



UNIVERSIDADE D
COIMBRA

Regina da Luz Ferreira da Silva Campinho

MODERNIZING MACAO
PUBLIC WORKS AND URBAN PLANNING
IN THE IMPERIAL NETWORK, 1856-1919

VOLUME 1

Tese no âmbito do Doutoramento em Patrimónios de Influência Portuguesa, ramo de Arquitectura e Urbanismo, orientada pelas Professoras Doutoradas Maria Luísa Pires do Rio Carmo Trindade, Hélène Vacher e Marta Maria Peters Arriscado Oliveira e apresentada ao Instituto de Investigação Interdisciplinar da Universidade de Coimbra.

Janeiro de 2021

Instituto de Investigação Interdisciplinar
da Universidade de Coimbra

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Aos meus pais.

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Acknowledgments

This journey started six years ago when, after roughly ten years of private and public practice in the field of architecture, a post-graduation in architectural and urban heritage, and with a one-year-old daughter, I decided to go back to academia to pursue a doctoral degree. My first debts are, therefore, towards Professor Marta Oliveira who, having previously supervised my research in the context of my diploma, upon meeting me in Porto in the Summer of 2014, agreed to take me under her supervisor wing once again, and directed me towards the University of Coimbra Heritages of Portuguese Influence PhD programme. By Autumn, I would go on to meet the Heritages' co-founder and director, Professor Walter Rossa, in a memorable encounter in Paris, where the topic of my research would be promptly, and almost definitely established. To the enthusiasm of these two eminent academics I owe my heartfelt gratitude, for encouraging me to follow this arduous, yet incredibly rewarding path.

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Abbreviations, Terminology and Orthography

Abbreviations

AHU	Arquivo Histórico Ultramarino, Lisbon, Portugal
AM	Arquivo de Macau, Macao SAR, China
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BAHSGE	Biblioteca e Arquivo Histórico da Secretaria-Geral da Economia, Lisbon, Portugal
BG	<i>Boletim do Governo da Província de Macau</i>
DG	<i>Diário do Governo</i>

Some notes on terminology and orthography

All translations from the Portuguese, French and Chinese languages are my own.

All transcriptions from the primary sources in their original Portuguese language have been transposed into Portuguese orthography regulated by the 1945/1973 spelling agreement.

In terms of Romanizing names and other untranslated terminology originally in the Chinese language, the adopted system is the 1979 Pinyin for Mandarin Chinese (Guānhuà, or ‘language of officials’). As Macao is geographically situated in the Guangdong province, however, where the most widely spoken language was (and still is) the Cantonese (Gwóngdūng wá, or ‘Guangdong language’), for which the Romanization systems aren’t as commonly used as the Pinyin, I have tried, as much as possible, and especially when dealing with local given names, to respect the orthograph as written in the primary sources. Which, given the natural lack of norms in the nineteenth-century romanization processes, I assume were established case-by-case, according to the phonetic correspondence each Portuguese author thought the most reliable. This is why the same Chinese individual can sometimes be referred to by differently orthographed names, and sometimes even by a simple nickname. In these situations, I have opted for the most commonly used name, preferably referenced to the authors having worked on the genealogies of the Macao Chinese entrepreneur communities.¹

¹ For further reference, see Guang Zhi Lin [in the original: 林广志], *Chinese Merchants in Macau in Late Qing* [in the original: 澳门晚清华商] (Hong Kong: Joint Publishing, 2015), as well as Lin’s *Soul of*

Otherwise, regarding more general terminology, for instance in terms of geography, ethnic groups or perceived nationalities, I have also decided to adopt, as much as possible, the contemporary appellations found on the primary sources. Thus, my usage of designations such as ‘Canton’ (‘Guangzhou’ in Mandarin Chinese), ‘Macao’ (‘Aomen’ in Mandarin Chinese), or generalizations such as ‘China’ and the ‘Chinese’, is meant to keep a certain coherence with their historical usage.

For example, the contemporary use of the term ‘China’ mainly equated it to the Qing empire (1644-1911/12), the term ‘Chinese’ globally encompassing all its inhabitants, regardless of origin or ethnicity. With this in mind, however, and in the interest of clarity, I have resorted to the term Qing when referring specifically to the imperial administration. Otherwise, I adopt the historical ‘Chinese’ generalization, namely in parallel (or counterpoint) with the ‘Christian’ one, the latter usually describing, by opposing it to the former, the non-Chinese population or the non-Chinese urban districts, architecture and other material objects.

Moreover, and by way of conclusion, I would remark that, in the early-nineteenth century Portuguese primary sources, there are often references to ‘*um chin*’ or ‘*um china*’ (instead of the current ‘*um chinês*’) when referring to a Chinese individual, as well as ‘*os chins*’ (instead of the current ‘*os chineses*’) when referring to the Chinese people.² Interestingly, these terms clearly borrow on the phonetics of the Mandarin word ‘Qin’ (‘Ch’in’ according to the Wade-Giles Romanization system), which is the name of the first dynasty of Imperial China (221 BC-206 BC). This particular Romanization, which apparently had originated back in the sixteenth century, would thus remain in use throughout the following centuries, designating, not just the people hailing from the territory under the sovereignty of its successive dynasties, but the empire itself.

Macau: Chinese Merchants and Chinese Communities in Macau in Late Qing [in the original: 澳门之魂—晚清澳门华商与华人社会研究] (Guangzhou: Guangdong People’s Publishing House, 2017).

² See, for instance, Manuel de Castro Sampaio, *Os Chins de Macau* (Hong Kong: Noronha e Filhos, 1867). In the main text, I have translated all three variants with the English word ‘Chinese’.

Abstract

The 1850s saw the beginning of the planned transformation and expansion of the Macanese urban landscape, unprecedented in its accelerated pace as in its wide territorial scope, in many ways setting the tone for present-day urban development in the Chinese Special Administrative Region (SAR). The present thesis seeks to document and analyze this process in its early stage, through original research into public works and other government-sponsored urban interventions under the influence of the Portuguese administration, with the purpose of interpreting how the city's changing built environment both represented and conditioned the province's economic, social and political dynamics, thus filling a gap in the current knowledge on the history of the Portuguese province's transition into a modern urban landscape.

It is set in the broader context of Portuguese overseas action and administration in the long nineteenth century's so-called age of imperialism and its burgeoning world urban system, where the major cities of the world became increasingly interconnected, trading in people, knowledge, images and ideas, but also in capital, labor and goods between them. As if the world had become, through the influence of the Western network of empires, one large, interdependent city, mainly fostered by the progress of transport and communication infrastructures.

Stemming from these considerations, a main focus of this research is the idea of the globalizing impact of modernization at the scale of this imperial network. In other words, how the modernization of these urban hubs became a global process through the expansion of the industrial revolution techno-scientific advancements, but also of progressive cultural constructs, such as hygiene and public health, and of the new governance and territorial management models, as well as the new legislative instruments enabling Western states to implement this panoply of 'material improvements'. As such, and although in necessarily different measures, these transformations were affecting all the interconnected territories, regardless of their geographical situation, or of their preponderance in the colonial hierarchy of each state, be they capitals, metropolitan provincial cities or overseas provincial cities. They were happening at the same time, materializing the same philosophies and using the same technical, scientific and legal tools, resulting in the recognizable features of the modern city.

While in line with recent post-colonial studies working on the connections between architecture and urbanism and the imperial machineries, the purpose of this study is less to give an insight on modernization in the colonial context, or a look into an example of a Chinese indigenous modernity, but rather to present a globally aware case study which, in turn, may contribute to nurture a better-informed, more locally aware, global narrative of the urban modernization process.

On a related note, this thesis also hopes to contribute to strengthening the ties between primary-source-based historical research on the long nineteenth century Western urban modernity, and the reassessment of its heritage value. This is a more operational sort of ambition, which sees in the history of modern urban planning a valuable resource for devising better informed, more integrated strategies of urban landscape conservation and management, whether regarding the Historic Center of Macao UNESCO-classified property, or any other similar context throughout the European world, where the under-researched modern urban landscape may be falling prey to several irreversible pressures with significant loss of cultural heritage.

Resumo

A partir dos anos 1850, assistiu-se à transformação e expansão planeadas da paisagem urbana de Macau, sem precedente, tanto no seu ritmo acelerado como no seu largo alcance territorial, de certa forma dando o tom para o desenvolvimento urbano actual desta Região Administrativa Especial (RAE) chinesa. O meu trabalho pretende documentar e analisar este processo no seu início, através de uma investigação sobre obras públicas e outras intervenções urbanas directamente encomendadas ou fortemente influenciadas pela administração portuguesa, com o objectivo de interpretar de que forma este ambiente urbano em transformação simultaneamente representou e condicionou as dinâmicas económicas, sociais e políticas da província, preenchendo, deste modo, uma lacuna no conhecimento actual sobre a história da transição da província portuguesa para uma paisagem urbana moderna.

Situa-se no contexto mais amplo da acção e administração portuguesas no ultramar durante o longo século dezanove, a sua era do imperialismo e correspondente sistema urbano mundial, no qual as principais cidades do mundo foram ficando progressivamente interligadas, trocando pessoas, conhecimento, imagens e ideias, mas também capital, trabalho e bens entre elas. Como se o mundo se tivesse tornado, graças à influência da rede dos impérios ocidentais, uma vasta cidade interdependente, fomentada pelo progresso das infraestruturas de transportes e comunicações.

Neste sentido, um dos principais enfoques desta investigação é a ideia do impacto globalizante da modernização à escala desta rede imperial. Por outras palavras, como é que a modernização destes centros urbanos se tornou num processo global através da expansão dos avanços tecnocientíficos da revolução industrial, mas também de conceitos culturais progressistas, como a higiene e saúde públicas, ou de novos modelos de governo e administração territorial, assim como dos novos instrumentos jurídicos necessários aos estados ocidentais à implementação desta panóplia de melhoramentos materiais. Assim, ainda que em diferentes medidas, estas transformações afectavam todos estes territórios interligados, independentemente da sua localização geográfica ou da sua preponderância na hierarquia colonial de cada estado, fossem eles capitais, cidades provinciais metropolitanas ou cidades provinciais do ultramar. Estavam a acontecer ao mesmo tempo, materializando as mesmas filosofias e utilizando os mesmos

instrumentos técnicos, científicos e jurídicos, resultando nas feições reconhecíveis da cidade moderna.

Apesar de se posicionar na linha de recentes estudos pós-coloniais tentando problematizar os mecanismos do imperialismo através da arquitectura e do urbanismo, o propósito deste estudo não será tanto de apresentar mais um exemplo de modernização no contexto colonial, ou de ilustrar um caso de modernidade indígena chinesa, mas antes de apresentar um caso de estudo local numa perspectiva global a fim de que, por sua vez, esta análise possa alimentar uma narrativa global mais informada dos processos de modernização urbana.

A título complementar, esta tese pretende também contribuir para reforçar os laços entre a investigação histórica, com base em fontes primárias, sobre a modernidade urbana ocidental no longo século dezanove, e a reavaliação do seu valor patrimonial. Esta é uma ambição mais operacional, que vê na história do planeamento urbano moderno um valioso recurso para elaborar estratégias melhor informadas e mais integradas de conservação e gestão das paisagens urbanas, quer em relação ao Centro Histórico de Macau, classificado pela UNESCO, ou qualquer outro contexto semelhante através do mundo Europeu onde, por falta de conhecimentos sobre a paisagem urbana moderna, esta possa a estar a ser vítima de pressões várias e irreversíveis com graves danos patrimoniais.

Résumé

Les années 1850 ont vu le début de la transformation et d'expansion planifiées du paysage urbain de Macao, sans précédent dans sa vitesse comme dans sa large portée territoriale, d'une certaine façon donnant le ton pour le développement urbain de la Région Administrative Spéciale (RAS) chinoise aujourd'hui. Mon travail cherche à documenter et à analyser ce processus à ses débuts, à travers une recherche sur les travaux publics et autres interventions urbaines directement commanditées ou fortement influencées par l'administration portugaise, dans le but d'interpréter comment cet environnement urbain en transformation à la fois représentait et conditionnait les dynamiques économiques, sociales et politiques de la province, et ainsi combler une lacune dans les connaissances actuelles sur l'histoire de la transition de cette province portugaise en un paysage urbain moderne.

Il se situe dans le contexte plus large de l'action et de l'administration portugaises dans l'outremer pendant le long 19^{ème} siècle, son âge de l'impérialisme et le correspondant système urbain mondial, au sein duquel les principales villes du monde sont devenues progressivement interconnectées, échangeant en personnes, savoirs, images et idées, mais aussi en capital, en travail et en biens entre elles. Comme si le monde était devenu, grâce à l'influence du réseau des empires occidentaux, une vaste cité interdépendante, stimulée par le progrès des infrastructures de transports et communications.

Dans ce sens, un des axes principaux de ma recherche est l'idée de l'impact globalisant de la modernisation à l'échelle de ce réseau impérial. Autrement dit, comment la modernisation de ces centres urbains est devenue un processus global à travers l'expansion des avancées technologiques de la révolution industrielle, mais aussi de concepts culturels progressistes, tels que l'hygiène et la santé publiques, ou bien de nouveaux modèles de gouvernance et d'administration territoriale, tout comme des nouveaux instruments juridiques nécessaires à la mise en œuvre, par les états occidentaux, de toute cette panoplie d'intérêts matériels. Aussi, et même si en différentes mesures, ces transformations affectaient tous ces territoires interconnectés, indépendamment de leur situation géographique ou de leur prépondérance dans la hiérarchie coloniale de chaque état, qu'ils fussent des capitales, des villes provinciales métropolitaines ou des villes provinciales de l'outremer. Elles se tenaient au même moment, matérialisant les mêmes philosophies et utilisant les mêmes instruments techniques, scientifiques et juridiques, entraînant les caractéristiques reconnaissables de la ville moderne.

Même si je me positionne dans la ligne de récents études post-coloniales essayant de problématiser les mécanismes de l'impérialisme à travers l'architecture et l'urbanisme, mon objectif, cependant, n'est pas tant de montrer encore un exemple de modernisation dans le contexte colonial, ou d'illustrer un cas de modernité indigène chinoise, mais plutôt de présenter un cas d'étude local dans une perspective globale afin que, à son tour, cette analyse puisse contribuer à nourrir une narrative globale mieux informée des processus de modernisation urbaine.

A titre complémentaire, ma thèse espère pouvoir contribuer également à renforcer les liens entre la recherche historique, résolument basée sur des sources primaires, sur le sujet de la modernité urbaine occidentale dans le long 19^{ème} siècle, et la réévaluation de sa valeur patrimoniale. Il s'agit d'une ambition plutôt opérationnelle, qui voit dans l'histoire de l'aménagement urbain moderne une ressource précieuse à l'élaboration de stratégies mieux informées et plus intégrées de conservation et de gestion des paysages urbains, que ce soit en rapport avec le Centre Historique de Macao, classé à l'UNESCO, ou avec n'importe quel autre contexte similaire à travers le monde européen où, par manque de connaissances sur le paysage urbain moderne, celui-ci puisse être victime de pressions diverses et irréversibles avec de graves dégâts patrimoniaux.

Introduction

We have long been concerning ourselves with sanitation in Macao, an old city erected by the audacious Portuguese under the rugged and naked cliffs, and over the timid swamps of this minuscule strip of land that formed the first Portuguese concession in 1557. Everything in the city is, so to speak, artificial. [...] Many teardowns and landfills have formed the stages of a process that, before it could be translated into the nowadays well-established term of ‘sanitation’, represented the conquest of much-needed space for the burgeoning colony. Macao, as all ancient cities, even if far from the influence of the narrow-minded Chinese, didn’t follow, at the beginning, nor until very recently, any principle or rule of urban hygiene. [...] A little has already been done, some of it is being handled today, but a lot remains to be accomplished in the future. [...] We mustn’t expect, however, to go suddenly from bad to optimal. From what Macao is today, even if we can’t hope to make it magnificent, let us at least think it and make it a [geometrically] perfect city. To reach this, a bloodless fight must be fought. A great deal must be destroyed and almost everything rebuilt. [...] The layout of the city’s General Improvement Plan is the indispensable foundation of a complete and harmonious study of these sanitary changes. Moreover, its diffusion would serve the dual purpose of bringing Macao’s progress and regeneration to the whole of the Far East’s attention, where it was losing its rightful position, and of interesting the colony’s population and living forces in its improvements.³

António Pinto de Miranda Guedes, Macao Public Works Director, 1909

The 1850s saw the beginning of the planned transformation and expansion of the Macanese urban landscape, unprecedented in its accelerated pace as in its wide territorial scope, in many ways setting the tone for present-day urban development in the Chinese Special Administrative Region (SAR). The present thesis seeks to document and analyze this process in its early stage, through original research into public works and other government-sponsored urban interventions under the influence of the Portuguese administration, with the purpose of interpreting how the city’s changing built environment both represented and conditioned the province’s economic, social and political dynamics, thus filling a gap in the current knowledge on the history of the Portuguese province’s transition into a modern urban landscape.

³ AHU, 251-2G-IS-SEMU-DGU cx., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, **March 31, 1909 (transcribed in Volume 3 - Annexes)**. All transcriptions of written primary sources accompanying the thesis’ main text on the present Volume 1 have been sorted by date and compiled on Volume 3. For more on the organization of the thesis in three separate volumes, see the Introduction’s section on methodology and sources, “Mapping urban transition.”

This study is set in the broader context of Portuguese overseas action and administration in the long nineteenth century's⁴ so-called 'age of imperialism' and its burgeoning 'world urban system'. Historian Andrew Porter defines this age of imperialism as a historical period, stretching from 1860 to 1914, and characterized by "exclusive claims to territory by European powers and [by] their attempts to assert effective control, as well as other forms of European intervention and influence, overseas."⁵ In an interconnected process, this period would also see the emergence of "an integrated world," in which "the mutual awareness, interconnection and interdependence of most parts of the world, which had developed since the early sixteenth century, grew at a startling rate and reached unprecedented levels."⁶ The long nineteenth century imperial context would also set the stage for the emergence of what art historian and sociologist Anthony D. King describes as the "world urban system," where the major cities of the world became increasingly interconnected, trading in people, knowledge, images and ideas, but also in capital, labor and goods between them. As if the world had become, through the influence of the Western network of empires, "one large, interdependent city,"⁷ mainly fostered by the progress of transport and communication infrastructures.

Stemming from these considerations, a main focus of my research is the idea of the globalizing impact of modernization at the scale of this imperial network. In other words, how the modernization of these urban hubs became a global process through the expansion of the industrial revolution techno-scientific advancements, but also of progressive cultural constructs, such as hygiene and public health,⁸ and of the new governance and territorial management

⁴ Borrowing on the work of British historian Eric Hobsbawm, 'the long nineteenth century' defines the historical period lasting from the French Revolution of 1789 up to the start of the First World War in 1914 [see Eric Hobsbawm, *The Age of Empire: 1875–1914* (London: Weidenfeld and Nicolson, 1987), 6]. The author divides this period, through which he analyses the dual political French revolution and industrial British revolution, into three separate works: *The Age of Revolution: 1789–1848* (1962), *The Age of Capital: 1848–1875* (1975) and *The Age of Empire: 1875–1914* (1987). In both chronological and thematic terms, this study focuses on Hobsbawm's "Age of Capital" and "Age of Empire" within the long nineteenth century.

⁵ Andrew Porter, *European Imperialism 1860-1914* (London: Palgrave Macmillan, 1994), 2.

⁶ Ibid.

⁷ Anthony D. King, *Urbanism, Colonialism and the World-Economy. Cultural and Spatial Foundations of the World Urban System* (London: Routledge, 1991), 2.

⁸ On the issue of colonial technoscientific networks and circulations of people, knowledge, practices and things considered in a post-colonial frame, and besides the pioneering work of Anthony D. King, see Jiat-Hwee Chang's research on tracing the origins of tropical architecture to nineteenth century British military technologies, medical theories and sanitary practices in *A genealogy of tropical architecture: Colonial networks, Nature and Technoscience* (London and New York: Routledge, 2016). Chang namely draws on the 1980s and 1990s Michel Callon, Bruno Latour and John Law social studies-based Actor-Network Theory (ANT). For an approach to the ANT and how it may connect with Architectural History in studying the former Portuguese Asian provinces, see Alice Santiago Faria, "Arquitectura e Mobilidade, ou Questões

models, as well as the new legislative instruments enabling Western states to implement this panoply of ‘material improvements’. As such, and although in necessarily different measures, these transformations were affecting all the interconnected territories, regardless of their geographical situation, or of their preponderance in the colonial hierarchy of each state, be they capitals, metropolitan provincial cities or overseas provincial cities. They were happening at the same time, materializing the same philosophies and using the same technical, scientific and legal tools, resulting in the recognizable features of the modern city landscape.

While in line with recent post-colonial studies working on the connections between architecture and urbanism and the imperial machineries,⁹ the purpose of this study is less to give an insight on modernization in the colonial context, or a look into an example of a Chinese “indigenous modernity,”¹⁰ but rather to present a globally aware case study which, in turn, may contribute to nurture a better-informed, more locally aware, global narrative of the urban modernization process.

On a related note, this thesis also hopes to contribute to strengthening the ties between primary-source-based historical research on the long nineteenth century Western urban modernity, and the reassessment of its heritage value. This is a more operational sort of ambition, which sees in the history of modern urban planning a valuable resource for devising better informed, more integrated strategies of urban landscape conservation and management, whether regarding the Historic Center of Macao UNESCO-classified property, or any other similar context throughout the European world, where the under-researched modern urban landscape may be falling prey to several irreversible pressures with significant loss of cultural heritage.

em Torno de Interinfluências nas Obras Públicas nos Antigos Territórios do Oriente Português.” In *Mobilidade e Circulação. Perspectivas em História da Ciência e da Tecnologia*, ed. Alice Santiago Faria and Pedro M. P. Raposo, 11-22. Lisboa: CIUHCT and CHAM, 2014.

⁹ For comparative urban studies in a colonial context, see the seminal works edited by Robert Ross and Gerard J. Telkamp, *Colonial cities: essays on urbanism in a colonial context* (Dordrecht: Martinus Nijhoff Publishers, 1985), as well as by Nezar Alsayyad, *Forms of dominance: on the architecture and urbanism of the colonial enterprise* (Aldershot: Avebury, 1992). For monographic studies on the same post-colonial historiographic model, respectively dealing with the British-administered cities of Singapore, Delhi, Lahore and Bombay, see Brenda S. A. Yeoh, *Contesting Space in Colonial Singapore: Power Relations in the Urban Built Environment* (Singapore: Singapore University Press, 2003); Jyoti Hosagrahar, *Indigenous Modernities: Negotiating Architecture and Urbanism* (London and New York: Routledge, 2005); William J. Glover, *Making Lahore Modern. Constructing and Imagining a Colonial City* (Minneapolis: University of Minnesota Press, 2008); and Prashant Kidambi, *The Making of an Indian Metropolis: Colonial Governance and Public Culture in Bombay, 1890-1920* (London: Routledge, 2016).

¹⁰ Jyoti Hosagrahar defines “indigenous modernities” as “other modernities,” developed in a colonial context, which are “the ways that dominant concepts from the metropole, proclaimed to be universal and liberating, translate into local spatial practices; and the ways that particular forms, places and communities engage with a changing cultural milieu to adapt and also recreate themselves.” See Hosagrahar, *Indigenous Modernities*, 2.

Towards a modern urban landscape in Macao

In the mid-sixteenth century, the Portuguese succeeded in establishing themselves in the Pearl River Delta, developing in the Macao peninsula a burgeoning city with an exclusive status as the sole Western permanent trading post allowed in the South China Sea¹¹ (Fig. 1).¹² Over the following three centuries, Macao would grow to become a cosmopolitan urban center, closely connected to Canton, at the heart of trade between China and the world.¹³ Only with the First

¹¹ Among the vast existing literature on the first centuries of Portuguese presence in Macao, one of its English-language frontrunners and most prolific historians was undoubtedly Charles Boxer (1904-2000), from the 1940s, with *Fidalgos in the Far East, 1550-1770: Fact and Fancy in the History of Macao* (The Hague: Martinus Nijhoff, 1948), to his 1960s comparative overview of the early-modern Dutch and Portuguese competing expansions in Asia, in *The Dutch Seaborne Empire, 1600-1800* (London: Hutchinson, 1965), and *The Portuguese Seaborne Empire, 1415-1825* (London: Hutchinson, 1969), to name just a few examples of his work. In the years leading up to the transfer of sovereignty to China in 1999, a number of authors worked on updating the historical survey of Macao format, which had been initiated in the 1900s by Macanese author Carlos Augusto Montalto de Jesus (1863-1927), with the famous *Historic Macau* (Hong Kong: Kelly & Walsh Limited, 1902). The Portuguese administration's focus, in the 1980s and 1990s, on promoting knowledge on the Macanese architectural and urban heritage, would thus foster some pioneering works on mapping the urban and topographical evolution of the Macao peninsula, from the sixteenth to the twentieth century, as presented by Maria Calado, Maria Clara Mendes and Michel Toussaint in *Macao. Cidade Memória no Estuário do Rio das Pérolas* (Lisboa: Governo de Macau, 1985); as well as by Sérgio Infante, Rogério Beltrão Coelho, Paula Alves and Cecília Jorge in *Cem anos que mudaram Macau* (Macao: Governo de Macau, 1995); or João Vicente Massapina's 1998 research, adapted for publication in "Desenvolvimento do Tecido Urbano da Cidade de Macau: Urbanismos e Urbanidades," *Revista de Cultura* 3 (2002): 43-57. In the field of community and social history of the province, done through ample sourcing, the work of reference is, undoubtedly, that of Ana Maria Amaro, for instance in *Das cabanas de palha às torres de betão. Assim cresceu Macau* (Lisboa: Livros do Oriente, 1998). This body of work would vastly contribute to improve knowledge in which to establish the official discourse on the heritage of Portuguese influence in China, which would ultimately lead to the inscription, in 2005, of the Historic Center of Macao in the UNESCO World Heritage List. That same year, another important historical survey on Portuguese urbanization and architecture in Macao was published by renowned art historian Pedro Dias Pedro Dias, *A Urbanização e a Arquitectura dos Portugueses em Macau, 1557-1911* (Lisboa: Portugal Telecom, 2005). In the 2000s, an important work has also been conducted on Macao in the early-modern era by looking at Chinese contemporary sources. This is the case of the work by Guoping Jin and Zhiliang Wu, for instance, their edited volume *Correspondência Oficial Trocada entre as Autoridades de Cantão e os Procuradores do Senado. Fundo das Chapas Sínicas em Português, 1749-1847* (Macao: Fundação Macau, 2000); or *Revisitar os Primórdios de Macau: para uma Nova Abordagem da História* (Macao: Instituto Português do Oriente, 2007); as well as by Guangren Yin and Rulin Zhang, *Breve Monografia de Macau* (Macao: Instituto Cultural do Governo da R.A.E. de Macau, 2009).

¹² All figures illustrating the thesis' main text on the present Volume 1 have been compiled on Volume 2. For more on the organization of the thesis in three separate volumes, see the Introduction's section on methodology and sources, "Mapping urban transition."

¹³ For more on the pre-Opium-War Canton trade, see the work of Paul A. Van Dyke, namely *The Canton Trade. Life and Enterprise on the China Coast, 1700-1845* (Hong Kong: Hong Kong University Press, 2005), as well as *Merchants of Canton and Macao. Politics and Strategies in Eighteenth-Century Chinese Trade* (Hong Kong: Hong Kong University Press, 2011). For a recent look at Canton from the point of view of architecture and the city, see Johnathan A. Farris, *Enclave to Urbanity. Canton, Foreigners, and Architecture from the Late Eighteenth Century to the Early Twentieth Centuries* (Hong Kong: Hong Kong

Opium War (1839-1842) would this golden era come to an end, with the English imperial power forcing the gospel of free trade into China Sea ports, where more competitive Western settlements soon blossomed (Fig. 2).¹⁴ Established in 1842 on the Eastern side of the Delta (Fig. 3), the British colony of Hong Kong would quickly take on the leading role as link to the trans-oceanic Canton trade, relegating the Portuguese city to a position of regional hub, much as the rest of the other local Heungshan district ports (Fig. 4).¹⁵

The 1850s were a changing time for the imperial paradigm on a global scale, as well as a time for redefining the key urban hubs of the imperial network. In this context, the Portuguese State, internally fragile and politically and economically dependent on its British connection, would nevertheless engage in a modernization strategy, in terms of governance as well as materiality, in order to claim its relevance in the new geopolitical order. The wheels were set in motion for the promotion of a vast public works and urban improvement programme to be deployed in the metropolitan and in the overseas provinces alike. Thus, from the point of view of the successive liberal governments emerging from the Portuguese Civil War (1828-1834), what was left of the rather heterogeneous group of more or less autonomous territories scattered all over three continents was reformulated as the Portuguese Empire, and submitted to a projected centralizing vision emanating from Lisbon.¹⁶

University Press, 2016). For a thorough look on everyday life in the foreign quarters of Canton and, more specifically, on how traders from around the world experienced these foreign quarters as home, see Lisa Hellman, *This House Is Not a Home. European Everyday Life in Canton and Macao, 1730-1830* (Leiden and Boston: Brill, 2018).

¹⁴ For a recent look on the circumstances leading up to the First Opium War (1839-1842), as well as on the conflict itself, see Julia Lovell, *The Opium War: Drugs, Dreams and the Making of China* (London: Picador, 2011). For an overview of how the Anglo-Chinese conflict was being perceived and the impact it had in the Macanese *status quo*, see Alfredo Gomes Dias, *Macau e a I Guerra do Ópio* (Macau: Instituto Português do Oriente, 1993).

¹⁵ Heungshan, in Cantonese, or Xiangshan, in Mandarin, was a former district of the Guangdong province, in which jurisdiction entered the territory of the Macao peninsula. In the primary sources, it is also referred to by its phonetic approximations, such as Hiang-Xan or, in the case of the 1912 map in Fig. 4, Hian-Chan. For more on the Qing local administration in regard to Macao, see Chapter I.

¹⁶ For a reflection on the nature of the early-modern Portuguese empire and its diverse set of “forms of domination” and related “forms of identity,” see Francisco Bethencourt, “Empire fragmentaire et formes d’identité,” in *Éclats d’Empire: du Brésil à Macao*, ed. Ernestine Carreira and Idelette Muzart-Fonseca-dos-Santos (Paris: Maisonneuve et Larose, 2003), 19-36. For a look at the 1800s-1850s global geopolitical shifts and their impact on the reconceptualization and first attempts at administrative reorganization of the overseas territories under Portuguese influence, see Valentim Alexandre, “As Periferias e a Implosão do Império,” in *História da Expansão Portuguesa, Volume 4, Do Brasil para África (1808-1930)*, ed. Francisco Bethencourt and Kirti Chaudhuri (Lisboa: Círculo de Leitores, 1998), 46-60. For an overview of the liberal Portuguese imperial project, see Valentim Alexandre, “A Questão Colonial no Portugal Oitocentista,” in *Nova História da Expansão Portuguesa (Volume X), O Império Africano (1825-1890)*, ed. Joel Serrão and A. H. de Oliveira Marques (Lisboa: Editorial Estampa, 1998), 21-132.

Situated at the epicenter of this global shift, Macao would be one of the first Portuguese overseas territories to be the object of a vigorous strategy in favor of the State's full control in the management of its territory. In fact, when it came to matters of sovereignty, Portuguese presence in China had always presented itself under a dubious status. To the Middle Kingdom, it was clearly no more than a lease for which the local Portuguese administration, the City Senate, payed since 1573 an annual fee, the so-called 'ground lease' (*foro do chão*). To the Macanese, this was a century-old obligation due by the city merchants to the Chinese Emperor, the "owner of the ground," (*dono do Solo*), as it was locally put.¹⁷ Moreover, a 'divided sovereignty' system existed *de facto*, in which both Chinese and Portuguese customs, administrative and judicial authorities were established within the city limits, each responsible for the affairs of its own community.¹⁸

In the wake of the First Opium War crisis, Portuguese central authority decided to put an end to this state of affairs and unilaterally declare Macao as a Portuguese colony, in the same basis the Treaty of Nanjing had established British Hong Kong. However, because Macao had declared itself neutral during the conflict, its victor neglected to back the Portuguese initiative, Portuguese delegates were barred from the 1842 negotiations, and the plan failed. It was clear that the sovereignty issue would literally have to be resolved on the ground. New governor João Maria Ferreira do Amaral was appointed in 1846, an experienced naval officer, well-versed in the Brazilian War of Independence as well as the Portuguese Civil War. Taking the Macanese City Senate's opposition in his stride, he initially expelled the Chinese officials from the city, claiming jurisdiction over all inhabitants, regardless of nationality, and claiming for the Portuguese Crown full sovereign rights to the walled city, as well as to the entire Macao peninsula. Setting himself as representative of the new 'owner of the ground', Amaral abolished the three-hundred-year-old

¹⁷ Letter n°26 from Macao Judge José Maria Rodrigues de Bastos to the Minister of the Overseas, September 26, 1839. Transcribed in Alfredo Gomes Dias, *Sob o signo da transição: Macau no século XIX* (Macao: Instituto Português do Oriente, 1998), 51-52.

¹⁸ For an overview of the changing political status of Macao vis-à-vis the Portuguese and Chinese claims to its territorial sovereignty, see the work of jurist Francisco Gonçalves Pereira, "Towards 1999: the Political Status of Macao in the Nineteenth and Twentieth Centuries," in *Macao. City of Commerce and Culture. 2nd Edition. Continuity and Change*, ed. R. D. Cremer (Hong Kong: API Press Ltd., 1991), 261-282; see also Boaventura de Sousa Santos, *Macao: o pequeníssimo dragão* (Porto: Edições Afrontamento, 1998). More specifically, Pereira refers to the peculiar status of the territory until the end of the eighteenth century as a "mixed Portuguese-Chinese jurisdiction" benefiting both parties (Pereira, "Towards 1999," 263). In turn, legal sociologist Santos goes further with this historical interpretation, considering that Macao can be understood as having very well been a Portuguese colony, in the sense that the Portuguese assumed possession of the territory, effectively and without interruption, from the sixteenth to the twentieth century. Although, as he puts it, it would have been a "special" kind of colony, in the sense that "the exercise of sovereignty was, throughout the centuries, less than full, and conducted under the Chinese governments' implicit or explicit consent," according to time and circumstance. The author thus translates this as a "divided sovereignty" status which would manifest itself in increasingly formal arrangements until retrocession to China in 1999 (Santos, *Macao: o pequeníssimo dragão*, 7).

lease, as well as the Chinese customs. His assassination, in 1849, would eventually make him a hero of the Portuguese colonial enterprise in China.¹⁹

Nevertheless, his successors managed to counter the Chinese effort to reestablish the divided sovereignty system, and a period of relative *pax portucalensis* followed. This lasted for over a century, up until the first meaningful protestations against foreign presence in China in general, and Portuguese presence in Macao in particular, already in the context of the establishment of the People's Republic of China in 1949.²⁰ In any case, the 1850s in Macao had opened up a period of political, social and economic stability, which was ripe to receive, by the influence of the public works engineers, the metropolitan material improvements and sanitation impetus and make it fructify. Accordingly, this modernizing impulse centered on trade and communications infrastructure, particularly on what was perceived at the time as the main driver for the city's economic regeneration: the inner harbor.

Now, despite the quality of the extensive available bibliography on the pre-Opium-War history of Macao, not many of these authors have delved into the actual production mechanisms and stages of this early-modern urban landscape. One exception is architect Vera Mónica Gaspar Domingues, with her work *Cultura e Património Urbanísticos de Influência Portuguesa na Ásia, 1503-1663*.²¹ In the context of a comparative study on the consolidation of five urban establishments of Portuguese influence in Asia, and through a method of cross-referencing the written sources with morphological analysis, on which we will expand in the next section, Domingues attempts to put forward a configuration hypothesis for the first Portuguese settlement in Macao, its location, and evolution over the sixteenth and seventeenth centuries.²²

¹⁹ For a more detailed look at this transition period, namely regarding the territorial expression of Governor Ferreira do Amaral's reforms, see Chapter I. See also Maria Teresa Lopes da Silva, *Transição de Macau para a Modernidade 1841-1853. Ferreira do Amaral e a Construção da Soberania Portuguesa* (Lisboa: Fundação Oriente, 2002), 316; as well as Dias, *Sob o signo da transição*.

²⁰ Santos, *Macao: o pequeníssimo dragão*, 41-51.

²¹ Vera Mónica Gaspar Domingues, *Cultura e Património Urbanísticos de Influência Portuguesa na Ásia, 1503-1663* (Tese de Doutoramento em Patrimónios de Influência Portuguesa, ramo Arquitectura e Urbanismo, Universidade de Coimbra, 2017), 453-541.

²² Although original and innovative, I have found that Domingues' results in what concerns Macao would need to be reassessed, namely in regard to the proposed location of the first Portuguese fortified settlement, from which the city supposedly grew. As we shall see detailed in Chapter I, the grounds on which the author locates this settlement would only be consolidated, through successive reclamations and appropriations of the riverbanks, around the turn of the seventeenth to the eighteenth centuries. Moreover, this gradual and autonomous city-expansion process would be established exclusively by the city's Chinese communities, resulting, by the early nineteenth century, in the Chinese Bazaar district, in which no Portuguese or any other foreign residents were ever recorded by the population statistics. It seems highly unlikely, therefore, that the mid-sixteenth century Portuguese settlement would have been set in these grounds. For more on these issues, see Chapter I.

Other authors have used similar methods to map wider timeframes of urban transformation and expansion in the Portuguese overseas. Such is the case of Alice Santiago Faria, with her work *Architecture Coloniale Portugaise à Goa. Le Département des Travaux Publics, 1840-1926*, which examines these processes in four Portuguese State of India cities in the long nineteenth century, by relying on morphological configuration hypotheses to illustrate urban evolution.²³ In the same institutional framework as Domingues and myself, the University of Coimbra Heritages of Portuguese Influence Doctoral Programme, Architecture and Urbanism branch, architects Lisandra Franco de Mendonça and Isabel Boavida, as part of their respective researches on the architectural and urban heritage of the former Portuguese provinces of Mozambique and Timor, have both put forward important contributions on the reconstitution of modern Maputo and Díli.²⁴

The long nineteenth century modern urban transition in Macao remains, however, largely under-researched. The work of reference regarding it may still be considered to be Macao-based architect José da Conceição Afonso's 1999 paper on Macao's "experience in a strategic and hygienist urbanism in the late nineteenth and early twentieth centuries."²⁵ In it, Afonso makes a thorough account of the individual projects carried out during this period, referencing some of their underlying key legislation and urban planning theory. It tends to focus, however, mainly on the succession of failed harbor improvement plans, which leads to the overall conclusion that this was a time of decadence for both the province of Macao and the Portuguese Empire, stemming from the political and financial difficulties of a weak State in an unfavorable international setting.

The same can be said of German sinologists Peter Haberzettl and Roderich Ptak's slightly earlier paper, which focuses exclusively on the Macao inner harbor works.²⁶ Based on a similar compilation of political, administrative and technical underachievements, the authors also settle for the idea of an imperial debacle manifesting itself through "mismanagement and administrative incompetence on the part of the Portuguese," and leading to the ostensible "meagre results" in

²³ Alice Santiago Faria, *Architecture Coloniale Portugaise à Goa. Le Département des Travaux Publics, 1840-1926* (Saarbrücken: Presses Académiques Francophones, 2014), 63-204.

²⁴ Lisandra Franco de Mendonça, *Conservação da Arquitectura e do Ambiente Urbano Modernos: a Baía de Maputo* (Tese de Doutoramento em Patrimónios de Influência Portuguesa, ramo Arquitectura e Urbanismo, Universidade de Coimbra, 2015), 49-90. For more on the work of Isabel Maria Guterres Boavida, see *Urbanografia de Díli no Tempo da Administração Portuguesa*. Dissertação de Mestrado Integrado em Arquitectura, Departamento de Arquitectura da Faculdade de Ciência e Tecnologia da Universidade de Coimbra, 2011. See also the author's PhD thesis proposal, *A Construção de Timor Colonial: Marcas Políticas e Administrativas na Arquitectura, Urbanismo e Ordenamento do Território (1894-1975)*. Projecto de Tese de Doutoramento em Patrimónios de Influência Portuguesa, ramo Arquitectura e Urbanismo, Universidade de Coimbra, 2012-present, in doutoramento.patrimonios.pt.

²⁵ José da Conceição Afonso, "Macao: uma experiência de urbanismo estratégico e higienista dos finais do séc. XIX aos começos do séc. XX," *Revista de Cultura* 38/39 (1999), 221-247.

²⁶ Peter Haberzettl and Roderich Ptak, "Macao and its harbour: projects planned and projects realized (1883-1927)," *Bulletin de l'Ecole française d'Extrême-Orient*, Tome 78 (1991): 297-316.

terms of the city's modern harbor infrastructure.²⁷ Setting their narrative against the sixteenth and seventeenth centuries' so-called Macao golden age, and relying mainly on the Outer Harbor's designer and champion, hydrograph engineer Hugo Carvalho de Lacerda's 1920s account of failures past, the authors conclude by setting the Macao and Hong Kong harbors' performances in terms of international influence up against each other, which necessarily results on a note of disappointment for the Portuguese colony.

Otherwise, architect and historian Ana Tostões has also contributed to current knowledge on these matters with some of the entries on both the print and website versions of the HPIP-Património de Influência Portuguesa/Heritage of Portuguese Influence database regarding nineteenth and twentieth century urban and infrastructural development in Macao.²⁸ Given its premise as an overview, though, and despite its thoroughness in terms of the important number of items surveyed, it tends to focus more on the fast-paced post-Second World War to the turn of the twenty-first century reclamations, extensions and architectural achievements which are presently, much like what we saw about the early modern era, fairly well researched.²⁹

With this thesis, I have thus set out to fill the gap in the current knowledge on the long nineteenth century history of public works and urban planning in Portuguese Macao. Or, in other words, on the history of the province's transition into a modern urban landscape. Now, in nineteenth century bibliography, namely in this study's primary sources, the terms 'modern' and 'modernly' are used, albeit sporadically, to signify 'present', 'current' or 'recently', in sentences such as 'modern requirements', 'modernly underway' or 'modernly finished'. From the 1860s on, these terms are literally employed to convey the idea 'of today', 'of present time', without necessarily hinting at the industrial-age notion of progress. In the 1850s and 1860s, the most common term to convey this notion in the context of architectural and urban change was rather 'improvement' (*melhoramento*). From the 1880s onward, 'sanitation' (*saneamento*) will come into use largely as

²⁷ Ibid., 303.

²⁸ The HPIP-Património de Influência Portuguesa/Heritage of Portuguese Influence database emerged from the Fundação Calouste Gulbenkian 2007-2012 project *Património de Origem Portuguesa no Mundo: Arquitectura e Urbanismo*, coordinated by historian José Mattoso. In 2010, this project would result in a publication of 3 volumes, dedicated respectively to "South America," "Africa, Red Sea and Persian Gulf," and "Asia and Oceania." The website, launched in 2012, assembles the previously printed information, with the double goal of rendering it as accessible as possible, but also making it easily updatable. For more information, see hPIP.org. See also José Mattoso, ed. *Património de Origem Portuguesa no Mundo: Arquitectura e Urbanismo. América do Sul* (coord. by Renata Araújo). *África, Mar Vermelho e Golfo Pérsico* (coord. by Filipe Themudo Barata and José Manuel Fernandes). *Ásia e Oceânia* (coord. by Walter Rossa) (Lisboa: Fundação Calouste Gulbenkian, 2010).

²⁹ For an overview of this topic, namely of the planning work of celebrated Portuguese architects Manuel Vicente, Tomás Taveira, José Catita, Siza Vieira and Fernando Távora in the 1960s through 1990s in Macao, see the entry on "Macau. Enquadramento Histórico e Urbanismo. A partir de 1911," by Ana Tostões, in hPIP.org.

its synonym, due to the influence of the developing environmental branch of public health.³⁰ As Macao Public Works Director Miranda Guedes puts it in the introductory quote, ‘sanitation’ was not only related to potable water and drainage, but more of a general concept, encompassing both infrastructure and urban regeneration in its scope.

The notion of progress was crucial in European urban milieus from the 1850s on. Within the circle of the Portuguese liberal elite, its association with the idea of freedom stemmed from the French economists-inspired theory of the “political economy of material improvements,”³¹ according to which investment on large scale public infrastructures, such as the national road and railway systems, and later on urban planning, was seen as a fundamental component of what the great politician and historian Alexandre Herculano would deem “the progress of civilization.”³² That is to say, the betterment of mankind through the advancement of transport and communication technology. Thus, the association of the idea of progress to the present time, or the vision of modern time as a time of progress, in the context of industrial-age liberal societies, would eventually lead to the emergence of the adjective ‘modern’ with its current progressive connotation.

The image of the “proper modern city, filled with air and light,”³³ formulated in the context of Macao’s urban transformation in the early 1900s, for instance, is a translation of this idea into the sphere of urban theory and practice. Indeed, looking at the industrial-age ‘urban factory’, or *fabrique de la ville*, through the prism of history of science and technology, we will find that the techno-scientific experts, such as the public works (civil and military) engineers, and public health physicians employed in the imperial network, sometimes ascending to provincial government or even to ministry status were precisely the major vectors of expansion of the progressive urbanism model in the long nineteenth century.³⁴ Nourished by the general theorists

³⁰ As historian Martin Melosi puts it, “mid-nineteenth-century England’s sanitary idea made popular the notion that the physical environment exercised a profound influence over the well-being of the individual.” So much so that health started to be viewed as dependent on the “power of scientific control of the physical environment.” See Martin V. Melosi, *The Sanitary City: Environmental Services in America from Colonial Times to the Present (abridged ed.)* (Pittsburgh: University of Pittsburgh Press, 2008), 28. For more on this subject, see Chapter III.

³¹ David Justino, *Fontismo. Liberalismo numa sociedade iliberal*. (Lisboa: Publicações Dom Quixote, 2016), 29.

³² *Ibid.*, 40. For more on the French ‘material improvements’ theory, as well as on its impact on Portuguese political circles, see Chapter II.

³³ AHU, 251-2G-1S-SEMU-DGU cx., Report from the Overseas Public Works Technical Committee regarding the Chinese Bazaar Improvement Plan, **February 1, 1908 (transcribed in Volume 3 - Annexes)**.

³⁴ A number of authors have been currently developing studies on the role of military and civil engineers in the long nineteenth century as urban practitioners, whether at home or in the overseas. Cities and sanitation were already presented as being part of imperialism’s paraphernalia of European technologies in Daniel R. Headrick’s *The tentacles of progress: Technology Transfer in the Age of Imperialism, 1850-1940* (New

on political economy, whose writings also circulated through the imperial network, they would set about effectively changing the face of the industrial urban landscape from the 1850s on, from the arrival of the railway connection and the improvement of port facilities, to quite literally penetrating the old historical fabrics to foster the ever-increasing circulation of people and commodities. Thus, it might be argued that, even if their approach of the city was indeed, as claimed by anthropologist Paul Rabinow, “as a technical object to be worked on, improved and regulated”³⁵ with hygiene and circulation as top priorities, their ultimate goal was the betterment of society and the progress of civilization, certainly making them the modern avant-garde.³⁶

York and Oxford: Oxford University Press, 1988), a topic reprised by Robert Home, in his *Of Planting and Planning. The Making of British Colonial Cities*, first published in 1997 (Second Edition. London and New York: Routledge, 2013). Within a more recent metropolitan European perspective, there is Portuguese historian Tiago Saraiva’s *Ciência y Ciudad: Madrid y Lisboa, 1851-1900* (Madrid: Ayuntamiento de Madrid, 2006). Specifically regarding the Portuguese imperial experience, there is an important group of science and technology historians at the Nova University Lisbon, coordinated by Professors Maria Paula Diogo and Isabel Maria Amaral, at the root of such innovative contributions as the collective work *A Outra Face do Império. Ciência, Tecnologia e Medicina (sécs. XIX-XX)* (Lisboa: Edições Colibri, 2012), or Bruno J. Navarro’s *Um Império Projectado pelo “Silvo da Locomotiva.” O papel da engenharia portuguesa na apropriação do espaço colonial africano. Angola e Moçambique (1869-1930)* (Lisboa: Edições Colibri, 2018). Resolutely putting the engineers at the center of the European modernity debate, there is also University of Évora historian Ana Cardoso de Matos, editor of the collective work *The quest for a Professional Identity: Engineers Between Training and Action* (Lisboa: Edições Colibri, 2009), as well as architect and historian Marta Macedo, with her doctoral thesis *Projectar e Construir a Nação. Engenheiros, Ciência e Território em Portugal no Século XIX* (Lisboa: Imprensa de Ciências Sociais, 2012).

³⁵ Paul Rabinow, *French Modern: norms and forms of the social environment* (Cambridge, Mass.: MIT Press, 1989), 77. Rabinow shares in the idea, originally put forward by urban historian and theorist Françoise Choay in *The Modern City: Planning in the 19th Century* (New York: George Braziller, 1969), that nineteenth century progressive urbanism never left the paper, and so that, in large-scale urban regularization interventions, such as Haussmann’s Paris, the city was understood “as a political, economic and technical object, but not yet as a social one.” Therefore, Rabinow argues, this lack of a “normative project for the ordering of the social milieu, any direct and plausible attempt to link norms and forms,” is precisely what excludes it from the categorization of “modern urbanism” (Rabinow, *French Modern*, 76-78). Similarly, urban historian Stephen V. Ward, working on the connection of theoretical approaches, governmental policies, and the impact of economic and social forces in the outcome of planning experiences, contends that the “modern urban planning movement began to take shape in the later nineteenth century” [Stephen V. Ward, “Cities as Planning Models,” *Planning Perspectives*, volume 28, 2 (2013): 295-313]. Indeed, Ward sets the origins of modernity, in terms of urban planning history, in the decade leading up to the institution, at the turn of the twentieth century, of a number of town planning movements, namely the the Garden City and Town Planning Association (1899), carrying “radical reformist ideas about changing and improving the city” [Stephen V. Ward, *Planning and Urban Change*. Second Edition (London: Sage, 2004), 2]. For more on the latter, see also Chapter IV.

³⁶ For a historical survey of the emergence and evolution of the “French engineers’ sense of social responsibility” and commitment to serving the “common good,” see Antoine Picon, “French Engineers and Social Thought, 18th-20th Centuries: an Archeology of Technocratic Ideals,” *History and Technology* vol. 23, 3 (2007): 197-208. As we shall see in Chapter II, the French ideology and practice on this matter would be extremely influential in the long nineteenth century European, and namely Portuguese techno-scientific circles.

From the first reclamation project for the realignment and expansion of the Macao inner harbor in 1856 to the shutdown of its improvement project in 1919,³⁷ this thesis is structured as a historical timeline interweaved with related thematic axes, in which the display and analysis of these techno-scientific experts' discourse and practice is paramount. Moreover, and to assist with the conceptual unfolding of this historical timeline, I have included, at the end of Volume I, a visual Timeline which summarizes the contents of the thesis, in terms of the most prominent projects, events and characters involved. As this timeline unfolds, it tells the story of political, economic, social and urban transition in Macao, shaping its lesser-known modern urban landscape. And it unfolds throughout five chapters.

Chapter I is dedicated to the city's first government-sponsored urban extension, decided and carried out in the wake of a devastating fire in the so-called Bazaar, the city's largest Chinese district. Beginning in 1856, and continuing throughout the following two decades, it would not only completely redefine the inner harbor and riverside city front, but also allow for a firm claim of Portuguese sovereignty over the urban ground, with the financial and logistic support of the city's most prominent Chinese entrepreneurs. Chapter II builds on this collaboration, into which will enter, by the 1880s, the Macanese local elite. A new inner harbor extension project will set the stage for the emergence and progressive affirmation of the newly-created Macao Public Works Department, whose engineering corps would be set on bringing order to a physical and social landscape made of strong traditions in autonomous space appropriation. The setting for Chapter III is the 1894-1895 bubonic plague outbreak in the Pearl River Delta. Against a backdrop of catastrophe, public interest and public health ideas and discourses will lead the way into the materialization of the first resumption and restructuring operations over some of the city's oldest and poorest Chinese working-class districts. By the 1900s, and riding on the crest of the sister material improvements and sanitation waves, the government urban restructuring ambitions would set their sights back on the Chinese Bazaar. This is the focus of Chapter IV, in which we will see how a gutting operation for the opening of a new avenue through the centuries-old Chinese district would become the definitive marker of modernity in Macao. Finally, Chapter V takes on the most contested of the Macao improvement plans, that of its inner harbor. Set as the ultimate aspiration, since the 1880s, of a city in search of its own identity in the face of global change, this project would go from deadlock to deadlock for forty years, setting the stage for discussing the very essence and purpose of the nineteenth century Portuguese Empire.

³⁷ The analysis of urban transformation in this timespan is not meant to be exhaustive. I have thus selected some projects and related topics, to the detriment of others, in order to better and more concisely illustrate my research. In this sense, I have purposely concentrated in public works and urban planning operations taking place in the Macao peninsula, leaving out, for instance, eventual contemporary projects in the Taipa and Coloane islands, which were also part of the territory claimed by the Portuguese authorities at that time, as these assumed, nevertheless, a secondary role in the hierarchy of provincial settlements.

Mapping urban transition

As previously mentioned, the historiographic path focusing mainly on the built landscape and territorial management has been providing for some exciting contributions to current knowledge regarding the “norms and forms”³⁸ of nineteenth century European, and namely Portuguese public action. Authors such as geographers Miguel Sopas de Melo Bandeira and Mário Gonçalves Fernandes, both studying urban planning and city management in northern Portugal,³⁹ were some of the groundbreakers. As we have seen, Ana Cardoso de Matos, Tiago Saraiva, and Marta Macedo would expand this field by focusing on the engineers and early public works departments. To which knowledge have added those authors working on empire-building through similar perspectives, such as the above-mentioned Maria Paula Diogo and Bruno Navarro.

However, and with some rare exceptions, such as the already-mentioned research led by architectural and urban historians, such as Alice Santiago Faria, Lisandra Mendonça and Isabel Boavida, to which we may add that of architect Margarida Relvão Calmeiro on the city of Coimbra,⁴⁰ there hasn't really been a concerted effort to engage in mapping this transition to modernity. Borrowing again from Paul Rabinow, we now know quite a bit about the “norms” of the long nineteenth century Portuguese modernity, but how about its “forms”? I have thus decided to tackle this issue, naturally within the scale limits and time span of this study, and illustrate the history of urban transition in Macao with an interpretative work of mapping, as well as with a written dissertation. In this sense, this thesis is both a written and graphic manuscript, aiming at establishing a more integrated perspective over the urban transitions at hand, be it in terms of social, political, or techno-scientific intent.

Based on the assumption that primary sources are the most direct and authentic link to the primary discourses of the empire's political, juridical and administrative machinery, this study relied on a vast collection of documentation on public works from the 1830s to the 1920s, gathered as thoroughly as possible. This included contemporary written sources, published and

³⁸ Borrowing on Paul Rabinow's definition of his own research topic, as French society's “construction of norms and search for forms adequate to understand and to regulate what came to be known as modern society” (Rabinow, *French Modern*, 9).

³⁹ Miguel Sopas de Melo Bandeira, *O espaço Urbano de Braga: Obras Públicas, Urbanismo e Planeamento (1790-1974)* (Doctoral thesis, Instituto de Ciências Sociais da Universidade do Minho, Portugal, 2001). Mário Gonçalves Fernandes, *Urbanismo e morfologia urbana no norte de Portugal. Viana do Castelo, Guimarães, Vila Real, Chaves e Bragança. 1852/1926* (Porto: FAUP Publicações, 2005).

⁴⁰ Margarida Relvão Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934* (Doctoral thesis in Architectural Theory and History, Universidade de Coimbra, Portugal, 2014).

unpublished, such as correspondence, survey and individual project reports, legislation, public speeches, to cite a few. Within the written sources, though, the drawings definitely took center stage: topographical and cadastral surveys provided information on the stages of evolution of the urban morphology throughout the transformation process; rough drawings and project plans inform on how the same transformation process was being envisioned. Frequently complemented by written reports, these plans were key to unveiling the techno-scientific experts' convictions in terms of urban intervention. Cross-referencing the successive surveys with the projects allowed us to reflect on the often difficult and contradictory process of adapting the technicians' urban theories to the physical and social reality of the city. Contemporary photography was also an indispensable source for cross-referencing survey maps. For instance, when a particular stage of evolution was absent from the available contemporary cartography, I have resorted, through cross-referencing historical photography and written information, to recreate its probable morphological configuration on plan.

In order to achieve a consistent degree of precision in the exercise of reconstituting the past urban form, I have relied on a method of graphic interpretation based on the role of drawing as an exploratory instrument to produce a sort of reverse engineering of the city. This included superimposing the information contained in the historical maps with the present-day vector general map (2015), so as to interpret the city design at different times under common morphological baselines, deconstructing the project intents at each phase, and reconstructing its evolution.⁴¹ This method of synthesizing the cross-referencing work of the primary sources through drawing was also useful to reconstitute a dependable chronological timeline of urban transformation, through which it became possible to attribute dates and authorships to different types of sources that hitherto have remained undated or anonymous. The same reasoning was applied, for example, to certain public works or housing projects which, once coherently placed in

⁴¹ For more on this method of graphic interpretation, and namely on the 'Coimbra school' advancements in the field of cadastral analysis, see the comprehensive work of Professor Walter Rossa at the University of Coimbra Faculty of Science and Technology, Department of Architecture, at the source of such contributions as "Património Urbanístico: (Re)fazer Cidade Parcela a Parcela" (2013), in *Fomos Condenados à Cidade: uma Década de Estudos Sobre Património Urbanístico* (Coimbra, Imprensa da Universidade de Coimbra, 2015), 97-131. For a more recent and updated review of this topic, see also Luísa Trindade, "Desenho: Discurso e Instrumento," in *Patrimónios de Influência Portuguesa: Modos de Olhar*, ed. Walter Rossa and Margarida Calafate Ribeiro (Coimbra: Imprensa da Universidade de Coimbra, 2015), 437-443. For a survey of the theory and methodology underlying other European 'schools' of research in the field of urban morphology, see Vítor Manuel Araújo de Oliveira, *A evolução das formas urbanas de Lisboa e do Porto nos séculos XIX e XX* (Porto: U. Porto Editorial, 2013), 21-48. Particularly regarding the historical-geographical British approach to urban morphology and its links to early twentieth century German research in cadastral analysis and the urban landscape through the work of British-based German geographer Michael R. G. Conzen in the 1960s, see Jeremy W. R. Whitehand, "British Urban Morphology: the Conzenian Tradition," *Urban Morphology*, volume 5, 2 (2001): 103-109.

this reconstituted timeline, could be plausibly attributed to a particular authorship and/or production date.

With the purpose of facilitating the reader's access, not just to this graphic work, but to the ensemble of the illustrations accompanying the thesis' main text, as set out on the present Volume 1, I have opted for compiling all figures on a separate Volume 2. The latter debuts with an introductory set of illustrations pertaining to the Macao peninsula general geographical location in the nineteenth century (Figs. 1 to 4), as we have seen. A compilation of the above-mentioned selected general historical maps follows. The choice of these maps was guided by the intention of illustrating, with an important level of morphological detail, significant stages of evolution in regard to the transformations at hand. Therefore, the selection starts with the 1838 topographical map of the Macao peninsula by Cândido António Ozório (Fig. 5), marking the 'before' stage or, in other words, the urban configuration immediately before the start of the modernizing process. This is followed by the 'mapping of transition' through the 1866 land and sea survey by W. A. Read (Fig. 6),⁴² the 1884 inner harbor improvement project by Adolfo Loureiro, which is based on an original 1880 city survey by Demétrio Cinatti (Fig. 7),⁴³ the 1889 published survey by António Heitor (Fig. 8), and the also published 1912 survey by the Macao cartography committee (Fig. 9). Rounding up this map collection is the 2015 vector general map of the Macao peninsula by the SAR government public works department (Fig. 10), which served as the reference plan for the interpretative mapping work.

The subsequent collection regroups precisely the transposition of the morphological information emerging from each of the historical maps into the 2015 reference map. The cartography thus produced is named 'interpretation', in order to convey the required stages of appropriating the morphological information and restituting it through the drawing process, both conducted as rigorously as possible. As a sort of visual 'table of contents', it features the location of the districts whose transformations will be detailed in the chapters of the thesis, such as the Chinese Bazaar, setting for Chapters I, II and IV (Figs. 11 to 15), the Horta da Mitra, Volong and S. Lázaro suburbs, as well as the Patane district, respectively the settings for Chapters III and V (Figs. 13 to 15). In this collection is also introduced the color code which I have adapted throughout the thesis' mapping work: the color red represents urban transformation and expansion; the color blue represents urban and infrastructural projects.

After a final introductory collection dedicated to the 2005 Historic Center of Macao's inscription on the World Heritage List, which we will detail in the next section, the subsequent collections of figures are organized by chapter. As each of the five chapters is focused on a particular district or

⁴² For more on Figures 5 and 6, see Chapter I.

⁴³ For more on Figure 7, see Chapter V.

improvement project, I have opted for producing separate specific sets of detail maps depicting the stages of each individual transformation process. In the first three chapters, this set of maps is featured at the top of the respective collection of figures, laid out on the same page in a chronological sequence, with the purpose of conveying, at a glance, a clear and integral picture of the urban transformation discussed in that chapter (see, for instance, the chronological board for Chapter I regrouping Figs. 19 to 22). At the scale of the detail map, I have engaged in producing what I have called ‘configuration hypotheses’, depicting some of the key intermediary stages of the transformation process which aren’t featured in the historical cartography. This original mapping work is primarily based on the comparative ‘interpretation’ of the selected historical maps, with which is cross-referenced the information from other primary sources. The typical chronological board is thus composed of excerpts from the afore-mentioned general interpretation reference maps, which are dated accordingly, and of these ‘configuration hypotheses’, which are dated as ‘circa the specific year’, to stress their intermediary character.

In what concerns Chapters IV and V, however, as their respective topics pertain more to the analysis of successive restructuring projects than to continuous processes of morphological evolution, I have abandoned this introductory chronological board format in favor of the linear organization of the figures in the order they are mentioned in the main text. In these latter chapters, the mapping work had to do mainly with transposing the morphological information emerging from the projects themselves, both in terms of restructuring intentions and of underlying cadastral surveys, into a common reference, in order to facilitate a comparative analysis. The final cartography often resulted in new ‘cadastral and restructuring configuration hypotheses’ based on the interpretation of the projects, cross-referenced with the appropriate general interpretation maps, themselves based on the 2015 general map. A heavy layering of morphological information, to be sure, but which hopefully resulted in an expressive production of original cartography illustrating ‘the forms’ of urban modernity in Macao.

The general purpose of this organization, as well as of the accent put on the mapping work, is that the Volume 2 - Figures may stand on its own, not just serving as an appendix for the main text, but constituting rather a visual narrative of urban transformation in its own right.

Otherwise, and given that this research is mostly focused on government sponsored urban interventions, the main ground for gathering primary sources was naturally the metropolitan and local governmental archives. Largely speaking, the available archives are those of the Central Administration, consisting of the correspondence and other exchanges between, on the one hand, the Governor of Macao and his Secretary-General, which oversaw the different departments and,

on the other hand, the governor of Macao and the Ministry of the Overseas,⁴⁴ through the Overseas Directorate-General.⁴⁵ The archives belonging to the former Ministry of the Overseas, in all its forms and since its establishment in 1834 to its extinction in 1975, are kept in the Arquivo Histórico Ultramarino (Overseas Historical Archive) in Lisbon, Portugal.⁴⁶ Those pertaining to the former Portuguese government of Macao are kept in the Arquivo de Macau (Archives of Macao) in the Macao Special Administrative Region, People's Republic of China. I was unable to research the local Public Works Department archives, which also remained in Macao after the 1999 handover, as they are currently inaccessible to the general public.⁴⁷

⁴⁴ During the Portuguese Constitutional Monarchy (1834-1910), government departments were styled *Secretarias de Estado*. These were headed by their respective Secretaries of State, who were literally styled 'Minister and Secretary of State for the Affairs of' the specific office. In the case of the Overseas department, which was coupled with the Navy department in the *Secretaria de Estado dos Negócios da Marinha e Ultramar*, the Secretary of State was styled *Ministro e Secretário de Estado dos Negócios da Marinha e Ultramar*. This remained the official norm up until the Republic, even though the department itself could also be referred to as *Ministério dos Negócios da Marinha e Ultramar* or simply *Ministério da Marinha e Ultramar*. Republican reform would confirm these simplified stylings by instituting, in 1910, the *Ministério da Marinha e Colónias* headed by its *Ministro da Marinha e Colónias*, no longer styled 'Secretary of State'. In 1911, this Ministry would split into two different offices, the *Ministério da Marinha* and the *Ministério das Colónias*, each headed by its own *Ministro*. With this in mind, and for the sake of simplicity, I have chosen to refer to the government department in charge of the 'Overseas affairs' as the Ministry of the Overseas (1834-1910)/Ministry of the Colonies (from 1910 on), and to the head of department as Minister of the Overseas/Minister of the Colonies.

⁴⁵ Since its 1843 reform, the Ministry of the Overseas, or *Secretaria de Estado dos Negócios da Marinha e Ultramar*, was organized in two sections, Navy and Overseas: *Secção da Marinha* and *Secção do Ultramar*. Each section was managed by a Directorate-General, the *Direcção-Geral da Marinha* and the *Direcção-Geral do Ultramar*, the latter further divided into sub-sections, or *repartições*, the third subsection pertaining to public works. This administrative division inside the Ministry of the Overseas remained more or less stable throughout the successive reforms and political changes, until the extinction of the Ministry itself in 1975, following the April 25, 1974 Portuguese democratic revolution. For more on this subject, see Maria Luísa Abrantes, Miguel Rui Infante, and José Sintra Martinheira. *Macau e o Oriente no Arquivo Histórico Ultramarino, 1833-1911* (Macao: Instituto Cultural de Macau, 1999), 12-15.

⁴⁶ Within the collections of the *Arquivo Histórico Ultramarino - Administração Central* (AHU-ACL), and given the timespan of my study, I have mainly drawn upon the archives of the *Secretaria de Estado dos Negócios da Marinha e Ultramar - Direcção-Geral do Ultramar* (SEMU-DGU), which holds the documents pertaining to the Overseas Directorate-General from 1834 to 1910. However, I have also used some post-1910 collections which have been filed under the transitional scope of the *Secretaria de Estado* and the first Republican *Ministério do Ultramar* (SEMU-MU-DGU), as well as under the latter's exclusive scope (MU-DGU). For more on the organization of the Lisbon Overseas Historical Archive collections, see Abrantes, *Macau e o Oriente no Arquivo Histórico Ultramarino, 1833-1911*, 11-16.

⁴⁷ Within the collections of the Archives of Macao (*Macau - Arquivo Histórico*: MO/AH), I have mainly drawn upon the archives of the *Administração Civil - Secção Administrativa* (AC/SA), 1734-1982, a subsection of the Government of Macao Secretary-General archives where documents pertaining to matters of public works were filed, together with a vast range of general topics. The Macao Public Works Department archives, including the documentation from such technical bodies as the Chinese Bazaar Sanitation Works Administrative Committee (*Comissão Administrativa das Obras de Saneamento do Bazar Chinês*), or the Committee for the Improvement of the Macao Harbors (*Missão de Melhoramentos dos Portos de Macau*)

In general, public works and urban planning issues appear in the records of these Central Administration exchanges, blended with a plethora of other general affairs topics, when there is a need for a consult or authorization by the corresponding maximum authority. This is a fairly straightforward process in the 1900s, for example, when large-scale restructuring projects are sent from Macao to Lisbon for financial and general approval. In such cases, such as the Inner Harbor or the Chinese Bazaar improvement projects, the corresponding manuscript reports and plans have been preserved in the Overseas Historical Archive in Lisbon. When we start going back in our chronological timeline, however, we see that projects made by Macao's public works engineers from the 1880s and 1890s are entirely absent from the Lisbon archive. Which indicates that their respective authorization and financing was decided locally by the governor. This local validation process, in its turn, meant that manuscript reports and plans would transit between the Macao Public Works Department and the Government Secretary-General, thus having been kept to this day in the Archives of Macao Civil Administration collection. In respect to projects dating from before the official establishment of the local Public Works Department in 1870, if manuscript documentation exists, it is wholly absent from both the metropolitan and the local general administration funds.

Therefore, when analyzing urban interventions from the 1850s to the 1870s, the indispensable primary sources were, on the one hand, the historical maps and, on the other hand, the descriptions from several written sources. These could be references to special events or to a specific work that was being done cited on local or metropolitan correspondence, but also in an indispensable source for this early period: the Government of Macao official bulletin. If, by the 1900s, this weekly publication started to focus primarily on local legislation, in the mid-nineteenth century it was a sort of local weekly newsletter, publishing anything from inauguration discourses, to the surgeon-general reports, to news of fires and other natural catastrophes that regularly fell upon Macao. Thus, as part of the work of gathering primary sources, and to complement the archival research, I have conducted a thorough survey of the official bulletin pages from 1850 to 1920, registering all entries related to public works and urban intervention, but also statistics, legislation, construction regulations, municipal and governmental budgets, etc.

The collection and thorough processing of primary sources allowed, not only for the identification of the five main themes that form the chapters of this thesis, but also for the main actors of these changes to stand out: those in positions of power, the Portuguese governors, responsible for the decision making process and for negotiating, when called for, with the metropolitan administration; the Portuguese public officials, all from a military background, in charge either of

are absent from the Archives of Macao collections. These archives are currently being kept directly by the Macao SAR Government Land, Public Works and Transport Bureau, and their consultation is subject to special authorization.

the public works engineering posts, or of the public health medical ones; technical specialists sent from the metropole on short-termed missions to study specific issues; City Senators, all Macanese of mixed-ethnicity, elected citizens in charge of the reduced scope of municipal affairs; and the Chinese entrepreneurs, heads of the powerful Fujian and Guangdong families who, throughout the nineteenth and twentieth centuries will dominate the city's economy.

With the purpose of rendering the ensemble of these primary accounts easier to process for present, as well as future research, a long and demanding transcription work was conducted including, not only the manuscript material, but also machine-typed material from the 1900s, as well as some of the most significant entries published on the Government of Macao official bulletin. As this work would ultimately prove itself a fundamental tool in establishing this thesis, the choice was made to present a selection of transcriptions in a separate volume, organized in a chronological order. Therefore, and as intended with Volume 2 - Figures, the Volume 3 - Annexes is meant to stand on its own, as a timeline of (mostly) untampered primary sources, to which the reader can turn to for historical reference as the main narrative on Volume 1 unfolds or, even better, to serve as basis for future research.

Furthermore, it also seemed important to present these transcriptions for the Portuguese reader to be able to access the original phrasing of the documents.⁴⁸ As all translations into English throughout the dissertation are of my entire responsibility, this presents an essential counterpoint to any eventual errors I unintentionally may have incurred on, or any freedom of interpretation I may have taken.

The annexes are sorted by date, so as to make them easily accessible. In the main text and footnotes on Volume 1, as well as in the bibliographical references, in each reference to a transcribed primary source, the corresponding date is highlighted in 'bold', directly linking it to its transcription on Volume 3. It consequently follows that, if a specific source is unmarked by a date highlighted in 'bold', it means that it has not been transcribed.

The assembled (and non-transcribed) primary sources also included contemporary published material by some of the narrative's main actors: reports on technical or medical problems, for example, which central government deemed important enough to warrant dissemination outside of the administrative circles. Such was the case of the many Inner Harbor improvement schemes, or of some medical reports on critical subjects, such as the Macao Public Health Director's account of the 1895 bubonic plague epidemic.

The processing of these primary records relating to Macao was complemented by a research on contemporary published texts providing additional insights on matters of philosophy and theory

⁴⁸ In view of simplifying the research process, all transcriptions in the Portuguese language have been regulated through the 1945/1973 spelling agreement.

behind the urban changes at hand. These ranged from travel logs from European sources touring the Orient in the nineteenth century and featuring depictions of Macao's physical and social landscape, to more specific issues, such as public health and sanitation, tropical medicine, material improvements and urban renovation. These are thus listed, in the bibliographical references, with the published primary sources, as 'contemporary publications'. For the purposes of comparing the Macanese experience in modernization with other Portuguese case studies, as well as with similar experiences in the European imperial network, I have resorted to secondary sources, ranging from general histories to monographic studies.

Finally, this extensive archival and bibliographical research was complemented by field research excursions to Macao conducted in 2015, 2017, and especially during the Heritages of Portuguese Influence Programme-sponsored 2018 field trip to Macao and Hong Kong. Most of the location photographs which are presented without a specific reference in this work were thus collected, by myself, during the many walkabouts through the city streets, with the main purpose of assessing and illustrating the state of conservation of the urban heritage at hand.

Placing urban history at the heart of heritage management

This last introductory note makes the link between the importance of increasing knowledge in the history of modern planning and devising better informed strategies of urban heritage conservation. In this sense, it is meant as a reflection on the possible operational interest of the thesis in the context of current urban planning practices in the Macao SAR.⁴⁹

The post-handover 2005 inclusion of the Historic Center of Macao in the World Heritage List promoted its representation as a meeting place of cultures and interweaving of influences between East and West, emphasizing the enduring spirit of tolerance and respect between its diverse communities throughout the centuries.⁵⁰ However, and somewhat paradoxically, in what concerned the city, the configuration of the protected areas, by leaving the historical Chinese districts out entirely, resulted, in my view, in perpetuating the old stereotype of the Chinese and Christian cities living back-to-back.⁵¹ It created an artificial frontier which, exacerbated by a conservation rhetoric mostly focused on the city's remarkable buildings while failing to properly

⁴⁹ For a perspective along the same lines regarding the study of architectural typologies, see the work of Macao-based architect Francisco Vizeu Pinheiro, namely "Macao Heritage. A Survey of the City's Traditions and Cultural DNA," *Review of Culture* 50 (2015): 7-27.

⁵⁰ ICOMOS - International Council on Monuments and Sites, "Advisory Body Evaluation, No. 1110, Macao (China)," whc.unesco.org, 2005.

⁵¹ For more on this subject, see Chapter I.

assess their urban context, ended up establishing, to some extent, a static ‘city-monument’ at the heart of a fast-changing urban landscape.⁵²

The configuration of the Historic Center of Macao protected areas and buffer zones (Fig. 16) was the result of a strategic effort, which had been developed since the first application for inscription on the World Heritage List in 2001, entitled “Historic Monuments of Macao,” and consisting in stitching together the protection zones of each individual monument established by local legislation into a coherent general area.⁵³ In the 2004 revised version of the application, this piecemeal strategy would be combined with the idea of determining the main buffer zone’s limits by following, as closely as possible, the layout of the sixteenth century river and sea banks (Fig. 17). The purpose of this strategy, which was based, as we have seen, in the 1980s and 1990s late Portuguese administration’s research on the city’s early-modern morphological evolution, was to effectively shift the focus of the application from a list of monuments to two historical urban areas, in order to “better represent the structure of the original settlement of Macao, enhancing its Outstanding Universal Value through a more coherent connection between its architectural monuments and the urban structures and public spaces that, as a whole, bear witness to its historical and cultural singularity.”⁵⁴ It was the emergence of the Historic Center of Macao, no longer exclusively focused on the heritage value of the city’s most remarkable architecture but, at least theoretically, recognizing this same value on its urban fabrics as well.

However, by adopting an urban heritagization strategy primarily based on those early morphological studies and how they could help regroup the classified monuments into a coherent perimeter of protection, the 2004 application, which would be accepted by UNESCO the following year, effectively excluded from considerations on heritage value all areas and districts established or consolidated beyond the sixteenth century inner harbor limits. More specifically, it excluded the two most popular and populated Chinese districts of Praia do Manduco and Bazaar, as well as practically all the nineteenth and twentieth century restructuring and reclamation areas.

This result had its roots, most probably, in a permanent hesitation, in the administration’s discourse, between building and site, monument and urban setting, as the appropriate repository

⁵² I have specifically addressed this process in Regina Campinho, “Centro Histórico de Macau, Património Mundial: a patrimonialização da cidade em questão,” in *Anais do V Encontro Internacional sobre Preservação do Patrimônio Edificado - Arquivemória*. Salvador, BA: Instituto de Arquitetos do Brasil, 2017.

⁵³ The State Administration of Cultural Heritage of the People’s Republic of China, “The Historic Monuments of Macao. Application to UNESCO for Inscription on the World Heritage List under the terms of the World Heritage Convention,” whc.unesco.org, 2001.

⁵⁴ The State Administration of Cultural Heritage of the People’s Republic of China, “The Historic Monuments of Macao. Nomination for Inscription on the World Heritage List. Supplementary Document,” whc.unesco.org, 2004.

of heritage value. The ICOMOS 2005 evaluation itself reflects this hesitation, oscillating between the “historical route,” the “historical fabric,” and the “monuments and public spaces” as material bearers of the history of Macao.⁵⁵ In turn, this hesitation can be traced to the legacy of the late Portuguese administration’s heritagization models, as expressed in the Portuguese 1980s and 1990s national legislation on conservation,⁵⁶ itself heavily influenced by the 1960s French pioneering legislative and operational practices in the same field. Having emerged as a reaction to the widespread destruction of historic centers, which was being guided by the modern principles of hygiene and circulation whose influence we saw developing increasingly from the nineteenth century on, the mid-twentieth-century French experience was, in fact, still deeply centered around the preservation of the monument and of its visual associations. It’s groundbreaking character would foster, through the following decades, many national and international sets of legislation in the same vein, namely after the establishment of the World Heritage Convention in 1972, based on the same Western and technocratic principles of what might or might not be considered to have heritage value, and what juridical tools should be deployed to best protect its integrity.⁵⁷

However, if retracing the institutional and legislative framework of the Historic Center of Macao can bring to light some of the factors determining the character of its classified property and the layout of the respective buffer zones, it cannot account for everything. The exclusion of certain districts from these perimeters of protection in benefit of others is also, most certainly, a reflection of a lack of historical knowledge on the fabrics, morphology and landscape, in sum, on the material forms of the Portuguese settlement of Macao, particularly with regard to its modern transformations. For, if the property’s outstanding universal value resides on it bearing a material evidence “of Western and Chinese cultural interchange” in the form of “special organization concepts, architectural styles, aesthetic ideals, artistic workmanship and technological interchange,”⁵⁸ the inclusion of, for instance, the Chinese harbor districts in the discussion would

⁵⁵ ICOMOS - International Council on Monuments and Sites, “Advisory Body Evaluation, No. 1110, Macao (China),” whc.unesco.org, 2005.

⁵⁶ For a thorough survey of this issue, see Miguel Tomé, *Património e Restauro em Portugal (1920-1995)* (Porto: FAUP Publicações, 2002).

⁵⁷ For more on the history of conservation theories and practices, see the survey by Francesco Bandarin and Ron van Oers, *Urban Conservation: Short History of a Modern Idea*, as well as “Urban Conservation as International Public Policy,” in *The Historic Urban Landscape. Managing Heritage in an Urban Century* (Chichester: Wiley Blackwell, 2012), 1-36, 37-74. For an overview of the “international (re)negotiation of the meaning of heritage” and of the actors of its conservation, see historian Aurélie Elisa Gfeller’s paper on the discussions leading up to the introduction of the category of ‘cultural landscapes’ in the UNESCO World Heritage Convention in 1992, “Negotiating the meaning of global heritage: ‘cultural landscapes’ in the UNESCO World Heritage Convention, 1972-92,” *Journal of Global History* 8 (2013): 483-503.

⁵⁸ ICOMOS - International Council on Monuments and Sites, “Advisory Body Evaluation, No. 1110, Macao (China),” whc.unesco.org, 2005.

have certainly complexified and expanded the parameters by which this particular heritage is understood, more specifically in terms of reassessing its identity.⁵⁹

As had been the case with the Shanghai *lilong* in the 1980s,⁶⁰ the accelerated demolition of the Macao inner harbor areas, especially from the early 2000s on, created a renovated interest in these ‘forgotten’ urban structures. Raising awareness of their social role, new research, such as architects Weijen Wang and Cheok Kio Cheong’s study of the historical Chinese *pátios* of Macao, endeavors to establish an inclusive narrative of urban heritage that aims at recognizing ‘ordinary’ residential architecture, specifically one that might convey what can be construed as Macao’s ‘Chineseness’, alongside the predominantly Portuguese/European classified monuments.⁶¹ For, as the authors point out, “neither included in the mainstream discourse of Macao’s historical architecture and urban spaces, nor included in the list of heritage buildings for protection, these Chinese urban patterns and historical buildings have been left out from efforts of urban conservation and are gradually being wiped out under the process of rapid urban development.”⁶²

I would point out, however, that this isn’t entirely true, as some parts of the Chinese Bazaar are indeed protected under local heritage legislation, although somewhat unwittingly, as this results from the presence of some remarkable building or public space and their respective protection zones. This is the case, for instance, of the area surrounding the Pagode (Chinese temple) in the old Bazaar, of Rua da Felicidade in the New Bazaar, or of Avenida Almeida Ribeiro, cutting through precisely the old Bazaar, from the inner harbor to the Praia Grande bay (Fig. 18).⁶³ They remain, however, as does the whole of the Bazaar, entirely excluded from the World Heritage main buffer zone. As mentioned, this is due to the choice of outlining the protected area, on its inner harbor side, by following the old sixteenth century shoreline which, as we shall see detailed in Chapter I, partially established the Chinese vs. Christian unofficial city ‘border’. And so, through lack of adequate preliminary research on the history of this urban landscape and the

⁵⁹ On the topic of assessing and questioning heritage identities, see the seminal work of sociologist and cultural theorist Stuart Hall, namely “Whose Heritage? Un-settling ‘The Heritage’, Re-imagining the Post-nation.” *Third Text* 49 (1999): 3-13.

⁶⁰ Non Arkaraprasertkul and Matthew Williams, “The Death and Life of Shanghai’s Alleyway Houses: Re-thinking Community and Historic Preservation,” *Revista de Cultura* 50 (2015): 136-150.

⁶¹ Weijen Wang and Cheok Kio Cheong, eds. *Regenerating Pátio. Study of Macao’s Historical Urban Fabric* (Macao: Instituto Cultural do Governo da R.A.E. de Macau, 2010).

⁶² *Ibid.*, 14.

⁶³ For more on the establishment and expansion of the old Bazaar district through the 1850s and 1860s, as well as on the of the 1870s New Bazaar around Rua da Felicidade, see Chapter I. For more on the Avenida Almeida Ribeiro old Bazaar ‘gutting’ operation, see Chapter IV.

intricate ties it maintained throughout the centuries with its neighbor, its heritage value was severely undervalued, leading to an overall deficit of legal safeguard instruments to protect it.

With this thesis, I am hopefully contributing to putting the so-called ‘Chinese’ historical fabric of Macao back in the city’s territorial planning narrative. Indeed, this is the history to which it had belonged, from the first harbor expansion projects in the 1850s, to the continuous restructuring of the riverfront over the following one hundred and fifty years, until the barriers of heritagization were ‘put up’ in the early 2000s. More than that, this research will help to question the narrow approach to the issue of heritage identity almost exclusively based on visual assessment, putting forward the notion that, whether Western or Eastern-looking, early-modern or modern, the built and morphological heritage of Macao bears witness, as a whole, to centuries of collaboration, negotiation and compromise between its communities, and that, putting it on the very pragmatical terms of operational urban planning, within which scope must fall heritage management, one should be indissociable from the other.

In this sense, I argue that the reassessment of urban heritage identities and values through a comprehensive primary-source-based historical research should be posited as an indispensable part of the initial surveys pertaining to the implementation of management strategies. And I would further argue that, among the currently-developed strategies, the Historic Urban Landscape (HUL) approach is the better suited to put this knowledge to use, in its proposed paradigm-changing transition from the twentieth-century heritage “conservation” intellectual traditions and practices, to a more twenty-first-century-oriented perspective on “managing change.”⁶⁴ Indeed, as HUL pioneer theorists Francesco Bandarin and Ron van Oers put it, “urban heritage conservation has become a moving target, to which a static, monumental approach, as inherited from the previous century, is wholly inadequate, or may become perhaps downright destructive,”⁶⁵ an appraisal which quite literally describes the conservation issues of historic sites under severe development pressure, such as the Macao divided landscape, as we have been seeing.

Meant as a tool to ‘change the conversation’ from the traditional approach to urban heritage from monument, to protection zone, to historic center, the UNESCO 2011 “Recommendation on the Historic Urban Landscape” puts heritage management at the heart of urban planning, in order to steer urban development into reconciling the necessary and natural new interventions and extensions with the conservation of the inherited urban fabric in environmentally sustainable development processes.⁶⁶ The choice of the comprehensive and inclusive ‘urban landscape’

⁶⁴ Bandarin and Van Oers, *The Historic Urban Landscape*, 193.

⁶⁵ *Ibid.*, 111.

⁶⁶ UNESCO - United Nations Educational, Scientific and Cultural Organization, “Recommendation on the Historic Urban Landscape, including a glossary of definitions,” whc.unesco.org, 2011.

concept in this context is namely one that I have found particularly useful and therefore adhered to in this thesis, in defining the city's both wider geographical and intangible settings, including:

the site's topography, geomorphology, hydrology and natural features; its built environment, both historic and contemporary; its infrastructures above and below ground; its open spaces and gardens, its land use patterns and special organization; perceptions and visual relationships; as well as other elements of the urban structure. It also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.⁶⁷

In terms of the 'historic urban landscape', the concept encompasses all the former parameters as a result of a historic layering of cultural and natural attributes. When assessing its value, therefore, I argue that one must strive to consider, not only reflections on identity, where the question 'whose heritage is this?' brings with it ideas of otherness and borders, but dare to approach the city and its multilayered history through this integrated point of view, where the question hopefully becomes 'how does this urban and architectural form translate the human complexities in its genesis?'. Particularly when it comes to landscapes fashioned by the colonial encounter, where this assessment often intertwines with identitarian ownership, this 'borderless' approach may better steer scientific objectivity towards the recognition of universal value in the parts, leading to a more all-encompassing safeguard of the whole.

⁶⁷ *Ibid.*, 3.

Reassessing Urban Landscape Identities: Chinese Entrepreneurship and the Building of a Modern Bazaar, 1856-1875

On January 4, 1856, a fire broke out in the Bazaar, Macao's most prominent Chinese district, destroying over eight hundred shophouses and affecting thousands of people.¹ Three days later, the Portuguese Governor had already issued instructions for rebuilding, projecting the widening of four main streets and a large reclamation plan. Commanding the district's land and construction policies had been the exclusive prerogatives of Canton authorities up until their eviction from Macao in 1849. Therefore, this would be the first time colonial Government intervened in the planning and management of the Bazaar, setting the beginning of the end for old Macao's Chinese and Christian cities living back-to-back.

By the 1860s, what had started as a response to a crisis, transformed into a full-fledged Government plan to expand the urban territory by restructuring the Bazaar riverfront. With the influx of refugee population from the Taiping rebellion and Second Opium War, the pressure to grow was intense, which agreed with the political agenda of ending the old divided sovereignty system and claiming Macao as a Portuguese colony. Meanwhile, the gambling and commodity concessions, including coolie trade, had helped develop local Chinese fortunes, which would turn out to be the best allies of Portuguese ambitions. In this Chapter, we will examine how, under the banner of "one single, favorable, and benevolent Government for all,"² these Guangdong and Fujian entrepreneurs financed and provided the workforce for most renovation projects culminating in the 1875 inauguration of the New Bazaar area: a unique urban landscape of Southern-Chinese architecture in an all-new modern urban mold.

¹ BG, n°11, **January 5, 1856**, 42-43, Information regarding the January 4 fire in the Chinese Bazaar (transcribed in **Volume 3 - Annexes**).

² BG, n°38, September 23, 1867, 224-226, "Project for the organisation of a public works special body" in Macao, by Major Francisco Maria da Cunha, head of the respective committee appointed by Governor José Maria da Ponte e Horta's local ordinance n°31 of September 14, 1867, **September 18, 1867** (transcribed in **Volume 3 - Annexes**).

Taking advantage of disaster: seizing control of the urban ground

On January 12, Governor Isidoro Francisco Guimarães (1851-1863)³ wrote to the Minister of the Overseas accounting for what he described as the “great calamity that had befallen Macao.”⁴ Guimarães told of how the fire had casually started in one of the Chinese shops, in the early afternoon, and had burnt all through the night, reducing most of the Bazaar to ashes, including the main traders’ houses. Providential in thwarting the effects of the wind in spreading catastrophe to the “part of the city inhabited by the Christian,”⁵ was the intervention of two French frigate crews that had been stationing in the harbor.

As the death toll was still being determined, the Governor’s mind was on the financial impact of the great fire, estimating the loss at a total of one and a half million patacas.⁶

Public finances, which we had worked so hard to straighten up, will be greatly disturbed. The revenue from the Chinese, which is the main revenue, consisting of the taxes and licenses for shops and gambling exclusives, lotteries and processed opium, will entirely cease for some time, and after will be very much reduced, until Macao may regain the prosperity it had attained.⁷

The following month, the Governor proceeded in laying out for the Minister his plan of attack to emerge from the crisis. This plan was twofold. First, he ordered a new cadastral survey of the Bazaar, in order to compel each and every Chinese landowner to register its property with the

³ Isidoro Francisco Guimarães (1808-1883) was a naval officer. Governor of Macao for an exceptional period of twelve years, from 1851 to 1863, he would personally contribute to pacify the relationship between the Portuguese and Qing administrations, marred with tensions since the assassination of Guimarães’ predecessor, Governor João Maria Ferreira do Amaral in 1849 [for more on the latter, see the next section; for more on Guimarães’ diplomatic efforts in favor of establishing a treaty regarding the sovereignty issue in Macao, particularly in the wake of the Second Opium War (1856-1860), see Chapter V]. He would subsequently serve as Minister of the Overseas (1865-1868), as well as Minister of War (1865).

⁴ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°355 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, January 12, 1856.

⁵ Ibid.

⁶ The ‘pataca’ is, to this day, the Macanese unit of currency, contemporarily abbreviated as MOP. According to Jorge Godinho, in the nineteenth century, ‘pataca’ referred “to the ‘Mexican dollar’, the *peso duro espanhol*, a silver Spanish/Mexican currency widely used in Europe, America and Asia, which had a value of 0,72 taels, being the weight in silver of the 8 real coin, and also of 720 réis (the Portuguese currency). In 1853, the value was changed to 850 réis (Decree of October 12, 1853).” See Jorge Godinho, “A History of Games of Chance in Macau: Part 2, The Foundation of the Macau Gaming Industry,” *Gaming Law Review and Economics*, vol. 17, 2 (2013): 111.

⁷ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°355 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, January 12, 1856.

Portuguese authorities, therefore being eligible for the corresponding tax. Second, urban renovation:

To take advantage of the January 4 disaster, apart from the increase in tax, I have determined to make some improvements in the layout and width of the Bazaar streets, and I am confident that something must be achieved despite the difficulties in expropriating, because the Chinese have willingly abided to everything, demonstrating themselves very reasonable and in good spirits. This part of the population has achieved a great deal, in my opinion, with the truly admirable resignation with which it has suffered such a great loss, and with the activity and diligence with which it strives to repair it. One project that I intend to see through, and which indeed is already well underway, is to build a 24-feet-wide road off the Bazaar shoreline, with a wall and several piers. This is a very important work, for the policing of the Bazaar, as well as for the defense of the City.⁸

Indeed, on January 7, the Governor had issued a local ordinance (*portaria*) laying out the guidelines for rebuilding the Bazaar under a “new form, making it less exposed to the risk of fire spreading throughout the whole district, which happens so frequently in this part of the Chinese town, completely destroying it and also endangering the part of town inhabited by the Christians.”⁹ In the same text, a committee was appointed to inspect the restructuring process and make sure that “the Bazaar is rebuilt according to the plan which will be given by this Government, and formulated in agreement with the same committee.”¹⁰

This committee, which would from now refer to itself as the “committee for street layout and demarcation of the burnt down Bazaar”¹¹ was to be presided by Major João Miguel Milner,¹² at that

⁸ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°363 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, **February 12, 1856 (transcribed in Volume 3 - Annexes)**.

⁹ BG, n°12, January 12, 1856, 72-73, Government of Macao local ordinance (*portaria*) n°2, **January 7, 1856 (transcribed in Volume 3 - Annexes)**.

¹⁰ Ibid.

¹¹ BG, n°13, January 19, 1856, 49, Public notice (*edital*) by Milner, Marques and Silva, January 13, 1856.

¹² Although his family originated from Portugal, João Miguel Milner’s place of birth remains unclear (in 1780, his grandfather, Joaquim António Milner, appeared before the Lisbon Inquisition tribunal claiming, among other things, to have been sent to England by his father in his youth, which indicates a British family connection (referenced in ANTT, PT/TT/TSO-IL/028/CX1622/16157). There is also a Máximo Milner (referenced in ANTT, PT/TT/MCO/A-C/002-011/0023/00010), born in 1731 in Lisbon from an English father and who, in 1772, is captain of the Diu armada, in service of the Portuguese State of India. Although the connection of this Máximo Milner with João Miguel Milner is difficult to establish, the fact is that the latter is first mentioned in official records in January 1842, being appointed assistant History professor, probably in one of the Goa secondary schools [local ordinance of January 24, 1842, published in the State of India’s Government official journal; see Filipe Nery Xavier, *Synopse em ordem alfabética e cronológica dos objectos mais salientes que comportam os Boletins do Governo Geral do Estado da India, publicados nos anos de 1837-1845* (Goa: Governo Geral do Estado da India, 1846), 75]. Milner couldn’t have been appointed for this teaching position in Macao because at that time there were no public schools under the Portuguese local administration. Precisely in February 1842, the City Senate (see footnote n°11) was writing to the Ministry of the Overseas demanding funding for the urgent opening of a school, “even if only of first letters, which is the main source of Civilization” (AHU, AHU-ACL-SEMU-DGU-005, Cx.0009, Letter n°5 from

time acting commander of the Macao artillery battalion, accompanied by civil citizens Lourenço Marques, procurator for Chinese affairs,¹³ and city senator Pedro Nolasco da Silva.¹⁴ Given what we can infer regarding his background, Milner's appointment seems to indicate that he must have been occupying some sort of engineering/public works senior position within the Portuguese local government, although this is not explicitly addressed in the primary sources. The local ordinance also provided for the possibility of calling upon "some respectable Chinese landowners"¹⁵ to help with the work of the committee.

The instructions for rebuilding the Bazaar followed.¹⁶ The first idea was to build a wall to separate Chinese and Christian dwellings. Although there is no further reference to this wall in the primary sources, seeming to indicate that it was never actually built, this description perfectly illustrates the frontier between the two cities, as it was understood at that time. As such, the projected wall was to be built by the respective owners at the back of the houses facing the Bazaar along Rua de S. António, Rua de S. Paulo, Largo do Senado and Rua dos Cules. Figure 19 (1838) shows that this limit corresponded to the city's historical main road from the S. António gate in the north to Largo do Senado (City Senate square), which was the heart of the Portuguese town, as well as the crossroad between the two cities, then following the sixteenth century shoreline¹⁷ towards the south

the Macao Senate to the Minister of the Overseas, February 12, 1842). Therefore, I must venture that João Miguel Milner would probably have completed his higher education either in the metropole or (most probably) in the Goa Military Academy, from 1841 reorganized into the Goa Military and Mathematics School, just before being appointed, in March 1842, second lieutenant in the Macao artillery battalion. He would eventually ascend through the military ranks, being made captain of the same battalion in 1848 (referenced in ANTT: PT/TT/RGM/H/0044/195520, PT/TT/RGM/H/0044/195521 and PT/TT/RGM/H/0044/195522).

¹³ Lourenço Marques, also a member of the City Senate, was already procurator in 1850, when he became a member of the Government Council, following the sudden death of Governor Pedro Alexandrino da Cunha. Another member of the same Council is navy captain and future Governor, Isidoro Francisco Guimarães; see Silva, *Transição de Macau para a Modernidade*, 316. For more on the Macao Procuratorate for Chinese Affairs (*Procuratura dos Negócios Sínicos*) see the next section.

¹⁴ For more on the Macao City Senate (*Leal Senado de Macau*) see the next section. For more on Pedro Nolasco da Silva and the importance of his family in the history of Macao, see Chapter II.

¹⁵ BG, n°12, January 12, 1856, 72-73, Government of Macao local ordinance n°2, **January 7, 1856 (transcribed in Volume 3 - Annexes)**.

¹⁶ BG, n°12, January 12, 1856, 72-73, "Instructions for rebuilding the Bazaar," by Governor Isidoro Francisco Guimarães, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

¹⁷ For further reference on the evolution of the Macao peninsula shoreline, see Fig. 17. In this schematic overview, included in the 2004 "Historic Monuments of Macao" application for inscription in the World Heritage List, this very same riverbank, formed by Rua da Praia Pequena and Rua do Bazar, is marked (in dark blue) as the "fifteenth century coastline" (The State Administration of Cultural Heritage of the People's Republic of China, "The Historic Monuments of Macao. Nomination for Inscription on the World Heritage List. Supplementary Document," whc.unesco.org, 2004). However, the layout of these streets, their toponymy, as well as the fact that the Chinese Bazaar started developing through reclaimed ground to the west of them, leads me to believe that this might rather be the shoreline encountered by the Portuguese at the

through Rua dos Cules (‘coolie’ street) and Rua da Alfândega (‘customs street’). Roughly, the Bazaar in 1838 (and we believe the 1856 reality to have been much the same) was the result of the occupation and urbanization of the silted riverfront in the so-called Praia Pequena bay, effectively extending the city westward from the streets that had once formed the sixteenth century inner harbor: Rua da Praia Pequena, Rua do Bazar, Rua dos Cules and Rua da Alfândega. Next to the Largo do Senado was situated the city’s central market (Grande Bazar), serving the nearby Chinese small industries, shops, inns and restaurants (*culaos*), constituting the heart of the Chinese town.¹⁸ To the south were established factories, such as the Pereira tea factory (*Casas do Pereira*),¹⁹ Chinese as well as Portuguese shipyards, and the Portuguese customs (*alfândega*). The Chinese customs (*hopu*) was situated at the top of the Praia Pequena bay. A decade later, Macao Surgeon-General Lúcio Augusto da Silva²⁰ would give a description of the Bazaar riverfront as was, referring to the “important improvements” achieved in later years, as part of his report on the province’s “public hygiene in general”:

A great part of the peninsula’s west bank, to which were turned the backs of the houses, and whose muddy riverbed was left uncovered at low-tide, was covered in all manner of filth. Almost all of this surface is now reclaimed, new streets having been established and new houses constructed, with their fronts to a riverside street, which is conveniently done and lined with piers.²¹

Indeed, this riverside street was the second project in the Bazaar rebuilding instructions, and the one Governor Guimarães held closest to his heart, as we have seen: “On the seaside [inner harbor]”²²

time of their definitive settlement in the Praia Pequena bay in the mid-sixteenth century. In any case, it is certain that the line marked (in purple) in this same map as the “seventeenth century coastline” corresponds, in fact, to the 1838 century riverbank as seen in Fig. 19, and that, throughout the nineteenth century, this riverbank would advance westward up to the 1880s harbor road (marked in light blue), as we shall see detailed in the present Chapter, as well as on Chapter II.

¹⁸ As mentioned in the Introduction, the morphological configuration of the Chinese Bazaar in the early nineteenth century, as depicted in Fig. 19, as well as what we learn from the primary sources regarding its occupation, suggest that the grounds west of the sixteenth century shoreline in the Praia Pequena bay couldn’t have constituted the location of the mid-sixteenth century original Portuguese settlement, as argued by architect Vera Domingues in her doctoral thesis *Cultura e Património Urbanísticos de Influência Portuguesa na Ásia*, 475-492. Moreover, and further refuting the author’s configuration hypothesis regarding this first settlement, Domingues relies on the regular layout of streets which were only built in the mid-nineteenth century, as part of the post-1856 fire reconstruction (Fig. 20), as well as on the layout of the Avenida Almeida Ribeiro, which was only planned and built in the twentieth century (see Chapter IV).

¹⁹ The Pereira tea factory is identified in the 1838 historical map (Fig. 5) as “*casas do Pereira*” literally meaning ‘Pereira’s houses’.

²⁰ For more on Macao Surgeon-General Lúcio Augusto da Silva, see Chapters II and III.

²¹ BG, nº46, November 14, 1870, 193-194, “Report on the Macao Public Health Department, relating to the years 1865-1867” by the province’s Surgeon-General Lúcio Augusto da Silva, **April 26, 1868 (transcribed in Volume 3 - Annexes)**.

²² Both terms ‘sea’ and ‘river’ are used in this primary source when referring to the inner harbor of Macao, which designates the peninsula’s west bank. In other sources, the distinction is often more clearly made

every effort shall be applied to continue the praya²³ which Apon is building in Tarrafeiro. This praya, with a public road along the sea, must come up to the Pereira factory. Rubble must be deposited by the coast to establish the praya.”²⁴ Based on the comparative interpretation of the 1838 and 1865-66 historical maps, Figure 20 (c.1860) depicts the configuration hypothesis for the rebuilt Bazaar some years after the fire and up to 1865. I believe that this may correspond to the plan drawn up by the 1856 committee, under the supervision of (probably) military engineer João Miguel Milner, and with the seal of approval of the Governor. In it, we can see a large reclamation area topping the Bazaar riverfront from Tarrafeiro to the former Pereira tea factory, practically duplicating the Chinese district’s surface and giving it an all-new regular profile, facing the inner harbor. No longer turned inward, it is lined up by a waterfront road, Rua Nova de El-Rei (‘King’s New Street’), to which is connected a regularly laid out network of one parallel and several perpendicular new streets, establishing a direct connection between the Bazaar thick urban fabric and the streets forming its limits (imprint of the sixteenth century shoreline, as we have seen) and thus with the Largo do Senado. This would mark the first time a planned reclamation and urbanization project was carried out in Macao, as well as the first-ever regularizing intervention in the Chinese Bazaar by the Portuguese Government.

In fact, the January 8 instructions took it one step further, recommending a building regulation. This stated that four of the Bazaar main streets were to be widened up to 20 “Chinese cubits”²⁵ and

between this west-side of the peninsula, referred to as ‘the river’ and the east-side, referred to as ‘the sea’ or the outer harbor.

²³ The term ‘praya’ derives from the Portuguese word ‘*praia*’, which is used by the author, and refers to any strip of construction-free land along a body of water or, in current English, ‘beach’. It probably originated in nineteenth century Hong Kong to indicate a seaside avenue and promenade (in 1911, Des Voeux Road was also known as Hong Kong’s Old Praya, and Conaught Road, built on reclaimed land, as the New Praya). This suggests that the term was most certainly inspired by its usage by the Portuguese in Macao, namely in referring to the city’s Praia Grande (literally ‘large praya’), also known as the peninsula’s east-side seafront.

²⁴ BG, n°12, January 12, 1856, 72-73, “Instructions for rebuilding the Bazaar” by Governor Isidoro Francisco Guimarães, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

²⁵ Ibid. In the original source in Portuguese, the term used for this specific unit of length is “*côvado china*,” which literally translates as ‘Chinese cubit’. The author is probably referring to the traditional Chinese unit of length, the *chi*, in Mandarin, or *chek*, in Cantonese, which is usually translated into English as ‘Chinese foot’, although it originally derived from a measurement unit based on the human hand. In nineteenth century Hong Kong and Macao, the *chek* was measured at approximately 37,15 centimeters (while today it has been standardized at 1/3 meter). This would give the realigned streets an approximate 7,5-meter width, corresponding to the above-mentioned 20 “Chinese cubits.” However, in another document, the Governor refers to the new riverside road as having been built with “*24 pés de largura*,” which literally translates as a ‘24-foot width’ [AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°363 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, **February 12, 1856 (transcribed in Volume 3 - Annexes)**]. We may assume that the Governor was still using the *chek* as a measurement unit, putting the riverside road at an approximate 9-meter width which, in its revised version, agrees with the information gathered from the historical maps. Therefore, it is possible that, in this context, the *chek* was being translated

realigned. Among these were Rua do Culao, down to the river, and Rua do Bazar, the Chinese district's main street, which implied setting up a compensation strategy towards the landowners who would eventually suffer a loss in the surface of their property. The idea was to offer them equivalent surface "right there, if possible, or by the seaside [in the reclaimed grounds], or by paying them. [...] One must be extremely careful in combining property rights with the Bazaar new shape."²⁶ Finally, license was granted to all landowners unaffected by the realignments to immediately begin reconstructing their shops and houses, with the incentive of a six-month tax pardon from the government.²⁷

A few days later, the committee would publish two new public notices (*editais*), urging the landowners affected by the fire to engage in clearing their ruins and in discarding the rubble onto the riverfront, so as to lay the ground for the reclamation, as well as to allow for the government officials to demarcate the layout of the widened streets. This second project already appears slightly less ambitious, now including only three streets, which should be widened up to 15 "cubits."²⁸ Confirming the layout of the new riverside road, it was also determined that "all burnt shops from the great Hopu [Chinese customs] to the end of Praia Pequena must wait for demarcation before rebuilding."²⁹ All those that should venture to rebuild beyond the demarcations, deliberately obstructing the government restructuring project for the Bazaar would be "imprisoned and taken to the Procurator to be punished."³⁰

It seems, however, that only two of the projected streets ended up being realigned, as we may infer from the comparison between Figs. 19 and 20: Rua do Culao and Rua do Bazar, the latter merely in the section formerly known as Rua da Praia Pequena. This whole section to the north of Rua do Culao seems to have suffered the greatest transformation in terms of realignment of the old Bazaar urban fabric, so as to allow this street to work as a major axis between the inner harbor's new riverfront and the city center.

to Portuguese indiscriminately as '*côvado china*' or '*pé*', the latter probably stemming from its English translation as it was used in Hong Kong.

²⁶ BG, n°12, January 12, 1856, 72-73, "Instructions for rebuilding the Bazaar" by Governor Isidoro Francisco Guimarães, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

²⁷ BG, n°12, January 12, 1856, 72-73, Public notice by Governor Isidoro Francisco Guimarães, January 11, 1856.

²⁸ Approximately 5,5 meters (see above for more details on this conversion). BG, n°13, January 19, 1856, 49, Public notice by Milner, Marques and Silva, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

²⁹ BG, n°13, January 19, 1856, 49, Public notice by Milner, Marques and Silva, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

³⁰ Ibid.

By the end of January 1856, Governor Guimarães published a new ordinance aimed at regulating construction in the city, but clearly thinking of the defaults of autonomous space appropriation practices in the Chinese Bazaar. Indeed, arguing again with the need to prevent the risk of fire spreading, the local ordinance imposed that wood or straw shacks would no longer be allowed inside the city. In the beaches and patios adjacent to the river, wrecked *tancá* ships³¹ and stilt shacks (both serving as dwellings for the poor) would also be completely forbidden. Finally, Chinese shops or houses were no longer allowed to build porches or balconies outside of their façade limits.³² In other words, although the ordinance did not express it explicitly, private initiative (in the form of construction materials and layouts) could no longer set public safety at risk, and private property could no longer overlap, nor occupy public space, for Chinese and Christian alike. A few days later, the Governor ordered the cadastral survey of the Bazaar, with the clear and stated purpose of establishing a thorough record of landowners for the layout of an overall property tax.³³

‘A State within a State’: the divided sovereignty system

Disputes over issues of sovereignty, territorial limits and ground administration had been prevalent since the establishment of the Portuguese settlement in the Macao peninsula in the mid-sixteenth century. Legal sociologist Boaventura de Sousa Santos argues that Macao presented, from the beginning, a peculiar situation of administrative, as well as judicial, “divided sovereignty.”³⁴ At the time of the 1856 great fire, however, this status had been changing at an increasingly fast pace for the best part of the latter ten years, in the sense of asserting exclusive Portuguese sovereignty over the territory. As we have seen in the immediate handling of the disaster by Governor Guimarães, establishing this full sovereignty had a fundamental expression in the control and management of the urban ground. Cadastral surveys, government-registered property titles, property taxes, building regulations, the idea of public prerogatives prevailing over private interest in the reconfiguring of the urban fabric, were all providential instruments to assert administrative legitimacy. Particularly

³¹ The *tancá* was a type of small flat ship with canopy, usually piloted by women called *tancareiras*, that often served as dwelling, as well as workplace. This Portuguese term most probably derived from the name of the ethnic group that populated these slums, or ‘floating villages’, as Macao public works director Francisco Jerónimo Luna would call them in 1873 (see below for further reference), the Tanka people, also known as ‘boat people’, historically considered to be outcasts among the predominant Han Chinese culture.

³² BG, n°14, January 26, 1856, 53, Government of Macao local ordinance n°6, January 22, 1856.

³³ BG, n°15, February 2, 1856, 57, Government of Macao local ordinance n°7, January 30, 1856. Followed by BG, n°21, March 15, 1856, 81, Public notice by Governor Isidoro Francisco Guimarães, March 14, 1856.

³⁴ Santos, *Macau: o pequeníssimo dragão*, 7. For more on this subject, see the Introduction.

set in the contested grounds of the Chinese Bazaar, this swift action in the wake of the fire would have ground-breaking significance.

The catalyst for change had been the first Anglo-Chinese conflict of 1839-1842, also known as the First Opium War, although awakening the sleeping dragon had been in the metropolitan books since the 1780s.

After the suppression of the Society of Jesus in the Portuguese empire by the Marquis of Pombal³⁵ in 1759, the metropolitan government, at the request of the Macao Senate, appointed a religious envoy to the Chinese imperial court to fill the missionary and politically influential role left vacant by the retirement of all Jesuits priests from China. The first selected Bishop of Beijing would be priest and mathematician D. Frei Alexandre de Gouveia, officially appointed by Queen D. Maria I (1777-1816) in February 1783. This was, of course, part of the plan to retake control of the former Jesuit network of power and influence through repositioning government right-hand men in the strategic former missions. As such, it naturally fell upon the Minister of the Overseas, Martinho de Melo e Castro (1770-1795), to plan for D. Gouveia's taking office, and was ultimately unsurprising that the Minister should send through him a set of instructions, as historian Fr. Manuel Teixeira puts it, for the "restauration of the Portuguese missions in China and of the colony of Macao."³⁶

The first instruction by Minister Melo e Castro, dated from April 4, 1783, was addressed to D. Frederico Guilherme de Sousa, Governor of India.³⁷ It started by setting the tone about the issue of governance, before instructing his correspondent in the projected reform³⁸ of the Macao Government.

The Port and City of Macao, an establishment worthy of our full attention and vigilance, has been insensibly forgotten, so rare have become the reports that we receive about it, either hailing from it or from Goa. [One has nevertheless been informed] that the Government of that important dominion is almost all in the City Senate [*Senado da Câmara*], and that it [the Senate] is the depositary of all income and funds belonging to the Royal Treasury, of which it disposes at its discretion, without being accountable, nor having to report to anyone; that the Governor is excluded from every Senate decision, without inspection, the same going for the

³⁵ Sebastião José de Carvalho e Melo, Marquis of Pombal, was Minister of the Kingdom (*Secretário de Estado dos Negócios Interiores do Reino*) from 1756 to 1777, during the reign of King D. José I (1750-1777).

³⁶ *Instrução para o bispo de Pequim e outros documentos para a história de Macau. Reedição fac-similada da obra com o mesmo título editada pela Agência Geral das Colónias, Lisboa, 1943* (Macao: Instituto Cultural de Macau, 1988), IV.

³⁷ At that time, and until 1844, when it was made an autonomous province (in its turn at the head of the Timor and Solor districts), Macao was part of the Portuguese State of India. This explains why, up until then, all official business, as well as civil and military appointments in the Chinese establishment hailed from the Governor in Goa.

³⁸ 'Reform', in Portuguese *reforma*, is the term used by the Minister himself in the sentence "[if the Macao City Senate learns] that Goa is preparing the reform of that Government [...]"; see *Instrução para o bispo de Pequim*, 14.

administration, collection and distribution of the Royal Treasury, nor has he any other power, if it isn't over the fortresses and their garrisons, which are made up of seventy or eighty wretched and destitute so-called soldiers; that since the position of judicial magistrate [*ouvidor*], [...] was terminated and replaced with a layman judge [*juiz leigo*],³⁹ elected or appointed by the City Senate, the administration of justice was also handed to the same Senate which, by the intervention of said judge, is the one who orders the arrest and the release, and the one who exerts that small part of jurisdiction that the Chinese didn't want to seize; that due to negligence, ignorance and lack of care by the same Senate, and due to a terror that it seems to have concocted of said Chinese, almost all the privileges, exemptions, and freedoms granted by the previous emperors to that Portuguese dominion have been lost [...].⁴⁰

On the matter of the Governor's "dependency, almost subordination to the municipal council,"⁴¹ due to the languishing state of the Portuguese military forces (which, by the way, the Minister also blamed on the Senate and its decision to reduce the garrison's wages to the bare minimum):

[This] has led to the repeated insults that we have been suffering from the Mandarins;⁴² realizing that there is no one to fear, they enter Macao and treat Her Majesty's servants as their slaves, while the City Council receives them, with menial, ignoble humiliations, hosting them with magnificence at the expense of the Royal Treasury, and treating them as their masters. If a Governor, outraged by this insulting behavior, has wanted to oppose it in the name of the Nation's honor, the Senate of Macao immediately protested against said Governor, accusing him of forfeiting the dominion [...].⁴³

In short, Minister Melo e Castro's plan to deliver the province from a situation he deemed dependent, and therefore degrading, was to reform the Portuguese customs (*alfândega*), so as to increase the Royal Treasury's revenue. Under the close watch of the governor, the new customs would serve primarily for the financing of a reformed military force which, in turn, would command independence from the Senate as well as respect and fear from the Mandarins.

³⁹ In Portuguese, *juiz leigo*, which I translated literally as 'layman judge' designates a judicial magistrate that may be appointed without having obtained a bachelor's degree in law.

⁴⁰ *Instrução para o bispo de Pequim*, 1-2.

⁴¹ *Ibid.*, 6.

⁴² 'Mandarin' was the commonly used term in Western sources, at the time and all through the nineteenth century, to describe high-ranking Qing imperial government officials. From the perspective of Qing territorial administration, Macao was under the responsibility of a magistrate referred to, in the Portuguese sources, as *Mandarim da Casa Branca* ('Mandarin of the White House'), or *zuotang*, who resided in the village of Mong-ha (situated in the Macao peninsula, outside the seventeenth century city wall, but south of Portas do Cerco, literally the 'door of the enclosure', the much contested border between Macao and China). In turn, the *zuotang* responded to the prefect of the Xiangshan (or Heungshan) district, himself subordinate to the Governor of the province of Canton (present-day Guangdong), who is also referred to in the Portuguese sources as the *Suntó*, or the Viceroy, of Canton. For a thorough analysis of the Qing local government concerning Macao, see Jin and Wu, "O enquadramento de Macau na administração local chinesa," in *Correspondência Oficial Trocada entre as Autoridades de Cantão e os Procuradores do Senado*, 16-44.

⁴³ *Instrução para o bispo de Pequim*, 6.

Melo e Castro stressed the importance of a swift and solid reform, “especially in present times which, after the peace that has just been reached between the powers of Europe⁴⁴ with the independence of the British Americas, Asia will be flooded with ships from those powers for the sake of their commerce.”⁴⁵

Indeed, from the early 1800s on, Macao became a hub serving the commercial interests of international companies trading in the port of Canton from October to January and residing in the city the rest of the year while waiting for the factories to reopen.⁴⁶ British companies were taking the lead, dealing mainly with tea at first, but quickly diversifying into the export of opium in all its forms to China, already an important commodity by the end of the eighteenth century, though forbidden by imperial law. Macao would gradually become the harbor of all this licit and illicit trade as, despite prohibition and the persecution of smugglers by Chinese authorities, business thrived, benefiting everyone involved. However, growing British hegemony, built by controlling opium production in Bengal, as well as most of the traffic, which was initially put under the East India Company’s scope, would ultimately lead to another situation foreseen by Minister Melo e Castro: the British attempts to annex Macao, under the guise of military protection.⁴⁷ In the face of Portuguese resistance, British ships started to look elsewhere in the Pearl River Delta for a permanent base, setting up makeshift and illegal establishments in the islands of Lintin, Lantau and Hong Kong.

Due to this particular set of circumstances, the economic balance of the region slowly shifted, inevitably bringing about political change, achieved mainly through the aftermath of the First Opium War.⁴⁸ Despite the confidence portrayed by the Portuguese Minister of the Overseas and even the Governor of the State of India in their 1783/1784 ‘instructions’, virtually nothing would really change in the management of Macao which, well before the outbreak of conflict between England and China, had already lost its exclusive status in the context of trade, as well as diplomatic relations within the Qing administration. The eruption of the liberal revolution in Portugal (1820) as well as the Brazilian call for independence (1821) would deal a great economic, political and

⁴⁴ The Minister is referring to the armed conflict that became known in the United States of America as the French and Indian War (1754-1763), fought between the North-American colonies of both the British Empire and France which, in turn, would eventually lead to the American War of Independence.

⁴⁵ *Instrução para o bispo de Pequim*, 5.

⁴⁶ For more on this subject, see the Introduction. See also Van Dyke, *The Canton Trade*, as well as *Merchants of Canton and Macao*; Farris, *Enclave to Urbanity*; Hellman, *This House Is Not a Home*.

⁴⁷ *Instrução para o bispo de Pequim*, 16-17.

⁴⁸ For more on this subject, see the Introduction. See also Lovell, *The Opium War*; Dias, *Macau e a I Guerra do Ópio*.

social blow upon the Portuguese imperial plan in general, and to its colonial ambitions in Macao in particular. As historian Ângela Guimarães puts it:

When, in 1839, events started escalating into what would later be known as the First Opium War, Macao was already little more than the scenery where a significant part of British business unfurled. [...] The status of Macao wasn't so much altered [by the war], as it was emptied of its sense by the development of the surrounding circumstances.⁴⁹

Therefore, and despite the fact that the new constitutional governments emerging from the Portuguese Civil War (1828-1834) immediately started to implement a global administrative strategy for the salvaged empire through the issue of a relatively standardized set of legislation, the governance situation in 1830s Macao was essentially the same in the Opium War years as described fifty years earlier.

A fundamental angle of this strategy was the reform of local administration, that is to say, of district and municipal bodies. A new Administrative Code had been promulgated on December 31, 1836, as part of Minister of the Kingdom Passos Manuel's extensive set of government reforms,⁵⁰ determining the territorial division of the Portuguese mainland, as well as that of the Azores and Madeira islands. As for the "other overseas provinces," mention was made that "special provisions" would subsequently determine their specific territorial division and the "administrative system more practical to each one of them."⁵¹ It also set out the responsibilities of local authorities, namely of municipal bodies (*câmaras municipais*), within which naturally fell the municipal public works, such as renovating or building new roads, streets, bridges or fountains as needed, as well as the management of urban public space and infrastructure, which ranged from matters of hygiene to traffic or public safety.

⁴⁹ Ângela Guimarães, "A conjuntura política: antes de Hong Kong," in *História dos Portugueses no Extremo Oriente*, ed. A. H. de Oliveira Marques (Lisboa: Fundação Oriente, 2002), vol. 3, 32.

⁵⁰ The 1836 Administrative Code was actually the first such text in the history of the Portuguese administrative tradition. Borrowing on Ministry of Treasury (*Ministro da Fazenda*) Mouzinho da Silveira's 1832 reforms (see below; see also Chapter II), it had first been legislated in 1835, although it wouldn't be formally published and promulgated before Passos Manuel's tenure as Minister of the Kingdom (*Ministro do Reino*) (1836-1837). Jurist, representative, and politician Manuel da Silva Passos (1805-1862), better known as Passos Manuel, was one of the most prominent personalities of the early Portuguese liberal governments, having initiated several decisive reforms, namely regarding the country's techno-scientific education, with the establishment of the Lisbon and Porto Medical-Surgical and Polytechnical Schools (for more on the latter, see Chapter II).

⁵¹ DG, n°6, January 7, 1837, 22, National ordinance (*decreto*) of December 31, 1836, promulgating the Portuguese Administrative Code.

The national ordinances (*decretos*) of 1834 and 1840 establishing respectively the old City Senates of Macao⁵² and Goa⁵³ as municipal bodies must be understood, I would argue, in this context of liberal governments' successive attempts at redefining territorial management and at striving to find the delicate balance between metropolitan centralization and local autonomy.⁵⁴ Interestingly, the fact that municipal reform was, at least in theory, affecting the faraway State of India, as well as the reference in the 1836 Administrative Code to the need to provide for the same reform in the overseas provinces other than Azores and Madeira, even if a case-by-case adaptation would necessarily be needed, indicates that Lisbon was already considering the territory to be divided and administered, not just at the continental scale, but rather at the imperial scale. In this sense, and for example, Minister of Treasury Mouzinho da Silveira's French-inspired administrative reform ordinance of May 16, 1832,⁵⁵ intending for municipalities to become "instruments of central power in a disciplined, obedient and effective administrative apparatus, so as to win any resistance to Reason and ensure the necessary centralization,"⁵⁶ could be seen, to borrow Daniel R. Headrick's expression, as an attempt at establishing the "tentacles"⁵⁷ of metropolitan power reaching from Lisbon to Porto, Braga or Bragança, but also across the world to Goa and Macau on equal terms. This sort of homogenizing conception of Portuguese establishments throughout the world as pieces of European land regardless of specific geographic locations or, as historian Valentim Alexandre puts it, "this extreme form of [administrative] assimilation found, undoubtedly, its roots in the Age of Enlightenment's belief in the existence of universal values, and therefore of laws and forms of government applicable to all men, irrespective of time and place."⁵⁸

Needless to say that this vision was not in the least shared by the Macao Senate which, historian Maria Teresa Lopes da Silva argues, despite merely representing, before the law, the city's municipal council, "had never ceased to act as the main [internal and external] political body of a

⁵² Silva, *Transição de Macau para a Modernidade*, 71, 243-245.

⁵³ Faria, "O papel dos luso-descendentes na Engenharia Militar," 228.

⁵⁴ For more on local administration legislative reform by the constitutional monarchy governments, starting right before the adoption of the 1822 Portuguese Constitution, see Henrique Dias da Silva, "Reformas Administrativas em Portugal desde o Século XIX," *Jurismat* 1 (2012): 65-97.

⁵⁵ For more on Minister of Treasury Mouzinho da Silveira, as well as on his 1832 administrative reforms, see Chapter II.

⁵⁶ Silva, "Reformas Administrativas", 69. The author is citing jurist Diogo Freitas do Amaral, *Curso de Direito Administrativo*, 3ª Edição (Coimbra: Almedina, 2006) vol. I, 109.

⁵⁷ Headrick, *The tentacles of progress*.

⁵⁸ Alexandre, "A Questão Colonial no Portugal Oitocentista," 49-50.

mercantile republic”⁵⁹ and as the “repository of the autonomist and centripetal purposes of the city’s oligarchy,”⁶⁰ more often than not setting itself against Lisbon directives.

Elected directly or indirectly (which meant that it was appointed by the Governor of India or sometimes by central government), according to the applying specific metropolitan legislation,⁶¹ the Senate consisted of five seats, drawn from a pool of approximately one hundred eligible citizens.⁶² Given that, in 1841, the population of Macao was composed by approximately 25.000 souls, from which 20.000 were Chinese,⁶³ about 1.100 were slaves, 2.200 were women and 1.700 were men,⁶⁴ this meant that these one hundred eligible citizens represented, in fact, less than 6% of the city’s Christian, free, male population, or 0,4% of the total population.

Of course, the Chinese population was excluded from representation. Only in 1868 would the total of Chinese dwellings be considered for inclusion in the official statistic used to determine the number of seats in the Senate.⁶⁵ However, and even if the election of naturalized citizens was a priori regulated by national law,⁶⁶ in the primary sources, no Chinese name is ever associated with representation in the municipal, nor in any other government body for that matter, at least not before 1918, when celebrated businessman Lou Lim Ieoc, son of Lou Kau, naturalized Portuguese in 1886, would become the first Chinese descendant to siege in the Government Council.⁶⁷ Until then, more

⁵⁹ Silva, *Transição de Macau para a Modernidade*, 244-245.

⁶⁰ Silva, *Transição de Macau para a Modernidade*, 245. Here the author is citing António Manuel Hespanha, *Panorama da História Institucional e Jurídica de Macau* (Macao: Fundação Macau, 1995), 17.

⁶¹ The national ordinance of September 20, 1844, which separated Macao from the State of India, establishing the Government of Macao, Timor and Solor with head in the city of Macao, confirmed the attributions of the Senate as established in the 1836 Administrative Code. This would effectively define the Senate’s obligation to abide by the system of direct election (DG, n°233, October 2, 1844, 304-306).

⁶² Silva, *Transição de Macau para a Modernidade*, 244.

⁶³ Dias, *A Urbanização e a Arquitectura dos Portugueses em Macau*, 56.

⁶⁴ AHU, AHU-ACL-SEMU-DGU-005, Cx.0009, Letter n°216 from the Governor of Macao, Adrião Acácio da Silveira Pinto, to the Minister of the Overseas, forwarding the 1841 Christian population survey, February 12, 1842.

⁶⁵ Report from the advisory committee in charge of studying the “alterations that must be made to the Administrative Code of March 18, 1842, that it may, practically and effectively, be enforced in this colony”: “[...] the committee sees no reason to exclude the Chinese from the city’s total number of dwellings, for it is certain that the council also exerts municipal jurisdiction upon the Chinese population.” BG, n°49, December 7, 1868, 226-227.

⁶⁶ National ordinance of January 9, 1834, regulating the existing municipal councils, *Colecção de Decretos e Regulamentos Mandados Publicar por Sua Majestade Imperial o Regente do Reino desde a sua entrada em Lisboa até à Instalação das Câmaras Legislativas* (Lisboa, Imprensa Nacional, 1835), 112-116.

⁶⁷ Lin, *Chinese Merchants in Macau in Late Qing*, 61. For more on Lou Lim Ieoc and his father, Lou Kau, as well as on the role of the Lou family in real estate development in Macao, see Chapter IV.

often than not, the senator seats were reserved for the most prominent tax-paying Macanese trader families or for their right-hand men.⁶⁸

Among the five councilmen elected, the most important post was that of Procurator for Chinese affairs (*Procurador dos negócios sînicos*). In a time when the role of the Senate went far beyond the strict municipal sphere, having to manage the establishment's actual government as well as its treasury, the Procurator was the settlers' principal magistrate. In the context of the divided sovereignty system, with "the presence in Macao of two jurisdictions with different nationalities,"⁶⁹ each responsible for its own, he also took over the role of diplomatic representative before the hierarchy of Qing officials. With the growing influx of Chinese population residing *intra muros*, the Procurator added yet again to his list of duties, now the role of arbitrator in civil cases involving Chinese and Christian citizens. The Procuratorate then evolved into a sort of unofficial combination between a Portuguese tribunal and a local ministry of foreign affairs gaining, through the years, and before its neighbors, "the prestige bestowed by tradition."⁷⁰ Despite the frequent lack of formal legal or diplomatic training in the majority of the Procurators' backgrounds,⁷¹ as well as the proverbial shadow that it cast over the Governor's diplomatic role, this institution persisted through the successive administrative reforms of the 1830s and 1840s, which undoubtedly proves its relevance among Macanese institutions as the "only legal authority recognized by the Chinese Empire to represent the Establishment."⁷² In the same vein, the national ordinance of September 20, 1844, establishing the autonomous Government of the Macao province, while confirming that the Senate's role was to be confined strictly to the municipal sphere, stated that "the City Procurator will [continue to] perform all [responsibilities] demanded by the interaction with the Chinese Authorities."⁷³

Therefore, everyone agreed that, as the 1867 government committee on the responsibilities of the Procuratorate would put it, its existence in Macao was "indisputably necessary, for it presented an

⁶⁸ For a thorough analysis of the Macao Senate in the mid-nineteenth century, see Maria Teresa Lopes da Silva, "O Senado: funções, constituição e objectivos político-económicos," in Silva, *Transição de Macau para a Modernidade*, 243-288.

⁶⁹ Report on the responsibilities of the city of Macao's Procuratorate for Chinese Affairs, by the committee appointed by Governor José Maria da Ponte e Horta's local ordinances of November 22, 1866, and February 6, 1867, March 21, 1867 (BG, n°12, March 25, 1867, 61-64).

⁷⁰ *Ibid.*

⁷¹ Maria Teresa Lopes da Silva cites José Torres in noting that "the Procurator, in his judgements, neither follows the Portuguese nor the Chinese law, but rather his own discretion;" see Silva, *Transição de Macau para a Modernidade*, 279.

⁷² Words from great reformer Governor Ferreira do Amaral himself, in a letter to the Minister of the Overseas from January 25, 1849, cited by Silva, *Transição de Macau para a Modernidade*, 245, 279.

⁷³ National ordinance of September 20, 1844, DG, n°233, October 2, 1844, 304-306.

indispensable value as an exclusive tribunal for a specific population.”⁷⁴ The issue as the First Opium War was looming was, as it had been in the 1780s, with governance. Who was governing Macao, and exactly what was being governed?

In May 1839, while the Daoguang Emperor's crackdown on illegal opium trade was starting to unfurl in Canton, Macao Governor Adrião Acácio da Silveira Pinto, later responsible for keeping the war at bay by holding on to a position of neutrality, in his writings to the Minister of the Overseas, expressed the recognizably metropolitan image on the issue of the province's governance:

This city, despite being one of the Portuguese dominions, has never ceased to be claimed by the Emperor of China, and the rent [*foro*] which is annually payed to him (from which we could already have been freed if we had been more patriotic, and if we hadn't wasted important occasions to gain independence by caring only for petty and sordid private interests) [...] and the indecent dependency that exists and has always existed on the Mandarins, quite confirms him in this thought. Any work in the city can't be done without license from the Mandarins, which costs many patacas; they provide us with food, any sort of artisans, and even servants; because the Portuguese here, or at least those who call themselves that, don't want to belong to any other class but that of trade, church, or ship employment, and would think less of themselves to work in mechanical crafts.”⁷⁵

Or, again, in September:

“In the copies of the correspondence that has been exchanged with the Chinese, and that I have sent to you on this occasion, Your Excellency will see in detail how this important business [the conflicts caused by the Emperor's decision to eradicate opium trade] has been handled, and I am certain that [Your Excellency] will be filled with indignation when realizing how they express themselves, considering us within the number of their slaves, and [Your Excellency] cannot imagine how my national pride has suffered for it, although, when I came to this commission, Her Majesty's government knew that this method of correspondence had been used for the last 300 years, and even though it could have been changed a long time ago if at any point any of the authorities that have preceded me had been more patriotic, which unfortunately hasn't happened, and because the only rule which must be followed in these regions is to keep to the way things are done, for the conservation, not the annihilation, of the establishment, endure we must, until a good opportunity comes along which, however, must not go to waste.”⁷⁶

Unsurprisingly, as the self-appointed guardian of the *status quo*, or of “the way things were done” as Silveira Pinto had put it, the Senate had a different view, as expressed by Judge José Maria Rodrigues de Bastos, also on September 1839, in correspondence with the Minister of the Overseas.

⁷⁴ Report on the responsibilities of the city of Macao's Procuratorate for Chinese Affairs, by the committee appointed by Governor José Maria da Ponte e Horta's local ordinances of November 22, 1866 and February 6, 1867, March 21, 1867 (BG, n°12, March 25, 1867, 61-64).

⁷⁵ Letter n°59 from the Governor of Macao, Adrião Acácio da Silveira Pinto, to the Minister of the Overseas, Mai 27, 1839. Transcribed in Dias, *Macau e a I Guerra do Ópio*, 101-104.

⁷⁶ Letter n°106 from the Governor of Macao, Adrião Acácio da Silveira Pinto, to the Minister of the Overseas, September 16, 1839. Transcribed in Dias, *Macau e a I Guerra do Ópio*, 118-120.

By this time, skirmish had turned into armed conflict in the Pearl River Delta ports, forcing Qing and British governments to the brink of war.

I couldn't help but wonder, seeing here established two governments, Chinese and Portuguese, each governing its subjects in perfect peace; thus maintaining a State within a State for three centuries. If our alliance with China were properly taken into account, this establishment wouldn't be bothered as frequently by foreigners, particularly by the British (as we so often have seen), envious of seeing the Portuguese flag hoisted in these parts, so much so that, in all of Asia, this is the only place where we alone possess some land; and because of our alliance in Europe, they wish to be preferred here as well, when sound reason demands that the first alliance be with the owner of the Ground [*dono do Solo*].⁷⁷

The opportunity for a show of patriotism, so longed by Governor Silveira Pinto or, in other words, for the assertion of the metropolitan vision of Macao as a territory of the Portuguese Crown, finally came with the end of the Anglo-Chinese conflict. Humiliated by the British, Qing officials felt nonetheless under no obligation of signing away the Emperor's sovereignty over it. After all, Portugal had never joined the hostile coalition and, as such, was not invited (nor made any official attempt, despite Silveira Pinto's urging the Minister of the Overseas on the matter) to take part in the 1842 Nanjing negotiations which put an end to the war. With the issue of a Sino-Portuguese treaty regarding the issue of sovereignty over Macao endlessly postponed, Silveira Pinto being called back to Lisbon, and the Procurator reassuming his diplomatic role with local Qing officials, by the end of 1845, governance seemed to fall back, unchallenged, into the old divided system. At least until the appointment of the most 'patriotic' (in Silveira Pinto's sense) Governor Macao had ever seen, Captain João Maria Ferreira do Amaral (1846-1849).⁷⁸

⁷⁷ Letter n°26 from Macao Judge José Maria Rodrigues de Bastos to the Minister of the Overseas, September 26, 1839. Transcribed in Dias, *Sob o signo da transição*, 51-52.

⁷⁸ Captain João Maria Ferreira do Amaral (1803-1849) was a graduate from the Lisbon Academia Real de Marinha (Royal Naval Academy). In 1821, at eighteen years old, he enlisted in the Portuguese imperial troops fighting against the Brazilian independence, where he would end up losing his right arm. Upon returning to regular service as a naval officer, he would quickly ally himself with the liberal side during the Portuguese Civil War (1828-1834), during which he probably met future Minister of the Overseas Joaquim José Falcão (1842-1846), responsible for his appointment as Governor of Macao a decade later. Starting his career in the overseas with a commanding post in the Angola naval station in 1838, Ferreira do Amaral would soon turn to politics, having officially left the navy in 1845 to take his post as Governor of Macao the following year. The growing animosity caused within the Qing administration by his unapologetic governing style would ultimately lead to his assassination on August 22, 1849, in the Macao Campo roads. For a thorough research on Ferreira do Amaral and his governorship in Macao, as well as on the sociopolitical context surrounding it, see Silva, *Transição de Macau para a Modernidade*.

Under ‘One single, favorable and benevolent Government for all’: asserting Portuguese sovereignty

Appointed by fellow Liberal Wars officer and now Minister of the Overseas Joaquim José Falcão (1842-1846), Ferreira do Amaral arrived with the rather ambitious mission to “reestablish and entirely rebuild” Macao.⁷⁹ As his predecessor Melo e Castro had been in 1783, Minister Falcão was keenly aware that change was severely needed in the province’s governance, even more so in the aftermath of the 1842 Treaty of Nanjing. In the ‘instructions’ given to Ferreira do Amaral, he described the new geopolitical order sprung from the forceful opening of the so-called treaty ports along the South-China Sea, as well as from the establishment of the British free port of Hong Kong right next door to Macao, in which the Portuguese settlement needed to find a new place. In office since September 1842, Falcão had already put some changes in motion, promoting the autonomy of the province through its separation from the State of India in 1844, as we have seen, as well as promoting its competitiveness, through the decision, in November 1845, to abolish the Portuguese customs, declaring Macao, thereafter, a free port.⁸⁰

As far as the issue of sovereignty went, however, the Minister made no reference whatsoever to it in his ‘instructions’. Falcão simply praised Ferreira do Amaral’s “knowledge and experience,” as well as the “energy of his character and his patriotism,”⁸¹ all of which had made him worthy of the Queen’s confidence and dependable in this endeavor. In Falcão’s mind, the most pressing issue would be to repair the province’s finances after the economic instability indirectly caused by the conflict, and aggravated by Macao’s new status as free port. The treasury needed income, which could only come from one place: establishing a general property tax. Already attempted, to no avail, by his predecessor, this was the arduous mission that would require all of Ferreira do Amaral’s ‘patriotism’ and then some.

This focus, in the Minister’s discourse, on the necessity of property tax as instrumental to the renewal and even to the survival of Macao, without making it explicitly, masterfully retackled the issue of ‘the owner of the Ground’ (to paraphrase Senator Judge Rodrigues de Bastos). For, to have the legitimacy to impose a property tax to the city, Amaral would first need to be recognized by its diverse population as the sole authority in charge of managing the territory. And manage it he would indeed. Instead of merely hoisting the Portuguese banner in the Taipa lighthouse, as the Minister

⁷⁹ Instructions for João Maria Ferreira do Amaral by Minister of the Overseas Joaquim José Falcão on January 20, 1846. Transcribed in Silva, *Transição de Macau para a Modernidade*, 345-351.

⁸⁰ National ordinance of November 25, 1845, cited by Silva, *Transição de Macau para a Modernidade*, 89.

⁸¹ Instructions for João Maria Ferreira do Amaral by Minister of the Overseas Joaquim José Falcão on January 20, 1846. Transcribed in Silva, *Transição de Macau para a Modernidade*, 345-351.

timidly suggested, Amaral set out to claim the whole of the urban landscape for the Portuguese Crown.

Backed by another one of Minister Falcão's national ordinances designed to give the governors in general more freedom to make important calls on the ground without having to wait for central government's approval,⁸² Amaral started his functions in Macao, on April 21, 1846. By summer, it was clear in the Governor's mind that, for Macao to fully enjoy the privileges of its newly free port, the Chinese customs, or Hopu, had to go. And that therefore, the Chinese population had to be included in the property tax collection. As Macao Judge Morais Carneiro, one of Ferreira do Amaral's most trusted magistrates, would later put it, by this time the Governor was enjoying a sort of new "moral force [...] enabling him to put his ideas into practice, that is, to turn Macao into a Portuguese possession which, without that success, would undoubtedly have taken more time." Morais Carneiro was referring to the "rebellion of the *faitiões*," the Chinese ships that provided passage and transport between the Pearl River Delta ports, and which Ferreira do Amaral had wanted to register in Macao and to pay a small anchorage fee, so the official discourse went, to repair the Tarrafeiro piers. Probably instigated by the local officials, the owners of the *faitiões* descended upon the city streets in the early morning of October 8, where they were met by the Portuguese army, which repelled the attack in a few hours. Facing the subsequent threat by Chinese authorities to close all shops in the Bazaar in order to shut down food supplies to the population, Amaral responded instantly by threatening to use Portuguese artillery to tear it all down.⁸³ After this, in the Governor's own words, "the way had been paved to begin the regeneration [*regeneração*] of Macao."⁸⁴

Feeling empowered by these events, on October 21, Amaral published his first property tax notice (*edital*), stating that he intended to consult with "the heads [*cabeças*] and other respectable persons [among the Chinese population] so that they would all reasonably agree with Government in the way these tributes should be collected."⁸⁵ It also stated that "all Chinese people that no longer wish

⁸² National ordinance of May 2, 1843, DG, n°104, May 5, 1843, 109. This ordinance stated that the "Governors of the Overseas Provinces may be authorised, after consulting their respective Councils, to provide, in any case when appealing to the Metropole might compromise the security of the State, or an irreparable prejudice to their special interest, immediately informing the Government of the measures taken in this circumstance."

⁸³ For more on this subject, as well as on Ferreira do Amaral's decisive action, see Maria Teresa Lopes da Silva, "A construção da soberania portuguesa em Macau," in Silva, *Transição de Macau para a Modernidade*, 127-184.

⁸⁴ Ferreira do Amaral, in a letter to the Minister of the Overseas on December 27, 1847, cited by Silva, *Transição de Macau para a Modernidade*, 130.

⁸⁵ Public notice by Governor of Macao, João Maria Ferreira do Amaral, on October 21, 1846, cited by Silva, *Transição de Macau para a Modernidade*, 134.

to live with the Portuguese [...] may leave Macao, taking all their belongings, without fear of persecution, which means that those who stay shall abide by these rules.”⁸⁶ The formal local ordinance regarding this issue would be published on June 21, 1847.⁸⁷ Roughly two years into his governorship, on March 1848, Amaral boasted to the Minister of the Overseas that, despite their initial opposition, their appeals to the Canton authorities, and “the intrigues of the Senate [...], the Chinese are paying their tributes to the Portuguese government [...], and all that’s lacking is to tax the Chinese living outside the City, which I will be able to do as soon as the road is completed.”⁸⁸

This last statement by the Governor leads us back to the issue of the contested ‘ownership’ of city grounds. In Ferreira do Amaral’s view, the whole of the Macao peninsula was Portuguese territory. The local Mandarins, on the other hand, maintained that the 1620s city wall separated the southern (*intra muros*) urban area for which the Portuguese payed rent to the Emperor, from the northern (*extra muros*) marshes and rice fields, which were being farmed by the Chinese. This area was known as Campo (the field).⁸⁹ Always the established-fact strategist, Amaral decided right at the beginning of 1847, with the support of Judge Morais Carneiro, to launch a project to realign and improve the old Campo road connecting the east and west northern city gates to the isthmus barrier in the northern top of the peninsula (Portas do Cerco), which he considered to be the frontier between Portuguese Macao and mainland China. This would accomplish a double purpose: first, it would “undoubtedly prove that the grounds up to the Portas do Cerco belong to us”⁹⁰ and, consequently, it would allow him to address as subjects of Her Majesty “all those that possess land or marshes in those grounds [informing them that they] were no longer obligated to pay rent to the Chinese authorities, but to the Portuguese government alone,”⁹¹ as stated in his public notice of May 5, 1848.

⁸⁶ Ibid.

⁸⁷ Information contained in the footnotes accompanying the province’s budgets since at least the 1880s, referring to the revenues from the Chinese property tax. Example in BG, supplement to n°11, March 21, 1888, 97-115.

⁸⁸ AHU, AHU-ACL-SEMU-DGU-005, Cx.0016, Letter n°230 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, March 27, 1848.

⁸⁹ For further reference on the location of the Campo marshlands, see Fig. 11.

⁹⁰ AHU, AHU-ACL-SEMU-DGU-005, Cx.0015, Letter n°100 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **March 24, 1847 (transcribed in Volume 3 - Annexes)**. Attached to this letter is the Governor’s public notice of February 27, 1847 informing “the Chinese, living together with the Portuguese in Macao,” of his decision to build a road, “from Porta do Campo [Campo gate] up to the Portas do Cerco temple and ending in S. António gate.”

⁹¹ Copy of Ferreira do Amaral’s public notice of May 5, 1848, attached to the letter n°241 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **May 22, 1848 (AHU, AHU-ACL-SEMU-DGU-005, Cx.0016) (transcribed in Volume 3 - Annexes)**.

This brazen attitude did not go down well with the Mandarin of Xiangshan, who wrote to the Procurator for Chinese Affairs a letter of protest stating that, not only were “the Portuguese building a road from Porta do Campo [Campo gate] to Lin-tin-chin in Mong-ha [...] in a land for which they don’t pay rent,” but that to do so, they were digging up graves, “which is a grave offense to Imperial laws, and a crime equating to that of murder.”⁹² He appealed to the Procurator as a “man of sound mind, consciousness and intelligence” to “immediately stop construction and not allow this to go on.”⁹³

Ferreira do Amaral did not appreciate the district Mandarin addressing the Procurator as if he were in charge, nor the thinly veiled threats contained in his discourse. In his mind, the Campo could not go on as it was, “completely covered with graves, so much so that Macao appears more like a Chinese cemetery than a Portuguese settlement.”⁹⁴ As far as he was concerned, the Chinese population had been warned in advance to remove their ancestor’s graves, poor families had been offered support to do so⁹⁵ and, by the end of construction, the government had even provided for a new Chinese graveyard so as to discourage the customary erratic burials.⁹⁶ And so, despite the Mandarin’s and also the Senate’s protests,⁹⁷ Amaral pressed on, reassuring the Minister of the Overseas that “the Chinese themselves were now saying that building the road was a good thing.”⁹⁸

To finance his project, Governor Ferreira do Amaral started up a fundraiser (*subscrição*). At the time, due to the scarcity of public funds, this was the traditional method to enable most projects of public interest. In 1842, for example, when the Senate was trying to regain some autonomy in the governance of the province, as we have seen, its president had written to the Minister of the Overseas asking for funds to open primary schools and to invest in public works, arguing that “this municipal council doesn’t have any resources to apply in any public works of first necessity, such as repairing or cleaning the city’s public roads, piers, etc., which have only been possible due to

⁹² Translated copy of the letter from Lu, Mandarin of Xiangshan (*Hiang-Xan* in the original text) to the Procurator for Chinese Affairs, on February 26, 1847, attached to the letter n°100 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **March 24, 1847** (AHU, AHU-ACL-SEMU-DGU-005, Cx.0015) (**transcribed in Volume 3 - Annexes**).

⁹³ *Ibid.*

⁹⁴ AHU, AHU-ACL-SEMU-DGU-005, Cx.0015, Letter n°100 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **March 24, 1847** (**transcribed in Volume 3 - Annexes**).

⁹⁵ *Ibid.*

⁹⁶ Silva, *Transição de Macau para a Modernidade*, 175.

⁹⁷ *Ibid.*

⁹⁸ AHU, AHU-ACL-SEMU-DGU-005, Cx.0015, Letter n°100 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **March 24, 1847** (**transcribed in Volume 3 - Annexes**).

spontaneous fundraisings by national, as well as foreign, citizens.”⁹⁹ Also, when Amaral had suggested that the *faitiões* should pay for anchorage to finance repairs on the pier, they replied that all necessary work was customarily financed by a fundraiser set up among the owners.¹⁰⁰ To build his road, the Governor was then following the customary practice to rely on the people of Macao, and have faith that they would all trust and grow to share his idea of, as he put it before the Mandarin of Xiangshan, “public interest.”¹⁰¹

Despite the unfurling of the opposition, not just about the confrontation with the Qing authorities regarding the issue of sovereignty over the *extra muros* grounds, but also about the establishment of property tax in general, the interesting fact is that quite a number of people, either Portuguese, Macanese, British or Chinese, responded enthusiastically to the fundraiser.¹⁰² In February 1847, Macanese citizen Caetano Gomes da Silva had already donated part of his property, the so-called “Horta Begman” (later renamed Horta de Volong)¹⁰³ to allow for the construction of the Campo road’s eastern section.¹⁰⁴ The following May, the subscription had already yielded a total sum of 760 patacas, which would ultimately make up for almost half of the total cost of the road works, rising to 1.600 patacas at the end of 1848.¹⁰⁵ Among the donors were the most prominent Macanese personalities, whether traditionally having been favorable to the Governor or not,¹⁰⁶ such as Alexandrino António de Melo, a rich ship owner and future Baron of Cercal,¹⁰⁷ Manuel Pereira, owner of the above-mentioned Bazaar riverfront Pereira tea factory, or even Bernardo Estêvão Carneiro, one of Ferreira do Amaral’s most fervent opponents.¹⁰⁸ Other than the Macanese, the list

⁹⁹ AHU, AHU-ACL-SEMU-DGU-005, Cx.0009, Letter n°5 from the Macao Senate to the Minister of the Overseas, February 12, 1842.

¹⁰⁰ Silva, *Transição de Macau para a Modernidade*, 129.

¹⁰¹ AHU, AHU-ACL-SEMU-DGU-005, Cx.0015, Letter from Governor Ferreira do Amaral to the Mandarin of Xiangshan on March 3, 1847, attached to the letter n°100 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **March 24, 1847 (transcribed in Volume 3 - Annexes)**.

¹⁰² Silva, *Transição de Macau para a Modernidade*, 137.

¹⁰³ For further reference on the location of the Horta de Volong, as well as of the Campo new roads, see Fig. 12. For more on the transformation of the S. Lázaro and Volong suburbs, see Chapter III.

¹⁰⁴ BG, n°7, February 18, 1847, 26, Letter from Caetano Gomes da Silva to Governor of Macao João Maria Ferreira do Amaral, donating a strip of land situated in his so-called Horta Begman property, for the construction of one of the Campo new roads, February 17, 1847.

¹⁰⁵ BG, n°64, May 12, 1849, 23-24, Transcription of the balance of receipts and expenditures regarding the construction of the Campo new roads, December 31, 1848.

¹⁰⁶ Silva, *Transição de Macau para a Modernidade*, 137.

¹⁰⁷ For more on Alexandrino António de Melo (c.1809-1877), as well as on his son, António Alexandrino de Melo, second Baron of Cercal (1837-1885), see Chapter II.

¹⁰⁸ Silva, *Transição de Macau para a Modernidade*, 253-255. For more on Bernardo Estêvão Carneiro, see also Chapter II).

of donors mentioned a dozen of foreign names, mostly British, and also an unspecific entry regarding the donation of 125 patacas by “eight Chinese,”¹⁰⁹ representing almost one sixth of the total raised amount. The Governor’s idea of ‘regeneration’ was clearly getting through to some of the wealthier merchants in Macao, irrespective of origin or community. And the Bazaar was to be its next battlefield.

Shortly after publishing the first public notice declaring his intention of building the Campo road, on March 17, 1847, Amaral published another one appointing the Procuratorate interpreter João Rodrigues Gonçalves to carry out “the registration of all the streets and alleys in the Bazaar [marked in Portuguese and in the Chinese], as well as the numbering of all registered houses, of which a precise survey should be done.”¹¹⁰ The interpreter and his crew were also “authorized to request the support of the armed forces, if needed be, so as to promptly carry out their mission.”¹¹¹

In the Governor’s mind, if there was little question about the claim of Portuguese sovereignty over the Macao peninsula’s *extra muros* grounds, its legitimacy in regard to the *intra muros* city was unambiguous. Which meant the whole of the urban ground, with no exceptions. Therefore, the idea that the Bazaar could constitute a sort of Chinese stronghold inside the city was, in this view, incongruous, and had to be dispelled.

Amaral had already manifested his intentions by threatening to bring down the Bazaar during the *faitiões* rebellion’. Capitalizing on his victory, the Governor had promptly demanded by public notice that all streets in the Bazaar be lit at night by the shop owners,¹¹² for the success of which decision he would later congratulate himself to the Minister of the Overseas.¹¹³ Another more controversial decision had come the same month, this time to build a wall in Patane (near the northwest S. António city gate) supposedly to protect the Portuguese population living near Tarrafeiro (from where had hailed the ‘rebellion’) from pirates.¹¹⁴ Although it remains unclear if Amaral managed to go ahead with building his wall, the Governor’s unilateral acts of sovereignty

¹⁰⁹ BG, n°7, May 22, 1847, 75, Transcription of the list of subscribers to Governor of Macao João Maria Ferreira do Amaral’s fundraiser for the construction of the Campo new roads.

¹¹⁰ Governor Ferreira do Amaral’s public notice of March 17, 1847, cited in Silva, *Transição de Macau para a Modernidade*, 139. When informing the Minister of the Overseas of this decision, Ferreira do Amaral specified that “posted in their respective corners were the street names for which they were already known” (AHU, AHU-ACL-SEMU-DGU-005, Cx.0016, Letter n°230 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, March 27, 1848).

¹¹¹ Silva, *Transição de Macau para a Modernidade*, 175.

¹¹² *Ibid.*, 131.

¹¹³ In Amaral’s own words, “I invited, and managed to convince, a great many [Bazaar] residents to light the streets” (AHU, AHU-ACL-SEMU-DGU-005, Cx.0016 Letter n°230 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, March 27, 1848).

¹¹⁴ Silva, *Transição de Macau para a Modernidade*, 135.

over what had traditionally been a Chinese-managed district, exclusively inhabited by Chinese people, sparked some demonstrations of outrage among this community, such as anonymous public notices instigating the population not to collaborate with the Governor. For, if they yielded to Amaral's continuous demands, one read, then "this will become a habit, and who is to tell if afterwards new land and shop rents won't be demanded as well? They surely will, increasingly, and our ruin will be without end."¹¹⁵

This pamphlet was partially right, of course, for as we know, the purpose of exerting sovereign power over the land, in other words, of making the Portuguese Crown the sole 'owner of the ground', wasn't solely about Silveira Pinto's brand of 'patriotism', but to enable new integral cadastral surveys to be made of the peninsula, and ultimately to establish the planned general property tax, which had been the main 'instruction' given to Ferreira do Amaral by the metropolitan government at the start of his governorship. In May 1848, Amaral informed the Minister of the Overseas that the work of survey was underway in the Campo, "without any objection from the Chinese people whatsoever [...] who would rather pay [their tributes] to the Portuguese."¹¹⁶

Another important governance issue at that time was, of course, the building regulations, although this is not explicitly addressed in the primary sources referring to Ferreira do Amaral's governorship. In his 1783 'instruction' to the Governor of the State of India, Minister Melo e Castro mentioned a set of laws that the local Mandarins had posted inside the Senate House, as well as in front of the Mandarin of the White House's residence in Mong-ha in 1749, signifying the rules by which the Macao population should abide. Among other restrictions, such as the ban on Christian teachings and conversions, this law, which Melo e Castro thought "destroyed, by its foundations, the exercise of the Christian religion and the sovereignty of the Portuguese Crown in that Dominion,"¹¹⁷ also pronounced a ban on the building of new houses and churches, for Chinese and Portuguese alike. Henceforward, the residents would only be authorized to repair the existing buildings.¹¹⁸

Referring to these laws, the instruction given by D. Frederico Guilherme de Sousa, Governor of India, to the appointed Bishop of Beijing on April 7, 1784, in his capacity of diplomatic representative of the Portuguese Crown, stressed the idea that the Emperor had given "the absolute and independent dominion" of Macao to the Portuguese,

¹¹⁵ "Copy of a proclamation from the *faitiões* Chinese" cited by Silva, *Transição de Macau para a Modernidade*, 129 and 171.

¹¹⁶ AHU, AHU-ACL-SEMU-DGU-005, Cx.0016, Letter n°241 from the Governor of Macao, João Maria Ferreira do Amaral, to the Minister of the Overseas, **May 22, 1848 (transcribed in Volume 3 - Annexes)**.

¹¹⁷ *Instrução para o bispo de Pequim*, 26.

¹¹⁸ *Ibid.*, 36.

to be ruled by Portuguese law and justice without any dependency nor subordination to Chinese laws, nor to its Ministers or Mandarins, and thus for many years, until the Suntó and Mandarin had managed to establish that the laws of the Empire be observed in Macao, usurping the Royal Jurisdiction, to which the Senate slavishly submitted itself without repugnance.¹¹⁹

As such, he proceeded,

the most important point of Your Excellency's commission will be to request from the Emperor: first, to command the removal of the notices posted, one in the Senate House and one in front of the Mandarin of Mong-ha or White House; for given that this colony belongs to the Portuguese Crown, the resident Portuguese vassals must [be allowed] to construct new buildings without having to ask for permission from the Mandarins [...].¹²⁰

Apparently, and as we have seen in other respects, not much seems to have resulted from this 'instructions' as, in January 1843, while Governor Silveira Pinto was trying to renegotiate the status of Macao in the post-Opium War context, calls were still being made by the Macanese public opinion to abolish building restrictions and authorization fees set by the local Mandarins.¹²¹ This demand would be met the same October, as part of a set of small concessions to the Senate by Qi Ying, the Qing imperial commissioner in charge of negotiating peace in Nanjing.¹²²

As for the 1749 laws, Governor Ferreira do Amaral, not bothering to consult with the Qing authorities, simply decided to take them down from the Senate House wall (the Governor's method of choice when disagreeing with the Qing officials' policies) where they had stood for almost one hundred years, as he considered, like his predecessors, that they "had never been ratified, neither by Her Majesty nor by the Emperor, and therefore were simply concessions wrenched from the senators by the sly mandarins."¹²³ Furthermore, and not least important, they also "contained some articles that were offensive to Portuguese national pride."¹²⁴

Despite the strictness of the laws, and probably in part due to the slowness of institutional change, the reality of urbanization on the Bazaar grounds had more to do with autonomous space appropriation than municipal governance. As historian Pedro Dias shows,¹²⁵ population growth through the eighteenth and early nineteenth centuries had led to the spontaneous agglomeration of straw or brick huts along the silted riverside, especially in the Praia Pequena bay, next to the Hopu. These were regularly destroyed, either by the Chinese authorities enforcing regulations or, more

¹¹⁹ Ibid., 58.

¹²⁰ Ibid., 61.

¹²¹ Silva, *Transição de Macau para a Modernidade*, 36.

¹²² Ibid., 43.

¹²³ Amaral's own words in his letter to the Minister of the Overseas on March 25, 1848, cited by Silva, *Transição de Macau para a Modernidade*, 152.

¹²⁴ Ibid.

¹²⁵ Dias, *A Urbanização e a Arquitectura dos Portugueses em Macau*, 49-54.

frequently, by fire. Passing through Macao in 1837, French artist Auguste Borget gave a colorful description of the Macao Inner Harbor and its *tancá* stilt slums (Fig. 23):

The first to get there took over the ground and set up their old boats that could no longer sail; the following sank strong wooden pillars around [these boats] thus making a floor above the first, either setting up the boats on top or making a canopy surrounded by mats to serve as cover. Others came, poorer still and, not having any ground, nor boat, nor cover, nor stilts, settled in the spaces between huts, setting up their hammocks and living there with the whole family, despite the precariousness of it all.¹²⁶

As for the Bazaar itself (Fig. 24), it probably wasn't much different in the 1830s and 1840s from its 1868 description by the province's Surgeon-General Lúcio Augusto da Silva, as an

entanglement of narrow streets and small, dark and damp Chinese houses. This was aggravated by the wayward porches stopping light and air from entering, as well as the variety of objects for sale outside the shops in such a manner to stop traffic, and the foul smell from the discharge pipes running through the middle of the streets and, like these, covered in large slabs, badly jointed, with cracks and holes between them.¹²⁷

The decade before the 1856 great fire had thus been a time of great change, with regard to the issues of sovereignty and governance, but also in political, financial and social terms, most of which having immediate and strong consequences in the transformation of Macao's urban landscape. When later reflecting on this sort of territorial expression of governance and on the role of public works in this process, Major Francisco Maria da Cunha¹²⁸ would identify Ferreira do Amaral's governorship as the turning point for the city of Macao:

A true martyr of civilization and of the progress of this land, [it was him] who first understood all the advantage that could be taken of public works for the regeneration of the colony; and who, in a hazardous, but politically significant attempt, opened the first roads outside the city gates, binding his memory to the effective repossession of the Macao peninsula. Since then, the Bazaar remained isolated between the Christian city and the Campo, of which we had taken possession with the roads that passed through it, completely exposing that Chinese district.

¹²⁶ Cited by Dias, *A Urbanização e a Arquitectura dos Portugueses em Macau*, 52.

¹²⁷ BG, n°46, November 14, 1870, 193-194, "Report on the Macao Public Health Department, relating to the years 1865-1867" by the province's Surgeon-General Lúcio Augusto da Silva, **April 26, 1868 (transcribed in Volume 3 - Annexes)**.

¹²⁸ In 1867, Francisco Maria da Cunha was a young military engineer starting out his overseas career as Commander of the Macao Battalion. Born in the Azores in 1832, and having studied in the Military Academy in Lisbon, he would subsequently be appointed Governor of Mozambique (1877-1880) and of Portuguese India (1891-1892), as well as president of the Lisbon Geographical Society (1888-1890), among several other metropolitan military and cultural institutions. In Macao, he would notably be in charge of the committee appointed by Governor José Maria da Ponte e Horta's local ordinance n°31 of September 14, 1867, to lay out "a plan to organize a public works special body to oversee this branch of service in the colony" (BG, n°37, September 16, 1867, 213). According to Major Cunha's proposed organization, which is laid out in the committee's report, at this time the Major himself was invested in the role of inspector of public works, with Captain Jerónimo Osório de Castro Cabral de Albuquerque as director of public works and W. A. Read as public works engineer. For more on Francisco Maria da Cunha's 1867 report, as well as on the work of this trio of engineers in Macao, see the next section.

From thence dates, so to speak, the submission of this part of the population; the convergence between it, the Christian, and the colony authorities; the mutual trust, and the belief that there was only one single government for both, and a favorable, benevolent one at that.¹²⁹

A new governance and new Chinese communities

On June 7, 1856, five months after the great fire in the Chinese Bazaar, Governor Isidoro Francisco Guimarães wrote to the Minister of the Overseas informing him of the progress of reconstruction:

Five months ago, I had the regret of informing Your Excellency about the terrible fire which, on January 4, had destroyed most of the rich Macao Bazaar, and I thought, at that moment, that a considerable time would be necessary to remedy such great loss, for I never despaired of this establishment's prosperity, as many did, thinking that it would never recover from such a catastrophe. Fortunately this wasn't so, and today I have the satisfaction to be able to announce to Your Excellency that the Bazaar is all but rebuilt in a much more solid, convenient and rich fashion, with its shops reopened and full of merchandise. The few houses that haven't been rebuilt yet are largely compensated by those built in the new grounds. The seaside road is well underway and will be finished before the end of the year.¹³⁰

Work on the Bazaar reconstruction and extension was then well under way in summer 1856. As we have seen in Figure 20, following (what had probably been) Major Milner's plan, the new grounds were outlined by Rua Nova de El-Rei, connecting Tarrafeiro (north of the Bazaar) down to the Pereira tea factory, as established in the January 8 rebuilding instructions. We know that Rua Nova de El-Rei remained as the Bazaar riverside road until 1865 and that the projected shophouses on its riverfront were already built and inhabited by that time for, in June that same year, a public notice was published notifying the "Chinese owners and tenants of some shops and houses in Rua d'El-Rei, contiguous to the river, that had abusively demanded contributions to the boats that anchor, load and unload in front of their shops and houses, [...] should immediately stop those abusive practices, under penalty of fine or prison."¹³¹

As mentioned, this extension had been Governor Guimarães' plan to finally get a definitive hold on the Bazaar grounds, but we also know from his own words that public finances, though stable, had been dealt a great blow by the fire, as they largely depended on revenue from the affected Chinese population. The precarious situation of public treasury, contrasting with the promptness

¹²⁹ BG, n°38, September 23, 1867, 224-226, "Project for the organisation of a public works special body" in Macao, by Major Francisco Maria da Cunha, head of the respective committee appointed by Governor José Maria da Ponte e Horta's local ordinance n°31 of September 14, 1867, **September 18, 1867 (transcribed in Volume 3 - Annexes)**.

¹³⁰ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°405 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, June 7, 1856.

¹³¹ BG, n°26, June 26, 1865, 104, Government of Macao public notice, June 19, 1865.

and dynamism of reconstruction, begs the question of who exactly was conducting the rebuilding operation. And of how it was being funded.

Going back once more to Minister Falcão's 'instructions' to Governor Ferreira do Amaral on his 1846 appointment, and in the context of turning Macao into a free port, we know that, in November 1845, metropolitan government had created a line of monthly credit for the province to be able to meet with "ordinary and urgent expenses" while the revenue from property tax gained momentum.¹³² The need for this financial assistance from the metropole must have ceased at some point as, in the aftermath of the 1856 fire, Governor Guimarães was writing to the Minister of the Overseas, asking for it to be reinstated while the province's regular revenue was suspended.¹³³ In March 1856, two months after the fire, as some of the commodity concessions (*exclusivos*) had been reestablished, Guimarães informed the Minister that he would be reducing Macao's 'allowance' (*mesada*) from the customary £500 to £300.¹³⁴ In May, the Governor informed that he had ceased to withdraw these funds completely, despite the six-month tax waver he had granted the affected Bazaar landowners, as "the concessions were progressing regularly, and old and new property tax was being collected, as was the Christian property tax."¹³⁵ From this episode we may gather that, already in the 1850s, the province's public finances heavily depended, not on property tax, which had been so insistently pushed by Ministers and Governors alike, but on the concession system.

The idea of giving the monopoly of certain commodities or services to the highest bidder had been introduced in Macao by Governor Ferreira do Amaral, inspired by seeing that practice and its profits in a visit to Hong Kong at the end of 1847.¹³⁶ The concession system was actually a Qing administration scheme, used by imperial government to control the revenue from profitable businesses, such as the trade in salt and other such commodities.¹³⁷ Still, while in the British colony the main source of revenue came from the processed opium monopoly,¹³⁸ Amaral decided to start

¹³² Instructions for João Maria Ferreira do Amaral by Minister of the Overseas Joaquim José Falcão on January 20, 1846, transcribed by Silva, *Transição de Macau para a Modernidade*, 345-351.

¹³³ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°355 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, January 12, 1856.

¹³⁴ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°371 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, March 12, 1856.

¹³⁵ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°393 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, May 7, 1856.

¹³⁶ Silva, *Transição de Macau para a Modernidade*, 212.

¹³⁷ Jonathan D. Spence, *The Search for Modern China. Third Edition* (New York and London: W. W. Norton & Company, 2013), 164. Jonathan Fenby, *The Penguin History of Modern China. The Fall and Rise of a Great power. 1850 to the Present. Second Edition* (London: Penguin Books, 2013), 13.

¹³⁸ John M. Carroll, *A Concise History of Hong Kong* (Hong Kong: Hong Kong University Press, 2007), 35.

with gaming concessions, or gaming ‘licenses’ (*licenças*) as they were initially dubbed. The first one of such licenses to be established was for the “Chinese lottery” (*lotaria china*), or Pacapiao,¹³⁹ in January 1847, “at the request from the Chinese,”¹⁴⁰ even before the publication of the local ordinance establishing the Chinese property tax. The monopolies on the trade of pork and beef followed in March 1849 and, the following month, was established the concession for twenty gambling-game Fantan houses.¹⁴¹ The following monopolies, for salt,¹⁴² fish, and processed opium,¹⁴³ probably also in Amaral’s works but interrupted by the commotion following the Governor’s assassination in 1849, were only established in 1851 by Governor Guimarães’ predecessor, António Gonçalves Cardoso (1851).

From all of these, the most profitable concession was by far the Fantan houses. Earning since 1851/52 a regular 12,000.000 patacas/year, it would soar up to 84,000.000 patacas in 1858/59, while all the other concessions remained rather stable. This represented more than 60% of the 134,706.000 patacas total concession revenue in that fiscal year. By order of importance, the Chinese lottery followed with 15%, pork/beef and processed opium with 9% each, salt and fish with 1,5% and other minor monopolies.¹⁴⁴ For the first time, the Fantan concession alone was bringing one third of the total government revenue for the fiscal year, which represented more than four times the earnings from either the Christian or the Chinese property tax collection.¹⁴⁵ This was explained in the budgetary report simply as the result of the increasing value of the winning bid. However, looking closely at the Fantan first ten-year balance, published precisely in 1859,¹⁴⁶ we notice that Macanese Nicolau Tolentino Fernandes, who had won the bid since the year 1851/52 for a regular 12,000.000 patacas, would almost double his offer in the year 1857/58. Jurist and historian Jorge Godinho offers the explanation for this in that Tolentino Fernandes had opened

¹³⁹ Godinho, “A History of Games of Chance in Macau”, 111-113.

¹⁴⁰ Footnote accompanying the province’s 1888 budget, referring to the concession revenues from the so-called “Chinese lottery” (BG, supplement to n°11, March 21, 1888, 97-115).

¹⁴¹ Silva, *Transição de Macau para a Modernidade*, 214. Footnote accompanying the province’s 1888 budget, referring to the concession revenues from pork (“local ordinance of March 21, 1849”) and Fantan (“the license for gaming houses were established in April 1849, following the local ordinance of February 16, 1846”), in BG, supplement to n°11, March 21, 1888, 97-115.

¹⁴² Silva, *Transição de Macau para a Modernidade*, 321.

¹⁴³ Footnote accompanying the province’s 1888 budget, referring to the concession revenues from fish (“established by the governor in 1851”) and processed opium (“established by the governor in July 1851, following the local ordinance cited in the previous note [February 16, 1846]”), in BG, supplement to n°11, March 21, 1888, 97-115.

¹⁴⁴ BG, n°30, May 21, 1859, 117.

¹⁴⁵ BG, n°40, July 30, 1859, 157-159.

¹⁴⁶ BG, n°30, May 21, 1859, 117.

more houses than the twenty initially established and thus had to pay a proportional fine.¹⁴⁷ Given that the opening of more Fantan houses was only done under permission granted by the Governor, it seems that Tolentino Fernandes must have worked with the administration to open almost forty houses that year, although this isn't explicitly addressed in the primary sources. The following year, 1858/59, Chinese Chiong Ahoi was the one breaking Tolentino Fernandes' seven-year streak by bidding the impressive 84,000.000 patacas for the concession. This amount, it may be inferred, would then correspond, either to an extreme reevaluation of the concession value (as mentioned in the 1859 budget report), or to the opening of an estimated one hundred new Fantan houses. In any case, it seems clear that, in 1859, Chiong Ahoi and his Fantan business held one third of the public treasury's income in his hands.

Of course, this made for a very alluring, but also extremely unsteady governance. As Guimarães had put it back in 1856 when informing the Minister that he wouldn't be needing the metropolitan credit anymore, or at least for the time being, "despite Macao's prosperity, this Government must always be allowed to access this [allowance] to solve any unexpected occurrence, for the [budget] revenue is all extremely contingent."¹⁴⁸

According to historian Guang Zhi Lin,¹⁴⁹ licensed gambling had occasionally been authorized for short periods of time by the Qing administration to serve specific funding purposes, usually being established using the concession scheme. This had apparently been the case between 1863 and 1866, when the Governor of Canton had briefly legalized the Vae-seng lottery to quickly raise funds for the war effort¹⁵⁰ during the Taiping rebellion.¹⁵¹ In that context, a Guangdong native named Ho Guai (also going by his nickname Olo-Quai) had risen to fame starting his fortune with the first lotteries in Canton, and later coming to Macao to make a name for himself with his Fantan parlors. In 1869, after Governor António Sérgio de Sousa (1868-1872) established the concession for the Vae-seng lottery in Macao, Ho Guai had won the first bid together with his partner, nicknamed

¹⁴⁷ Godinho, "A History of Games of Chance," 115.

¹⁴⁸ AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°443 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, November 12, 1856.

¹⁴⁹ Lin, *Chinese Merchants in Macau in Late Qing*, 35.

¹⁵⁰ Godinho, "A History of Games of Chance", 116.

¹⁵¹ The Taiping rebellion, also known as the Taiping Civil War, waged from 1850 to 1864. It originated in the Guangxi region, neighboring Guangdong, instigated by Hong Xiuquan, self-proclaimed brother of Jesus Christ and funder of the Taiping Heavenly Kingdom, opposing both Confucianism and the Qing dynasty. Initially backed by the British and French military, it ultimately succumbed to the alliance of these foreign forces with the Qing armies, brought together by the Taiping objection to the post-Nanjing treaty European settlements in general and to the opium trade in particular. For more on the Taiping rebellion and its impact in Macao, see Alfredo Gomes Dias, "Macao e a revolta Taiping," in Dias, *Sob o signo da transição*, 91-102.

Apon, to which contract was guarantor illustrious Macanese Bernardino Senna Fernandes.¹⁵² It seems that, in a matter of twenty years since the gaming industry had been introduced as a legitimate business by Ferreira do Amaral, in a way as traditionally did the Governors of Canton, to raise the province's income in order to fund his regeneration project, it had increased in such a spectacular fashion, that none of his successors would ever dare to change course. This obviously ended up attracting more and more Guangdong and Fujian entrepreneurs as, in Macao, they enjoyed a freedom and stability to conduct their businesses and extend their influence that didn't exist in Canton, or anywhere else in China, for that matter.

The Taiping rebellion itself, as well as the Second Opium War,¹⁵³ must also have played a significant role in driving these families, such as Ho Guai's, to settle in Macao. Reaffirming Macao's neutral position in the conflicts, Governor Guimarães gave exactly that testimony on August 1854 in a letter to the Minister of the Overseas, while referring to the Taiping siege of Canton:

The tranquility of this establishment continues to be unaltered, even though all its surroundings are in disorder and civil war. That disorder, as well as the increase in population as consequence of the great number of Chinese from Canton that took their refuge here, have greatly increased the price of foodstuffs, as well as house rents.¹⁵⁴

These "Chinese business families,"¹⁵⁵ as Lin calls them, often originated in a young male entrepreneur settling in Macao in the 1850s, already with some fortune or ties to the gambling business in the region, or both. Having a wife and several concubines, as again was Ho Guai's case, they usually founded large clans through their multiple sons, who remained in control of family assets. Thus, the family connection was the primary business model in Macao's Chinese community. These assets would in time diversify from strictly gambling into pawnshops, opium

¹⁵² For more on Ho Guai and his son Ho Lin Vong, nicknamed Avong, see Lin, *Chinese Merchants in Macau in Late Qing*, 33-41.

¹⁵³ The Second Opium War, also known as the Second Anglo-Chinese War, took place from 1856 to 1860, while the Taiping rebellion was raging. Again in the aftermath of a skirmish over an opium smuggler boat in Canton, British forces, joined by the French and, later, by the American armies, managed to occupy Canton and Tianjin. New treaties were signed in 1858, further advancing western commercial interests in China. When difficulties arose in the ratification process, however, Anglo-French forces marched on Peking and eventually destroyed the Emperor's Summer Palace, as the allied forces' famously symbolic last act of reparation and submission. For more on the Second Opium War and its impact in Macao, see Alfredo Gomes Dias, "Macao e as Guerras do Ópio (1856/60)," in Dias, *Sob o signo da transição*, 102-113.

¹⁵⁴ Letter n°252 from the Governor of Macao, Isidoro Francisco Guimarães, to the Minister of the Overseas, August 19, 1854, quoted by Dias, *Sob o signo da transição*, 101-102.

¹⁵⁵ Lin, *Soul of Macau: Chinese Merchants and Chinese Communities in Macau in Late Qing*, 339.

and coolie trade,¹⁵⁶ firecracker and silk industries, as well as real estate.¹⁵⁷ As historian Jonathan Fenby points out, “the second half of the eighteenth century [in China] had seen the flowering of a rich mercantile elite,” where the holders of government monopolies, particularly the traders in salt, became big landowners, building “compounds that covered whole city blocks.”¹⁵⁸

Ho Guai’s story also tells us that, once in Macao, these ‘foreign’ entrepreneurs rapidly established their connections with the local Chinese and Macanese networks, associating with them, and thus being put in the path of the government concession auctions, for example, or real estate development opportunities. Case in point, his 1869 partner in the bidding for the first Vae-seng lottery was none other than Chinese merchant nicknamed Apon, cited in the 1856 Bazaar rebuilding regulations.

Although both primary and secondary sources offer no clues about his identity or background, this Apon seems to have been tightly linked to the first phase of the Bazaar expansion. Indeed, by the time the great fire broke in January 1856, he was unarguably already conducting a reclamation project in the Tarrafeira area (Figs. 19 and 20), as the phrasing of the regulation indicates: “On the seaside, every effort shall be applied to continue the praya which Apon is building in Tarrafeira.”¹⁵⁹ Therefore, we may assume that the layout of Rua Nova de El-Rei must have been determined, or at least influenced, by Apon’s previous plan. His name resurfaced again in 1859, in the context of a fundraiser, authorized by Governor Guimarães and launched on November 10, 1857, “to help with the expenses for the masonry work conducted in Tarrafeira.”¹⁶⁰ Although the nature of this work remains unclear, the fact is that, from the total of 300 patacas raised, half was donated by a “merchant Apon, from himself and from other Chinese.”¹⁶¹

Given what we know about the participation of Chinese merchants in fundraisers to support government-promoted works, as had been the case with Ferreira do Amaral’s much contested

¹⁵⁶ ‘Coolie trade’ refers to Chinese emigration to European colonies in the Caribbean, but also to South America and to California, often recruited through forceful or deceitful methods. This activity gained momentum in the 1860s in the context of the global ban on slavery and human trafficking, especially in the Western settlements of the South China Sea. For more on this business in Macao, see Francisco Vizeu Pinheiro, “Macao’s Coolie Trade: One City, Two Cultures, Three Communities. Social Harmony, Separate Development and Taxing Vices,” *Review of Culture* 35 (2010): 60-83. For an insight on what was happening in Hong Kong, see Carroll, *A Concise History of Hong Kong*, 35.

¹⁵⁷ Lin, *Soul of Macau: Chinese Merchants and Chinese Communities in Macau in Late Qing*, 206-339.

¹⁵⁸ Jonathan Fenby, *The Penguin History of Modern China. The Fall and Rise of a Great power. 1850 to the Present. Second Edition* (London: Penguin Books, 2013), 13.

¹⁵⁹ BG, n°12, January 12, 1856, 72-73, “Instructions for rebuilding the Bazaar” by Governor Isidoro Francisco Guimarães, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

¹⁶⁰ BG, n°1, December 9, 1859, 1-2.

¹⁶¹ *Ibid.*

Campo roads, and also given the fact that Governor Guimarães had provided for “some respectable Chinese landowners”¹⁶² to work alongside the 1856 committee for the reconstruction of the Bazaar, these references (thin as they are) in official documents to Chinese activity and/or funding of (what would later be construed as) public works, seem to indicate that Chinese entrepreneurs were the main actors of city building and real estate development in Macao in the 1850s and 1860s. Unsurprisingly so, as public finances were still struggling after the many transitions of the post-Opium War period, public governance in terms of public works (or public health for that matter) wouldn’t be formalized until the very end of 1869, and all the while Chinese fortunes were flooding into Macao.

And so, specifically in the case of the 1856 Bazaar reconstruction and expansion, and even if the urban layout was indeed imposed by the Portuguese government, we may infer that the capital and workforce, as well as the architectural typology of the shophouse unit composing the new regular urban fabric, all of it, was Chinese.

In the last months of his twelve-year governorship, Isidoro Francisco Guimarães managed to get published a national ordinance, for which he undoubtedly would have campaigned, together with the representative (*deputado*) from Macao, that would crystalize in the form of law the special bond that his government had formed with the Macao Chinese merchants, and with their fortunes, power and influence. It pertained to the naturalization process of the Chinese and how, once Portuguese citizenship was obtained, their inheritance could still be regulated by “the ways and customs of China,”¹⁶³ as it was considered essential by the applicants. This requirement would be granted,

considering how great and effective it has been the assistance to the prosperity and progress of this establishment, where a great number of Chinese possessing substantial fortunes already reside, that they should be the subjects and citizens of Portugal, thus binding themselves to the State’s general interest, as well as proportionally reducing the chances of conflict and the causes of disagreement with the authorities of the [Qing] Empire.¹⁶⁴

¹⁶² BG, n°12, January 12, 1856, 72-73, Government of Macao local ordinance n°2, **January 7, 1856 (transcribed in Volume 3 - Annexes)**.

¹⁶³ BG, n°9, January 31, 1863, 33-34, National ordinance of November 26, 1862 establishing the framework for the naturalization of the Chinese and management of their inheritances under Portuguese citizenship.

¹⁶⁴ *Ibid.*

Regenerating the Colony: building a New Chinese Bazaar

Given the success of this collaboration for both parties, namely in rebuilding the Bazaar after the 1856 fire, and given also the growing prosperity of public revenues, the topic of investing in public buildings and in general ‘works of public interest’ started gaining momentum in official discourses, as well as in local and national legislation.

For instance, on March 1861, representative from Macao Joaquim José Gonçalves de Matos Correia (undoubtedly with the support of Governor Guimarães) presented to the House a draft law, which would later pass, demanding that an expense of 20:000\$000 réis,¹⁶⁵ taken from the province’s own resources, be authorized in the budget for the fiscal year of 1861/62, “to be used exclusively in works of public interest.”¹⁶⁶ It would be up to the Governor, after consulting with the Government Council and the Senate, to prioritize what needed to be done. This demand was justified, the draft law argued, by the ever-growing public revenue in Macao, which had

quadruplicated over the last six years [...], exceeding today the expenditures in over 50 per cent [...]. Notwithstanding the province’s flattering state, which everything indicates will be permanent, there are many changes and repairs to be done in the fortifications, public buildings, piers and walls that protect the city from the devastating action of the sea; and even more, it is becoming of great necessity to follow the progressive movement of the province, providing with new constructions to improve public hygiene, the safety and comfort of the residents, as well as facilitating commerce. This anomalous state, this poverty in the midst of abundance, cannot continue, without it compromising the province’s legitimate interests.¹⁶⁷

The following year, Matos Correia would express what would undoubtedly be the first reference to the need to improve the inner harbor sailing and anchorage conditions, a topic that would haunt Macao for well over a century. In 1862, however, the House representative’s discourse seemed only to allude to the idea of continuing south with the Bazaar new regularized riverfront. Indeed, while addressing the House, he returned to the topic of the need to develop “public works in Macao,” adding that “the means to improve the harbor should be seriously considered, at least to avoid its continuous silting. The harbor of Macao is its only source of wealth, without which that province would soon disappear from the number of our possessions. One cannot be too careful in preserving and improving it.”¹⁶⁸ This idea would be clarified in the report from the president of the Government

¹⁶⁵ The *real* (literally meaning ‘royal’, plural *reais* or, more commonly, *réis*, literally meaning ‘kings’) was the Portuguese unit of currency at the time, remaining in use until it was replaced by the *escudo* after the Republican Revolution of 1910.

¹⁶⁶ BG, n°24, May 18, 1861, 93, Draft law (*projecto de lei*) presented in the House of Representatives (*Câmara dos Deputados*) by Joaquim José Gonçalves de Matos Correia, representative from Macao, on March 13, 1861.

¹⁶⁷ *Ibid.*

¹⁶⁸ BG, n°33, July 19, 1862, 132, Address by Joaquim José Gonçalves de Matos Correia, representative from Macao, to the House of Representatives, on April 25, 1862.

Council, drafted for the information of newly appointed governor José Rodrigues Coelho do Amaral (1863-1866),¹⁶⁹ on June 23, 1863. Referring to a dock project being built on the Praia do Manduco area (south of the Bazaar), which would realign the riverfront in a similar fashion to the work previously done in Praia Pequena,¹⁷⁰ the President of the Council asked for the new Governor's support, arguing that "it implied directly with clearing the river, which had been obstructed by flaws in its current, compounded by the irregularity with which the piers had been built, for the Chinese have a horror of straight alignments, to which they call 'swords' [...]."¹⁷¹

And so, even though the formal project to realign and reclaim the whole of the riverfront, from Portas do Cerco to Barra,¹⁷² wouldn't be officially formulated until José Maria da Ponte e Horta's governorship in 1867, the ambition to carry it out seems to have been in the minds of many in Macao, Portuguese and undoubtedly Chinese alike, since proper 'advantage' (to paraphrase Governor Guimarães) had been taken of the 1856 catastrophe to restructure the Bazaar.

By the end of Coelho do Amaral's governorship, which was to happen on October 25, 1866, he wrote to the Minister of the Overseas to inform him that the new topographic plan of the city, which he had commissioned, was done and ready to be printed at the Minister's convenience. This new plan, including a survey of the river and sea¹⁷³ harbors' floors, had been carried out by "a British

¹⁶⁹ José Rodrigues Coelho do Amaral (1808-1873) was a military engineer and overseas administrator. In 1846, as he was working as a substitute teacher at the Lisbon Military School (Escola do Exército), he would be sent by the School administration on a three-year sponsored trip to study at the Paris École des Ponts et Chaussées. The purpose of this scientific mission would also be to gather as much knowledge and documentation from the French techno-scientific top institutions as possible, so as to contribute to update the Portuguese engineering curriculum (Macedo, *Projectar e Construir a Nação*, 79-80. For more on the Portuguese liberal governments' policy of promoting "scientific immigration," see Chapter II). A few years after his return from Paris, Coelho do Amaral would start a prominent career in the Portuguese overseas administration, as Governor of Angola (1854-1860). After his commission in Macao (1863-1866), he would return to Africa, having served again as Governor in Angola (1869-1870) and subsequently in Mozambique, from 1870 to his death in 1873.

¹⁷⁰ For further reference on the location of the Praia do Manduco 1863 new dock, see Fig. 12. For more on its project and construction, see Chapter II.

¹⁷¹ BG, n°30, June 27, 1863, 118, Report from the president of the Government Council, J. Ferreira Pinto, delivered at the investiture session for Governor José Rodrigues Coelho do Amaral, on June 23, 1863.

¹⁷² In Portuguese, *barra* refers to the entrance of a port. In Macao, it was also the name given to the Chinese village and Portuguese fortress situated in the southwest edge of the peninsula, guarding the entry into the inner harbor.

¹⁷³ Macao's sea harbor was situated on the east side of the peninsula, off the Praia Grande bay. It was commonly known as *rada* which, in Portuguese, refers to a harbor sheltered by more or less high hills.

engineer, Mr. W. A. Read,¹⁷⁴ who had performed his duties perfectly.”¹⁷⁵ Henceforth, the province’s administration would have at its disposal a valuable instrument “to draft any city improvement projects, or to plan for the regularization of the river’s left bank.”¹⁷⁶

W. A. Read’s plan, dated from 1865-66,¹⁷⁷ shows that the riverfront had indeed been realigned, from the south end of Rua Nova de El-Rei to the Praia do Manduco bay, where the new dock (projected in 1863) is already featured. Figure 21 details the Bazaar area as represented in the same plan, showing that a new row of blocks had been added to the riverfront, undoubtedly at the beginning of 1866, creating a new promenade and pier, named Rua do Guimarães (in tribute to the previous Governor). The former Pereira tea factory, as well as the old shipyards, were integrated into a new reclamation featuring a large dock (*doca do Manuel Pereira*)¹⁷⁸ as well as a smaller one in front of the former Portuguese customs (*doca da Alfândega*). Between Rua Nova de El-Rei and Rua do Guimarães, a small square was left opened (later called Largo do Pagode, or ‘Temple square’), indicating the presence of the Pagode do Bazar (the ‘Bazaar Chinese temple’), facing the inner harbor at the heart of the new district. Situated at the crossroads between the 1856 riverfront and the new Bazaar main axis, Rua do Culao, it probably was a feature of the original 1856 extension plan (Fig. 20), thus justifying the open space, as well as the small pier left in front of it in the 1866 riverfront. On May 1867, in the government bulletin (*Boletim do Governo*), there is a reference to this temple and its square: “The beautiful pier in front of the Bazaar Chinese temple’s

¹⁷⁴ W. A. Read signed his 1865-66 plan as “W. A. Read, C. E.”. The acronym ‘C. E.’, as well as the Governor mentioning him as ‘Mr.’ and not by a military rank, suggests that Read was probably a civil engineer. Although his background is unknown, we do know that he would end up staying in Macao, having worked on Major Francisco Maria da Cunha’s 1867 committee to study the establishment of a “public works special body,” the future Macao public works department (see above). Although Major Cunha is still inspector of public works in April 1869 [he signs the public works report for the first trimester 1869 on April 30, that year (AM, MO/AH/AC/SA/01/00113)], no mention is made in the primary sources of W. A. Read after October 26, 1867, when he appears as member of the above mentioned committee in a public notice regarding the sale of a plot in Patane (BG, n°44, November 4, 1867, 255). Nevertheless, in his 1884 study on the Macao inner harbor improvement, Military Engineer Adolfo Ferreira de Loureiro mentions Mr. Read as “a former officer of the British admiralty,” without offering any additional information [Adolfo Ferreira de Loureiro, *O porto de Macau. Ante-projecto para o seu melhoramento* (Coimbra: Imprensa da Universidade, 1884), 130].

¹⁷⁵ AHU, AHU-ACL-SEMU-DGU-005, Cx.0033, Letter n°136 from the Governor of Macao, José Rodrigues Coelho do Amaral, to the Minister of the Overseas, October 20, 1866.

¹⁷⁶ Ibid.

¹⁷⁷ For further reference on W. A. Read’s 1865-66 plan, see Fig. 6.

¹⁷⁸ This dock, itself reclaimed in the 1870s as we will see, is referred to in 1873 as “the so-called Manuel Pereira dock,” (*doca do Manuel Pereira*) undoubtedly in reference to the former owner of the Pereira tea factory, mentioned in the 1838 plan (Fig. 5) (BG, n°3, January 18, 1873, 9, Government of Macao local ordinance n°7, January 17, 1873).

square [*largo do Pagode do Bazar*] is finished and, in the two columns demarcating it, two large candelabras will be put.”¹⁷⁹

However, this, as well as other references to the work on the Bazaar streets in the beginning of 1867, indicates that the reclamation, or at least the urbanization of the Bazaar extension was still underway after W. A. Read’s 1866 plan was published. For instance, in January, the government bulletin noted that “many of the large streets in the Bazaar have been finished, having become finer and better lit as well.”¹⁸⁰ Or again in March: “The city’s public works continue actively. The Bazaar main streets will be finished in a few days and the workforce, so we’re told, will be transferred to the Praia do Manduco and Bazarinho districts.”¹⁸¹

As we can gather from both the written sources and the comparative analysis of the historical plans, the “regeneration of the colony,” or at least of the Bazaar, through public works, to borrow on Major Francisco Maria da Cunha’s phrasing,¹⁸² that had started with Ferreira do Amaral, knew its greatest advancements in city building and germinated its main ideas in terms of urban planning, during the long and productive twelve-year governorship of Isidoro Francisco Guimarães. And yet, for some reason, maybe because of his military engineering background, Coelho do Amaral, at the helm for little over three years, reaped all the fame and glory, namely for the spectacular ten-year transformation of the inner harbor.

For instance, fellow military engineer Miranda Guedes would paint the picture of the Governor as the proverbial tireless colonial expert at work, in his 1909 ‘Macao improvement plan’, noting that,

apart from the intrepid effort of Coelho do Amaral, engineer and governor who, putting aside the briefcase of the colony’s superior administration, took on his old theodolite and laid out streets and roads, remembered his professional knowledge and rebuilt the S. Francisco [barracks], paved the city streets and lined them with trees, thus glorifying his memory with the double circumstance of a good governor and a good engineer,¹⁸³

¹⁷⁹ BG, n°21, May 27, 1867, 122.

¹⁸⁰ BG, n°4, January 28, 1867, 15-18.

¹⁸¹ This refers to what would be the next phase of the inner harbor realignment project. The “Bazarinho” (literally meaning ‘little Bazaar’) referred, I believe, to the reclaimed area in the Praia do Manduco bay which, in its morphology and urban structure, was indeed much like the reclaimed Praia Pequena bay, or like a ‘small Bazaar district’ (BG, n°12, March 25, 1867, 61-64). For further reference on the location of the Praia do Manduco, see Fig. 12.

¹⁸² BG, n°38, September 23, 1867, 224-226, “Project for the organisation of a public works special body” in Macao, by Major Francisco Maria da Cunha, head of the respective committee appointed by Governor José Maria da Ponte e Horta’s local ordinance n°31 of September 14, 1867, **September 18, 1867 (transcribed in Volume 3 - Annexes)**.

¹⁸³ AHU, 251-2G-1S SEMU DGU cx., Report on the “Urban and general sanitation of the city of Macao” by engineer and Macao public works director António Pinto de Miranda Guedes, on **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

only by the 1890s had proper improvement work been done in Macao.

Major Francisco Maria da Cunha, although giving Guimarães a bit of his due by stating that the impulse Coelho do Amaral had given to public works had been made possible by his predecessor's sensible management of public treasury, was no less laudatory to the latter. While enumerating his achievements, for instance "having started the riverside road, which he left well advanced, thus establishing one of the city's main arteries," or having "expanded the city by creating new districts, more pleasing and full of life," or even having "considerably increased public revenue by renting the new grounds and buildings,"¹⁸⁴ all ideas outlined and even partially carried out during the previous governorship, as we have seen, Cunha concluded with what was, in his view, Governor Coelho do Amaral's greatest feat: "managing to get the Chinese interested in public works, so much so as to lend him great assistance in capital, as well as in workforce."¹⁸⁵ He then offered a rarely explicit reference to the fundamental bond between Portuguese sovereignty and Chinese entrepreneurship in the making of Macao's modern urban landscape:

Hence, there was a complete transformation in Macao, due to the development of public works, as well as the implementation of liberal ideas regarding administration, which are both parts of the same economic philosophy. And, as it is true that a civilization cannot pass through a country without leaving the mark of the ideas of its time, it is also true that today the Chinese understand the instruments of civilization, that they know how to use them, and that they are fully aware of the services they receive from this colony's government by carrying out those works.¹⁸⁶

As mentioned previously, continuing the riverside road "from Portas do Cerco to Barra"¹⁸⁷ was to be the following governorships' next great project. The idea was to extend a regularly outlined pier along the inner harbor, through land reclamation over the silted riverfront, as had been done for the Praia Pequena and Praia do Manduco bays, this time all the way from the northern border to the south end of the peninsula.¹⁸⁸ This project was formalized by new Governor José Maria da Ponte e Horta (1866-1868)¹⁸⁹ in February 1867, for "the embellishment of the city [*embelezamento da*

¹⁸⁴ BG, n°38, September 23, 1867, 224-226, "Project for the organisation of a public works special body" in Macao, by Major Francisco Maria da Cunha, **September 18, 1867 (transcribed in Volume 3 - Annexes)**.

¹⁸⁵ Ibid.

¹⁸⁶ Ibid.

¹⁸⁷ BG, n°6, February 11, 1867, 26, Government of Macao local ordinance n°16, February 8, 1867.

¹⁸⁸ For further reference on the outline of the inner harbor piers general realignment plan, see Figs. 12 and 13.

¹⁸⁹ José Maria da Ponte e Horta (1824-1892) was a military engineer, Lisbon Military School graduate, and teacher at the Lisbon Polytechnical School (for more on his personal and professional engagement with the Saint-Simonian material improvements philosophy, see Chapter II). After serving as Governor of Macao, from 1866 to 1868, he would go on to serve in Angola (1870-1873), having succeeded José Rodrigues Coelho do Amaral on both offices.

cidade], as well as for the benefit of hygiene and commerce.”¹⁹⁰ As we have seen before, however, in the 1865 matter of the Rua Nova de El-Rei shop owners who charged anchorage fees to the users of the piers facing their properties, there seemed to have existed some sort of common law regarding property rights over the riverfront. As such, Ponte e Horta’s ordinance read:

As it is not fair to thwart the right of preference that belongs to the owners of properties facing the portions of river in front of them, I have decided that said owners must declare a minimum time in which they might be able to finalize their own reclamations; resting assured that the colony’s superior authority has the firm resolution to cease the conventional right which they were given, if the time set to complete the work is deemed excessive or if they fail to uphold the commitment to which this ordinance compels them.¹⁹¹

It seems that the landowners abided by this order for, as early as June that same year, the editor of the government bulletin noted that “the reclamation at Ponta da Rede [south of Praia do Manduco],¹⁹² belonging to Dr. Pitter, has been carried out under the supervision of this gentleman, as swiftly as properly.”¹⁹³ Or again in July:

The Ponta da Rede road is almost finished, one which was until recently in such an uncomfortable condition for the travelers, and even more so, in such an irregular and ugly fashion to behold. The owners, yielding to His Excellency the Governor’s wish, put order and geometry in their buildings, to the point that one can say that the Ponta da Rede road, today one of the city’s main arteries, is completely changed.¹⁹⁴

In this context of restructuring the inner harbor front, another project dear to Governor Ponte e Horta would be the reconfiguration of the pier facing the former Portuguese customs, south of the Bazaar, into a proper square. Commonly referred to for a time as Praça nova (‘new square’) or Praça do Comércio (‘commerce square’), it was later named Praça Ponte e Horta, in tribute to the Governor himself (Fig. 22). This square would be the highlight of the modernized inner harbor, with the old customs remodeled as the province’s courthouse, and a projected statue of King D. Luís at its center.¹⁹⁵ The latter doesn’t seem to have come about, however, as neither did the

¹⁹⁰ BG, n°6, February 11, 1867, 26, Government of Macao local ordinance n°16, February 8, 1867.

¹⁹¹ BG, n°6, February 11, 1867, 26, Government of Macao local ordinance n°16, February 8, 1867.

¹⁹² For further reference on the location of the Ponta da Rede district, see Fig. 12.

¹⁹³ BG, n°24, June 17, 1867, 139. Dr. Vicente de Paulo S. Pitter is mentioned as one of the top donors in Governor Ferreira do Amaral’s 1847 fundraiser to build the Campo new roads (BG, n°7, May 22, 1847, 75). He is also mentioned as “a physician who had received his education in Goa,” by French traveler Dr. Melchior-Honoré Yvan, in his 1855 *Six Months Among the Malays; and a Year in China*. See Chapter II for more on the latter reference. See also Dr. Yvan, *Six Months Among the Malays; and a Year in China* (London: James Blackwood, Paternoster Row, 1855), in Cecília Jorge and Rogério Beltrão Coelho, *Viagem por Macau, Volume III - Século XIX – II Parte* (Macau: Livros do Oriente, 2014), 136.

¹⁹⁴ BG, n°30, July 29, 1867, 176.

¹⁹⁵ As noted by the editor of the government bulletin: “His excellency the Governor has asked Lisbon for a statue of King D. Luís to be put in the center of the new Praça do Comércio. It is only fair that this Portuguese

Governor's intention of relocating the city market, situated since the sixteenth century at the heart of town, in the so-called Grand Bazaar block behind Largo do Senate, to the new public square.¹⁹⁶

Another feature of the new inner harbor was to be its unified and harmonious front, with every building facing the pier sharing a similar façade (Figs. 25 to 31): two storey, with straight, large windows in the upper floor, and an open arcade (referred to, in Portuguese, as “*arcada*” or “*arcaria*”) on the ground floor, so as to create a covered public gallery, or walkway, along the riverside road, that could also be used to shelter street vendors or extend the commercial activities from the contiguous shops onto the street.¹⁹⁷ This was undoubtedly an integral part of the realignment project as, by the end of February 1867, the editor of the government bulletin was already writing about the “active progress of the foundations for the city’s riverside road arcade, along the inner harbor.”¹⁹⁸ The new square was also to be lined by this arcade as, one month later, the editor commented that “the columns that will support the archways on each side [of Governor Horta e Costa’s square] are already emerging from the ground, and it is said that the owners of the buildings in that square have agreed to finish this work in no time, in harmony with the plan given to them by the authority”¹⁹⁹ (Fig. 32 and 33). As had happened for the Ponta da Rede riverside road and piers, the new square’s arcade, although designed by the government administration, was

land, and such a longstanding one at that, should have in one of its squares the statue of its King” (BG, n°9, March 4, 1867, 47).

¹⁹⁶ BG, n°21, May 27, 1867, 122. For more on the Grand Bazaar city market, subsequently called S. Domingos market, see Chapter IV.

¹⁹⁷ This design feature would become a fairly popular solution for waterfronts in western settlements throughout Asia in the nineteenth and early twentieth centuries. For example, Brenda Yeoh reflects on the use of this architectural solution in colonial Singapore, where it was referred to as ‘verandah’ (from the Portuguese word *varanda*, literally designating an open balcony or gallery situated on the upper floors of a building), and its contested nature as an “ambiguous territory between the public street and the private house;” see Yeoh, *Contesting Space in Colonial Singapore*, 243-280. Regarding the use of the ‘verandah’ in Hong Kong, British military engineer Osbert Chadwick observed, in 1882: “In Queen’s Road and some other streets, permission has been given to construct verandas [*sic*] over the public sidewalks. These would afford agreeable shade to foot passengers. Being but narrow, and much obstructed either by persons looking into shops or by goods temporarily deposited, they are of but little advantage to the pedestrian, whilst the verandas above are so substantially built, and so enclosed with blinds, that they amount to inhabited spaces, and thus the width of the street is diminished by the depth of the veranda [Osbert Chadwick, *Report on the Sanitary Condition of Hong Kong* (London: Colonial Office, 1882), 14]. Chadwick’s description suggests that the term ‘veranda’ was being currently used, in the late nineteenth century at least, in a sense closer to its meaning in Portuguese, that is, designating the open spaces on the upper floors (which could be closed with blinds), situated above the public galleries on the ground floor. See, for instance, in Figs. 32 and 33, the Casa do Ópio, situated at Praça da Ponta e Horta in Macao. For an overview on the use of the ‘verandah’ in Hong Kong see Joseph S. P. Ting and Nai-kwan Wong, *City of Victoria. A Selection of the Museum’s Historical Photographs* (Hong Kong: Urban Council of Hong Kong, 1994).

¹⁹⁸ BG, n°8, February 25, 1867, 41.

¹⁹⁹ BG, n°12, March 25, 1867, 61-64.

clearly being funded directly by the owners of the adjacent buildings. In this case, they were two Macanese, Maximiniano dos Remédios and Vicente da Portaria, to which the editor pays tribute for the zeal and effort put in building “their houses’ arcades,”²⁰⁰ seemingly indicating that these remained their private property.

By June 1867, the bulletin reported on the advancement of a number of building sites along the inner harbor. Governor Ponte e Horta’s square had been finished and lit, with a new bridge over its dock.²⁰¹ The urbanization in the Bazarinho district had also been finished and, as predicted by the editor in March, all efforts were concentrated in continuing the remaining reclamations over at Portas do Cerco, to the north, and Barra, to the south.²⁰²

The relatively wide geographical range of this project, its unity in terms of design, as well as the rapidity with which it was carried out, it all points to the preexistence of an integral project, whose draft would be attributed by the contemporary sources, as we have seen, to Governor and military engineer Ponte e Horta himself. I would like to argue, at this point, that the trio of engineers Major Francisco Maria da Cunha, inspector of public works, Captain Jerónimo Osório de C. C. Albuquerque,²⁰³ director of public works, and W. A. Read, may have played an important role in this design, even though there are no indications in the primary sources directly linking them (or anyone else) to the authorship of the inner harbor 1867 realignment project.

Indeed, we know that Mr. Read had been commissioned by fellow engineer, Governor Coelho do Amaral, in 1865, to carry out the topological survey of the Macao peninsula. He obviously stayed in the service of the Portuguese administration’s public works, as he is named, with the aforementioned servicemen, as the third member of the 1867 committee in charge of laying out “a plan to organize a public works special body to oversee this branch of service in the colony.”²⁰⁴ Because this work had been entrusted to Read, and also because no other name is mentioned during his governorship, we may assume that, at the time, Coelho do Amaral didn’t have at his disposal any military engineers occupying the province’s public works-related positions. Therefore, it is also

²⁰⁰ BG, n°21, May 27, 1867, 122.

²⁰¹ This dock was known as “*caldeira da Alfândega*” (the former Portuguese ‘customs dock’), indicating that a common word for a small dock was ‘*caldeira*’ (literally meaning ‘boiler’).

²⁰² BG, n°24, June 17, 1867, 139.

²⁰³ Not much is known about Jerónimo Osório de Castro Cabral de Albuquerque. He was probably related to José Osório de Castro Cabral de Albuquerque, Governor of Macao from 1817 to 1822. Possibly the son of this former governor, he would have been born in Lisbon, probably after his father’s tenure in Macao, and raised in the metropolitan circles. I infer that he must have been a military engineer from the fact that he is explicitly cited as the Macao director of public works in a public notice on October 26, 1867 (BG, n°44, November 4, 1867, 255).

²⁰⁴ BG, n°37, September 16, 1867, 213, Government of Macao local ordinance n°31, **September 14, 1867 (transcribed in Volume 3 - Annexes)**.

fair to assume that Major Cunha and Captain Albuquerque must have started their duties around the time Governor Ponte e Horta succeeded Coelho do Amaral, which was on October 26, 1866, a few months before the new governor issued the local ordinance of February 1867, launching the inner harbor restructuring project.

Furthermore, the ‘public works committee’ had been appointed by Governor Ponte e Horta by local ordinance on September 14. Four days later, the three engineers were handing in their report, which would be published in the government bulletin on the 23rd. The swiftness of the committee’s results indicates that its research and conclusions had probably already been written before the ordinance was issued. Also, the proposed organization of the future Macao Public Works Department corresponded exactly to the already existing personnel, with the aforementioned trio of engineers in its top positions, to which was added the chief of the statistics department.

The Macao statistics department had been another one of Governor Ponte e Horta’s initiatives. Established by local ordinance on November 15, 1866²⁰⁵ (a few weeks after the Governor took office), it was given the following day, also by local ordinance, to the management of Manuel de Castro Sampaio.²⁰⁶ On January 14, 1867, the editor of the government bulletin indicated that Sampaio was well at work, writing that he had just “seen the topographic plan of the Bazaar, [which had been] drafted by the statistics department.²⁰⁷ It is a careful and delicate work. This plan is accompanied by an explanatory map, presenting the number of squares, streets, sloped streets, alleys, lanes and public courtyards of said Bazaar,²⁰⁸ as well as all of its houses, doors and

²⁰⁵ BG, n°47, November 19, 1866, 189, Government of Macao local ordinance n°19, November 15, 1866.

²⁰⁶ Manuel de Castro Sampaio (1827-1875) had been sent to Macao as part of the army medical corps, having ascended to Lieutenant of the Macao Battalion. He was a member of the London Royal Asiatic Society, as well as the founder and editor of several newspapers, both in his native Alentejo province, in 1859, and in Macao, in 1863; see his work, which is dedicated to Governor Ponte e Horta, *Os Chins de Macau*, VII-XI, 149.

²⁰⁷ Sampaio would later write in his first report of May 3, 1867, that he had presented this plan to the Governor on January 7 (BG, n°18, May 6, 1867, 97-98).

²⁰⁸ In the Portuguese original, the Bazaar public spaces are listed as follows: “*largos, ruas, calçadas, vielas, travessas, becos e pátios públicos*”. Straightforwardly, I have translated “*largo*” to ‘square’ and “*rua*” to ‘street’ (although ‘*largo*’ traditionally refers to a portion of a street where its width is ‘larger’, thus forming a sort of forecourt or parvis, often in front of a public, or otherwise notable building; its meaning is therefore different than ‘*praça*’, which would more accurately translate as ‘square’ or ‘plaza’). The next terms, as they are used by the author to convey the diversity and intricacy of public space in the Bazaar, aren’t as easily translated. Wang and Cheong (see Wang and Cheong, *Regenerating Pátio*, 19) suggest a Chinese-Portuguese-English translation grid to try and solve this problem, ranging from the larger axes to the smaller spaces. I have partially adopted this grid to translate “*calçada*” as ‘sloped street’ (although, in Portuguese, it can refer to any street with a stone pavement, independently of its steepness), “*travessa*” as ‘alley’ (I didn’t translate “*viela*” because it can also be translated as “alley”) and “*beco*” as ‘lane’. As for “*pátio*”, I suggest the translation as ‘courtyard’, instead of ‘cul-de-sac’, as proposed by Wang and Cheong’s grid, as better adjusted

dwellers.”²⁰⁹ Sampaio’s topographic map of the Chinese Bazaar (Fig. 34) would be published that same year, together with the rest of the chief of the statistics department’s report on the Chinese population in Macao.²¹⁰

This map portrays a seemingly intermediate state between the reclamation works circa 1860, whose configuration hypothesis I have restituted in Figure 20, and in 1866, as gathered from W. A. Read’s plan, restituted in Figure 21. In it, Manuel de Castro Sampaio already depicts the row of blocks forming the new Bazaar riverside street named Rua do Guimarães, which was only built after 1865, as we have seen. The district’s south limits, however, are less clear, particularly regarding the author’s depiction of the so-called ‘Manuel Pereira dock’ and surrounding built frame. Indeed, the latter resembles more to the unfinished, patchwork shoreline of the 1830s-1860s, than to the relatively better-defined piers, south of the dock, as portrayed in the 1866 map. I would venture, then, that Manuel de Castro Sampaio must have conducted his topographic survey of the Bazaar in 1866, having initiated it, nevertheless, sometime before his official appointment as chief of the statistics department in November. Which would probably put his mission under the tutelage of Governor Ponte e Horta’s predecessor, José Rodrigues Coelho do Amaral, and also possibly in collaboration with W. A. Read himself.

In any case, the official establishment of the statistics department by Governor Ponte e Horta had garnered criticism from the Minister of the Overseas right at the beginning of the year, proving that it had indeed been an autonomous decision made by the new Governor. In a confidential letter, the Minister accused Ponte e Horta of infringing on his liberties as, although it was established in the national ordinance of August 14, 1856, that the Governors of the overseas provinces were permitted to make decisions in urgent cases without waiting for metropolitan approval, there were a number of specific circumstances that were “not considered urgent and therefore not permitted to the Governors,”²¹¹ among which was to create new employments. To which Horta e Costa responded, justifying the legitimacy of his actions with the urgency of the situation he encountered in Macao:

I deemed it extremely urgent, Your Excellency, to illuminate what was obscure in this Colony. I believe that I wouldn’t have been able to take a right step in the government His Majesty has bestowed upon me, without first being instructed in accurate data about the living elements that could signify the activity and the resources of the Colony. [...] And does Your Excellency know what happened with the small appointment that earned Your Excellency’s reproach? Was

to the meaning of the word in Portuguese, which conveys the image of an intimate open space, surrounded by buildings, often private or, if public, shared by a very small community.

²⁰⁹ BG, n°2, January 14, 1867, 7.

²¹⁰ Sampaio, *Os Chins de Macau*.

²¹¹ DG, n°196, August 20, 1856, 332-333, National ordinance of August 14, 1856, regulating the cases where, according to the Additional Act to the Constitution, the Overseas Governors may establish legal measures without previous authorization from metropolitan government.

that the Colony's cadastral map, as obscure and untrustworthy as it was, is today reformed and based upon clear and safe foundations; so much so that, in the current Chinese tax collection, the new and improved cadastral map is already in effect, which I hope will contribute to collect, as Your Excellency shall see, another one thousand patacas for the Public Treasury.²¹²

It was all about science, knowledge, and the power of social and commercial data in the effectiveness of governance (and tax collection).²¹³ And, once again, the focus was on the 'obscurest' of districts, the Chinese Bazaar. Therefore, in my view, the 1867 inner harbor restructuring project, population survey and public works department outline, though being the direct heirs of Ferreira do Amaral's reforms, took them one step further by applying to the territory of Macao, for the first time, modern urban planning's whole range of instruments of measurement, restructuring and control.

As we have seen, this must have been a plan outlined locally by the Governor with probably the collaboration of Major Francisco Maria da Cunha as inspector of public works. His (or rather, the committee's) September 1867 report, which I have cited profusely, is a remarkable testimony of the progressive philosophy that drove these men, and so we must believe that their work on the ground was, in their view, indelibly imprinting the urban landscape with the stamp of civilization. Once again, in Major Cunha's own words:

As Your Excellency knows, the idea of social transformation and improvement is being understood through the impulse and movement given to inanimate material. A scientific paradox, many would think, when this idea first spread, but from which civilization has sprouted, an acknowledged consequence of roads, railways, canals, public buildings and great cities, many of them risen from the near wild and barrenness. Political economy, commerce, industry and all fields of human activity in general have found a resource in the development of the first and most essential element of State prosperity. We will again demonstrate this fact, not by appealing to the great nations of the world, but borrowing on the history of our own small but beautiful and blossoming colony. Undoubtedly Your Excellency is aware of the unflattering picture of Macao twenty years ago. Two districts, as if forming to separate cities: the first, most populated, the Bazaar, inhabited only by the Chinese, clinging to their prejudices and traditions, harassed by the rule of the mandarins; an entanglement of narrow streets, filthy, unsanitary, and crowded with houses of bad appearance; the second, the Christian city, with its old doors, genuine barriers to progress; and both without police, completely separated, with unequal rights, no reciprocity of interests, few income, limited, with no easy way to expand, in moral languish, apathetic, in lack of activity. [...] Lately, over the short period of Your Excellency's administration, Your Excellency knows the increase that has been given [to public works], finishing some projects and beginning others of great scope; all this forming a

²¹² AHU, AHU-ACL-SEMU-DGU-005, Cx.0034, Letter n°55 (confidential) from the Governor of Macao, José Maria da Ponte e Horta, to the Minister of the Overseas, **March 26, 1867 (transcribed in Volume 3 - Annexes)**.

²¹³ For more on the Portuguese Regeneration's general policy of improving the State's collection of data on both its territory and its population, see Rui Branco, *The Cornerstones of Modern Government. Maps, Weights and Measures and Census in Liberal Portugal (19th century)* (Doctoral thesis in History and Civilization, European University Institute, Florence, Italy, 2005).

considerable contribution for the elevation of the colony and for the embellishment and extension of the city.²¹⁴

Manuel de Castro Sampaio delivered his first Macao demographic statistics on September 17. According to his report, on June 14, 1867, the Chinese population amounted to 56.252 souls, mainly located in the “Christian city,” with 20.177 residents, and in the Bazaar, with 14.573 residents. The majority of this population, namely 48.617 residents, hailed from the Guangdong province; 5.723 were born in Macao and only 1.797 came from the Fujian province.²¹⁵ Sampaio would later complete his work with the statistics concerning the “Chinese population that lives on board their ships in the river and Praia Grande bay,”²¹⁶ or what he would call Macao’s “maritime Chinese population.”²¹⁷ This amounted, on January 25, 1868, to 21.818 souls, residing in 3.277 boats: “Thus, adding the ground Chinese to the maritime ones, this results in a total of 78.070 souls.”²¹⁸ Therefore, if we are to rely on the afore-mentioned 1841 estimation, in the time span of little over 25 years, the Chinese population in Macao had increased almost fourfold.²¹⁹

The statistics on the Portuguese and other foreign residents would only be published in 1873,²²⁰ which shows that Governor Horta e Costa’s aim at this time really was to pin down the city’s Chinese population in general, particularly in the Bazaar district, trying to lay bare all its urban and

²¹⁴ BG, n°38, September 23, 1867, 224-226, “Project for the organisation of a public works special body” in Macao, by Major Francisco Maria da Cunha, **September 18, 1867 (transcribed in Volume 3 - Annexes)**.

²¹⁵ BG, n°38, September 23, 1867, 219-224, Conclusion of the population statistics report of June 14, 1867, September 17, 1867.

²¹⁶ BG, n°7, February 17, 1868, 38-41, Supplement to the population statistics report of January 25, 1868, February 12, 1868.

²¹⁷ Ibid. Sampaio described this cluster of ships as a “great floating city,” adding that “the maritime Chinese use their boats simultaneously to make a living and as permanent dwellings for themselves and their whole families [...]. It is on board their ships that they celebrate weddings, raise their children, practice their religion, make their celebrations, etc. There the women work alongside the men, even having the children helping in several activities. This maritime folk is, as the ground one, essentially laborious and lively. One truly feels a great pleasure in seeing their commitment and love of work.”

²¹⁸ BG, n°7, February 17, 1868, 38-41, Supplement to the population statistics report of January 25, 1868, February 12, 1868.

²¹⁹ In 1841, the Chinese population in Macao was estimated at 20.000 souls (Dias, *A Urbanização e a Arquitectura dos Portugueses em Macau*, 56).

²²⁰ BG, n°19, May 10, 1873, 75-77, Population census of December 31, 1871. According to this census, the total population in Macao was of 71.730 souls, from which 5.375 were “Christians” and 66.267 were Chinese (56.207 ground and 10.060 maritime). This Chinese population now concentrated mainly in the Bazaar, with 19.877 people, in the contiguous Sé district (the heart of the traditionally ‘Christian’ city), with 8.360 people, and in the northern area of Patane, with 7.215 people.

social intricacy²²¹ or, as he himself put it, working to “illuminate what was obscure”²²² in the colony’s life and in that community’s businesses in particular.²²³ Comparing the 1860s and 1870s statistics, it may be inferred that, contrary to the Chinese population’s spectacular rise, the ‘Christian’ population hadn’t spread much over the 5.000 figure since 1841.²²⁴ Also, between June 1867 and December 1871, the Chinese ‘ground’ population seemed to have remained relatively stable around the 56.000 figure. In what concerns the geographical concentration of each community, while the ‘Christians’ resided primarily in the traditionally ‘Portuguese’ districts, such as Sé (which literally means ‘cathedral’, and is therefore usually the central district in Portuguese towns), S. Lourenço and S. Agostinho, the Chinese spread through all districts, unsurprisingly, we might add, given their number. In 1871, however, they were concentrating in the Bazaar, which remained an exclusively Chinese enclave in Macao.

All in all, the 1860s and early 1870s saw population growth, Chinese entrepreneurship and political governance mix together in a powerful cocktail of urban regeneration and expansion. While reflecting on the importance of the Procuratorate for Chinese Affairs in this context, acting Procurator Marques Pereira would write in 1867 that “the practice of shaping ground for construction, either by reclaiming it to the sea, either by using vacant land that for centuries had only been populated by graves, at times has seemed more like a frenzy, rather than the natural result of the increasing number of residents that it actually is.”²²⁵

²²¹ On May 3, 1867, Manuel de Castro Sampaio described the Bazaar as “an extremely important part of Macao, where the commercial life of the Chinese that populate this establishment is concentrated, where they have their industries, and where most of the Chinese population agglomerates. [...] Cut, however, by an infinity of dark streets and dead-end lanes [*“becos sem saída”*], it constitutes quite a labyrinth [with some] truly filthy lanes and not one of the proper sanitary conditions in its houses” (BG, n°18, May 6, 1867, 97-98).

²²² AHU, AHU-ACL-SEMU-DGU-005, Cx.0034, Letter n°55 (confidential) from the Governor of Macao, José Maria da Ponte e Horta, to the Minister of the Overseas, **March 26, 1867 (transcribed in Volume 3 - Annexes)**.

²²³ Quoting again from Manuel de Castro Sampaio’s report of May 3, 1867: “The series of uninterrupted improvements that, for years now, have been fostered in Macao, clearly indicate that the statistics department was also to come, as soon as circumstances would allow it. [...] Thus, through this department, important Chinese business, which so far has been obscure and mysterious, may now be clarified; and, also through it, the government will henceforth rest its action and authority on true foundations” (BG, n°18, May 6, 1867, 97-98).

²²⁴ In 1841, the ‘Christian’ population in Macao was estimated at 4.788 souls (AHU, AHU-ACL-SEMU-DGU-005, Cx.0009, Letter n°216 from the Governor of Macao, Adrião Acácio da Silveira Pinto, to the Minister of the Overseas, forwarding the 1841 Christian population survey, February 12, 1842).

²²⁵ BG, n°12, March 25, 1867, 61-64, “Report on the attributions of the Macao Procuratorate of Chinese Affairs”, by acting Procurator A. Marques Pereira, head of the respective committee appointed by Governor José Maria da Ponte e Horta’s local ordinances of November 22, 1866, and February 6, 1867, March 21, 1867. The Procuratorate for Chinese Affairs had, by national ordinance of July 5, 1865, been formally separated from the City Senate. Since then, the position of Procurator had been filled by royal appointment,

The next chapter of the Bazaar regeneration would come during the governorship of Admiral António Sérgio de Sousa (1868-1872),²²⁶ who had replaced Ponte e Horta in August 1868. By the time the new project was introduced, probably around the beginning of 1870, metropolitan government had already issued the national ordinance of December 3, 1869, officially establishing the overseas provinces' public works department, with a specialized body of civil or military engineers especially assigned to oversee this branch of administration throughout the empire.²²⁷ According to this new legislation, public works in the provinces became (another) matter of central governance, with the department's personnel being directly appointed by decree of the Minister of the Overseas. As such, right after the publication of the national ordinance, in March 1870, Governor Sérgio de Sousa had almost immediately confirmed Lieutenant-Colonel Domingos José de Almeida Barbosa as public works director.²²⁸ A few months later, on July 15, 1870,²²⁹ metropolitan government would name its pick for this important position, thus making engineer Major Francisco Jerónimo Luna²³⁰ the first Macao public works director of this new Portuguese

upon proposal from the Governor. The 1867 committee reaffirmed the importance of this institution in Macao, now that it had been divested of its former role of diplomatic representation, for it acted as a "private tribunal for a special population", administering justice to the Chinese according to their ways and customs. The committee felt, however, that "the Chinese population should, as far as possible, be educated in our laws and ways of judging, from which they can only benefit", and therefore that the Procuratorate should gradually be assimilated to the Portuguese courts of first instance. This would eventually lead to the reforms of 1868, 1877 and 1881, which would put the Procuratorate progressively under metropolitan control.

²²⁶ Vice-admiral António Sérgio de Sousa (1809-1878) started his career in the Overseas administration by being appointed acting Governor of the Angola province from 1851 to 1853. He would go on to serve one term as Governor of Macao, from 1868 to 1872, after which he would serve one short commission as Governor of the Portuguese State of India between 1877 and 1878. He would be made Viscount Sérgio de Sousa by King D. Luís I. After a similar education as his father and grandfather in the Lisbon Naval School, Viscount Sérgio de Sousa's grandson, António Sérgio de Sousa Júnior (1883-1969), better-known by his pen name António Sérgio, would become a renowned intellectual and politician with strong ties to the opposition to the 1933-1974 Estado Novo Dictatorship.

²²⁷ BG, n°10, March 7, 1870, 42-47, National ordinance of **December 3, 1869**, organizing "the Overseas public works department" ("*serviço das obras públicas no Ultramar*") (**Preliminary report transcribed in Volume 3 - Annexes**). For a detailed look at this reform, see Chapter II.

²²⁸ BG, n°13, March 25, 1870, 59, Government of Macao local ordinance n°23, March 23, 1870. Virtually nothing is known about Lieutenant Colonel Domingos José de Almeida Barbosa. He probably succeeded Jerónimo Osório de Castro Cabral de Albuquerque as public works director, sometime around spring 1869. As for public works inspector Francisco Maria da Cunha, as we mentioned, he is last referenced in the primary sources on April 1869, and there is no mention of anyone resuming this position after his departure, at least until the early 1900s.

²²⁹ This date is mentioned in Armando Azenha Cação, "Sankiu," *Revista de Cultura*, 35/36 (1998): 136.

²³⁰ Not much is known about Francisco Jerónimo Luna, other than that, in July 1862, he was working under the management of Filipe Folque, illustrious Director-General of the Royal Geodesic and Cartographic Service (*Director-Geral dos Trabalhos Geodésicos e Cartográficos do Reino*), as cited in Branco, *The Cornerstones of Modern Government*, 193. He is also mentioned as having been part of a group of metropolitan engineers coming to serve in the State of India Public Works Department in May 1870, precisely

imperial network generation of engineers. However, newly-promoted Lieutenant-Colonel Luna would only arrive in Macao to take office on August 22, 1871.²³¹

References to this early 1870s project are very few in the primary sources. The first comes only at its latter stages of construction, on January 1873, when the reclamation seems to be over and the public works department is authorized to proceed with the layout of drainage infrastructure. This comes in the form of a public ordinance, mentioning “the project to install the drainage pipelines in the streets adjacent to the new bazaar and Chinese theater, next to the recently reclaimed dock [*doca*], the so-called Manuel Pereira [dock].”²³² As we had previously seen, this dock had undoubtedly been given its name in reference to the old Pereira tea factory, mentioned in the 1838 Macao historical map (Figs. 19, 20 and 21). Lieutenant-Colonel Luna, in his public works report regarding the first trimester of 1873, mentioned this infrastructure work as ongoing, indicating that it had started on October 21, 1872.²³³ In his following published report, regarding the year 1872, Luna mentions that, in what concerned road works, the most important project had been the (still ongoing) setting up of

the drainage pipelines in the streets adjacent to the New Bazaar and Chinese theater, which were newly constructed, mostly over a reclamation done in an old dock [*caldeira*], whose presence was no longer convenient for the city’s general sanitation as, besides being for some time now surrounded by buildings, it served at the same time as shelter for the accumulation of *tancás*, full of Chinese families, which they consider themselves the most inferior class, forming something of a floating village, without any attention to salubriousness what so ever.²³⁴

Based on the comparative interpretation of the 1866 and 1884 historical maps, Figure 22 (c.1875) depicts the configuration hypothesis for the New Bazaar district as it would have been around its inauguration in 1875, connecting the old Bazaar towards the south with Ponta e Horta square, through the reclamation of the ‘Manuel Pereira dock’ and its surrounding areas.

in the context of the reorganization of the overseas technical staff (Faria, “O papel dos luso-descendentes na Engenharia Militar,” 8). If so, he would almost immediately be reassigned to head the Public Works Department in Macao, having taken office one year later.

²³¹ This date is mentioned by Lieutenant-Colonel Luna himself, in his public works report of May 22, 1873 (AHU, AHU-ACL-SEMU-DGU-005, Cx.0042, Letter n°92 from Macao public works director Francisco Jerónimo Luna, to the Overseas Director-General, on the same date).

²³² BG, n°3, January 18, 1873, 9, Government of Macao local ordinance n°7, January 17, 1873.

²³³ BG, n°16, April 19, 1873, 62, Public works report regarding the first trimester of 1873, by Lieutenant-Colonel Francisco Jerónimo Luna.

²³⁴ BG, n°23, June 7, 1873, 92-93, Public works report regarding the year 1872, by Lieutenant-Colonel Francisco Jerónimo Luna.

According to Wang Wen Da,²³⁵ part of the site where the dock stood had been “an old Jewish tea company called Pereira,”²³⁶ which had been bought by the Chinese merchant Vong Lok around 1861. Wang describes it as a vast ground, abandoned by its owners during the post-Opium War period, when many businesses had moved to the newly-established and free port of Hong Kong. It seems that, in the 1860s, this site was known as “the orange at the bottom of the basket,”²³⁷ meaning that nobody wanted to invest in it. According to Lin, Vong Lok’s family had come to Macao from Fujian during the reign of the Kangxi Emperor (1661-1722), making him the fifth generation born in the territory.²³⁸ If Vong Lok bought the old Pereira tea factory in the 1860s, and since Wang describes some activity regarding “reclamations, property purchase, street layout and building construction”²³⁹ around it at that time, we may assume that he was the one responsible for the construction of the dock area seen in Read’s 1865-66 map (Fig. 21), following the 1856 old Bazaar extension. It seems that business didn’t go as planned, however, and Vong Lok had to dissolve the company he had formed with some other Chinese associates to invest in this site.

At the beginning of 1870, the old Manuel Pereira dock, also known as “White Eye dock,”²⁴⁰ was being managed by Ho Guai who, as mentioned, had just won the first concession for the Vae-seng lottery²⁴¹ with his partner Apon. According to Wang, Governor Sérgio de Sousa asked Vong Lok and his son Vong Dai to undertake the reclamation and urbanization of the area, which they started on October 1870,²⁴² with Ho Guai and with his son Ho Lin Vong as partners.²⁴³

The reclamation must have been done by October 1872, when the public works department started laying out the drainage infrastructure, as we have seen. Vong Lok then started the construction of a new theater, the future Cheng Peng Theater, which would be inaugurated in 1875, in time for the

²³⁵ Wang Wen Da (1901-1981), was a descendant from Wang Lu (written in pinyin for a Standard Mandarin Chinese pronunciation), known in Macao as Vong Lok (written in pinyin for a Cantonese Chinese pronunciation). His work, *Macao Chronicle*, which was published posthumously in 1999, is a collection of stories and anecdotes from Macao’s oral tradition, passed on through the Wang (Vong) family generations; see Wang Wen Da, *Macao Chronicle* (Macao: Educational Publishing House, 1999).

²³⁶ Wang, *Macao Chronicle*, 224.

²³⁷ *Ibid.*, 227.

²³⁸ Lin, *Chinese Merchants in Macau in Late Qing*, 24. The author also mentions that Vong Lok celebrated his 70th birthday in 1875, which would logically put his birth around 1805.

²³⁹ Wang, *Macao Chronicle*, 224.

²⁴⁰ Lin, *Chinese Merchants in Macau in Late Qing*, 36.

²⁴¹ The Vae-seng lottery concession had been established by Governor Sérgio de Sousa in 1869 (Lin, *Chinese Merchants in Macau in Late Qing*, 35).

²⁴² Wang, *Macao Chronicle*, 225.

²⁴³ Lin, *Chinese Merchants in Macau in Late Qing*, 36.

celebration of his 70th birthday.²⁴⁴ Wang also mentions that the Governor had planned to include a market in the New Bazaar, which would lead to the planning and construction of a square for this purpose, “built with shophouses on three sides and the fourth side open to the river.”²⁴⁵ As, by this time, the Ponte e Horta square had already been finished, I assume that this description must relate to Largo da Caldeira (‘Caldeira square’),²⁴⁶ henceforth at the strategic south end of Rua Nova de El-Rei.

The New Bazaar is easily identified in Figure 22 as the regularly structured area between the old Bazaar and the former Portuguese customs. Apart from Rua da Caldeira (‘Caldeira street’) and Travessa da Caldeira (‘Caldeira alley’), which lined the old dock, none of these new streets appear in Manuel de Castro Sampaio’s July 1869 survey on city streets,²⁴⁷ which proves that they were built subsequently. Their names allude to the recent nature of the ensemble operation, such as Travessa do Aterro Novo (‘New Reclamation alley’), Travessa do Bazar Novo (‘New Bazaar alley’) or Travessa do Auto Novo (‘New Theater alley’ or, in Chinese, literally ‘Cheng Peng New Street’).

The main street in the new district was, however, Rua da Felicidade (Fig. 35). It had been laid out as an extension of Rua da Caldeira, cutting the old urban fabric and climbing up to Rua da Alfândega and Rua dos Cules, which themselves descended to Largo do Senado. As Rua do Culao (now Rua das Estalagens, literally meaning ‘Inns street’) had done for the old Bazaar, Rua da Felicidade thus established for the new Bazaar a direct axis, beautifully lined by its decorated shophouses, connecting the inner harbor to the heart of town. The New Bazaar quickly became Macao’s most popular district, known for its opium houses, gambling parlors and prostitution salons.

²⁴⁴ Ibid., 24.

²⁴⁵ Wang, *Macao Chronicle*, 228.

²⁴⁶ The Largo da Caldeira, literally meaning ‘dock square’ (see above), had been named after the reclaimed ‘Manuel Pereira dock’. It stood at the river entrance of the former dock, where there used to be a bridge (Fig. 21), named in 1869 *Ponte Oito de Outubro* (‘October Eighth Bridge’), in tribute “to the victory won by our troops over the Chinese *faitiões* crews that, with the help from other Chinese, on October 8, 1846, had attacked this city.” This quote is taken from the report from the committee in charge of surveying and setting the names of the city’s public spaces, by head of the statistics department Manuel de Castro Sampaio, appointed by Governor Sérgio de Sousa (BG, n°30, July 26, 1869, 141). The new square’s name is mentioned in the 1907 “Bazaar district Improvement Project” by Public Works Director António Pinto de Miranda Guedes (AHU, 251-2G-1S SEMU DGU cx.). This square no longer exists, having been built over sometime in the 1920s.

²⁴⁷ BG, n°30, July 26, 1869, 141, Report from the committee in charge of surveying and setting the names of the city’s public spaces, by head of the statistics department Manuel de Castro Sampaio, appointed by Governor Sérgio de Sousa.

Military engineer Adolfo Ferreira Loureiro, in Macao for a special commission to study the improvement of the inner harbor, would write about the New Bazaar a few years later (Fig. 36):

The so-called Chinese Bazaar is a district partly of modern construction [*modernamente construído*], already with some regularity and hygiene [*asseio*], where there is extraordinary movement and liveliness. The shops selling objects originating in China are situated there, from the well assorted warehouses and stalls of fruit and other edibles, to cloth, silk and jewelry. The streets are clean and aligned, though narrow. The houses are all built the same and are all alike, with shops decorated with large golden signs, written in Chinese and ornamented with flowers and lanterns. [...] There were many Fantan houses there, distinguishable by their green paintwork and by large lanterns having, by the doorway, niches and altars, where incense and candles burnt, shining over ugly idols painted in very bright colors, in arrogant positions and with impossible dragons and beasts. The Vae-seng lottery, Pacapiao and other game houses were also very popular, and were also distinguishable by their large lanterns, signs, flowers and very narrow and long paintings. The fact is that games of chance are a dominant vice of the Chinese and that, from the exploitation of that vice, we have derived the colony's main income, by creating the gaming concessions. This is a case of the end not justifying the means.²⁴⁸

As for the authorship of the regeneration project, it is again quite difficult to ascertain. Because the Government had been imposing explicit street alignments and building regulations since the 1856 Bazaar extension, we may assume that the public works department was involved in laying out the street plan, making it coherent with the inner harbor realignment project, namely with its overall goal of improving traffic conditions and sanitation. This is hinted at by Lieutenant-Colonel Luna in his June 1873 report, in which he states that the presence of the old dock “was no longer convenient for the city's general sanitation,”²⁴⁹ seemingly confirming Wang's information that the initiative to reclaim this area had come directly from Governor Sérgio de Sousa. However, by the time the reclamation of the ‘Manuel Pereira dock’ started, supposedly in October 1870, Luna, although appointed in July, hadn't arrived in Macao yet. Therefore, if we were to look to the acting public works department at the beginning of the year 1870 in search of the New Bazaar penmanship, we would find, as mentioned, Lieutenant-Colonel Domingos José de Almeida Barbosa, of whom we don't know much about. We would also find, occupying the position of draughtsman (*desenhador*), Lieutenant Henrique Augusto Dias de Carvalho.²⁵⁰ Some sources place Dias de

²⁴⁸ Adolfo Ferreira de Loureiro, *No oriente: de Nápoles à China. Diário de viagem* (Lisboa: Imprensa Nacional, 1896), 317-318. Adolfo Ferreira Loureiro was in Macao from September 1883 to April 1884. In the following pages of this memoir, he offers a description of each of the mentioned Chinese games of chance and of what he perceived to be their impact on Chinese society. For more on Adolfo Ferreira de Loureiro and his work in Macao, see Chapter V.

²⁴⁹ BG, n°23, June 7, 1873, 92-93, Public works report regarding the year 1872, by Lieutenant-Colonel Francisco Jerónimo Luna.

²⁵⁰ After the publication of the 1869 national ordinance establishing the overseas public works department, and pending the appointments by the Ministry of the Overseas, Governor Sérgio de Sousa published a local ordinance confirming in their positions: as acting draughtsman, Lieutenant Henrique Augusto Dias de Carvalho, and as work supervisors (*condutores de trabalhos*), Captain Francisco Justiniano de Sousa Alvim

Carvalho working together with Surgeon-General Dr. Lúcio Augusto da Silva on the plans for the new military hospital which, if accurate, would have to have been before Luna took office.²⁵¹ Luna also mentions having taken up some projects developed by the public works department before his arrival, such as the Ferreira do Amaral commemorative Portas do Cerco archway, inaugurated in October 31, 1871.²⁵² Therefore, without much certainty about who was occupying the key positions at the right time, I would venture that the New Bazaar street layout may have been designed by the early 1870s public works engineers, possibly by draughtsman Dias de Carvalho.²⁵³

After the completion of the riverside road from Barra to Portas do Cerco in the summer of 1868, reflections on the inner harbor improvement continued, leading to an 1872 project to broaden the existing reclamation, so as to “simultaneously regularize the river currents.” After having been

and Lieutenant Manuel de Castro Sampaio, chief of the statistics department (BG, n°13, March 25, 1870, 59, Government of Macao local ordinance n°22, March 23, 1870).

²⁵¹ The ground leveling work for the construction of the new S. Januário military hospital began, according to Luna, on May 11, 1872 [BG, n°16, April 19, 1873, 62, Public works report regarding the first trimester of 1873], roughly one year after he had taken office. In his public works report of May 22, 1873, referring to the work carried out by the public works department in the year 1872, Luna mentions that construction on the new hospital had begun on December 1, 1872, adding that “the plans for this building, as well as its budget, have been approved by the technical council, of which there is rigorous copy in the Ministry of the Overseas” (AHU, AHU-ACL-SEMU-DGU-005, Cx.0042, Letter n°92 from Macao public works director Francisco Jerónimo Luna, to the Overseas Director-General, May 22, 1873). The plans would indeed be sent to Lisbon, although apparently not for approval, but for information purposes only, as they appear as annexes to the letter n°10 from the Governor of Macao to the Minister of the Overseas, dated from January 20, 1873 (AHU, AHU-ACL-SEMU-DGU-005, Cx.0042), when construction was already under way. Therefore, it seems that Luna could have been the author of the hospital plans, as he had taken office well before the preliminary construction work started. This idea is contrary, however, to historian Helena Gonçalves Pinto’s thesis (see Helena Gonçalves Pinto, *Hospital Militar de S. Januário*, www.arquitecturasdaude.pt, visited on December 13, 2018), which claims Henrique Augusto Dias de Carvalho was the author of the hospital plans, although without citing her sources.

²⁵² In his public works report of May 22, 1873, referring to the work carried out by the public works department in the year 1871 since he had taken office (on August 22, 1871), Luna mentions that the new Portas do Cerco archway had been “built according to the plan that we found already drafted, having been inaugurated, by order of the colony’s government, on October 31, birthday of His Majesty the King D. Luís I” (AHU, AHU-ACL-SEMU-DGU-005, Cx.0042, Letter n°92 from Macao public works director Francisco Jerónimo Luna, to the Overseas Director-General, May 22, 1873).

²⁵³ Henrique Augusto Dias de Carvalho is a fairly well documented figure in Portuguese contemporary history as, after his residency in Macao, he would become known for his role in the Portuguese African expeditions of the 1880s. Born in 1843, he was only 26 years old at the time of his March 1870 appointment as draughtsman in the Macao public works department, a position he accepted without having completed his studies at the Lisbon Polytechnical School (see Pedro Dinis, *Biografia de Henrique de Carvalho*, <http://clubedohistoriador.blogspot.com>, visited on December 13, 2018). He was then appointed for administrative positions in the provinces of S. Tomé (1873), Moçambique (1877) and in the Luanda public works department in Angola (1878-1882), before embarking in an expedition to Lunda (1884-1888), with the purpose of establishing a Portuguese ‘civilizing mission’ in the province. In 1895, promoted Colonel, he would be appointed the first Portuguese Governor of the Lunda district.

presented with its project, Governor Sérgio de Sousa would authorize construction of its first portion by local ordinance of January 17, 1873 (published, by the way, in the same day as the one authorizing the infrastructure project in the streets of the New Bazaar).²⁵⁴ This latter pier realignment project may safely be attributed to the penmanship of Lieutenant-Colonel Luna, by then well proven as public works director. As we have seen, the same is much harder to establish regarding the New Bazaar, or any other project dating from before the formal establishment of the overseas public works departments, as mentions of projects to be approved by local ordinance before construction, prior to 1870, are not very many or none at all. The practice, from Ferreira do Amaral's time forth, had rather been for the government more or less to introduce a specific urban regeneration idea, have the project laid out by the available military or civil engineers (I assume), and then partner with a Chinese entrepreneur to fund, build and develop the new urbanized grounds. This would change, of course, as was the purpose of the 1869 national ordinance, however slowly, as the following 1870s and 1880s projects would show.²⁵⁵ In the instruction of one of these projects, for instance, Governor Carlos Eugénio Correia da Silva (1876-1879),²⁵⁶ acting as president of the Government Council, would give a clear statement about the way things had been done in the (very recent) past, asserting, on June 26, 1879, that:

Although previous governors had the practice of authorizing [works] without deeming it necessary to hear the vote of the Council, nor that of the Treasury or of the technical corporations, as had been the case of reclamations [...] such as the inner harbor riverside road pier, built by private initiative without supervision nor control, same as the Grand Bazaar [*Bazar Grande*], built after the 1856 fire, that destroyed part of this town, or other fifteen or twenty important works done in Macao with no legal frame, however he, President, understood that his actions should be legitimized by the vote of these corporations in all important matters.²⁵⁷

The New Bazaar shophouse: a restructuring and development unit

The distinctive feature of the new Bazaar areas, from 1856 through 1875, is the use of the shophouse typology as a real estate development unit. Its widespread construction, with minor variations, ended up creating a rather homogeneous urban landscape which, as General Adolfo Loureiro would put it in the 1880s, gave the viewer the impression that “the houses are all built the same and are

²⁵⁴ BG, n°3, January 18, 1873, 9, Government of Macao local ordinance n°6, January 17, 1873.

²⁵⁵ For more on this subject, see Chapter II.

²⁵⁶ For more on Governor of Macao Carlos Eugénio Correia da Silva (1876-1879) see Chapter II.

²⁵⁷ BG, n°41, October 11, 1879, 251-252, Minute from the Government Council session of **June 26, 1879 (transcribed in Volume 3 - Annexes)**.

all alike.”²⁵⁸ In Figure 37, a photograph of the Bazaar circa 1900, these new constructions are easily identifiable on the right side of the street, with their regular façades topped by platbands and straight alignment, in contrast with what I assume would be the old Bazaar buildings on the left side, one storied, irregularly aligned and with overhanging roofs.²⁵⁹ In his 1855 *Six Months Among the Malays; and a Year in China*, French traveler Dr. Melchior-Honoré Yvan would give an expressive description of these old brick and wood tenements. Although written in his typically depreciative fashion, his impressions quite confirm the information one is able to gather from the 1900s photograph.

The houses are in general dreadfully shabby and dirty, and have quite the appearance of places in which elegance and utility are sacrificed to business; they consist of but one story, if that term can be applied to the miserable, low-roofed attics in which the wretched inhabitants all herd together like dogs; as to the owner of the hovel, he lodges elsewhere; the façade, when made of bricks, is dirty and discolored, and when of wood, so broken and disjointed as to resemble wicker work, but the riches of the merchandise in these horrible dwellings, in some measure redeems the shabbiness of the exterior.²⁶⁰

The 1850s and 1860s Macao shophouse typology, which we saw on the right side of the street in Figure 37, and which we can still identify in some of their last original plots in Rua do Guimarães (Fig. 38), comprises a two-to-three-storied building, with a commercial function on the ground floor and residential quarters on the upper floor. Construction is based upon a straightforward structure of two load-bearing walls on each side of the building, perpendicular to the street, in which stand the wooden roof and floor structures. The structural material is the traditional gray brick, used for the façades as well. The brick platbands hiding the two-sloped roof accentuates the linearity and simple elegance of the ensemble. The use of the platband had actually been an issue contemplated by the 1856 committee for the reconstruction of the old Bazaar which stated, in its January 8 public notice, that, to better prevent fire from spreading, the edges of the shop’s rooftops should be “made of lime, without the appearance of wood, as done in the city’s Christian houses; instead of wooden roofs [the landlords] might also build small tiled terraces with platbands, equally high and

²⁵⁸ Loureiro, *No oriente: de Nápoles à China*, 318.

²⁵⁹ On the left side of the street, at the back, there is another traditional Chinese building typology, rather common in the Bazaar, which is the fortress-like *Torres dos Prestamistas* (literally ‘towers of the loaners’). These were used as pawnshops and banks, in which deposited goods were stored, sometimes for extended periods of time, therefore needing an elaborate wooden inner structure and air circulation system to maximize storage space and to prevent the deterioration of the goods (by rats, moist, the white ant, etc.).

²⁶⁰ Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 150.

uniform.”²⁶¹ If built in the old urban fabric, these shophouses usually had an inner courtyard separating the main building from a secondary one, often with a private well.²⁶²

In 1867, Chief of the statistics department Manuel de Castro Sampaio, would remark on the significant improvement the introduction of this typology had meant for the embellishment of the Chinese district and the salubrity of its dwellings:

The new Chinese houses, in addition to being extremely agreeable to the eye, comparatively with the old shacks which they have replaced, having been built according to more or less hygienic conditions [...], for the old houses were of small proportions, sordid and almost without light nor ventilation, forming as much breeding grounds of deleterious, and even contagious miasmas, due to the accumulation of people and domestic animals of several species: an accumulation to which the Chinese are used to, and which is frequent also in the new houses, but whose miasmatic effect is neutralized by a hygienic influx which didn't exist in the previous dwellings.²⁶³

Conversely, in the 1870s New Bazaar (Figs. 35 and 36), higher density was privileged, and so the shophouses were mostly built back to back. This would probably end up creating slightly worse living conditions for its inhabitants though, as the residential quarters thus had far less natural light and ventilation than with the inner courtyard system. The façades were homogenous, punctuated by the salient bearing walls that marked each unit, with large openings on the commercial ground floor and slightly smaller windows on the upper floor, protected by more or less carved wooden shutters painted in bright colors. The platbands were replaced by wooden ledges.

Figure 39 shows a reconstitution of the cadastral configuration in the old and New Bazaar districts circa 1875, based on the morphological information drawn from a 1903 cadastral map. In the same way the urban structure of the extension areas is clearly differentiated from the old urban fabric by a much more regular layout, which we analyzed in Figs. 19 through 22, here we may observe that the plot division in the new blocks is also geometrically regular, contrasting firmly with the more additive²⁶⁴ layout of the old Bazaar blocks and plots. The shophouses are most often arranged back

²⁶¹ BG, n°13, January 19, 1856, 49, Government of Macao public notice, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

²⁶² These private wells were often cited on the fire department's reports, as they were frequently requisitioned for fire emergencies. So as to be swiftly located on these occasions, the Government had ordered that every house with a well should have a small sign with the letter 'P' (for 'poço', 'well') outside their door. Apparently this system was not very effective, as several times throughout the years the Government had to reiterate the same demand, under threat of penalties, as it seems that the landlords had the habit of removing the 'P' signs (not to be disturbed, or for fear of robberies if they opened the door during a crisis, was the interpretation of the Portuguese authorities). On this subject, see BG, n°8, February 24, 1877, 30, Public notice by the Procurator for Chinese Affairs, February 22, 1877.

²⁶³ Sampaio, *Os Chins de Macau*, 4-5.

²⁶⁴ The terminology to express the concept of what appears, by its geometrically unregulated form, to be the 'unplanned city', often ranges from words such as 'organic', referring to a development guided by intrinsic rules, such as those commanding living organisms, or 'spontaneous', referring to space appropriation which

to back as, for example, in the blocks between Rua Nova de El-Rei and Rua do Guimarães, built in 1866.

In the 1870s New Bazaar, around Rua da Felicidade and Travessa do Bazar Novo, these plots are also fairly regular and homogeneously-sized, presenting around 10-to-12-meter lengths, over 3,5-to-4-meter widths. Here, the experimentation in optimizing the available block space is also taken one step further by the occasional introduction of a back lane. Beco da Felicidade (Fig. 40), as it is called, is situated behind the eastern portion of Rua da Felicidade, allowing the shophouses on the main street to have two façades. The units accessed by the back lane were, however, strictly residential, with no commercial space on the ground floor, thus preserving a more domestic character to the lane, also reinforced by the presence of a gateway and altar at its Rua da Felicidade entrance (Fig. 35). This type of public/private lanes may be seen as a reinterpretation, under a more geometrically regular and optimized layout, of the old Bazaar traditional lanes (*becos*) and courtyards (*pátios*), which can also be appreciated in their intricacy on the old Bazaar portion of the same map. These systems of interconnected streets with different hierarchical status, and therefore with different morphological characteristics, ranging from their width to the characteristics of their residential unit, formed the built frame for community life, symbolically sheltered from city hustle by their gateways.

Similar configurations could be found, for instance, in the Hong Kong Taipingshan and Sheung Wan districts,²⁶⁵ as depicted in British military engineer Osbert Chadwick's comprehensive *Report on the sanitary condition of Hong Kong*, from July 1882.²⁶⁶ First off, in regard to the shophouse typology itself, Chadwick presented an example of a back-to-back built unit which, according to the author, was the usual block layout in a level site (Fig. 41). Chadwick had surveyed this particular shophouse in the Canton Bazaar district, which was the market district at Queen's Road Central

is done by the individual or the small community in close interaction with the topographical characteristics of the site. As Luísa Trindade argues, however, 'spontaneous' rather applies to the manner of settlement, not to its morphological expression, which may vary depending mostly on the chosen territory management system: "If, in a given moment, not very distant from settlement, a planning intention presides, the urban form will be regular. If, on the contrary, space construction, urban growth and consolidation, all is left to follow its normal course, by successive additions, as time unfolds and without planning, either general or partial, then, in terms of morphological analysis, the correct word is organic and/or additive;" see Luísa Trindade, *Urbanismo na Composição de Portugal* (Coimbra: Imprensa da Universidade de Coimbra, 2013), 123.

²⁶⁵ For a postcolonial perspective into the Hong Kong shophouse, the so-called 'tong lau', and its recent heritagization processes, see Cecilia Chu, "Between Typologies and Representation: The Tong Lau and the Discourse of the "Chinese House" in Colonial Hong Kong," in *Colonial Frames, Nationalist Histories: Imperial Legacies, Architecture, and Modernity*, ed. Mrinalini Rajagopalan and Madhuri Desai, 253-283. Hong Kong: Hong Kong University Press, 2012.

²⁶⁶ Osbert Chadwick, *Report on the Sanitary Condition of Hong Kong* (London: Colonial Office, 1882). For more on Osbert Chadwick (1844-1913) and his work, see Chapter III.

near the Sheung Wan Chinese district. Built in the traditional “blue Canton brick,”²⁶⁷ it shared its back wall with the opposite unit, which separated each other’s “cookhouses.” These were small compartments in the back, usually serving as “kitchen, latrine, urinal and general backyard,” as well as extra room, and ventilated through “smoke-holes” pierced in the upper floors and roof.²⁶⁸ According to Chadwick, each and every available surface of the shophouse, seldom including its commercial ground floor and cookhouse, was subdivided by fixed or movable wooden partitions, vertical as well as horizontal, in order to accommodate a maximum of lodgers. In this house alone, the upper floor was inhabited by five families, in a total number of sixteen people.²⁶⁹

This would be the typical residential unit of real-estate development operations in Chinese districts in the early 1880s, as Chadwick mentions repeatedly that most of these shophouses had been recently built.²⁷⁰ It was the case, for example, of Taipingshan, in upper Sheung Wan, whose geometrically regular system of shophouse blocks clearly ensued from a previously planned urban program (Fig. 42). In this, it quite resembles the Macao New Bazaar area (Fig. 43), with its variety of both back-to-back and back lane shophouse blocks, established along regularly laid out main streets, and punctuated by remarkable buildings: the central market and Tung Hing theater²⁷¹ at Taipingshan and Cheng Peng theater in the Macanese Bazaar. The use of the back lane was also common in these layouts, although preferably used in sloped sites, mainly to better connect the two opposite housing units which had to be built on different levels. “Frequently,” Chadwick added, “this lane will be at or near the level of what is the first floor in the street in front.”²⁷² Moreover, the Taipingshan plan, with its orthogonal sloped streets and literally ‘ladder streets’, also bears some resemblance to the 1885 Horta da Mitra improvement plan, a restructuring plan of a poor Chinese district in Macao, sort of in-between, in terms of urban pattern, the 1870s and 1880s first real-estate development operations and the 1890s resumption plans.²⁷³ Indeed, and contrary to the

²⁶⁷ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 10.

²⁶⁸ *Ibid.*, 11.

²⁶⁹ For more on the issue of overcrowding as well as, in general, of living conditions in the Macao and Hong Kong Chinese districts, see Chapter III.

²⁷⁰ In 1883, passing through Hong Kong on his way to Macao, General Adolfo Loureiro would also remark on these new districts along Queen’s Road, with their narrow streets and beautiful stores, evidently of recent construction, and in which “all the houses were separated by salient pilasters” (the author seems to be summoning a classical reference to illustrate the repetitive rhythm of the shophouses’ load-bearing walls in the street view) (Loureiro, *No oriente: de Nápoles à China*, 284).

²⁷¹ Ting and Wong, *City of Victoria*, 58.

²⁷² Chadwick, *Report on the Sanitary Condition of Hong Kong*, 11.

²⁷³ For more on the issue of the 1880s and 1890s restructuring and resumption plans in Macao and Hong Kong, namely regarding the Horta da Mitra improvement and the Taipingshan resumption plans, see Chapter III.

Macao New Bazaar, which had been built mainly as a culture and leisure district, Taipingshan had been planned as a strictly residential Chinese working class district (Figs. 44, 45 and 46).

Chadwick mentions several similar ongoing development programs, some of which might have still been in their planning stages in 1882, as they aren't represented in the Hong Kong 1889 cadastral map (Fig. 47). It was the case, for instance, of a housing operation in Aberdeen Street, lower Sheung Wan, near Queen's Road Central (Figs. 48 and 49), in which the goal is decidedly to achieve maximum density within the available block. As a result, and despite it being of "superior construction, and on the whole well kept," as well as having mixed functionalities, as some of the better units were meant to house "a hotel for Europeans," its extremely narrow alleys and back lanes foreshadowed the usual array of sanitary grievances. In Chadwick's view, "the inadequate amount of light and ventilation which [the access alleys] afford to the surrounding buildings," together with "remarkably defective drainage," would ultimately result in "a most abominable nuisance."²⁷⁴

Another one of these sites using the shophouse unit as a development and densification tool can be seen in Figures 50 and 51, this time situated behind a row of houses aligned with Queen's Road West, facing the Victoria Harbor old praya (Des Voeux Road West). Given that the Connaught Road new praya reclamation (seen in Fig. 51 under construction) would only start in 1889, it seems that this densely packed residential block must have been built in the 1880s, such as the previous Aberdeen Street example.

The shophouse typology in Macao is described by Wang and Cheong as "traditional Chinese street-houses"²⁷⁵ in a Guangzhou (Canton) architectural style.²⁷⁶ Architect Carlos Marreiros has used a similar expression to describe the architecture surrounding the Cheng Peng Theater, which he calls "traditional Chinese architecture," following "rigid principles of construction and design," to which the author attributes the homogeneity of the "Chinese city," as he called it: "Because of this rigidity, buildings for different purposes, whether temples, shops, or ordinary residential houses, may often look alike."²⁷⁷

Now, in my view, and as architect and researcher Cecilia Chu has remarked regarding the equivalent Hong Kong 'tong lau', literally meaning "Chinese building" or "Chinese house,"²⁷⁸ this 'traditional Chinese' interpretation needs to be put into perspective. For, even though the Macao

²⁷⁴ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 14.

²⁷⁵ Wang and Cheong, *Regenerating Pátio*, 27.

²⁷⁶ Wang and Cheong, *Regenerating Pátio*, 18.

²⁷⁷ Carlos Marreiros, "Traces of Chinese and Portuguese Architecture," in *Macau. City of Commerce and Culture*, ed. R. D. Cremer, (Hong Kong: UEA Press Ltd., 1987), 91-92.

²⁷⁸ Chu, "Between Typologies and Representation," 253.

Bazaar shophouses were built using Southern China provinces' materials, construction techniques and visual codes, I would argue that they were anything but traditional. In my view, this commercial and residential unit was, rather, a typological instrument for the maximization of house space and urban density that emerged in colonial settings, such as Macao and Hong Kong, in the context of 1850s through 1870s government-sponsored property development operations, such as those described in this chapter. As Chu points out, the 'tong lau' was mostly defined through contrast with its antithesis, the 'yang lau', the "foreign building" or "European house," and thus could only materialize in specific urban landscapes, where the "Chinese building tradition" came into contact with "colonial building policies."²⁷⁹

In this sense, it is somewhat the Southern Guangzhou version of the Shanghai *lilong* row house.²⁸⁰ Literally meaning 'community lanes' (*li* for 'community' and *long* for 'lane'), the *lilong* was, from the second half of the nineteenth century and up to the 1950s, the dominant form of residential district in Shanghai.²⁸¹ It had originated in the British section of the International Settlement, established in the 1840s in the wake of the First Opium War, but it soon became the standard real estate development operation in the French and Russian concessions as well. The *lilong* row-housing typology, introduced "to accommodate the surge of migrant inflows and overcrowding"²⁸², is generally associated with British "traditional row houses: a series of short-width houses joined by common sidewalls,"²⁸³ the British Victorian poor tenements.

However, as researcher Nora Boyd points out,²⁸⁴ the history of the *lilong* doesn't fit exclusively in the straightforward diffusionist narrative of the housing typology imported from Europe and disseminated in China through the "quasi-colonial"²⁸⁵ networks of influence. Instead, Boyd argues that these complexes emerged in a context of particularly strong building pressure, where the figure of the comprador²⁸⁶ emerged as contractor, "engaged to solve the problem of housing single men

²⁷⁹ Ibid., 257, 278.

²⁸⁰ For a look into the emergence of nineteenth century urban modernity in Shanghai, see Samuel Y. Liang, *Mapping Modernity in Shanghai. Space, Gender, and Visual Culture in the Sojourners' City, 1853-98* (London and New York: Routledge, 2010).

²⁸¹ Arkaraprasertkul and Williams, "The Death and Life of Shanghai's Alleyway Houses," 138.

²⁸² Ibid.

²⁸³ Ibid.

²⁸⁴ Nora Boyd, "Building Cosmopolitanism: Reconsidering the Comprador as Contractor in the Formation of Shanghai's Lilong," *Architectural Histories* (2021, pending publication).

²⁸⁵ Arkaraprasertkul and Williams, "The Death and Life of Shanghai's Alleyway Houses," 137.

²⁸⁶ The term *comprador* is used here in line with its Merriam-Webster definition describing it as an "intermediary in business affairs" (<https://www.merriam-webster.com>, visited on September 28, 2020). Deriving from the Portuguese language, in which *comprador* literally means 'buyer', its use has become widespread, namely stemming from the nineteenth century contemporary sources. As seen, for instance, in

and then small families, entirely new social units in China, [looking to] regional forms and [employing] them to serve the mercantile project of rent collection.”²⁸⁷

Hence, for example, as Cheng Jinxuan and Silas Aaron Hardoon in Shanghai,²⁸⁸ so Chinese entrepreneurs Apon, Ho Guai and Vong Lok seem to have been among the first-generation compradors/contractors of the new Portuguese sovereign Macao. Meeting the ambitions of the Governments, from Ferreira do Amaral onward, with the funds and logistics to materialize them in the regeneration and expansion of the urban landscape, I believe that these were the men at the source of the new shophouse typology. As such, it must have emerged as the adaptation of Southern China regions’ low and middle-class housing architectural and construction vocabularies,²⁸⁹ to the ensemble real estate development plan general scheme which, until then, had been virtually unpracticed (and impracticable, due to the local Chinese authorities’ building restrictions) in the region. As Chadwick himself had remarked, back in 1882:

The usual type of Chinese house in Hong Kong is essentially different to that in use on the neighboring mainland. This is due, to some extent, no doubt, to European influence and example, but principally to the necessity for economy of space on account of the high price of land and the great cost of preparing level sites for building. This shows that the Chinese are not so averse, as commonly supposed, to change their habits to suit altered conditions.²⁹⁰

Therefore, I would argue that the emergence of Western settlements from the 1840s on, may be seen, not as the vehicle through which Western housing typologies and modern urban forms were introduced in Chinese ‘traditional’ urban landscapes, but rather as the enabler agents whose liberal urban governance model allowed for a new type of ensemble property development to materialize. The combination of modern European urban planning, expressed in the Bazaar urban extension and regeneration plans by Portuguese military engineers in charge, more or less officially, of the public

Osbert Chadwick’s 1882 *Report on the Sanitary Condition of Hong Kong*, regarding the city’s shophouse tenements: “Very frequently each floor is leased separately from the owner, or from his ‘comprador’, and sublet again to individual lodgers” (Chadwick, *Report on the Sanitary Condition of Hong Kong*, 37). This role of the ‘middleman’ could be performed between local businesses or manufacturers and Western commercial agencies or, at a more institutional level, between Western government agencies and local interests.

²⁸⁷ Boyd, “Building Cosmopolitanism.”

²⁸⁸ Ibid.

²⁸⁹ The Shikumen (literally ‘stone gate’) row-house of the early Shanghai *lilong* is an entirely different typology from the Southern Chinese shophouse. As its function was primarily residential, it usually had a front yard protected from the street by a high wall with a carved archway. This gave access to the two or three-storied house, with either a second yard or a service area in the back, with an independent access to the opposing street. The blocks were thus composed of single rows of houses, in which all streets had the same hierarchical value (there were typically no ‘back streets’), with the fronts of the houses on one side facing the backs of the houses on the other side.

²⁹⁰ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 11.

works office, with Chinese entrepreneurs' willingness to diversify their business portfolio would, in turn, lead to the regularization of the district's urban fabric through the space optimization effort made possible by the new moderate-cost housing typology.

* * *

Disputes over issues of sovereignty, territorial limits and ground administration had been prevalent in Macao since the establishments of the Portuguese concession in the sixteenth century under a peculiar situation of administrative, as well as judicial, divided sovereignty. At the time of the 1856 great fire, however, this status had been changing at an increasingly fast pace for the best part of the latter ten years, in the sense of asserting exclusive Portuguese sovereignty over the territory. And, as we have seen in the immediate handling of the disaster by Governor Guimarães, establishing full sovereignty had a fundamental expression in the control and management of the urban ground. Cadastral and population surveys, government-registered property titles, property taxes, building regulations, the idea of public prerogatives prevailing over private interest in the reconfiguring of the urban fabric, were all providential instruments of scientific measurement, knowledge, and interconnected judicial regulation to assert administrative legitimacy. Particularly set in the contested grounds of the Chinese Bazaar, the Governor's swift action in planning and building its first regular-layout urban extension in the wake of the fire would have ground-breaking significance.

On the other hand, the focus of post-Opium War Portuguese colonial ambition on making its claim on territorial sovereignty through regenerating and expanding Macao's urban landscape, mostly for the purpose of establishing property tax as a major instrument of financial viability, would make city building a proverbial land of opportunity for the local Chinese fortunes, much as it had throughout the Nanjing treaty ports, such as Hong Kong and Shanghai. The Bazaar first government-led reconstruction and expansion twenty-year timespan, for instance, would see the emergence and consolidation of a fundamental bond between Portuguese sovereignty and Chinese entrepreneurship, which would prove decisive in the making of Macao's modern urban landscape for decades to come. As, even if the urban layout would indeed be planned by the public works engineers in charge of the operation, as would happen in most of the subsequent city restructuring and extension plans, the capital and workforce, as well as the architectural typology of the units composing the new geometrically optimized urban fabrics were, more often than not, of Chinese origin.

In the regularly-aligned 1850s through 1870s new Chinese Bazaar, the immediate material result of this changing social, political and technical dynamics was the emergence of the shophouse as the typological instrument for the maximization of house space and urban density. Built by adapting Southern China regions' low and middle-class housing architectural and construction vocabularies and materials to the space optimization effort of the real estate development plan, it became the quintessential commercial and residential unit of modernized Macao working-class urban living. A new moderate-cost Chinese housing typology in a new liberally-managed urban landscape.

Modernizing ‘the Old-fashioned Way’: the Public Works Department and the New Inner Harbor Reclamation , 1877-1884

In 1877, Councilman Miguel Ayres da Silva and his Chinese partners were authorized by the Governor to reclaim and urbanize a large portion of the city’s riverfront. Coming from an old-established and well-respected family, Silva was one of the first in his generation of ‘native-born Portuguese’, as the aspiring aristocratic mixed-blood Macanese called themselves, to drift away from traditional employment in the administration or the military and make a name for himself as entrepreneur and landowner. His reclamation project, in line with the 1850s through 1870s Government-promoted inner harbor restructuring efforts, put forward the modern principles of progress and sanitation, adopting an orthogonal pattern of well-aligned streets, blocks and plots, setting the tone for a new age of centralized urban planning in Macao.

Indeed, this would be the first urban extension plan to be carried out under the supervision of the newly appointed Public Works Department. From early 1870 on, a new generation of Public Works engineers, fresh out of the metropolitan and Portuguese State of India military schools, was seeking to further the European modern urban planning and management model in Macao. Which meant, of course, favoring the Portuguese government’s claim of full control over the territory as being the system of governance better suited to upgrade both the disorganized and insalubrious additive pattern of the divided sovereignty city and the autonomous space appropriation practices of its inhabitants.

However, Miguel Ayres da Silva’s blatant disregard for government regulations in the construction process, as well as the succession of patched-up settlements reached as the work progressed, resonated profoundly with Macao’s ‘old-fashioned’ model of informal city building. Through the focus on Silva’s inner harbor reclamation project, this Chapter looks at the transition from these century-old bottom-up urban practices to the tentative Public Works top-down model, recognizing that this was, in reality, quite a contested process, reflecting both the ambitions and the contradictions of modern Macao.

Administrative reform: metropolitan ideal and local reality

On July 2, 1877, newly-appointed Governor of Macao Carlos Eugénio Correia da Silva (1876-1879)¹ issued a local ordinance granting the citizen Miguel Ayres da Silva permission, under a six-year concession contract, to reclaim and urbanize a large portion of the city's riverfront.² It justified the concession on claims of it improving public prosperity by creating new ground on which to build commercial and industrial structures, as well as public health, by eliminating an insalubrious siltation point, and even the river flow, by realigning the pier wall, thus giving the riverfront a more regular profile.

By that time, as we have seen, the riverfront had been under constant restructuring for more than twenty years, with several one-off projects successively reclaiming new ground, from the northern Portas do Cerco border to the southern Barra end of the Macao peninsula.³ In his request to carry out the reclamation, dated from January 22, 1877, Miguel Ayres da Silva explicitly referred to the “precedents of such concessions, granted by Governors Isidoro Francisco Guimarães and José Rodrigues Coelho do Amaral to citizens Vicente de Paula Portaria, Apon, Bernardino de Senna Fernandes and others”⁴ to support his claim. Which seemingly corroborates the theory I had ventured in the previous chapter that the 1850s through 1870s Government-promoted inner harbor restructuring efforts had been achieved through a series of concessions, negotiated on a case-by-case basis with the city's notable entrepreneurs.

¹ Vice-admiral Carlos Eugénio Correia da Silva (1834-1905) started his career in the Overseas administration by being appointed Governor of Macao on December 31, 1876. At the end of his commission, in October 1879, he would go on to serve one term as Governor of the Portuguese State of India (1882-1886) and another term as Governor of the Mozambique province (1881-1882). Correia da Silva had been made Viscount of Paço de Arcos by King D. Luís I in 1874, and would later be made Count of Paço de Arcos by King D. Carlos I in 1890, right after his tenure as Civil Governor of the Lisbon district. He would also serve as the first Portuguese ambassador to the new Brazilian Republic (1891-1893). Both Correia da Silva's parents had family ties with his almost-immediate predecessor in the Macao Governorship, Januário Correia de Almeida, Viscount of S. Januário (1872-1874). His son, Henrique Monteiro Correia da Silva, also serving as Governor of Macao (1919-1922), would be responsible for the Inner Harbor Improvement Project shutdown in October 1919 (for more on this subject, see Chapter V).

² BG, n°27, July 7, 1877, 109-110, Government of Macao local ordinance n°64, establishing the concession, to entrepreneur Miguel Ayres da Silva, for the construction of a new inner harbor reclamation, **July 2, 1877 (transcribed in Volume 3 - Annexes)**.

³ For further reference on the outline of the inner harbor piers general realignment plan, see Figs. 12 and 13.

⁴ AM, MO/AH/AC/SA/01/00205, Letter n°169 from the Macao Treasury Department secretary to the Government Secretary-General, regarding the request by entrepreneur Miguel Ayres da Silva to carry out the construction of a new inner harbor reclamation, **June 7, 1877**. Includes a copy of Silva's concession request, dated from January 22, 1877 (**transcribed in Volume 3 - Annexes**).

However, as we have also seen, and although this hypothesis can be inferred from the comparative analysis of the general historical maps, as well as from sporadic references in published discourses, technical reports, local legislation, and the occasional Chinese source, no official decisions, nor any type of attempt at public office control had ever been publicized about the previous concessions. As such, it is safe to say that the July 2, 1877 ordinance represents the very first government effort at regulating, as well as documenting private initiative intervention in the city, making the Miguel Ayres da Silva concession contract a paradigmatic case-study, in which the tone is set for a new age of centralized urban planning in Macao.

Newly arrived in Macao at the beginning of 1877, Governor Correia da Silva clearly stated this purpose of rendering urban planning and management practices as transparent as possible, starting with Silva's project. In a Government Council session in June that same year, while referring to the recent history of riverside reclamations in the province, the Governor had noted that:

This sort of concession had been a long-established practice [here], sometimes overlooking its legal frame, although one must not infer from this opinion a criticism to his predecessors, who faced many difficulties and tried to overcome them as best they could, not particularly heeding to some procedures which, even if legal, are by nature very lengthy. [...] Hereupon, [the Governor] read Miguel Ayres da Silva's request, adding that, even though the requested concession could have been granted following the example of his predecessors, he had deemed convenient to ask for the opinion of the competent bodies.⁵

This relatively new concern from the Portuguese authorities regarding the accountability of their actions would thus find its main expression in the act of publicizing the administrative process, either by stressing the importance of the written (and drawn) document in the administrative validation circuit, prompting the output of periodic reports, as well as of written communication between departments and central administration, or through the publication in the Government bulletin of relevant session minutes, thus making the decision process available to the public.

The standardization of bureaucratic procedures was one of the facets of the first Portuguese liberal governments' effort for governance reform. This emphasis on achieving a state of "political-administrative rationalization," as architect and researcher Anni Günther Nonell puts it, had been a prerogative directly inherited from the Enlightened Despotism *ancien regime*, with the purpose of putting territorial administration under the aegis of the State:⁶

⁵ BG, n°39, September 27, 1879, 223, Minutes from the Government Council session of June 6, 1877, regarding the new inner harbor reclamation project.

⁶ Anni Günther Nonell, *Porto, 1763/1852. A Construção da Cidade entre Despotismo e Liberalismo* (Porto: FAUP Publicações, 2002), 37. This topic is developed largely on the basis of Nonell's own research on the transition period from the Enlightened Despotism to the Liberal State (1750-1852), in terms of political-administrative reorganization, territorial management in view of fostering internal trade, and techno-scientific and artistic teaching reform. Which the author further employs to put in perspective the city of Porto urban development and management at that same period. For more on the latter subject, see also Chapter IV.

[Institutional reform] was about establishing a mediation between administered agents and royal power, capable of establishing limits to private initiative and reducing the attributions of peripheral powers. Thus, was pursued the double purpose of reinforcing central administration and increasing control over the municipalities, which were the peripheral political and administrative basic territorial structures. [...] With the institution of the Liberal State between 1820 and 1852, [governments] strived to set the premises for the emergence of the principle of State authority, in which the State is understood as the sum of the individual voices expressed through universal suffrage [...]. The aim was to rationalize State apparatus through a policy of uniformizing and centralizing territorial administration, in accord with the basic principles of the citizen's liberty and equality before the law.⁷

As we have seen in the previous Chapter, Minister of Treasury Mouzinho da Silveira's 1832 administrative reforms, later formalized into the 1836 Administrative Code by Minister of the Kingdom Passos Manuel, had been one of the expressions of this effort.⁸ However, its French-inspired centralizing model swiftly saw itself under criticism by competing liberal factions, who assimilated its new heightened role of the State to the fallen absolutist regime which, too, had sought to overpower the country's so-called "municipal tradition."⁹ And, indeed, according to Nonell:

Up to 1832, on the basis of established law, the municipality had the most relevant role in the political and administrative local structure. This preeminence over other institutions and local powers derived from its double function: that of legitimate representative of the local population (that is, of the local oligarchies in charge of municipal power), and that of intermediary in the control exercised by central power over the instances of local power and, as such, that of representative of the State.¹⁰

Indeed, Mouzinho da Silveira's reforms sought precisely to overthrow this administrative system, in favor of a hierarchy of territorial divisions, headed by government-appointed agents under the Civil Governor's authority, set to disassemble the century-old traditions of power in the hands of local aristocracy and other notables, which his liberal faction saw as the basis of persistence of the

⁷ Nonell, *Porto, 1763/1852*, 37-39.

⁸ One of the most influential personalities of the 1820 liberal revolution, José Xavier Mouzinho da Silveira (1780-1849) was a University of Coimbra Law graduate. Appointed Ministry of Treasury (*Ministro e Secretário de Estado dos Negócios da Fazenda*) in March 1832, he would conduct his reforms while the liberal wars were raging, and namely taking part in some of their expeditions. Mouzinho da Silveira's reforms were published as a set of three national ordinances, dated from May 16, 1832, respectively regarding the organisation and management of Treasury, Justice and Territorial Administration. These texts would ultimately influence the letter of the first Portuguese Administrative Code, which would only be formally published and promulgated by Minister of the Kingdom Passos Manuel in 1836 (see Chapter I). In disagreement with the appointed head of government, the Duque de Palmela, Mouzinho asked and was granted his resignation by King D. Pedro IV in December 1832, having kept office for barely nine months. For more on Mouzinho da Silveira, as well on the territorial impact of his political-administrative reform, see Luís Nuno Espinha da Silveira, *Território e Poder. Nas Origens do Estado Contemporâneo em Portugal* (Cascais: Patrimonia, 1997), 76-79.

⁹ Nonell, *Porto, 1763/1852*, 40.

¹⁰ *Ibid.*, 41.

absolutist territorial order. Once this new territorial articulation of the State set in place, and under its tutelary administration, the territory itself could initiate its restructuring process, under the liberal principles of public good, free initiative and equality under the law, towards accomplishing the modern goals of progress and global development.

Minister of the Kingdom Costa Cabral's Administrative Code of March 18, 1842¹¹ reaffirmed this centralizing tendency, putting the Civil Governor, not only at the heart of territorial administration, but also, essentially, at the helm of the local end of what would be known as the Regeneration governments' modernizing plan.¹² Which presupposed, of course, that Governor and Municipality saw eye to eye on this matter or, as Nonell puts it, assuming "the latter's submission to the former."¹³

Despite the violent popular revolt which followed Costa Cabral's multifaceted effort at governance modernization,¹⁴ and even despite the Minister's own removal from power in the wake of the upheavals, the 1842 Administrative Code would prevail, remaining in force throughout the empire for almost forty years. Theoretically, anyway.

In Macao, it would be only by the end of the year 1868 that Governor António Sérgio de Sousa (1868-1872)¹⁵ would appoint an advisory committee in charge of studying the way by which the 1842 Administrative Code could be implemented in the province. In its report, the committee started by contesting the idea that one single set of administrative rules might be blindly enforced in every territory. Which was not to say that the overseas provinces shouldn't abide by national legislation, on the contrary. However, similarly to other "colonial nations" such as Great Britain,

¹¹ As Mouzinho da Silveira before him, António Bernardo da Costa Cabral (1803-1889) was a University of Coimbra Law graduate, as well as one of the most decisive figures in the consolidation of the Portuguese constitutional monarchy. Appointed Minister of Justice (*Ministro da Justiça e Negócios Eclesiásticos*) in 1839, Costa Cabral started a reformatory programme which he would pursue as Minister of the Kingdom after the 1842 military coup promoted by himself and his partisans. Despite the usual political contestation, the government of which Cabral was a part of managed to complete, for the first time in the constitutional period, a full four-year legislature, a period later named as *cabralismo*, such was the polarizing force of the Minister of the Kingdom's personality and the impact of his reforms. For more on Costa Cabral, as well as on the centralizing ambition of his 1842 administrative code, see Silveira, *Território e Poder*, 103-115.

¹² For more on the Portuguese Regeneration period (1851-1868), see the next section.

¹³ Nonell, *Porto, 1763/1852*, 44.

¹⁴ Known as Maria da Fonte revolt, it raged for eight months between 1846 and 1847, during which several popular upheavals occurred, in direct opposition to Minister Costa Cabral's tax, conscription and burial legislation reforms. With the involvement of political factions of all stripes, as well as of the armed forces, the conflict evolved into the Patuleia civil war, opposing the supporters of then-exiled Costa Cabral, and the city of Porto-based, self-proclaimed, Provisional Government Council (*Junta Provisória do Governo do Reino*). Originally formed by left-wing liberals, the *Junta* would later welcome a few absolutist partisans, ending up reopening, in a way, the badly healed wounds of the recent liberal wars.

¹⁵ For more on Governor of Macao António Sérgio de Sousa (1868-1872), see Chapter I.

Portuguese governance, “confident in the liberal notion of rendering all of its members equally-abled participants, accommodates the [letter of the] general law to the demands of each possession’s circumstances.”¹⁶ That said, it is clearly stated in the same report that the Administrative Code in force at that time was the Mouzinho da Silveira/Passos Manuel 1836 text, some twenty-six years after the promulgation of Costa Cabral’s reform. Which goes to show that, even though the State administrative hierarchy had been established through the “general overseas legislation”¹⁷ with, for example, the province’s Military Governor encompassing the attributions of the Civil Governor and the City Senate in the municipality role, as we have seen, metropolitan institutional reform in Macao was more of an ideal framework than a legislative reality.

To address this discrepancy head-on, and rather than renewing attempts at adapting the metropolitan texts to the colonies in a case-by-case strategy, Minister of the Overseas Luís Augusto Rebelo da Silva,¹⁸ under the third and last Duque de Loulé government (1869-1870), opted for issuing, on December 1, 1869, a national ordinance establishing the organization of public administration in the six overseas provinces, under the clearly-stated general principle that the 1842 Administrative Code was to be considered in force in all of them. Technically, this ordinance established the outline for adapting the metropolitan institutional scheme to the overseas territories, further allowing each province to reevaluate its terms and suggest the modifications deemed necessary so as to better correspond to each one’s particular circumstances. Therefore, it represented a way of compromise between the 1830s legislation’s “extreme assimilation” ideal, as historian Valentim Alexandre puts it,¹⁹ and the yearning for emancipation of traditionally self-relying local administrations. In the words of Minister Rebelo da Silva himself:

Convinced that the state of some of our possessions not only allowed, but suggested the reform of the administrative institutions, in what a prudent decentralization might allow local initiative an ampler field of action, [I appointed a committee in charge of drafting] a plan, which may reasonably be designated as the organic charter of governance and administration in the overseas provinces as, taking the more advanced ones as reference, such as Angola and the State of India, moderates, restricts and adapts the suggested dispositions, applying them to the other possessions according to each one’s special circumstances. [...] The state of India,

¹⁶ BG, n°49, December 7, 1868, 226-227, Report from the advisory committee in charge of studying the “alterations that must be made to the Administrative Code of March 18, 1842, that it may [...] be enforced in this colony”.

¹⁷ *Ibid.*

¹⁸ Lisbon born and based Luís Augusto Rebelo da Silva (1822-1871) was an intellectual, historian and politician, affiliated to the Academia Real das Ciências de Lisboa (Lisbon Royal Academy of Sciences), as well as to the similarly aimed Instituto de Coimbra (Coimbra Institute). Personally and professionally linked to the major personalities of the Portuguese Romanticism literary movement, such as Alexandre Herculano and Almeida Garrett, Rebelo da Silva is best known for his historical novels, rather than his work as a Regeneration government official.

¹⁹ Alexandre, “A Questão Colonial no Portugal Oitocentista,” 49-50.

through its civilization, its education system, and the abilities of its population, has long been considered apt to oversee more closely in the management of its moral and physical interests. In provinces such as these, the influence of central power is still useful, however regulated, so that individual and collective action won't be crushed nor overruled, but might be used with advantage, contributing with its intelligence and strength to the establishment and steering of the necessary improvements, such as public works, education, philanthropy and public health.²⁰

However, in the mind of the legislator, the intended institutional bearer of this newly empowered "local initiative" was to be the Governor himself, as the province's superior authority. In Angola and the State of India, considered to be the most strategic territories, the Governor was to be assisted by the overseas equivalent of the somewhat independent metropolitan District General Council (*Junta Geral de Distrito*), the newly-created Province General Council (*Junta Geral de Província*), which was to embody the essence of Minister Rebelo da Silva's decentralizing experience. Thereby, just as the former assembled representatives from each of the corresponding district's municipalities, the latter assembled the living forces of each province such as, in the case of the State of India: the archbishop, the government secretary-general, the treasury procurator, the public works director, the surgeon-general, a professor from the medical school, another from the Nova Goa military and mathematics school, as well as a designated member of each municipality. As the Minister put it:

By entrusting to local initiative the plan and its means of execution regarding important issues, and by calling upon it to examine and decide these matters [...] the purpose of this reform is to familiarize the possessions with engaging in these grave matters with their own capitals of intelligence and knowledge. [...] Given this ability, the provinces will be faced with the choice between progress and inertia, between improvement and backwardness. The metropole emancipates them from its tutelage and recognizes their majority and capacity. If they are unable to take advantage of this concession, they can only blame themselves.²¹

In the smaller provinces, such as Macao, this advisory role would continue to be taken on by the Government Council (*Conselho do Governo*), similarly assembling the province's higher religious, judicial, military, treasury, public health and municipal authorities. The fundamental difference being, in comparison to the Province General Council, that the Government Council was put directly under the presidency of the Governor, who was not bound to the decisions of its majority. Also, in a minor note, no seat was provided for the province's public works director. Functionally, as well as technically, it was the equivalent to the metropolitan District Council (*Conselho de Distrito*), as nearly all its members were civil (or, in the overseas, also military) officers appointed by the King. In the end, at least in what the Macao administration was concerned, Minister Rebelo

²⁰ DG, n°280, December 9, 1869, 609-616, National ordinance of December 1, 1869, organizing public administration in the Overseas. Preliminary report from Minister of the Overseas Luís Augusto Rebelo da Silva.

²¹ Ibid.

da Silva's notion of widening "local initiative" actually meant increasing, within certain well-defined guidelines, Governor autonomy. Municipal enterprise, however, remained tightly under its tutelage.

In compliance with its provisions, Governor Sérgio de Sousa once again appointed a committee in charge of "reviewing the Administrative Code established by the December 1, 1869 national ordinance, in order to propose the convenient amendments for the implementation of the same Code regarding the peculiar circumstances of this colony."²² In its August 31, 1871 report, the committee pointed out precisely the difficulties of enforcing the Administrative Code in what the municipality was concerned as, for the last thirty years, the latter's initiative, as well as its resources, had been extremely abridged by both central government and the local Governors, in order to halt what these institutions perceived as "the abuses of the [City Senate's former] exceptional administration."²³

Municipal public works was one of the Senate's presumably legitimate fields of action that had been severely restrained. Indeed, the 1842 Administrative Code stated that the municipality held responsibility for issuing regulations regarding, among other issues, "the aspect (*prospecto*) of buildings within city boundaries,"²⁴ as well as resolutions on "hiring companies to undertake work in the municipality's interest," "constructing and conserving municipal roads, bridges, fountains and aqueducts," "plans for opening and realignment of city streets and squares" and "any other new municipal construction, reconstruction and demolition projects."²⁵ As the August 31, 1871 report pointed out, however, the City Senate lacked the resources, both in personnel as in financial terms, to uphold this responsibility, especially given the fact that some of the municipal sources of income, such as the street lighting tax, or the licensing of foodstuffs commerce, were being collected by public treasury and booked in the provincial budget. As such, the committee advised in the sense that all municipal work be "proposed by the municipality [*câmara*] and approved by the District Council, the respective plans and budgets being carried out by that [public works] department, as well as directed and executed by its personnel. The municipality will profit as it will be exempt from a responsibility that, by lack of qualified personnel, could have been badly executed."²⁶

²² BG, n°42, October 10, 1871, 167-170, Report from the advisory committee in charge of "reviewing the Administrative Code established by the December 1, 1869 national ordinance, in order to propose the convenient amendments for the implementation of the same Code regarding the peculiar circumstances of this colony", August 31, 1871.

²³ *Ibid.*

²⁴ DG, n°67, March 19, 1842, 108-149, National ordinance of March 18, 1842 establishing the Portuguese Administrative Code. Article 120, n°VII.

²⁵ DG, n°67, March 19, 1842, 108-149, National ordinance of March 18, 1842 establishing the Portuguese Administrative Code. Article 122, n°II-V .

²⁶ BG, n°42, October 10, 1871, 167-170, Report from the advisory committee in charge of "reviewing the Administrative Code established by the December 1, 1869 national ordinance, in order to propose the

In the wake of the committee report, the Government of Macao local ordinance of October 9, 1871, finally implemented the Administrative Code in the province of Macao, in accordance with the prescriptions of the December 1, 1869 national ordinance regarding the overseas institutional organization. In it was established that all municipal prerogatives regarding public works, as stated in the Administrative Code, should be resolved, as well as fully financed, by the City Senate, provided that, before proceeding into planning and construction stages, it sought the director of public works' "advice, guidance and management."²⁷

The road to progress: institutionalizing Public Works

Hence, by the 1870s, in relatively small cities, and particularly if holding peripheral situations in the imperial network, as was definitely the case of Macao, the Public Works, as well as the Public Health Departments,²⁸ represented the dual grasp at technical and scientific expertise provided by central Government, which would probably be out of reach for these populations without the State's aforementioned "political-administrative rationalization"²⁹ effort of previous decades.

A national plan of global development and progress demanded an able State, that is to say, a structured State, with institutionalized knowledges and practices, and a clear definition of who does what in the modernizing effort. Therefore, in the liberal mind, fomenting (to use the preferred contemporary expression) 'modern Portugal' was seen as a State project requiring, in turn, a capable State invested in leading by initiative, by supporting private enterprise and by offering top expertise in the fields of science and technology.

Although this plan had been an aspiration of early liberal governments,³⁰ it was only with the political truce of the Regeneration period (1851-1868)³¹ that State institutions found the long-

convenient amendments for the implementation of the same Code regarding the peculiar circumstances of this colony", August 31, 1871.

²⁷ BG, n°42, October 10, 1871, 167-170, Government of Macao local ordinance n°57, implementing the December 1, 1869 Administrative Code in the province of Macao, October 9, 1871.

²⁸ For more on the subject of public health management in Macao, see Chapter III.

²⁹ Nonell, *Porto, 1763/1852*, 37.

³⁰ For an overview of reform regarding public works and economic development, both planned and tentatively implemented, since the reign of Queen D. Maria I (1777-1816) and through the early decades of the nineteenth century, see Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 43-54.

³¹ The description of this historical period, the Regeneration (*Regeneração*), borrows on the name of the political party founded by the Duke of Saldanha when taking office as head of government, following his May 15, 1851 military coup. The Regenerator Party (*Partido Regenerador*) takes a centrist turn in the wake of the Patuleia civil war ideological divide, in a bid for political peace, and putting forward the liberal goals

awaited stability to pursue it. Reflecting the purposeful and ambitious ‘material’ turn the Portuguese modernizing plan was about to take, one of the most significant steps of the Duke of Saldanha’s first Regeneration government would be to emancipate the Public Works Department (*Direcção das Obras Públicas*) from the Ministry of the Kingdom (*Ministério do Reino*). Thus, on August 30, 1852, was published the national ordinance establishing, in its own right, the Ministry of Public Works, Commerce and Industry (*Ministério das Obras Públicas, Comércio e Indústria*), headed by one of the most decisive figures of the Regeneration, military engineer António Maria Fontes Pereira de Melo.

Together with the Duke of Saldanha as head of government, Rodrigo da Fonseca Magalhães as Minister of the Kingdom and fellow military engineer António Aloísio Jervis de Atouguia as Minister of the Overseas, Fontes Pereira de Melo, at the time heading the Ministry of Treasury, signed the ordinance’s preliminary report, written as a manifesto for the rationalization of governance as means to achieve material progress:

Madam! Public Service organization, as all human institutions, must follow the stages of civilization and satisfy the new demands that it creates. Without the judicious implementation of this rational thought, there will be discrepancies between the actions of the Governance Machine and the movements of the Social Body, with great loss of living force. The new economic situation that presents itself to modern Nations by the immense industrial development that characterizes this century, brought the need to subdivide the departments of Public Governance, charged with oversee and manage, in the name of general interest, the major groups of private interests. That is why, in other Countries, different Ministries have been established for Agriculture, Public Works and Public Education. [...] Industry, Commerce and Public Works must, therefore, be separated from the Ministry of the Kingdom to constitute a distinct Ministry. This Ministry will connect the administration with the industries; [...] will facilitate transactions and promote affordable transport by building good communication routes; will organize industrial credit and establish professional teaching, without which the industries can hardly progress, as they know not how to improve their processes by taking advantage of the prescriptions of science. [...] Real improvement [of Public Treasury] cannot come from petty and irrational economies, but necessarily results from increasing taxable matter, which can only be achieved by promoting the industries, building communication routes, enabling education, fomenting credit, in a word, by improving the conditions of national labor. Madam, it is time that, as other civilized Peoples have done, we

of societal renewal and progress. More than yet another political movement, though, eminent historian António Henrique de Oliveira Marques deems it a “generous utopia,” borrowing on a traditional notion in Portuguese history, that of “striving to actually ‘regenerate’ the Country, bringing it back to a pure liberal path,” where corruption and nepotism would no longer hinder its chances at achieving material and cultural progress and at freeing itself from its chronic dependency towards the developed nations of the world. See A. H. de Oliveira Marques, “A conjuntura,” in *Nova História de Portugal. Volume X. Portugal e a Regeneração (1851-1900)*, ed. Joel Serrão and A. H. de Oliveira Marques (Lisboa: Editorial Presença, 2003), 467.

give an energetic and productive impulse to the most powerful agents of public wealth, on whose development is based the solid prosperity of Nations.³²

The same day, two more national ordinances were passed by the same Ministers. Having laid out their strategic vision on the first, the second ordinance stated the new Ministry's main, and very specific goal: the construction of the "Northern railway."³³ The purpose of this railway was to establish a direct connection between Lisbon and Porto, itself linked to the Lisbon-Spanish frontier railway, whose construction was already underway.³⁴ The third ordinance established where the funds to pay for the new railway were to come from: none other than from the nationalization of the Special Fund of Amortization (*Fundo Especial de Amortização*), whose product would henceforth be redirected exclusively to allow for the construction of the Northern railway. In line with the Ministers' previous statement, the latter ordinance's preliminary report is probably the soon-to-be-appointed first Minister of Public Works Fontes Pereira de Melo's own manifesto for the railway as the proverbial road to the nation's "civilization, prosperity and increased wealth,"³⁵ written with such passion and in such an expressive and purposeful language that, I feel, should be quoted at length:

Madam! Public roads in Portugal lack great development and demand a powerful impulse.

Almost with no roads, no canals, no railways, this country's commercial existence is due to the seas that bathe its wide shoreline, as well as to the rivers that penetrate its territory: but if these natural ways have been able to partly neutralize the lack of communication routes regarding the edges of territory touched by water, one cannot say as much for the heart of the country, those large tracts of land interspersed with villages that don't communicate with each other, of populations that don't commune, of products that don't circulate, of manufactures that aren't transported, and even of riches and wonders that rest unknown. This beautiful country, Madam, so fertile by the nature of its soil, for the amenity of its climate, lives almost exclusively from the commercial activity of its two great Cities of Lisbon and Porto; and its inland villages,

³² DG, n°206, September 1, 1852, 383-384, National ordinance of August 30, 1852, establishing the Ministry of Public Works, Commerce and Industry. Preliminary report.

³³ DG, n°206, September 1, 1852, 385-386, National ordinance of August 30, 1852, regarding the construction of the "Northern railway", connecting the city of Porto to the underway frontier line and onward to Lisbon.

³⁴ The railway line connecting Lisbon to the Spanish frontier was being promoted by a "Public Works Company (Companhia de Obras Públicas)" which had been established in 1844 by a group of the capital's entrepreneurs. One prominent member of this Company would be future Minister of Public Works João Crisóstomo de Abreu e Sousa, of whom we will speak further in the next section. For more on this subject, see Ana Cardoso de Matos, "Asserting the Portuguese Civil Engineering Identity: the Role Played by the Ecole des Ponts et Chaussées," in *The quest for a Professional Identity: Engineers Between Training and Action*, ed. Ana Cardoso de Matos, Maria Paula Diogo, Irina Gouzevitch, André Grelon (Lisboa: Edições Colibri, 2009), 177-178.

³⁵ DG, n°206, September 1, 1852, 386-389, National ordinance of August 30, 1852, establishing the nationalization of the Special Fund of Amortization (*Fundo Especial de Amortização*), whose product would henceforth serve to fund the construction of the Northern railway. Preliminary report.

some of them so happily situated in their mountainous relief, languish in their isolation, with the innumerable inconveniences that it implies in terms of social, political and economic order.

In a country as small as ours, with the Capital almost in a halfway position to all of the Kingdom, it is certain that we have, in Lisbon, swifter news from London, Paris or Brussels, than from Chaves or Bragança. Many important people from the Kingdom's hinterland have never crossed its city's boundaries, so many that have never discovered a wider horizon than the mountains that surround it. The fruit of the land dies next to its place of birth, unable to reach the consumer markets. The products of industry, the wonders of art, the comforts of civilization and the pleasures of life, are almost unknown outside of the two Capitals. This great body has no arteries, no veins through which circulation may flow to preserve its existence; and the traffic difficulties, which are uninterrupted barriers between the citizens of the same People, are incessantly calling out for a timely and efficient remedy, that brings us closer to the educated Nations' way of life, shortening distances, for the communication of men and the permutation of products.

While the European Nations draw and build roads, and open canals, we have remained stationary, limited to our extremely flawed means of communication. Now that the World is covering itself with a railway network, we must overcome, almost by leaping, the gap that separates us from this great improvement, to join the other Peoples in the prodigious increment of their means of transportation. Before, we had the discoveries and the conquests to fill the glorious pages of History; later, we have rested on the fruits of those conquests, while others were actively equipping themselves with great improvements; it is essential that we enter now in the general communion, and that we seek in economic reform and in the rapidity of communications what we have lost in so many years of unfortunate backwardness.

Your Majesty's Government has been so fortunate as to have recently signed a contract with a foreign Company, set to build the railway from Lisbon to the Spanish frontier by Elvas. This line, which will put us, in a few hours, in touch with the rest of the civilized World, and that will transform Lisbon into a Western Europe trade emporium, promises to yield large profits in retribution of the capitals invested in it. [...] That railway, however, is insufficient, in this Country, to pull it out of the commercial stagnation in which it dwells for so many years; it is essential to build a great artery, crossing the heart of the Kingdom, and afterwards ramifying in several directions, bringing life and comfort to the Country's key locations. [...]³⁶

The notion of societal, economic and political renewal through material progress, very tangibly epitomized by the railway, as expressed by the Ministers of the Regeneration, had been crucial in European urban milieus from the 1830s on. Within the circle of the Portuguese liberal elite, its association with the idea of freedom, stemming from French Polytechnique-graduate, Corps des Mines civil engineer, and economist Michel Chevalier's philosophy of the "political economy of material improvements,"³⁷ would nourish political thought before and all through the Regeneration period.³⁸ In this intellectual context, sociologist David Justino links precisely Fontes Pereira de

³⁶ Ibid.

³⁷ Justino, *Fontismo*, 29.

³⁸ Historian Joel Serrão argues compellingly that the word 'regeneration' (*regeneração*), as an ideology, commands, in Portuguese contemporary history, two great cycles that largely surpass and encompass the historic Regeneration period. The first, starting at the genesis of the first liberal movements and going up to the 1851-1868 relatively stable political instituted time. The second, going from the first fall from government of the Regenerator Party in 1868 to end of the first quarter of the twentieth century, that is, to the end of the First Republic (1910-1926). As we shall see, this is undeniable, especially in what concerns the overseas

Melo with the Saint-Simonian thinkers, as was the case of Chevalier, based on the works of late nineteenth and early twentieth centuries Portuguese historians Oliveira Martins and Anselmo Andrade, and quoting the latter: “At the time [1852], new statesman Fontes was at the helm, enamored with foment and enthusiast of capitalism, bent on bringing to government the political economy of Michel Chevalier.”³⁹

Undeniably, Fontes’ founding discourses, such as the previously cited reports, echo Chevalier’s premises that freedom, particularly for the working class or, in the Portuguese case, for the hinterland folk, would only come through material progress, that is to say, by State investment in land and water communication routes, by which “men and goods” could be brought closer together:

A man who is hungry is not free as, evidently, he is not in possession of his faculties, either physical, intellectual or moral. The 1789 *tiers-état* must have paid little mind to the material side of freedom as, thanks to its toil, the bourgeoisie had, during the seven centuries that had passed since the institution of the *communes*, painstakingly amassed, through the sweat of its brow, all that gives comfort, that assures drink, food and lodging. The reform, such as undertaken by the bourgeoisie, was one conceived by people that weren’t hungry, thirsty, nor cold. That which remains to undertake for the benefit of democracy must be conceived from this point of view: that democracy is cold, thirsty and hungry; that it deserves to change this condition, that it has the will and, quite frankly, the power to do it. In a word, the progress of material improvements [*le progrès des intérêts matériels*] has become, at the highest level, a political affair. [...] Material prosperity matters, one cannot stress it enough, to the exercise of public liberties. What can electoral or municipal rights mean to men chained to poverty?

[...] Among the instruments to facilitate, accelerate and consolidate material progress, we can distinguish three kinds occupying first rank. They are:

1st. Communication routes by water and land, bringing man and goods closer together;

2nd. Credit institutions, through which capitals, even if they don’t multiply, will at least multiply their action and power;

3rd. Special education, that is, apprenticeship for the workingman and industrial training for the bourgeoisie.⁴⁰

It is also true that, both in political circles as in public opinion, from the very beginning of his tenure as Minister of Public Works, Fontes Pereira de Melo would become so intrinsically and personally linked with the Regeneration material improvements policy, that both the policy itself and its

territories, where public investment on material improvements would increase exponentially after 1869. See Joel Serrão, “Regeneração,” in *Dicionário de História de Portugal. Volume III*, ed. Joel Serrão (Lisboa: Iniciativas Editoriais, 1971), 553. For more on the Portuguese Regeneration, see the already-mentioned overview by A. H. de Oliveira Marques, “A conjuntura,” in *Nova História de Portugal. Volume X. Portugal e a Regeneração (1851-1900)*, ed. Joel Serrão and A. H. de Oliveira Marques (Lisboa: Editorial Presença, 2003), 467-518. See also Maria Manuela Tavares Ribeiro, “A Regeneração e o seu Significado,” in *História de Portugal. Volume V. O Liberalismo (1807-1890)*, ed. José Mattoso (Lisboa: Lexicultural, 2002), 133-141.

³⁹ Justino, *Fontismo*, 29-30.

⁴⁰ Michel Chevalier, *Des intérêts matériels en France. Travaux publics : routes, canaux, chemins de fer*. (Paris: Charles Gosselin et W. Coquebert, 1838), 3-11.

driving ideology, started being referred to as ‘Fontism’ (*fontismo*). However, as Portuguese historiography has recurrently pointed out, Fontes was probably less a trailblazing ideologist of the “religion of progress,”⁴¹ than he was a voice of his time, even if a particularly active and politically influential one.⁴²

In this sense, Fontes was probably more accurately just another purveyor of what researcher Tiago Saraiva describes as the “Saint-Simonian city,” made possible by, as the author puts it, “republican science.”⁴³ Indeed, when describing the importance of Parisian political economy, as well as urban thought and practice in the Iberian Peninsula throughout the nineteenth century, and the foremost role played in it by men of science, the author draws a compelling parallel with the French First Republic. One that had been made by “a genuine incursion of positive science into power”, where “science was power.”⁴⁴

As David Justino also points out, the generation that would end up building and institutionalizing Fontism had been born in the 1820s, had shared the benches of the Escola Politécnica de Lisboa (Lisbon Polytechnical School), moved in the elite circles of the capital’s cultural associations, such as the Grémio Literário (Literary Guild), indulged in a broad editorial activity, and had enlisted in a promising career in the military engineering corps. Through conferences and lectures, dedicated periodicals and articles in journals of broader audience, they spread the progressive material improvements gospel, shared the Saint-Simonian authors, debated contradictory views on the materiality or immateriality expressions of that progress, and engaged in lengthy controversies with the romantics and traditionalists.

José Maria da Ponte e Horta, for example, future Governor of Macao, whom we saw taking the reins of the inner harbor realignment project in 1867, had once been one of these young and

⁴¹ Justino, *Fontismo*, 63.

⁴² Joel Serrão, for example, argues that Fontes Pereira de Melo was a “perfect symbol of a time” and that ‘Fontism’, instead of being a “case of personal idiosyncrasy, was the mirror where [that time] reflected itself”. Along the same lines, David Justino recalls the words of prominent Portuguese writer Ramalho Ortigão, a few days after Fontes’ death in 1887, portraying the assimilation between the man and his contemporary reality. “The Regeneration”, said Ortigão in one of his *Farpas*, “had long turned into Fontism. For several years, the royal policy had had one, and only one, governance principle. And that principle was António Maria Fontes Pereira de Melo.” Justino goes on to argue that “this excessive personalization between Fontes and Fontism [...] can be misleading”. See Joel Serrão, “Melo, António Maria Fontes Pereira de (1819-1887),” in *Dicionário de História de Portugal. Volume III*, ed. Joel Serrão (Lisboa: Iniciativas Editoriais, 1971), 11; and also Justino, *Fontismo*, 16, 30. For an extensive look at Fontes in his time, see Maria Filomena Mónica, *Fontes Pereira de Melo. A Modernização de Portugal* (Lisboa: Edições Afrontamento, 1999).

⁴³ Saraiva, *Ciencia y Ciudad*. “Republican science” (*Ciencia Republicana*) is the book’s first chapter, while “The Saint-Simonian City” (*La Ciudad de Saint-Simon*) is its second chapter, corresponding, respectively, to pages 25-59 and 61-99.

⁴⁴ Saraiva, *Ciencia y Ciudad*, 25.

enthusiastic minds. Back in 1849, already a reputed teacher at the Polytechnical School at the age of 25, he would give a lecture at the Grémio Literário intitled “Course on the steam engine” (“*Curso sobre as máquinas a vapor*”), in which, quoting Michel Chevalier, he would claim that “the introduction of the machines, amplified by the discovery of steam, was a true step on the road to progress; a gigantic step, forever marked on the pilgrimage of mankind.”⁴⁵

In another clear reference to Chevalier’s 1838 work, was founded, in 1846, the Sociedade Promotora dos Interesses Materiais da Nação (Society for the Development of the Nation’s Material Interests). Headed by the capital’s most active entrepreneurial and associationist figures, it focused mainly on matters of political economy. Nonetheless, its self-proclaimed ambition, as expressed with conviction as early as 1841 in the Society’s draft bylaws, truly was to spread techno-scientific knowledge far and wide, through the largest possible variety of channels:

By organizing a small library of mostly periodical or sporadic journals of practical science; by publicizing through the press any national or foreign new invention in relation to the Society’s purpose; by distributing these publications through the districts of the kingdom to which the new inventions may profit the most; by establishing in Lisbon an athenaeum of arts and sciences; by annually publishing the kingdom’s statistics regarding the widest possible variety of issues; by establishing close connections with all national and foreign societies and academies that may add to its purpose; by proposing to the government any eventual plan for improvement, in harmony with the society’s purpose, and that its knowledge and experience has lead it to believe it will promote the interests of the country; by organizing a library of machines, keeping them as models to be reproduced in their actual size; by sending individuals of recognized aptitude to study abroad, so as to import here the practical knowledge we are lacking; [...] by promoting the study of the country’s natural history; by promoting the banking and savings institutions, as well as any institution that foments national agriculture. [...] The society will be divided into the following classes: agriculture; industry; commerce; roads, internal navigation and public works; public instruction; colonies; and others that may be deemed convenient.⁴⁶

Although the Society itself turned out to be relatively short-lived,⁴⁷ its 1841 draft bylaws perfectly embody, well before the public-opinion ‘institution’ of Fontism, the outlook of the liberal “road to progress.”⁴⁸ No longer looking at political actors to bring it about, since they had been the ones responsible for “the dark fog brought by party quarrels” preventing the nation from “finding the

⁴⁵ Justino, *Fontismo*, 56-57.

⁴⁶ “Sociedade promotora dos interesses materiais da nação,” *Revista Universal Lisbonense* 12 (1841): 142-143.

⁴⁷ The Material Interests Society would be suspended by the Duke of Saldanha’s second government in 1849. For more on this subject, see António Alves Caetano, “Liga Promotora dos Interesses Materiais do País (1846-1849). O Crescimento Económico-social Adiado,” *Arquipélago- História*, 2ª série, IV, 2 (2000): 585-612.

⁴⁸ Justino, *Fontismo*, 57.

path to true social felicity,”⁴⁹ this was to be a task for a wider, united, network of actors: a supranational (Western) network of self-cultivated entrepreneurs and ‘republican’ *savants*, sharing knowledge through the printed word, through extensive documentation travels, and by facilitating common access through the network’s techno-scientific higher education institutions. Politics replaced, as Saraiva puts it, by “republican science”⁵⁰ or, breaking it down etymologically, by the ‘science of the public thing,’ the ‘science of public good’.

The game-changer of the Regeneration period, as compared to early liberal governments, was that many of these young *savants*, engaged by profound conviction in the societal implications of the material improvements theory, would end up taking public office, be it as Governors (Civil in the metropole or Military in the overseas), as Ministers of Public Works, Treasury, Overseas, Kingdom and sometimes even ascending to head of Government status, framing a true *république de savants*⁵¹ at the heart of the Portuguese constitutional monarchy.

Unsurprisingly, as we will continue to see in the case of Macao, the historical moments when these techno-scientific constellations of high-institution aligned, drawing with them the best of their corresponding State administration talents (such as Public Works and Public Health Departments), were the moments ‘Saint-Simonian magic’ materialized, in the form of major national transport infrastructure schemes or local general improvement plans.

Still, before the Grémio Literário and the Chiado *cafés*, in which Fontes and this elite were regulars, there were the medical and engineering school benches. As for the latter field of knowledge, the profile and role of the Portuguese ‘modern engineer’ started to be codified in print by Manuel de Azevedo Fortes (1660-1749), the first military engineer to be appointed to the post of Royal Engineer-General (*Engenheiro-Mor do Reino*) in 1719. At that time, engineers trained in military academies were, more often than not, the only available technical resource when it came to urban planning and architecture. In this sense, Fortes advocated that their teaching should be upgraded so they could be employed in the expertise of the territory, both in its physical and in its economic

⁴⁹ “Sociedade promotora dos interesses materiais da nação,” *Revista Universal Lisbonense* 12 (1841): 142-143. Introductory note by “F. S. T.”

⁵⁰ Saraiva, *Ciencia y Ciudad*, 30, 46.

⁵¹ Reprising the phrase “*La République n’a pas besoin de savants!*” attributed to the president of the revolutionary court sentencing chemist Lavoisier to death in 1794 (see Saraiva, *Ciencia y Ciudad*, 25). More recently, the phrase has been appropriated by French politician Pierre Mendès France while addressing the *Assemblée Nationale*, in 1953, to advocate for scientific research: “*La République a besoin de savants; leurs découvertes, le rayonnement qui s’y attache et leurs applications contribuent à la grandeur du pays.*”

aspects, and could learn to accomplish their tasks with the scientific precision, discipline and zeal for the service of King and Country that were usually expected from military officers.⁵²

Thus, to effect this change, the Enlightened Despotism *ancien regime* promoted the establishment, in 1779, of the Academia Real de Marinha (Royal Naval Academy) and, in 1790, of the Academia Real de Fortificação, Artilharia e Desenho (Royal Academy of Fortification, Artillery and Draftsmanship). This was, of course, part of a wider reform of Portuguese scientific education, itself in the scope of the Marquis of Pombal general institutional reforms, and which would also give birth to several other significant modern science teaching hubs such as, most notably, and also in 1779, the Academia Real das Ciências de Lisboa (Lisbon Royal Academy of Sciences).

Early liberal reforms accentuated the French-inspired tendency to favor techno-scientific fields of knowledge, rather than the Humanities, which continued to be the fief of the University of Coimbra. With the establishment, in Lisbon, of the Institute of Mathematics and Physical Sciences in 1835, assembling five Schools of Higher Studies (*Escolas Superiores*) including Civil and Military Engineering, Navy and Commerce, the capital was emerging as the nation's hub for scientific education. This would be confirmed with the institution of the Escola Politécnica de Lisboa (Lisbon Polytechnical School) in 1837, in place of the extinguished Royal Naval Academy. Its purpose was to somewhat democratize the access to preparatory teaching in operative mathematics, in the form of military and civil architecture and engineering, cartography, statistics, geodesics and meteorology, which could subsequently be pursued in the Escola Naval and Escola do Exército (the Naval and Military Schools).⁵³

The latter, also established in 1837, would replace the extinguished Royal Academy of Fortification, Artillery and Draftsmanship. Together with the institution of the Polytechnical School, the Military School's liberal reform represented, unquestionably, one of the most significant contributions to the advancement of Portuguese teaching of engineering up until that point, as it not only provided a three-year military engineering and artillery course, but also a two-year civil engineering one. Both stayed on as military schools under the tutelage of the Ministries of War and Overseas (*Secretaria de Estado dos Negócios da Guerra* and *Secretaria de Estado dos Negócios da Marinha e Ultramar*) though, in order to evade the opposition moved by the University

⁵² Nonell, *Porto, 1763/1852*, 54. A telling example of this commitment by Fortes to enabling a wide access to the techniques and methods of military training in the fields of geography, topography and geometry, for the benefit of historical knowledge, as well as territorial management, is, for instance, his *Tratado do modo o mais fácil e o mais exacto de fazer as cartas geográficas, assim da terra, como do mar, e tirar as plantas das praças, cidades, e edificios com instrumentos, e sem instrumentos para servir de instrução à fábrica das cartas geográficas da história eclesiástica, e secular de Portugal* (Lisboa: Pascoal da Silva, 1722).

⁵³ For a thorough analysis of the role the Escola do Exército (Military School) played in the establishment of the Portuguese liberal State's "techno-scientific elite" of "modern engineers," see Marta Macedo, *Projectar e Construir a Nação*, 31-112.

of Coimbra to the decentralization of the techno-scientific teaching reform.⁵⁴ Anni Günther Nonell argues that the particular circumstances of this reform contributed decisively, “not only to accentuate the supremacy of the military engineers, but also to compound the difficulties and the backwardness which characterized, in Portugal, the institutionalization of polytechnical and artistic education’s civil branches,” and namely of architecture.⁵⁵

Medical teaching was another fundamental aspect of reform. Despite, once again, facing the University of Coimbra’s opposition, the Lisbon and Porto Escolas Régias de Cirurgia (Royal Schools of Surgery) were established in 1825, as branches of each capital’s major hospital. This would end up driving a wedge between the Coimbra Faculty of Medicine and the Royal Schools of Surgery graduates, particularly the Lisbon surgeons, compounded by their association with the Polytechnical School and, thus, with the military institutions. As Alexandre Herculano, Polytechnical enthusiast that he was, put it, the Lisbon School was to be:

An institute for the physical and applied sciences destined, not only for the preparation of military engineers, civil engineers, Naval officers and technicians, Artillery and Military staff, but also for the lecture of the indispensable auxiliary knowledge to the study of Medicine, Farmacy, Commerce and, most importantly, Agriculture and Industry.⁵⁶

Therefore, by force of circumstances, Medicine, particularly through its illusive ‘urban sanitation’ branch,⁵⁷ became another field of the utilitarian Regeneration techno-scientific knowledge archetype, itself increasingly considered as another exclusive prerogative of military officers. This would prove to be especially relevant in the overseas administration, as Royal Schools surgeons would take on the majority of public health-related prominent roles, such as those of Surgeon-General (*Cirurgião-Mor*) and, after the 1869 overseas administration reforms, as heads of the provinces’ Public Health Departments (*Serviços de Saúde*).⁵⁸

As one of the forerunners of Portuguese political medicine, António Ribeiro Sanches (1699-1783),⁵⁹ would put it in his 1756 “Treaty on the Conservation of the Health of the People” (“*Tratado da conservação da saúde dos povos*”), regarding the fundamental role of medical doctors in the planning of properly sanitary overseas settlements:

⁵⁴ Saraiva, *Ciencia y Ciudad*, 41; Nonell, *Porto, 1763/1852*, 63.

⁵⁵ Nonell, *Porto, 1763/1852*, 69.

⁵⁶ Herculano’s 1841 manifesto in favor of the Lisbon Polytechnical School, *Da Escola Politécnica e do Colégio dos Nobres*, cited by Saraiva, *Ciencia y Ciudad*, 41.

⁵⁷ For more on the subjects of public health and urban sanitation, see Chapter III.

⁵⁸ For more on Minister Rebelo da Silva’s 1869 overseas administration reform in regard to public health, see the next section.

⁵⁹ For more on António Ribeiro Sanches and the Portuguese legacy in the theorization of political medicine, see Chapter III.

As, it seems, no Medical [doctors] were ever consulted, nor by the Magistrate, nor even less by the architects, before establishing any settlement, I decided it should be useful to gather all that I have read [...] in order to avoid the damages that can be seen in many villages and towns; I persuade myself that Portugal has a greater need of this knowledge than any other nation; for, being its everyday task to establish new settlements in its wide dominions, this way could be avoided many inconveniences, which would necessarily result in the loss of many of its vassals.⁶⁰

Political medicine thus came, in a concomitant and complementary fashion, both to extend the scope and to increasingly justify the progressive societal purpose of the Regeneration material improvements political economy. Overlapping and surpassing political movements, by the hands of the techno-scientific public health and engineering experts, both theories would prove to have a considerable impact on nineteenth century through to the early twentieth century urban planning and major infrastructure schemes.

Moreover, the *ancien regime* education reform had established a fourth ‘center of knowledge’ besides the cities of Coimbra, Lisbon and Porto: Goa, the capital of the Portuguese State of India, of which Macao was tributary. In the field of engineering, thus, Naval (*Aula de Marinha*), Artillery (*Aula de Artilharia*) and Fortification (*Aula de Fortificação*) courses had been established there, respectively in 1759, 1784 and 1812. These had later been reorganized into the Academia Militar de Goa (Goa Military Academy) in 1817, which would itself be extinguished and replaced by the Escola Matemática e Militar de Goa (Goa Mathematics and Military School) in 1841. The Goan elites also had the choice of higher education in medicine, with the Aula de Medicina e Cirurgia (Medical and Surgical course), established in 1691, which would be reformed into the Escola Médico-Cirúrgica de Goa (Goa Medical-Surgical School) in 1842.⁶¹

According to Alice Santiago Faria, the majority of teachers in the Goa military schools came from, and had been educated in Portugal, at least until the early 1800s, when the first Portuguese-descendant engineer is recorded to have started his lecturing functions.⁶² This was probably already in the context of the newly-established Military Academy, whose purpose seems to have been exactly that: to train, by officers already deployed in India or sent on special teaching missions, a local body of experts to serve in the empire’s eastern provinces, which were centered in the

⁶⁰ Quoted by Nonell, *Porto, 1763/1852*, 68.

⁶¹ For a critical account of the Escola Médico-Cirúrgica de Goa and of its graduates’ role within the Portuguese imperial network, see Cristiana Bastos, “Medicina, Império e Processos Locais em Goa, Século XIX,” *Análise Social* vol. XLII, 182 (2007): 99-122.

⁶² Faria, “O papel dos luso-descendentes na Engenharia Militar,” 226. For a thorough look at the Goa military engineering schools and at the role of their graduates within the Portuguese imperial network, see the fundamental work of Alice Santiago Faria, namely the above-quoted “O papel dos luso-descendentes na Engenharia Militar e nas Obras Publicas em Goa ao longo do século XIX” (2012).

Viceroyalty of India but reached wide, from Mozambique to Macao and Timor, greatly facilitating their deployment and consequently reducing central government expenses.

Even after the Viceroyalty status of its General Governor had been extinguished⁶³ and the province of Macao had become autonomous,⁶⁴ the importance of the State of India, and particularly of Goa, as a cultural and techno-scientific hub in the Portuguese empire's generic 'Orient', was well imprinted and somewhat challenging to bypass. In the context of the 1869 overseas public works reform,⁶⁵ for instance, Minister of the Overseas Luís Augusto Rebelo da Silva shared what must have been an administrative struggle of some kind regarding the issue of which military engineering nursery should provide which province's public works staff. The adopted solution had involved establishing a general body of engineers in what Minister Rebelo da Silva described as a "situation of service" (*"situação de serviço"*), to be appointed in every province through a three-year commission turnover system. In his preliminary report to the December 3, 1869 national ordinance, he added:

Undoubtedly, the choice of technical staff should be easier in the metropole. However, one must not forget that in the State of India there are also schools that qualify somewhat to the practice of engineering, as well as military officers that hold those qualifications. In order not to disregard or waste these elements, one could almost give India the mission to provide the Oriental provinces with personnel, leaving the kingdom with the task of choosing the technical staff for the occidental African provinces. I have decided, however, as an essential rule of good administration, on the principle that all personnel must be compelled to serve in any of the possessions he is appointed to.⁶⁶

Still, the reputation of the Goa schools lingered. Colonel (and engineer) João Alexandre Lopes Galvão would rightly pay them homage in his 1940 propaganda work significantly titled "Portuguese Engineering in the Modern Work of Colonization": "Portugal [could] take pride in having been the first country that, before any other colonial nation, had established engineering schools in the overseas!"⁶⁷

⁶³ Alice Santiago Faria and Paulo Varela Gomes mention that the last Governor of the State of India to be titled 'Viceroy' was D. Manuel de Portugal e Castro, whose tenure lasted from 1826 to 1835; see Alice Santiago Faria and Paulo Varela Gomes, "A Universidade de Coimbra e a Modernização do Planeamento no Estado Português da Índia," in *University of Coimbra Application to UNESCO* (2010), 45.

⁶⁴ DG, n°233, October 2, 1844, 304-306, National ordinance of September 20, 1844, separating the Macao province from the State of India and establishing the Government of Macao, Timor and Solor with head in the city of Macao.

⁶⁵ For more on the 1869 overseas public works reform, see the next section.

⁶⁶ BG, n°10, March 7, 1870, 42-47, National ordinance of **December 3, 1869**, organizing "the Overseas public works department" (*"serviço das obras públicas no Ultramar"*). Preliminary report (**transcribed in Volume 3 - Annexes**).

⁶⁷ João Alexandre Lopes Galvão, *A Engenharia Portuguesa na Moderna Obra da Colonização* (Lisboa: Agência Geral das Colónias, 1940), 22.

In Macao, as we have seen in Chapter I, the 1850s through 1870s modernizing effort, despite being pushed by the Governors, relied to an extent in the Goan Portuguese-descendant engineers and physicians' expertise, working side-by-side with their metropolitan-educated colleagues. Indeed, two of this community's most decisive personalities would collaborate in the 1880s, in which would turn out to be a turning point for modern urban planning in the territory. The first, Dr. Lúcio Augusto da Silva (1820s-1906),⁶⁸ was Macao's Surgeon-General, referenced in the primary sources since the 1860s. The second, Constantino José de Brito (1836-1914),⁶⁹ was a military engineer, appointed as Macao Public Works Director in 1881. Both would be exonerated in 1884 at the end of their commissions, not before having managed the 1883 and first-ever Macao Improvement Committee, whose wide-encompassing work would prove determinant for the utilitarian and sanitarian distinctiveness of the Public Works Department's projects in subsequent years.⁷⁰

⁶⁸ Born in Nova-Goa (Portuguese State of India), probably in the 1820s, Lúcio Augusto da Silva graduated as Surgeon from the Lisbon Medical-Surgical School in 1851. In 1857, he would go on to earn a doctoral degree in medicine from the University of Brussels. Having started his overseas commissions in Angola, where he would serve as 1st class doctor ("*facultativo de 1^a classe*") for a period of four years, Silva would soon be appointed Surgeon-General of the Macao and Timor province, by national ordinance of June 4, 1860. He would take office on December 18, 1861, having been made Lieutenant-General in 1869 in accordance with his rank in the administrative hierarchy. Silva would subsequently retire, by national ordinance of October 1, 1884, having spent more than twenty-three years of service in Macao. He died in Lisbon, unmarried and without descent, on January 31, 1906 [AHU, 445-1B-SEMU-DGU, "General Book of the Macao and Timor Public Health Staff" ("*Livro Mestre do Quadro de Saúde da província de Macau e Timor*")].

⁶⁹ According to Colonel Galvão, Constantino José de Brito was born in Pondá (Portuguese State of India) in 1836. Graduate of the Goa Mathematics and Military School, he would pursue his education in the Lisbon Polytechnical School, from which he would graduate in 1864. In 1867 he would earn his civil engineering degree by the Lisbon Military School (see Galvão, *A Engenharia Portuguesa*, 260-261). Lieutenant-engineer of the Indian Army ("*primeiro tenente de engenheiros do exército da Índia*"), Brito stayed on in Lisbon having asked, on September 11, 1869, to join the Ministry of Public Works' body of engineers, in order to perfect his technical knowledge by "practicing in the kingdom's varied civil engineering work, where [he] might find, in times of peace, a larger field into which apply [his] skills." Meanwhile, Minister Rebelo da Silva's 1869 overseas public works reform had passed by national ordinance of December 3 (see next section), and so the Ministry of the Overseas, to which the Indian Army body of engineers was hence affiliated, gave its opinion regarding Brito's request. This stated that, according to said ordinance, "Indian Army officers with a degree in engineering may be employed in the service of public works, both in that State as in any other overseas province" and that, consequently, it would be profitable for Lieutenant Brito to "practice in the diverse work of civil engineering in the kingdom, in order to better his proficiency for when he will find himself employed in an appropriate commission in the overseas." Thus, in February 1870, Minister of Public Works Lobo de Ávila granted Brito's request to join the Ministry's departments for a year, only to have him turn it down the next month, as the commission's terms implied the suspension of his military pay without compensation (quoted from the original correspondence to be found in BAHSGE, PT/AHMOP/PI/023/037). Macao Public Works Director from 1881 to 1884, he died in Lisbon in 1914 (Faria, *Architecture Coloniale Portugaise à Goa*, 543).

⁷⁰ For more on these subjects and the work of these two personalities, see Chapters III and IV.

Building a connected Empire: networks of techno-scientific knowledge

While reflecting on the “dialogical relationship between the conceptual framework of the British Indian administration and the actual physically constructed framework in which it operated,” Peter Scriver can’t help but marvel at the way the British Public Works Department of the Government of India engineers had managed, by the late 1870s, to “effectively lace together this patchwork [the Indian subcontinent under British administration] with some of the most extensive railway and irrigation systems in the world.”⁷¹ “After British soldiers had dug the foundations in sweat and blood”, Scriver quotes from a 1935 historical account of the Royal Engineers in India, “British engineers raised, as it were, a steel framework for the expansion of the civil administration.”⁷²

Now, in my view, this is not the type of historical depiction that better suits the circumstances of the Portuguese Empire, and even less so the circumstances of Portuguese presence in Macao. To be sure, I am also dabbling in the physical and conceptual ‘framework’ and ‘network’ metaphors. However, in the Portuguese account of the processes of Empire-building in the nineteenth century, as we have been seeing, institutional presence in the overseas territories precedes, in most if not all cases, the proverbial “soldiers’ sweat and blood,” as historical circumstances dictated that a more or less effective State apparatus was already established before the unfurling of the so-called modern ‘age of imperialism’.⁷³ Infrastructure did come, but later, and ever so slowly. By the same late 1870s, when India was quickly being transformed into a “techno-scientific landscape,”⁷⁴ the Portuguese Northern Railway, which had been launched in 1853, was barely reaching Porto.⁷⁵ Talks were still ongoing between the Portuguese State of India government and British interests to build a railway through the Goan territory in order to connect the city of New Hubli in the British Raj to the Portuguese port of Mormugão. Construction of this “West of India Portuguese Railway” would start in 1881, only to be halted mid-way in 1902.⁷⁶ In Angola and Mozambique, a well-functioning

⁷¹ Peter Scriver, “Empire-Building and Thinking in the Public Works Department of British India,” in *Colonial Modernities. Building, Dwelling and Architecture in British India and Ceylon*, ed. P. Scriver and V. Prakash (London and New York: Routledge, 2007), 70.

⁷² *Ibid.*, 70.

⁷³ For more on this subject, see the Introduction.

⁷⁴ Scriver, “Empire-Building and Thinking,” 80.

⁷⁵ The D. Maria Pia railway bridge, connecting the south side of the Douro river to the city of Porto, thus completing the Northern Railway’s 1852 plan, would only be inaugurated in 1877; see Saraiva, *Ciencia y Ciudad*, 88.

⁷⁶ Faria, *Architecture Coloniale Portugaise à Goa*, 273-276.

railway wouldn't be a reality until the early 1900s.⁷⁷ In Macao, major infrastructural work, which centered around the inner harbor improvement and its associated Canton railway, although well researched and projected since the early 1880s, would never come to pass.⁷⁸

Still, I argue that the Regeneration Portuguese Empire was a thoroughly connected one. Not in terms of infrastructure, nor even in terms of communication channels, but in terms of techno-scientific knowledge carried by a network of experts placed on the various spheres of institutional governance, moved by their belief in societal progress through material improvements. In the face of such purpose and, one might add, ambition, physical results (or the lack thereof) were practically incidental. Particularly if there was little these men could do about the roots of inertia: lack of public and/or private funding, political quarrels, public revolts, economic crisis, unfavorable geopolitical circumstances, and such vicissitudes.

Through it all, nevertheless, the institutional network set up by Fontes Pereira de Melo and his generation of Saint-Simonians would not just endure, but fructify into a Portuguese 'achievable modernity', in the sense that it was the physical or, in other words, the 'material' result of an adequate compromise reached between the experts' vision and the political, financial and social means to achieve it.

As such, Scriver's notion of Public Works improvement projects as "an important first step along the path of a more stridently rational and authoritative approach to the colonial governance of India by central authority"⁷⁹ seems to be missing a more subtle point. Infrastructure materialized, I find, because 'techno-scientific'-oriented governance was already established, not the other way around. Without a strong, rational, functioning, administration framework to pursue it, it never would have been possible to achieve any kind of techno-scientific landscape at all, let alone the awe-inducing, modern-wonder, 'patchwork laced together by infrastructure' depiction of nineteenth century British India.

Tiago Saraiva remarks as contradictory the fact that, even though the engineer community was well established in the mid-nineteenth century, both in Spain as in Portugal, railway infrastructure was advancing slowly and mainly by resorting to foreign expertise, giving the impression that "both nations were simply the scenery for the expansion of French and British technology."⁸⁰ The author explains this "apparent contradiction" with the institutional decision to "restrain the activity of State engineers to the ongoing projects' control and inspection." Thus, Iberian engineers "weren't getting

⁷⁷ For more on this subject, see Navarro, *Um Império Projectado pelo "Silvo da Locomotiva."*

⁷⁸ For more on the Macao inner harbor improvement, and Macao-Canton railway projects, see Chapter V.

⁷⁹ Scriver, "Empire-Building and Thinking," 78.

⁸⁰ Saraiva, *Ciencia y Ciudad*, 98.

their hands dirty in this work,” the same way they weren’t “entering the cities,” rather projecting infrastructures as “foreign bodies” juxtaposed to the generally outlined municipalities.⁸¹

Admittedly, Fontes’ material improvements project started with the railway and a lot of his initial efforts centered around launching and financing it, to the point of it leading to the downfall his own first government.⁸² Also, as Saraiva accurately points out, Portuguese engineers may not have been quite up to speed regarding railway management and construction, driving the Cabinets to recruit foreign technicians and relegate national expertise to the background of governance roles.⁸³ However, as we have seen in the not so high-profile 1850s through 1870s Macao inner harbor regeneration, public works engineers were actively engaged in all lines of work, including public building and small infrastructural design, as well as urban survey and urban planning.

Moreover, after the first decade of railway euphoria, a series of 1860s legislation would be passed by the same institutionalized experts, now focusing on the national road system and, shortly after, on the municipal road system. Through these texts, the centralized governance model set up for railway management would subtly be extended to local territorial management and thence to the hearts of towns and villages. As such, further contradicting Saraiva’s take on the unengaging role of government engineers, through the mechanisms of administrative reform and institutionalization of public works, the techno-scientific experts were intelligently clearing the way to purposely ‘enter the cities’ bringing the Regeneration to their very core. Finally, in 1869, Minister Rebelo da Silva’s overseas public works reform would extend the same territorial management system to the whole of the Empire.

A few years before, on January 1864, progressive journalist and Minister of the Overseas José da Silva Mendes Leal, while addressing the House of Representatives, would draw a clear picture of this ‘connected Empire’ in the making:

Now that electricity and steam erase distances and its inherent hindrances; now that we may say about modern civilization [...], *vires acquirit eundo* as, with each passing hour, the movement produced by every progress produces a new velocity; now that, at last, we are catching up to the most educated nations having, to drive us further, an exceptional geographical position and an almost predestined succession of maritime ports; it most certainly isn’t a fantasist delusion to predict the time, maybe even less remote that one might think it, in

⁸¹ Ibid.

⁸² In order to redeem the 1855 loan negotiated in London to finance the construction of the Eastern and Northern railways, Fontes submitted a draft bill to the House of Representatives calling for an increase in tax. Due to the strong protest of public opinion against this measure, namely from a group of 50.000 petitioners headed by Alexandre Herculano, and also due to the personal antipathy of King D. Pedro V towards Fontes and his purposefulness, the bill was rejected by the House of Peers (*Câmara dos Pares*), resulting in the fall of Duke of Saldanha’s government (1851-1856); see Jorge Borges Macedo, *Fontes Pereira de Melo* (Lisboa: Ministério das Obras Públicas, Transportes e Comunicações, 1990), 25.

⁸³ Saraiva, *Ciencia y Ciudad*, 85.

which all of Portugal, having become, so to speak, contiguous to the port of Lisbon by its railway and road networks, will develop into a vast metropole with its wide overseas territories as its proper provinces.⁸⁴

This reality was no longer to come about solely through State-led transport and communication infrastructure, but clearly also through what was to become an institutionalized system of State-managed territorial control and local urban planning:

When visiting London's sumptuousness, that modern Babylon, can one believe that, where now stand the wonders of West-End or Portland-Place, there were only vast lands infested with malefic emanations? The Seine and the Thames, now perennial sources of the best products and the healthiest comforts, were they not before, as the African rivers [are today], frequently dangerous in their native savagery and, as them, harmful for being unsubdued? Why can't that same ["civilizing"] strength [...], that has initiated, prepared and policed ["prodigiously metamorphosing inhospitable parts in active towns"], why can't that strength, incomparable when driven by faith, generate in new countries that which it has already generated around us.⁸⁵

But first things first. On June 6, 1864, Minister of Public Works João Crisóstomo de Abreu e Sousa, under the second Duque de Loulé government (1862-1865), published a national ordinance regulating municipal roads. It stated that they were to be divided into two categories, according to their relevance to the conurbations. Roads falling into the first category, that is, those "of common interest for several towns and whose construction and conservation was the responsibility of two or more municipalities," would be subject to a new "municipal road general plan" ("*plano geral de estradas municipais*") established by the district's Civil Governor, with the help of its Public Works director.⁸⁶ Even if the national ordinance also prescribed a validation circuit between concerned municipalities and their respective Civil Governor, it nevertheless followed that, henceforth, it would be up to the local representatives of central government to head a conurbation-scale management plan of all major urban thoroughfares. The purpose of it being, we may assume, to ensure a level of coherence with the district and national road development plan, as it was stipulated that, through a "municipal road committee" ("*comissão de viação municipal*"), the Civil Governor and his technical staff were handed the responsibility over the classification of municipal roads (determining which ones were to be considered of conurbation relevance or not), as well as over the feasibility and project stages, budget approval and inspection of all repair and construction work therein.⁸⁷ In accordance with the stipulations of the Administrative Code, however, all "construction, improvement, conservation and police" work pertaining to municipal roads was to

⁸⁴ BG, n°20, May 16, 1864, 78-80, Address by the Minister of the Overseas to the House of Representatives, on **January 23, 1864 (transcribed in Volume 3 - Annexes)**.

⁸⁵ Ibid.

⁸⁶ DG, n°125, June 7, 1864, 223-226, National ordinance of June 6, 1864, regulating municipal roads.

⁸⁷ Ibid.

be financed by the respective municipalities, in a mandatory fashion but within budget limits, “with or without State allowance.”⁸⁸

Lastly, all municipal roads were declared “public and indefeasible domain” (“*domínio público e imprescriptível*”), in which any “construction, realignment or improvement” project would automatically comprehend a “declaration of public interest” (“*declaração de utilidade pública para expropriações*”), in accordance with the legislation on expropriation of July 23, 1850, and June 8, 1859.⁸⁹

Minister Abreu e Sousa had just taken the first step on the road, as Anni Günther Nonell puts it, to “placing urban planning under Government tutelage, through the Ministry of Public Works, thus drastically limiting municipal leverage on the urbanization process.”⁹⁰ And, by this time, around six months into his Ministry tenure, he was just getting started.

A “quintessential example” of the Regeneration engineer, as described by historian Maria Paula Diogo,⁹¹ João Crisóstomo de Abreu e Sousa had been born in 1811. Such as Fontes Pereira de Melo himself,⁹² he had graduated as a mathematician from the Royal Naval Academy and, in 1836, as a military engineer from the Royal Academy of Fortification, Artillery and Draftsmanship, having further studied for a year at the newly-established Polytechnical School. Again, as Fontes, an *habitué* of Lisbon’s Grémio Literário⁹³ and an active promoter of his profession, he would become, in 1869, the first president of the Associação dos Engenheiros Civis Portugueses (Portuguese Association of Civil Engineers). One of his first commissions had been as government inspector in the Eastern Railway works. When the British company heading the enterprise abandoned the site in 1855, alleging that it had not received the established pay, however, young Abreu e Sousa would find himself director of the Eastern Railway. For about six months at least, when Fontes, still in his first tenure as Minister of Public Works, would replace him with French engineer Wattier, professor

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Although, in this quote, Nonell is referring to the subsequent December 31, 1864 national ordinance, on which we will also elaborate; see Nonell, *Porto, 1763/1852*, 50.

⁹¹ Maria Paula Diogo, “Being an engineer in the European Periphery: three case studies on Portuguese engineering,” *History of Technology*, vol. 27 (2006): 134.

⁹² António Maria Fontes Pereira de Melo was born in Lisbon in 1819. “As his father and brothers had done, he entered the Royal Naval Academy where he would graduate. He then entered the Royal Academy of Fortification, Artillery and Draftsmanship, since then transformed into the Military Academy, having also graduated from the Polytechnical School. At twenty years old, he accompanied his father when he was appointed Governor of Cabo Verde. There, he worked on hydrographic surveys, as well as on projects for bridges and hospitals.” See Maria Filomena Mónica, *Fontes Pereira de Melo e as Obras Públicas* (Lisboa: Ministério das Obras Públicas, Transporte e Habitação, 2003), 5.

⁹³ Saraiva, *Ciencia y Ciudad*, 47.

at the *École des Ponts et Chaussées*. Saraiva recounts that “João Crisóstomo” took this act as a personal censure related to his lack of experience, leading him to quit the inspection body of engineers and request to be enrolled precisely at the *Ponts et Chaussées*⁹⁴ as, he claimed, “he was the only member of the Public Works Council that hadn’t studied in the Parisian school.”⁹⁵ The newly-hired French expert’s ascertainment of the situation certainly wasn’t going to restore Abreu e Sousa’s professional pride, as it read, regarding the construction defects of the already-built 36 kilometers of railway: “The British concessionaries were experienced men, trying to make the most of the country’s resources; after them, the Portuguese engineers took the matters into their own hands, in order to prove their own talent and experience; although no one can question their earnestness, I believe that the construction work, when done, will cost more than double what it might have cost to build the railway in a more difficult ground.”⁹⁶ Following this inglorious episode, Abreu e Sousa would indeed get to travel through Europe, as Maria Paula Diogo also points out, “to study the progress being made in the operation and management of the railways and other transport systems.”⁹⁷

It is indeed a more determined man who, in January 1864, would take on the Ministry of Public Works and namely the issue of centralizing urban planning, which had been in the books for some time but never actually implemented.⁹⁸ Following the publication of the June 6 national ordinance

⁹⁴ In her research, historian Ana Cardoso de Matos has tracked the educational and professional paths which saw a number of Lisbon and Porto Polytechnical graduates pursue their studies in civil engineering at the *École des Ponts et Chaussées* in Paris, starting as early as the 1830s, as part of the early liberal governments’ strategy to “minimize the effects of the lack of technical training in the country.” During the course of the following decades, this endeavor would prove itself so successful that, from the very first year of its institution in 1852, the Ministry of Public Works took it upon itself to continue promoting it, extending the range of possibilities for a government-sponsored education at the French schools for the young Portuguese polytechnicians also to the *École des Mines*. For more on this subject, see Matos, “Asserting the Portuguese Civil Engineering Identity,” 179-180, 188. For more on a similar policy of sponsored “scientific immigration,” established since the 1840s directly by the Lisbon Polytechnical and Military Schools, although this time regarding the complementary education of its teachers, see Macedo, *Projectar e Construir a Nação*, 78-79. For a thorough analysis of the contents of the techno-scientific curriculum of the Lisbon *Escola do Exército*, and its evolution over the course of the nineteenth-century, see Macedo, *Projectar e Construir a Nação*, 82-96.

⁹⁵ Saraiva, *Ciencia y Ciudad*, 85.

⁹⁶ *Ibid.*

⁹⁷ Diogo, “Being an engineer in the European Periphery,” 134.

⁹⁸ In an 1887 paper published in the journal of the Portuguese Association of Civil Engineers, António José Antunes Navarro suggested that the substance of the June 6, 1864 national ordinance was being discussed in the House of Representatives since, at least, 1856 (on this issue, see also Chapter IV). According to the author, the controversial issue holding it back had concerned the paragraphs of the law regulating a specific municipal tax, established so that local budgets could fund road conservation and construction directly. While accounting for what he still perceived as the contemporary backwardness in the establishment of what had been Minister Abreu e Sousa’s “municipal road general plan,” the author pinpointed this “uncollectable” tax as its continued main cause. Thus, in his view, municipalities were operating on “fictitious budgets” from

and, incidentally, while he was cumulating the Public Works and the Overseas Ministries, Abreu e Sousa would endorse one of the most progressive laws of the Regeneration: the December 31, 1864 national ordinance, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements”⁹⁹ or, as it came to be known, the text establishing the “general improvement plan” as a legal object.¹⁰⁰

In line with the letter of the June 6 national ordinance regulating municipal roads, the new text explicitly established that urban streets also belonged to the “public and indefeasible domain.” Thus, claimed the Minister in his preliminary report, and although the municipality wielded over urban public space its power of police, according to the Administrative Code, “in no way this meant that [urban streets] were the city’s private property.” As such, Abreu e Sousa concluded, “the Government’s right to oversee their construction, conservation and police was indisputable, not to weaken municipal action nor to curtail its prerogatives, but to reinforce them with the technical and administrative assistance of central authority.”¹⁰¹ In the name of “city embellishment (*decoreação das cidades*), free traffic, people’s comfort and safety, public sanitation and the convenience of avoiding overcrowding,” central government, through the Ministry of Public Works engineers, would then, henceforth, “regulate, direct and assist municipal action” regarding all matters pertaining to urban planning.¹⁰²

These same principles were later extended to the overseas territories by Minister Rebelo da Silva, under the third and last Duque de Loulé government (1869-1870), and namely through the already-mentioned national ordinances of December 1, and December 3, 1869, pertaining, the former, to the organization of public administration in the Overseas¹⁰³ and, the latter, to the establishment of

which resulted a constant lack of funds to invest in their roads and, consequently, a two-tiered development dynamic between the national and the municipal road networks, to the detriment of the country’s “commerce and agriculture.” See António José Antunes Navarro, “A Viação Municipal em Portugal,” *Revista de Obras Públicas e Minas*, Tomo XVIII, 207-208 (1887): 118-119.

⁹⁹ DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements.”

¹⁰⁰ For more on the general improvement plan national legislation, and particularly on the Macao general improvement plan, see Chapters III and IV.

¹⁰¹ DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements.” Preliminary report from Minister of Public Works João Crisóstomo de Abreu e Sousa.

¹⁰² *Ibid.*

¹⁰³ DG, n°280, December 9, 1869, 609-616, National ordinance of December 1, 1869, organizing public administration in the Overseas.

the Overseas public works department (“*serviço das obras públicas no Ultramar*”).¹⁰⁴ Through these two texts, the Minister Rebelo da Silva effectively put all “public road works, civilian and military building, swamp reclamation, river channeling, soil exploitation and statistics”¹⁰⁵ in the hands of the public works department military engineers,¹⁰⁶ henceforth forming a special technical body under the general tutelage of the Ministry of the Overseas. Once appointed to their three-year commissions in the provinces as Public Works Directors, they would report directly to their respective Governor, who would also preside over the province’s “technical council” (*conselho de serviço técnico*).¹⁰⁷ Municipal public works, encompassing urban planning, already to be heavily monitored by central authority according to the 1864 and 1869 texts, as we have seen, received yet a special provision: “if the municipalities so wished it”, they would also be overseen directly by the province’s public works department.¹⁰⁸ As this was already the case in Macao as in most overseas provinces, Government-led urban development would continue unchanged (though not entirely unchallenged) up until at least the 1890s.¹⁰⁹

By the way, and rounding up his comprehensive take on the Overseas administrative reform, Minister Rebelo da Silva would also publish, at the same occasion, his December 2, 1869 national ordinance reorganizing “the overseas provinces’ public health department” (“*serviço de saúde das províncias ultramarinas*”).¹¹⁰ This reform would put the medical officers in a similar position as the engineers employed in the Overseas. As such, they were to form a special body of experts which, by way of their education, also came, for the most part, from a military background, hailing from the Medical-Surgical schools of the Kingdom, as well as from the Nova Goa and Funchal (Madeira) schools, but also, if needed, from the University of Bombay.¹¹¹ For the first time, all Portuguese candidates could aspire to be appointed to any available position in whichever province, regardless of their educational background. This disposition aimed at putting definitively an end to

¹⁰⁴ BG, n°10, March 7, 1870, 42-47, National ordinance of **December 3, 1869**, organizing “the Overseas public works department” (“*serviço das obras públicas no Ultramar*”) (**Preliminary report transcribed in Volume 3 - Annexes**).

¹⁰⁵ Ibid.

¹⁰⁶ Ibid. In his preliminary report, Minister of the Overseas Luís Augusto Rebelo da Silva specified that the overseas public works department staff should preferably consist of military engineers which, he claimed, “are the class where the most valuable elements can be found.”

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ For more on the subject of municipal vs. provincial public works in Macao, see Chapter III.

¹¹⁰ DG, n°257, November 11, 1869, 679-690, National ordinance of December 2, 1869 organizing “the overseas provinces’ public health department” (“*serviço de saúde das províncias ultramarinas*”).

¹¹¹ Ibid. Preliminary report. This was apparently already an accepted practice, but which had never been properly regulated. It concerned, nevertheless, solely the medical-surgical graduates of Portuguese descent.

discriminatory practices which, much like what had been considered regarding the public works officials, tended to circumscribe the Nova Goa medical graduates to the ‘Oriental’ provinces centered around the State of India and including Mozambique. Of course, ending discrimination in the overseas medical ranks was not the Minister’s priority, as both the Funchal and Nova Goa graduates still weren’t allowed to hold public offices in the metropole, and this well into the 1890s.¹¹² Rebelo da Silva’s purpose was solely to provide for proper medical representation throughout the empire as, “for any enlightened nation, health and security constitute the two main pillars of good administration in governing the overseas possessions.”¹¹³

Social forces and economic prowess in Macao

Within this rather complex administrative framework, we can see that the July 2, 1877 ordinance authorizing Miguel Ayres da Silva’s reclamation project was coming precisely at a time when Portuguese liberal governments were seeking to implement the Regeneration institutional prerogatives throughout the whole of the Empire. This meant, as mentioned, that the rules of city planning were changing from a more or less informal system, based on a sort of self-government local tradition, where projects were decided between the entrepreneurs and the municipality or, in the case of the overseas territories, the Governor, with no account for public opinion or need for validation by either metropolitan or local financial and technical bodies, to a centralized system where the Public Works Departments were acquiring an essential role of expertise and surveillance, alongside whether the Civil or the General Governors.

In Macao, the complexification of administrative procedures brought about by this transition in governance is surely at the source of the production of substantial archival documentation regarding Silva’s project, as compared with the period studied in the previous chapter, for which there are virtually no surviving technical documents (such as reports or plans) to support research. It also must have enabled the emergence, or the strengthening, of the middleman role between private Chinese capital and the Portuguese administration in the formalization of urban projects. The emancipation of the former interpreter into a proper comprador role fit right into the ambitions of a new generation of educated Macanese, of which Miguel Ayres da Silva would be one of the first ambassadors.

¹¹² Bastos, “Medicina, Império e Processos Locais em Goa, Século XIX,” 105-106.

¹¹³ DG, n°257, November 11, 1869, 679-690, National ordinance of December 2, 1869 organizing “the overseas provinces’ public health department” (“*serviço de saúde das províncias ultramarinas*”). Preliminary report.

Miguel António Ayres da Silva was a young man of 33 when the July 1877 ordinance was published. With his older brother Pedro Nolasco da Silva, one of the most prominent intellectual personalities in the history of the territory, they were at least the fourth generation of their family to be born in Macao.¹¹⁴ Both brothers were also members of the City Council (*Conselho Municipal*) or, as referred-to in Macao, City Senators (*Senadores*). Miguel Ayres is less of a public figure than his brother, partly for his unusual choice of career in real-estate development, but most probably because of his untimely death in 1886 at the age of 42, which may also account for the scarcity of archival sources detailing his life. Given his experience in urban planning and undoubtedly due to his connections not only to the Portuguese colonial government but also to the Chinese entrepreneurial community, he was often referenced in collaborative missions with the government, as a member of the 1883 Macao Improvement Committee, for example, or as representative of the City Senate on the Technical Council for Public Works (*Conselho Técnico de Obras Públicas*).

Coming from the old-established and well-respected Silva family, Miguel Ayres is therefore one of the first in his generation of ‘native-born Portuguese’, as the aspiring aristocratic mixed-blood Macanese called themselves, to drift away from traditional employment in commerce, administration or the military, and make a name for himself as entrepreneur and landowner. Probably highly educated, as his brother had been, at St. Joseph Seminary,¹¹⁵ he would certainly have learnt to speak not only the Macanese patois, but also Portuguese, Mandarin and Cantonese. This was probably not the standard education for the Macanese who, in the last quarter of the nineteenth century, were frequently depicted, in Portuguese as in European sources, as living through a sort of cultural and moral decay linked to the involvement of some of these families in the coolie trade, which had allowed, until its prohibition in 1874, for a sort of financial resurgence in Macao.¹¹⁶

Associated with *ancient regimes* that everywhere in the modern world were giving way to more liberal societies, these “yellowish complexion men and women dressed in a European style”¹¹⁷ were depicted by travelers, such as Austrian diplomat Joseph Alexander von Hübner in his 1871 *Promenade autour du monde*, as a “half-blood Portuguese” mixed-race,¹¹⁸ belonging to a bygone or even mythical time, when men came to Macao to make their fortunes:

¹¹⁴ Jorge Pamplona Forjaz, *Famílias Macaenses* (Macao: Fundação Oriente, Instituto Cultural de Macau, 1996), 763-781.

¹¹⁵ *Ibid.*, 765.

¹¹⁶ Pinheiro, “Macao’s Coolie Trade,” 64-68.

¹¹⁷ Joseph Alexander von Hübner, *Promenade autour du monde* (Paris : Librairie Hachette et Cie, 1871), 599.

¹¹⁸ *Ibid.*

There are no more than a dozen pure blood Portuguese families in Macao today. In this number are not comprised the doctors, the civil and military officers that the government sends at certain times and who, miserably paid, are repatriated when their time is over. The time when Portuguese employees would come here to make their fortunes belongs to history or, better said, to myth. Nobody prospers here anymore, apart from coolie brokers or gambling house owners. [...] The Chinese element is constantly gaining ground, which is only natural. The Chinese represent life; the Portuguese, sleep, or death. That's why we see the Chinese establish themselves in quite a few of the beautiful, old Portuguese houses. [...] While English and German residents depart because they are no longer able to do business, while the Portuguese element, through a series of multiplied infusions of Asian blood, taints and extinguishes itself, the Chinese element, by means of its wonderful activity and sobriety, achieves what its government couldn't, neither by force, nor by ruse: it comes, under the very shadow of the Portuguese flag, retake possession of the territory formerly conquered by the Lusitanian heroes.¹¹⁹

Hübner's typical nineteenth century Euro-centered vision equated the ethnic mixture of the Macanese to what he perceived as their physical and moral deterioration which, in turn, was a fitting metaphor of the city's decay, as well as of the decline of the century-old Portuguese presence in China. Not even to be saved by the caricaturized government officials stepping in and out of their commissions in the territory. In contrast, the thriving Chinese community was depicted as a growing menace to the future of the city, put at the same level of importance as the post-Opium Wars geopolitical shifts. In the author's words:

The causes of decadence of the commercial activity are: the Chinese competition and the opening of the treaty-ports. Everything conspires for the ruin of Macao. And yet this was the great emporium of the first Portuguese merchants; it was, since mid-sixteenth century, a beacon of catholic science in the Far-East. Is still is today the place that connects this branch of the Portuguese race to faith and civilization.¹²⁰

Indeed, as we have seen, the Macanese families were strongly attached to the old divided sovereignty system, having built their fortunes by negotiating, through their seats at the City Senate, the legitimacy of the Portuguese presence and privileges on a basis of proximity with the Qing officials who, up until a few decades ago, had wielded absolute power over the district's land and construction policies. The eviction of the Mandarins, as well as the local institutional reform engaged by Governor Ferreira do Amaral in the 1840s, ultimately had led, as also mentioned, to the development of a more liberal climate in the city, allowing other social and economic forces to thrive under the shadow, as Von Hübner had put it, of the Portuguese imperial flag. These forces were, of course, the Fujian and Guangdong entrepreneur families, growing in power and influence since the establishment of the gambling and commodities concession system.

Due to the historic conflict between the Macanese families, as representatives of local Portuguese interests, and central government, they were often depicted in a somewhat depreciative way in

¹¹⁹ Ibid., 634, 637.

¹²⁰ Ibid., 637.

metropolitan sources as well. Dr. Lúcio Augusto da Silva, for example, although himself a Goan Portuguese-descendant, wrote in his 1865 public health report:

The profession of foreign Europeans is commercial. The Portuguese, for the most part, are public officers, civil and military, or navy. Their descendants follow those same professions, also finding employment in commerce. With the exception of the typographic art, in which some of the Macanese engage themselves, there are no Portuguese nor foreigners in this city engaging in the arts and crafts, which only the Chinese employ themselves in.¹²¹

More than twenty years later, Dr. Lúcio Augusto da Silva's successor at the head of the Macao Public Health Department, Dr. José Gomes da Silva's impressions on this social group were scarcely better.¹²² Apart from those that managed to 'escape' their homeland to establish themselves in Singapore, Siam, Shanghai, Yokohama and mostly Hong Kong, whom Dr. Gomes da Silva conceded to be the "able, robust and useful part" of Macao's "indigenous population," the remainder of its youth had but two options for a dignified employment: government administration or the practice of law. For the poorer families, the promise of a meal would encourage their sons to enlist in the local battalion.¹²³ Although, in the Public Health Director's view, the Portuguese government was partly to blame in this situation, which he saw as the discriminating result of the mid-century struggle for power and consequent mismanagement of the province's social forces:

The Macanese lives poorly because he cannot live better. He is indolent because there is no work. He is proud because he is only just now discovering hardship. He has no love for his nation [*amor pátrio*] because the nation doesn't offer him the resources to build his livelihood. He isn't an industrial because industry is in the hands of the Chinese, the Germans of the Orient, with which one cannot compete in terms of low wages. He isn't a trader because he doesn't have the capital. He doesn't opt for a liberal profession because in Macao there isn't even a secondary school [*liceu*] nor an institute. That is why, when in 1883 the metropole wanted to extinguish the national battalion, for its uselessness, all the colony protested. For it may not serve as police, nor as garrison, nor as defense, but it serves to feed the hungry.¹²⁴

In regard to the Macanese wealthier strata, though, the issue which impressed the contemporary observers the most was their aristocratic habits, as if they were still living in another time. Architect and historian Francisco Pinheiro, while describing this, quotes eighteenth century British diplomat George Staunton in stating that the Macanese "avoided 'undignified' manual work, preferring to beg than to do any rural, artisanal or industrial work."¹²⁵ Pinheiro describes them living in their

¹²¹ BG, n°34, August 21, 1865, 135-137, Report on the Macao Public Health Department by the province's Surgeon-General Lúcio Augusto da Silva, **June 1, 1865 (transcribed in Volume 3 - Annexes)**.

¹²² For more on Macao Public Health Director Dr. José Gomes da Silva, see Chapter III.

¹²³ BG, n°1, January 6, 1887, 2-4, Macao Public Health report for the year 1886 by Public Health Director José Gomes da Silva, January 2, 1887.

¹²⁴ Ibid.

¹²⁵ Pinheiro, "Macao's Coolie Trade," 64.

“large Mediterranean-style mansions,”¹²⁶ “like small kings with large entourages of slaves [...] of different origins: African, Indian, Malay, Polynesian and Asian,”¹²⁷ literally, and somewhat anachronistically, as Charles Boxer’s “*fidalgos* of the Far-East.”¹²⁸

Writing in 1855, French traveler, physician and politician Melchior-Honoré Yvan confirmed this idea that the Macanese cultivated indeed a *fidalgua* status: “There are some remains of aristocracy amongst them, and their European descent seems to regulate their privileges in proportion as it is more or less decided.”¹²⁹ They were, however, in the author’s view, very much lacking in formal education, particularly the women. This had doubtlessly been a result of the suppression of most of the religious orders, whose colleges and convents historically provided for this service, starting with the expulsion of the Jesuits from the whole of the Portuguese territories by the Marquis of Pombal in 1759, and finally established for all congregations with the post-civil war decree of 1834.¹³⁰ As mentioned in the previous chapter, government-sponsored secular instruction hadn’t followed and, therefore, in the small provinces such as Macao, the choice of education was very limited for young boys. For girls it was nonexistent. As a result, Dr. Yvan noted:

The amusements and conversation of the natives are not very interesting; in his own house the Portuguese reads little, yawns a great deal, and fans himself the whole day long, while his wife, in a light style of *dishabille* seats herself behind the blind and, with a fan in her hand and a cigarette or a piece of areca nut in her mouth, gazes listlessly at the passers-by, which are not very numerous in the quiet streets. All business and arrangements of every kind fall to the lot of the male population here, for the women appear to think themselves quite exempt from duty, and take no trouble either about household affairs, or the state of their husband’s income.¹³¹

In her quest for the origins of the Macanese community, researcher Ana Maria Amaro dwells on the historic precedents of Portuguese population-based policies in the Oriental provinces, namely in India, which was considered the Empire’s most prestigious possession. Going back to the great conqueror Afonso de Albuquerque and his plan to “plant Catholic vines in the Indian soil and organize a colonizing core through marriage and population,”¹³² Amaro notes that this was effectively to be done, in an initial phase, by sending Portuguese noblemen to India to marry equally-ranked local women with the promise of land and tax exemptions. Later, the “King’s orphans”, daughters of noblemen that had died in the overseas, would be sent to India with the same

¹²⁶ Ibid.

¹²⁷ Ibid., 80.

¹²⁸ Boxer, *Fidalgos in the Far East, 1550-1770*.

¹²⁹ Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 136.

¹³⁰ For more on the suppression of the religious orders in Portugal, and namely on the impact this decision would have in terms of urban planning throughout the second half of the nineteenth century, see Chapter IV.

¹³¹ Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 132.

¹³² Ana Maria Amaro, *Filhos da Terra* (Macao: Instituto Cultural de Macau, 1988), 14.

purpose, both policies being at the source of the establishment, over time, of a so-called “new nobility” in India.¹³³ Therefore, this new aristocracy was fashioned by “genuinely Portuguese families, whose children married between themselves, keeping certain lineages that, at best, would marry mestizas with good dowries. Most of these families held *fidalgua* titles dating from the last quarter of the seventeenth century.”¹³⁴

In the rest of the Portuguese territories of the Far-East, such as Malaca, similar processes must have been the norm. At the dawn of the seventeenth century, with the loss of some of these Portuguese settlements to the Dutch, probably a great number of these families came to seek refuge and settle in Macao. Hence, Amaro argues that the Macanese probably descended from these Indian and Malay Eurasian ‘noble’ women, to which the newly arrived metropolitan Portuguese would preferably marry. As had happened in Goa, the author notes that another ‘cast’ of Portuguese-descendants probably existed concomitantly, either descended from the numerous Indian, Japanese, Malay and Chinese slave-girls from the aristocratic households, or from the union of lesser-ranked Portuguese men who more willingly tended to marry native girls with no rank nor title, with the purpose of enjoying the land concessions that were still being given to married men as a population-based policy.

Therefore, Amaro concludes that the higher-ranking ‘native-born Portuguese,’ or ‘children of the land’ (*filhos da terra*)¹³⁵ families, whether or not of actual noble blood origin, did have the aristocratic prerogative of preserving their lineages. They would preferably marry between themselves or, otherwise, the daughters would marry Europeans. Also, there was little opening of these families towards Chinese society, at least not before the nineteenth century, which leads the author to the assumption that the Macanese genetic pool continued to be, through to the mid-twentieth century, preponderantly Indo-Malay.¹³⁶

¹³³ Ibid., 15.

¹³⁴ Ibid., 17.

¹³⁵ As Macanese researcher Graciete Batalha wrote in 1974: “The genuine Macanese, the child of the land, the child of Macao, is descendant from the Portuguese, born in Macao, with a mixture of Chinese, Indian, Malay, Javanese, Philippine, Japanese, and I don’t know what other blood.” See Renelde Justo Bernardo da Silva, *A Identidade Macaense* (Macao: Instituto Internacional de Macau, 2001), 80.

¹³⁶ Amaro, *Filhos da Terra*, 47.

Despite the depreciative portrait painted of the Macanese as “scarcely a distinguished people,”¹³⁷ as Dr. Yvan put it, the author clarified, nevertheless, that there were exceptions to that “*tout ensemble*”.¹³⁸

I was acquainted with one young lady whose industrious life formed a striking contrast to the indolent habits of her companions, as she was so good a linguist as to be able to read the French and English poets, Horace and Virgil, all in the original; nor was she a solitary example, for I knew many other ladies who spoke several languages, and took the greatest interest in all the new literature of London, Paris, Lisbon, Madrid, and Calcutta; can this be said of French ladies, or of their philological talents? And the same remark applies to the men, for those who have been educated in Europe are perfect gentlemen, and even among those who have been brought up in their own country, some remarkable persons may be found. I remember, in particular, a physician named Pitter,¹³⁹ who had received his education in Goa, and was intimate with several of our fellow countrymen [...]. There are many other men in Macao living and laboring in tranquil retirement, without even the wish for celebrity, loving art and science for their own sakes.¹⁴⁰

Indeed, Miguel Ayres da Silva’s generation, which followed Dr. Pitter’s, showcased some remarkable personalities which would unquestionably make a difference in Macanese society from the 1870s on. In direct contradiction to Hübner’s metaphor of ‘sleep’ and ‘death’ to portray the decay of the Portuguese-descendant society, we can look, first and foremost, to the Silva brothers. Educated in Macao, as mentioned, they were among the group of young men who would establish, in 1871, the Association for the Promotion of Education of the Macanese (*Associação Promotora da Instrução dos Macaenses*),¹⁴¹ which constituted a fund, raised among the Macanese richest families, to finance the institution of a Portuguese ‘Commercial School’ (*Escola Comercial*), a sort of local and private equivalent to the Polytechnical. In it, young Portuguese and Macanese minds were taught History, Geography, Arithmetic, Algebra, Natural Sciences, as well as Portuguese, English and Chinese.¹⁴² Its first president, Maximiano António dos Remédios, was a rich Macanese established in Hong Kong, whose family, according to Amaro, was descendant from the Macao

¹³⁷ The original wording is “a distinct people,” which I freely interpret, based on what might have been Dr. Yvan’s native French wording, as meaning “un peuple distingué,” “a distinguished people.” See Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 136.

¹³⁸ “In the picture I have endeavored to give of the appearance, manners, and customs of the inhabitants of *La Cidade do Santo-Nome-de-Deos*, I have rather sought to convey an idea of the *tout ensemble*, than to describe individualities”; see Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 136.

¹³⁹ Dr. Vicente de Paulo S. Pitter is mentioned in the primary sources as one of the top donors in Governor Ferreira do Amaral’s 1847 fundraiser to build the Campo new roads (BG, n°7, May 22, 1847, 75). He is mentioned again in the context of the 1867 Ponta da Rede reclamation (BG, n°24, June 17, 1867, 139). See also Chapter I for more on both subjects.

¹⁴⁰ Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 136.

¹⁴¹ Forjaz, *Famílias Macaenses*, 765.

¹⁴² P. Manuel Teixeira, *A Educação em Macau* (Macao: DSEC, 1982), cited by nototavaiconta.wordpress.com, visited on March 21, 2019.

Christianized Chinese community, whose daughters were known to marry the sons of the lower-ranked metropolitan Portuguese and Macanese families. Amaro remarks that very little is known about this wealthy Chinese branch, as their Christian names, including the surnames, render them difficult to differentiate from the Indo-Malay male-line Portuguese-descendants.¹⁴³ Thus, the Macao Christianized Chinese community remains largely unknown, even if the author ventures the surnames Remédios, Rosário, Xavier and Noronha as deriving from this branch, well-established since the seventeenth century, but nevertheless clearly separated from the “higher-ranking older Macanese families.”¹⁴⁴

Interestingly, neither branch of Portuguese-descendants seems to have followed the path of military techno-scientific schools and its usual professional outcome of public works and public health employment, as was customary among the Goan elites, for example. According to Alice Santiago Faria, both conflicting communities of Portuguese-descendants and Indian Christianized elites, through the local military schools, monopolized government institutions in the respective fields of Public Works and Public Health.¹⁴⁵ However, in contrast to the appointment of Goan experts to government positions in Macao which, as we have seen, happened mostly up to the 1880s, there are little to no records of Macanese youths, either attending school in Goa (nor in Europe, for that matter), or being appointed for such positions in the Macao administration. After the departure of Dr. Lúcio Augusto da Silva and Constantino José de Brito, the top techno-scientific expert roles in the province would be placed and thus remain in the hands of metropolitan born and educated, central government-appointed, physicians and engineers. Was this because Macanese elites shied away from going abroad to receive a techno-scientific education? Were they being kept from these more prominent positions, potentially reserved for metropolitan officers? Did the underdeveloped education system in Macao, from the 1830s to the 1870s, hinder the chances of these generations of Macanese to aspire to a higher techno-scientific education? I would tend to favor the latter explanation.

Indeed, despite the already-mentioned liberal education reforms, former Minister of Public Works João Crisóstomo de Abreu e Sousa was still arguing, in 1872, against the lack of incentives technical education was being given in Portugal, which was resulting, in his view, in the country’s backwardness in terms of innovation and industrial development:

They may tell us that where there is no industry there is no need for civil engineers, and that there is an overabundance of engineering schools for which there is no need. We can reply, firstly, that the premise is not true, nor are the consequences they seek to draw from it; and, finally, we can turn the argument around and say that where there are no engineers there can

¹⁴³ Amaro, *Filhos da Terra*, 23.

¹⁴⁴ *Ibid.*, 27-28.

¹⁴⁵ Faria, “O papel dos luso-descendentes,” 235.

be no industry, not a profitable industry anyway, not an industry capable of competing with that of other countries. Recognizing the fact that civil engineering, as an industrial profession, is at this moment at an embryonic stage in our country, and accepting, for the moment, that this is merely symptomatic, we ask: is this symptom not tellingly expressive and characteristic of the economic condition of our country and of certain tendencies, which do not run in the direction of true progress? The fault lies not solely in our laws and deficiencies of learning; it lies more, perhaps, in our habits and the dominance of certain ideas.¹⁴⁶

If this was the setting in the metropole, what chance was it being given to science and technology in a province such as Macao where, in 1842, the Senate was still complaining that there wasn't even a public primary school in the province to fall back on?¹⁴⁷

Also speaking out against what Abreu e Sousa saw as “our habits and the dominance of certain ideas,” in his already mentioned 1887 paper on the municipal road system, engineer António José Antunes Navarro pointed at the preference given by Portuguese youth to what he perceived as a “metaphysical and bloated education,” especially in the field of law, to the detriment of a more “positive”, “industrial” one, as the main cause of its “decadence”:

If we have achieved a lot, there is still much to do. As Rodrigues de Freitas wrote, not long ago: We believe that there is not one other country in the world that, in regard to the surface of its metropole and its population, is so much in need of thinking, of establishing wise policies and of developing an advanced industry as we do, in order to properly govern simultaneously the continent, the islands and the overseas regions. [...] [And yet] we still are, claims Rodrigues de Freitas, among the most ignorant, [analphabetic] and the most unwise! [...] Before, there was nothing better than becoming a priest. Today, the main goal of those wishing to make their daily bread is to have a bachelor's degree in law, or to be a public servant, civil or military. To be a farmer, dyer, draftsman, industrial or trader is almost for those who cannot reach those other professions. It is an old Portuguese tendency to escape the independent life of a well-run laborious profession.¹⁴⁸

We had already encountered this critical vision of a new generation, living in a modern world but uninterested in its technical progress and innovation, rather favoring a life of social privilege, either granted by an aristocratic status, or by a university diploma, in the above referenced portraits of the Macanese society. Therefore, we may venture that this sort of caricaturized portrait was yet another construct of the liberal thinkers and the champions of the material improvements philosophy, serving the rhetoric purpose of opposing such social privilege, associated with the *anciens régimes*, to social freedom and equality, associated with industrial progress. However, the reality was that education, public or otherwise, was falling behind, particularly for the lower-ranking classes, and especially in the overseas. To this, as we have seen regarding the Macanese community, was added

¹⁴⁶ Diogo, “Being an engineer in the European Periphery,” 133-134.

¹⁴⁷ AHU, AHU-ACL-SEMU-DGU-005, Cx.0009, Letter n°5 from the Macao Senate to the Minister of the Overseas, requesting funding for the opening of primary schools and for public works, February 12, 1842. See also Chapter I.

¹⁴⁸ Navarro, “A Viação Municipal em Portugal,” 112-113.

the reality of conflicting social forces, as this new generation was indeed engaged in societal progress, but also very aware and very keen to preserve its elite position, eventually also through that progress and through its own education structures, *vis-à-vis* the Chinese entrepreneur families and even the Portuguese public officers.

Case in point and, incidentally, another striking example of the educated and progressive 1870s Macanese youth, was António Alexandrino de Melo, second Baron of Cercal (1837-1885).¹⁴⁹ Sent to study in a Jesuit college in England, he had later graduated in civil engineering. After some years travelling through Europe, he returned to Macao, where he would serve in all manner of higher-level public service, from the Government Council, to the artillery battalion command and the Santa Casa da Misericórdia administration. He would also be responsible, although always preserving his independent expert capacity, for some of the most emblematic public buildings in nineteenth century Macao, such as the 1873 S. Januário military hospital,¹⁵⁰ the 1874 Indian police ‘Moorish Barracks’ (Quartel dos Mouros),¹⁵¹ and the renovation of his own family home in the Praia Grande bay, later to become the Government Palace.¹⁵²

As for Miguel Ayres da Silva, he was definitely engaged with the idea of societal progress through education, not just in relation to the activities of the Association for the Promotion of Education of the Macanese, but also by his own initiative as entrepreneur. Indeed, by the end of his reclamation’s troubled construction process, in September 1883, he freely decided to donate to the City Senate, as Senator himself and, incidentally, current holder of the Fantan concession, a set of buildings situated on the new grounds to be used as a municipal fish market. The rents collected from this new market, he specified in his donation request, would mandatorily be used to fund a “primary and complementary school” run by the Senate,¹⁵³ in which Portuguese, Geography and History would be taught. This fund should also be employed for the establishment of a school library and

¹⁴⁹ The first Baron (also made Viscount of Cercal in 1865) had been his father, Alexandrino António de Melo (c.1809-1877), by title granted to him by Queen D. Maria II of Portugal in 1851 (BG, n°12, June 3, 1852, 48). A wealthy merchant and ship owner, he is figured as one of the top donors in Governor Ferreira do Amaral’s 1847 fundraiser to build the Campo new roads (BG, n°7, May 22, 1847, 75. See also Chapter I).

¹⁵⁰ BG, n°2, January 10, 1874, 6-8, Inauguration of the S. Januário Military Hospital.

¹⁵¹ BG, n°32, August 8, 1874, 129, Inauguration of the new Indian police barracks (Quartel dos Mouros): “On this occasion will be distributed some pictures of the barracks’ main façade, whose wonderful design is due to the Baron of Cercal.”

¹⁵² Biographical data on António Alexandrino de Melo from P. Manuel Teixeira, *Galeria de Macaenses Ilustres do Século XIX* (Macao: Imprensa Nacional, 1942), 659.

¹⁵³ In his September 19, 1883 donation request, Miguel Ayres da Silva mentioned the national ordinance of May 2, 1878 regarding primary education reform, and in particular its article 61st, which determined that financing and housing public-school teachers, as well as housing and equipping the school itself, all fell under the obligations of the municipality, to which central government would concur with an allowance (DG, n°110, May 16, 1878, 53-62).

museum,¹⁵⁴ as well as for the acquisition of school supplies for “destitute students.”¹⁵⁵ After being approved by the Government Council, presided by Governor Tomás de Sousa Rosa (1883-1886), the new fish market would open in February 1884,¹⁵⁶ marking the conclusion of Silva’s urban extension enterprise.

The New Inner Harbor Reclamation

As mentioned by Miguel Ayres da Silva himself,¹⁵⁷ the January 1877 reclamation project had not been the first concession in the inner harbor realignment and extension recent history to be granted by the Portuguese government. It wasn’t even the first time a Macanese name was linked to this sort of property development as, despite the apparent social factors opposing them, there seem to have been quite a number of collaborations between the Portuguese-descendants and the Chinese entrepreneurs before.

For instance, Bernardino de Senna Fernandes, cited by Silva as one of the previous beneficiaries of the inner harbor reclamation concessions,¹⁵⁸ although I have not been able to determine the details

¹⁵⁴ Providing the city, and especially its newly created districts, with a panoply of buildings and other public facilities dedicated to leisure and culture was another feature of the Regeneration program for societal progress. We started seeing it in the 1860s and 1870s in the New Bazaar, with the building of a new Chinese theater, and now with Miguel Ayres’ plans for a library and museum, which would indeed be the first of each other’s kind in the province. On this note, there had also been the building, in the 1860s, of the Italian-style D. Pedro V Theater, as well as the Praia Grande public promenade (*passeio público*). To which were added those buildings related to growing concerns over hygiene and public health, such as the 1870s-built S. Januário military hospital, and the successive plans for new local markets. For more on the increased attention the latter topic and related building programs would garner over the 1880s and subsequent decades, see Chapters III and IV.

¹⁵⁵ MO, MO/AH/AC/SA/01/00580, Letter n°30 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Tomás de Sousa Rosa, regarding a donation of an urban plot and 16 houses by entrepreneur Miguel Ayres da Silva, April 21, 1884. Includes a copy of Silva’s donation request, dated from September 19, 1883.

¹⁵⁶ BG, n°8, February 23, 1884, 82, Macao City Senate regulation (*postura*) regarding the opening of a new fish market in the Chinese Bazaar, February 20, 1884. In this text, the new market is mentioned as being “situated between Rua Nova do Comércio and Rua do Guimarães.” Figure 65 shows my interpretation of this location, based on the configuration of the corresponding blocks in the 1903 historical map, as well as on a remaining toponymic data, in which a Pátio do Mercado Interior de Miguel Aires (Miguel Aires Inner Market Courtyard) exists to this day.

¹⁵⁷ AM, MO/AH/AC/SA/01/00205, Letter n°169 from the Macao Treasury Department secretary to the Government Secretary-General, regarding the request by entrepreneur Miguel Ayres da Silva to carry out the construction of a new inner harbor reclamation, **June 7, 1877**. Includes a copy of Silva’s concession request, dated from January 22, 1877 (**transcribed in Volume 3 - Annexes**).

¹⁵⁸ *Ibid.*

of this particular operation, appears in the secondary sources as guarantor in the 1869 Vae-seng lottery concession granted to Chinese merchants Ho Guai and Apon.¹⁵⁹ As for Vicente de Paula Portaria, he appears in the primary sources in relation to the 1867 construction of the Ponta e Horta square, together with fellow illustrious Macanese, future funding member of the Association for the Promotion of Education of the Macanese, and real-estate owner Maximiano dos Remédios.¹⁶⁰

Miguel Ayres da Silva doesn't mention, however, the only one of these collaborations of which there happens to be a bit more information in the primary sources: the construction of the Praia do Manduco 1863 new dock.¹⁶¹ In the context of the whole 1850s and 1860s inner harbor transformation, this is also the first project of which a drawing has been preserved in the metropolitan archives (Fig. 52).¹⁶² Both these circumstances render it interesting enough from a purely historical point of view. However, it is also interesting to use it as a counterpoint to Silva's own project, in order to emphasize the latter's innovative character, I argue, as the first institutionalized modern urban plan in the history of Macao.

Indeed, the 1863 dock project had little to no urban impact. So much so that, looking solely at its plan/perspective in Figure 52, it is absolutely impossible to locate it in the city map.¹⁶³ The original plan must have been an attachment to the request, by Portuguese Bernardo Estêvão Carneiro to Governor of Macao Isidoro Francisco Guimarães, on March 4, 1863, to expand an old Praia do Manduco dock he owned. This was to be done through a consortium established between himself, a Chinese contractor named Wengming, and also an unnamed, although seemingly experienced British contractor, who proposed to have the work done in under six months.¹⁶⁴ Carneiro was also asking for an 8.000 patacas loan, corresponding to one third of the total budget of 24.000 patacas

¹⁵⁹ Lin, *Chinese Merchants in Macau in Late Qing*, 33-41. For more on this subject, see also Chapter I.

¹⁶⁰ BG, n^o21, May 27, 1867, 122.

¹⁶¹ For further reference on the location of the Praia do Manduco 1863 new dock, see Fig. 12.

¹⁶² AHU, PT/AHU/CARTM/062/01427. This plan, currently filed in the AHU cartography collection, was originally part of the annexed documents to the Overseas Council (Conselho Ultramarino) report on the 1863 Praia do Manduco new dock project, itself filed under the reference AHU, AHU-ACL-SEMU-DGU-CU-01, Pt.39 – 1859, decision on August 18, 1864. It is, more specifically, an annex to the letter n^o45 of the Macao Government Council to the Minister of the Overseas, dated from March 28, 1863. Thus, although dated by the AHU as c. 1864, its correct dating, I argue, must be c. 1863.

¹⁶³ The same plan was published in Dias, *A Urbanização e a Arquitectura dos Portugueses em Macau*, 59, 61. Dias claimed that this dock had been projected in 1859, although only submitted to the Overseas Council in 1864. The author also mentions that “we do not know its exact location, nor if it was actually built as projected.” Based on the observation of the 1866 Macao historical map (Fig. 6), I would say that this is indeed the Praia do Manduco dock as represented by W. A. Read, which I have also located in Figure 12, and that it seems to have been built according to its original plan.

¹⁶⁴ AHU, AHU-ACL-SEMU-DGU-CU-01, Pt.39 - 1859, Consultation of the Overseas Council by the Government of Macao regarding the construction of a dock on Praia do Manduco bay. Decision on August 18, 1864.

which, with the Governor's favorable opinion, prompted the issue to be sent to Lisbon for an official decision. As guarantor, Carneiro presented Avong, "a well-respected Chinese merchant in this country, a landowner, and naturalized Portuguese."¹⁶⁵

Bernardo Estêvão Carneiro had been born in Portugal at the turn of the eighteenth century, having settled in Macao with his brother in the 1830s, where he had already bought "the palace of Praia do Manduco street," with the considerable fortune previously gathered trading in Manilla.¹⁶⁶ Having served two times as Procurator for Chinese Affairs and three times as City Senator, he is referenced by Maria Teresa Lopes da Silva as one of the top property tax contributors in Macao during Ferreira do Amaral's governorship, as well as one of his most fervent opponents.¹⁶⁷

According to the primary sources, namely the decision file from the Overseas Council regarding Carneiro's loan request, construction work was already well underway in July 1863.¹⁶⁸ The Council's favorable decision, meanwhile, would only come one year later, in August 1864. A few years later, however, the new dock would eventually be demolished as part of the 1867 inner harbor realignment and Praia do Manduco reclamation projects.¹⁶⁹

In any case, all these previous concessions had been rather small-scale, whereas Miguel Ayres da Silva's plan clearly fell within the more ambitious scope of the Chinese entrepreneur-led inner harbor realignment projects, such as merchant Apon's Chinese Bazaar rebuilding and extension following the 1856 ravaging fire, or Vong Lok's 1870s New Bazaar reclamation.¹⁷⁰ In light of these precedents, the breakthrough character of Silva's plan must be emphasized, I argue again, as the city's first Macanese-led real-estate development operation.

¹⁶⁵ Ibid. Regarding Carneiro's guarantor, Guang Zhi Lin mentions a Chinese merchant nicknamed Avong, whose name was Ho Lin Vong, son of Guangdong native Ho Guai, whom we saw engaging in the gambling concessions and property development ventures, namely with Vong Lok, through the 1860s and 1870s; see Lin, *Chinese Merchants in Macau in Late Qing*, 33-41. However, probably being from the same generation as Miguel Ayres da Silva, Ho Lin Vong would be too young, in 1863, to be serving as guarantor for real estate operations in his own name. I therefore must assume that Carneiro's partner must have been some other Chinese merchant also nicknamed Avong.

¹⁶⁶ Forjaz, *Famílias Macaenses*, 661.

¹⁶⁷ Silva, *Transição de Macau para a Modernidade*, 253-255. He would nevertheless figure as one of the top donors in Governor Ferreira do Amaral's 1847 fundraiser to build the Campo new roads (BG, n°7, May 22, 1847, 75. See also Chapter I).

¹⁶⁸ AHU, AHU-ACL-SEMU-DGU-CU-01, Pt.39 - 1859, Consultation of the Overseas Council by the Government of Macao regarding the construction of a dock on Praia do Manduco bay. Decision on August 18, 1864. Document 2.

¹⁶⁹ For further reference on the location of the 1870s New Bazaar, see Fig. 22, around Rua da Felicidade.

¹⁷⁰ For more on Apon, Vong Lok and the Macao Chinese entrepreneurs, see Chapter I.

According to the July 2, 1877 local ordinance authorizing the concession, its purpose was to reclaim an extension of the old Chinese Bazaar riverfront, by drawing a straight line between its northern and southern points (Figs. 53 and 54).¹⁷¹

In the particulars of the concession accompanying the local ordinance, it was established that the reclamation was to be completed within a three-year time frame, to which were added three more years for the urbanization of the new ground, that is to say, for the construction of the projected commercial and industrial buildings. It was also explicitly mentioned that all private plots would be subject to property tax, and that all projected streets and squares would, once finished the construction process, automatically fall into the public domain. The concessionaire was held to faithfully respect the project report and plans which had been previously approved by the Technical Council of Public Works (Conselho Técnico de Obras Públicas). He would finally be obliged to submit to government inspection, provided by the Public Works Director, “to this end considered as the government’s permanent surveyor.”¹⁷² This specific task would fall into the hands of Augusto César Supico, at the helm of the Macao Public Works Department since August 12, 1875.¹⁷³

¹⁷¹ BG, n°27, July 7, 1877, 109-110, Government of Macao local ordinance n°64, establishing the concession, to entrepreneur Miguel Ayres da Silva, for the construction of a new inner harbor reclamation, **July 2, 1877 (transcribed in Volume 3 - Annexes)**: “permission to reclaim, in the inner harbor riverfront, the surface circumscribed by, on the sea side, a straight line drawn between a point in the river wall located 24 meters to the south of Rua da Caldeira and another one in front of the northern angle of Travessa do Tarrafeiro, and closed by the riverside road crossing those two points.”

¹⁷² BG, n°27, July 7, 1877, 109-110, Government of Macao local ordinance n°64, establishing the concession, to entrepreneur Miguel Ayres da Silva, for the construction of a new inner harbor reclamation, **July 2, 1877 (transcribed in Volume 3 - Annexes)**. Particulars of the concession, July 2, 1877, signed by the acting government secretary, J. M. Teixeira Guimarães, and Miguel Ayres da Silva.

¹⁷³ Mathematics graduate from the University of Coimbra and engineer by the Lisbon Military School (Faria and Gomes, “A Universidade de Coimbra,” 49), Augusto César Supico was appointed Macao Public Works Director by national ordinance of February 23, 1875, officially taking office by local ordinance on August 12, 1875 (BG, n°33, August 14, 1875, 139, Government of Macao local ordinance n°88, August 12, 1875). By that same local ordinance was exonerated acting Public Works Director Feliciano Henrique Bordalo Prostes Pinheiro, who had been filling in since January that same year. In fact, before Supico’s arrival, Macao had been without a properly appointed Public Works Director for more than a year, after Francisco Jerónimo Luna’s commission had been abridged, in June 1874, by the Minister of the Overseas in these terms: “Given that, today, there are no significant public works in Macao requiring the service of an officer from the Portuguese army’s superior body of engineers, and thus it being appropriate to reduce the treasury expenses as much as possible, His Majesty the King, through the Minister of the Overseas, orders the Governor of Macao and Timor to send back to the kingdom the engineer officer and Public Works Director Francisco Jerónimo Luna” (BG, n°33, August 15, 1874, 138, June 25, 1874). This had probably been a consequence of the public works budget restrictions following the prohibition of the coolie trade in March 1874 (BG, n°23, June 6, 1874, 90-92, March 26, 1874; BG, n°23, June 6, 1874, 90-92, June 2, 1874). Luna would later transfer from Macao to the State of India Public Works Department, to which he would be appointed Director by notice of the Ministry of the Overseas on October 28, 1874 (BG, n°52, December 26, 1874).

Otherwise, regarding all constructions lining the new riverside street, the concessionaire was held to the obligation of building them “over similar arcades [*arcadas iguais*] according to a uniform plan. In the inner streets, although the construction system may be different, the plan should also be uniform.”¹⁷⁴ Finally, all drainage infrastructure and street pavements were to be constructed and fully funded by the government.

Silva’s urbanization plan for the new reclaimed ground was fairly straightforward. It merely applied an orthogonal grid over the 19.000 square meters surface, using the waterfront line as its reference. A main perpendicular street was drawn roughly at the middle, connecting the new riverside street to the heart of the old Bazaar, the Largo do Pagode (‘Chinese Temple square’), and from here to its main artery, the Rua das Estalagens (‘Inns street,’ former Rua do Culao). Silva would later name this 10-meter-wide new street after himself. The rest of the grid was composed of 6-meter-wide secondary streets, a longitudinal one, pompously named Rua Nova do Comércio (‘New Commerce street’), and five transversal ones, which would receive the names of the highest ranking colonial officers in charge at the time (allowing for a ‘Pedro Nolasco’ street, probably in honor of Silva’s father), aligned as well as possible with the preexisting perpendicular streets.

By the end of summer 1877, construction was probably already under way, only to be halted by the administration roughly one year later, on the grounds that Silva was breaching the concession contract. The complaint that led to this decision had been filed by Public Works Director Augusto César Supico, right at the beginning of the reclamation work, claiming that Silva had deliberately started construction of the river wall using a different technique than the one established in the contract. Silva argued that he had completed only a 10-meter wall in this alternative manner, as an experiment. By the time Supico’s second complaint was finally taken into consideration by the administration and construction effectively halted on October 4, 1878,¹⁷⁵ a 120-meter wall had already been built. In other words, Silva had already managed to complete one third of the projected reclamation.¹⁷⁶

In the meanwhile, Supico’s commission as Public Works Director had come to an end. On September 27, 1878, Raimundo José de Quintanilha¹⁷⁷ was ordered to transfer from the head of the

¹⁷⁴ BG, n°27, July 7, 1877, 109-110, Government of Macao local ordinance n°64, establishing the concession, to entrepreneur Miguel Ayres da Silva, for the construction of a new inner harbor reclamation, **July 2, 1877 (transcribed in Volume 3 - Annexes)**. Particulars of the concession.

¹⁷⁵ BG, n°26, June 28, 1879, 138-139, Government of Macao local ordinance n°59, regarding the new inner harbor reclamation project, June 27, 1879.

¹⁷⁶ BG, n°41, October 11, 1879, 251-252, Minutes from the Government Council session of **June 26, 1879**, regarding the new inner harbor reclamation project (**transcribed in Volume 3 - Annexes**).

¹⁷⁷ Very little is known about Raimundo José de Quintanilha. Born in Lisbon in 1850, he was related to better known *Estado Novo* Governor of the State of India Fernando de Quintanilha e Mendonça Dias (1898-1992) [António José Pereira da Costa, *Os Generais do Exército Português* (Lisboa: Biblioteca do Exército, 2005)].

State of India Public Works Department to take office in Macao.¹⁷⁸ Since the reclamation work was already on hold, the Technical Council of Public Works had determined to wait for Quintanilha's arrival to decide what to do about Silva's waywardness. Probably arrived in Macao by spring 1879, the new Public Works Director reported, unsurprisingly, that the cofferdam (*ensecadeiras*) construction system preconized by his predecessor was "the most scientific and convenient" for the project in hand. However, given its advanced state, the fact that the rock-fill (*enrocamento*) system (Fig. 55)¹⁷⁹ "was also customary, and that the portion completed could be considered well-built and acceptable," it would be costlier to demolish and rebuild with the technique favored by the Public Works Department than to let it go on as it was under the responsibility of the builder.¹⁸⁰

The issue was definitely resolved in the summer 1879, when Governor Carlos Eugénio Correia da Silva published a new provincial ordinance establishing an amendment to the original contract, effectively modifying the construction system of the river wall to accommodate Silva's preference for the rock-fill, under a 10-year deposit meant to guarantee its safety and stability. However, read the ordinance, no further alterations would be allowed.¹⁸¹

After this slight disruption, work proceeded seemingly as expected until the completion of the reclaimed area. Indeed, despite Quintanilha's protests,¹⁸² the reception of the work and the order to

Alice Santiago Faria places him as the State of India Public Works Director in January 1878 (Faria, *Architecture Coloniale Portugaise à Goa*, 574), which he would leave for Macao barely one year later, after his appointment of September 27, 1878.

¹⁷⁸ BG, n°47, November 23, 1878, 185-186, National ordinance of September 27, 1878, exonerating Macao Public Works Director Augusto César Supico and appointing Raimundo José de Quintanilha for the same position.

¹⁷⁹ Figure 55 shows a reclamation carried out between 1890 and 1904 in the Hong Kong Central District praya using the rock-fill system.

¹⁸⁰ BG, n°41, October 11, 1879, 251-252, Minutes from the Government Council session of **June 26, 1879**, regarding the new inner harbor reclamation project (**transcribed in Volume 3 - Annexes**).

¹⁸¹ BG, n°26, June 28, 1879, 138-139, Government of Macao local ordinance n°59, regarding the new inner harbor reclamation project, June 27, 1879.

¹⁸² Two weeks before the publication of the local ordinance establishing the reception of the reclamation work and the start of the building three-year term, Quintanilha expressed his negative opinion regarding the state of the reclamation. Indeed, Miguel Ayres da Silva, in his request for reception dated from the previous January 27, claimed that the work corresponding to the first three-year term was done, and that he only had left open certain ditches to accommodate the rubble resulting from the foundations that were to be presently built. According to an unimpressed Quintanilha, this only meant that Silva wished to start building his properties before completing the whole surface which, according to the 1877 plan, he was contractually bound to reclaim. Thus, in his view, Silva's request constituted another breach of contract. Despite advising Governor Joaquim José da Graça in this regard, and the Governor seeming to agree with him, the letter of the March 4, 1881 ordinance clearly shows that the Public Works Director was, once again, overruled. See AM, MO/AH/AC/SA/01/00278, Letter n°13 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, February 14, 1881.

continue with the three-year term for urbanization and construction of the industrial and commercial buildings were again established by provincial ordinance on March 4, 1881,¹⁸³ signed by new Governor Joaquim José da Graça (1879-1883).¹⁸⁴

By September, however, Quintanilha was issuing a new order to stop construction. This time, he accused the entrepreneur of having started to build his properties without having previously submitted the corresponding projects for approval, once again breaching his contract. To add insult to injury, when the Public Works Director had finally decided to intervene, sending an officer to halt the work, Silva's contractor refused to yield, thus undermining Quintanilha's authority as public inspector.¹⁸⁵ Even so, the latter's pains regarding Silva's reclamation were coming to an end as, by March that same year, he had completed his commission in Macao and was already set to be replaced by Goan engineer Constantino José de Brito at the head of the Public Works Department.¹⁸⁶

Having taken office in November,¹⁸⁷ Brito would thus inherit of the proper mess the new inner harbor reclamation had turn into. Things had gotten so out of hand that, in January 1882, the Macao District Attorney was writing to the government Secretary-General in these terms:

The alignments of streets and buildings have been done in utter contravention of the [1877 contractual] plans accepted by both parts, notwithstanding the repeated indications and warnings the Public Works Director has issued as government inspector. It is therefore time, in my view, to act vigorously against said concessionary, using the instruments of the law in accordance with the gravity of his actions. Therefore, [...] I propose that: 1°. The concessionary be intimated by the District Administrator to stop all work immediately; 2°. That he otherwise

¹⁸³ BG, n°10, March 5, 1881, 61, Government of Macao local ordinance n°35, regarding the new inner harbor reclamation project, March 4, 1881.

¹⁸⁴ Not much is known about military officer Joaquim José da Graça (1825-1889), other than the fact that he had come to take office as Governor of Macao in 1879 after serving as acting Governor in Angola, where he had probably been stationed beforehand, for a short period of time in 1870. Moreover, his nomination to this Portuguese African province had followed the second mandate of former Governor of Macao José Rodrigues Coelho do Amaral in that same office (1869-1870), and would be succeeded by the appointment of also former Governor of Macao José Maria da Ponte e Horta (1870-1873). Before heading East, he had presented to the Lisbon Geographical Society (Sociedade de Geografia de Lisboa), of which he was a member, a project for the establishment of an "African Agricultural and Commercial Company," published in 1878. For more on this subject, see Joaquim José da Graça, *Projet d'une Compagnie Agricole et Commerciale Africaine* (Lisbonne: La Société de Géographie de Lisbonne, 1878). For more on the Lisbon Geographical Society, see Chapter V.

¹⁸⁵ AM, MO/AH/AC/SA/01/00365, Letter n°62 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, September 21, 1881.

¹⁸⁶ BG, n°21, May 21, 1881, 131, National ordinance of March 23, 1881, exonerating Macao Public Works Director Raimundo José de Quintanilha and appointing Constantino José de Brito for the same position.

¹⁸⁷ BG, n°47, November 19, 1881, 344, Government of Macao local ordinance announcing that Constantino José de Brito has taken office as Macao Public Works Director, November 14, 1881.

be intimidated to start tearing down, according to the Public Works Director's instructions, all contravening buildings, within 24 hours; 3°. That he be notified that, if he doesn't abide perfectly, immediately and completely to the previously stated instructions, his contract will be terminated by local ordinance [...] and the reclamation adjudicated again to a new concessionary.¹⁸⁸

This time, the main issue at stake was the 1877 contractual clause regarding the obligation to provide all buildings overlooking the waterfront on the new reclamation site with regular arcades, according to a previously approved uniform pattern. This clause had probably been put in Silva's contract to fulfill the architectural prerogative of having the new riverfront buildings follow the 1867 inner harbor realignment model, continuing the arcade visual north of Ponte e Horta square, thus reframing the old Bazaar and, through this façade uniformity, giving the inner harbor a sort of modern *allure*.

It was obvious from the start, however, that Miguel Ayres didn't much care for embellishing his façades, and even less for homogenizing the riverfront. He clearly saw this clause as a nuisance which, if abided to, would end up costing him dearly in terms of ground-floor surface.

Already back in October 1879, fresh out of his first controversy with the Public Works Department, Silva had sent recently-exonerated Governor Carlos Eugénio Correia da Silva what seems to have been his initial plan and elevation for "the first block in the riverside street reclamation"¹⁸⁹ (Fig. 56). In the accompanying letter, Silva wrote that this elevation had already been approved by the City Senate, adding: "By this project you may see that that I intend to fulfill religiously the 11th clause of the concession contract, both in reference to the arcades and to the uniformity of the construction plan."¹⁹⁰

Now, Silva must have been aware that this plan most certainly didn't correspond to the expectations of the government contract, as it presented a *faux* arcade of almost flat arches, whereas the 1860s model preconized a covered public gallery built into the surface of the private plots, made of a succession of rounded arches. While claiming otherwise in his letter, it was nevertheless clear from this drawing where the entrepreneur stood regarding the obligation to build an arcade. Also clear from these short statements was who Silva was relying on for institutional validation: not on the

¹⁸⁸ AM, MO/AH/AC/SA/01/00278, Letter n°18 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, January 17, 1882. Document 1, January 9, 1882.

¹⁸⁹ AM, MO/AH/AC/SA/01/00278, Undated letter from Miguel Ayres da Silva to the government Secretary-General, October 1879, filed between the letter n°60 from Macao Public Works Director, October 22, 1879, and a request from entrepreneur Miguel Ayres da Silva, October 28, 1879. Includes the plan and elevation for the first block of the new inner harbor reclamation, MNL.03.18.Cart.

¹⁹⁰ Ibid.

Public Works Department, of course, who had proved too hung up on upholding the contract, but rather on his own City Senate.

Indeed, all through his extremely contested construction process, Silva would unashamedly endeavor to take advantage of any legal loophole or jurisdictional overlap between these two institutions which might allow him to have his way, namely regarding the arcade issue. This tendency to use the approval of the Senate as *fait accompli* must have rubbed Quintanilha the wrong way, prompting Governor Joaquim José da Graça to appeal to the Ministry of the Overseas for help in clarifying who was in charge of what. The answer came from Minister Viscount S. Januário, Januário Correia de Almeida, incidentally a former Governor of Macao (1872-1874), on March 22, 1881, and was published in the government bulletin, so that there would be no hesitation:

Given that the Administrative Code of 1842 is in force in the overseas provinces and, moreover, the subject at hand having been regulated by the national ordinance of December 31, 1864 which, in its article 54^o, attributes to the municipalities outside of Lisbon and Porto the right to determine alignments and levels [*alinhamentos e cotas de nível*] for all buildings inside city limits, this is, without a doubt, an attribution of the City Senate whom, in its use, must consult the respective Public Works Director, as the technical entity more able to elucidate and clarify that collective body on this subject.¹⁹¹

Broadly speaking, Minister Correia de Almeida was confirming that, both in terms of the laws in force in the overseas and of the concession contract, the Senate was indeed authorized to deliberate as it saw fit. With this in mind, the Minister was also making indisputably clear that the Public Works Director had final say in all matters of construction permits and building regulations.¹⁹²

Following his October 1879 plan, Silva formally submitted a request, on August 30, 1880, to have the contract altered again, this time to suppress the obligation of building the front arcade:

Miguel Ayres da Silva, wishing to begin construction in the new reclamation, has arranged for the project of the first block to be drafted, in accordance with the stipulations of clause 11th of the concession contract, that is, with verandahs (*varandas*)¹⁹³ at the front, however, several inconveniences to this disposition having been brought to his attention, the Supplicant deems it his duty to partake these considerations, so that Your Excellency may determine, after

¹⁹¹ BG, n^o21, May 21, 1881, 131, Notice from the Minister of the Overseas regarding construction regulations in the new inner harbor reclamation project, March 22, 1881.

¹⁹² In the Government of Macao local ordinance of October 9, 1871, as mentioned, it was established that all municipal prerogatives regarding public works, as stated in the 1842 Administrative Code, should be resolved, as well as fully financed, by the City Senate, provided that, before proceeding into planning and construction stages, it sought the director of public works' "advice, guidance and management." See BG, n^o42, October 10, 1871, 167-170, Government of Macao local ordinance n^o57, implementing the December 1, 1869 Administrative Code in the province of Macao, October 9, 1871.

¹⁹³ In this August 30, 1880 request by Miguel Ayres da Silva is the first reference found in the primary sources to the covered public gallery as *varanda* as, up to this point, it had been typically referred to in Portuguese as *arcada*. I have thus translated it into 'verandah,' following Brenda Yeoh's use of the word in the context of British colonial Singapore (Yeoh, *Contesting Space in Colonial Singapore*, 243-280). See also Chapter I for the analysis of the use of this architectural solution in the 1867 inner harbor realignment project.

hearing the competent bodies, the most convenient course of action. [...] Considering that the houses built with verandahs, by being small, become not only poorly ventilated but also dark, thus hindering the [salted] fish merchants' [activity], and thus considering that, by altering the front of these houses, the Sovereign loses nothing, while public sanitation and the merchant's convenience has much to gain, the Supplicant presents Your Excellency with two drawings, the first [...] with verandahs and the second without them, asking Your Excellency allow the buildings to be constructed according to the second project.¹⁹⁴

Unfortunately, these two drawings don't seem to have been preserved in the archives, although Quintanilha references them in his immediate reaction to Silva's request. Indeed, the Public Works Director writes two days later to inform the Governor of where he stands regarding Silva's claims on public health. In short, he considers them wholly unsubstantiated as, in his expert view, the arcades would benefit, not just the ventilation of the upper floors, "which are the most important and the only ones fit for housing families," thus freeing them from "the fetid exhalations of salted fish", but also street traffic itself, giving it more space and "sheltering the passers-by in the seasons of great heat and rain."¹⁹⁵

The argument of the buildings' salubriousness naturally called for another expert opinion, that of Public Health Director Lúcio Augusto da Silva. As a true man of science, the Public Health Director would take some time to, as he puts it, "visit the reclamation and the nearby shophouses [*lojas*] with and without arcades,"¹⁹⁶ before handing in his well-pondered report a few weeks later. As would be expected, Lúcio Augusto da Silva wholeheartedly agreed with the Public Works Director's view:

The houses that are to be built in the new reclamation, as all houses in the riverside street, will face the West and, as such, from noon, will be exposed directly to sunlight which, without the arcades, will overheat the shophouses' walls and enter them, making them not just unpleasant for those who work there, but also prejudicial to the foodstuffs deposited therein, for the heat and humidity that last four months in this city are the two most important causes of effluvia. These excesses do not equate to good hygiene. Even more so, the owners of the shophouses selling salted fish currently without arcades, with the purpose of attenuating the sun heat during the better part of the day, put up in front of them some ridiculous canopies, low and strung by their extremities to weights positioned in the middle of the street, thus encumbering public traffic. Conversely, the arcades, judging by the shophouses that have them, won't prevent the much-needed air and light from entering those establishments. [...] In this case, therefore, the

¹⁹⁴ AM, MO/AH/AC/SA/01/00278, Information from the Public Health Council (*Junta de Saúde*) regarding the new inner harbor reclamation project, **September 25, 1880 (transcribed in Volume 3 - Annexes)**. Document 2, August 30, 1880.

¹⁹⁵ AM, MO/AH/AC/SA/01/00278, Letter nº40 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, **September 1, 1880 (transcribed in Volume 3 - Annexes)**.

¹⁹⁶ AM, MO/AH/AC/SA/01/00278, Information from the Public Health Council (*Junta de Saúde*) regarding the new inner harbor reclamation project, **September 25, 1880 (transcribed in Volume 3 - Annexes)**.

beauties of architecture, modest as they may be, go hand in hand with the principles of hygiene.¹⁹⁷

Paying no mind to these “prescriptions of science,”¹⁹⁸ as he himself put it, since science had proved disappointingly to be against his interest, and following to the letter the authorization to proceed with construction granted by the local ordinance of March 4, 1881,¹⁹⁹ Miguel Ayres and his associates started building their shophouses by the end of summer. This sparked outrage, as we have seen, in the government circles, which was hardly a reason, in the entrepreneur’s point of view, to halt construction. Probably to set minds at ease, however, he did present a new plan for the reclamation’s riverside first block (Fig. 57). In its margin, there was a manuscript note which read the following: “Having consulted with the acting Public Works Director, the City Senate approves this plan. Macao, in session of October 27, [1881]. Signed by D. C. Pacheco, L. J. Baptista, A. A. da Silva, [...?], José Vicente de Jesus.”²⁰⁰ Besides the fact that this plan might have been approved by Silva himself as acting member of the City Senate, signing as ‘A. A. da Silva’ for António Ayres da Silva, we see that, in regard to the Public Works Department, it was vetted by ‘the acting Director.’ Given that Quintanilha was still on duty on September 27, 1881, when he signed a letter to the government Secretary-General detailing his decision to stop construction,²⁰¹ it can be inferred that he had left Macao shortly after, leaving the Public Works Department in the care of acting Director, Alcino António Sauvage. As Constantino José de Brito would take office on November 14, 1881, it all puts the approval of Silva’s new plan in the very short six-week transition period between Quintanilha’s departure and Brito’s arrival.

This plan basically reprises the one from October 1879 (Fig. 56), juxtaposing to the shophouse façades an arched gallery supporting a balcony on the first floor, to be built over the 8-meter-wide riverside street. As a result, the later would be reduced to a 6,70-meter width, ceding 1 meter (plus

¹⁹⁷ Ibid.

¹⁹⁸ AM, MO/AH/AC/SA/01/00278, Information from the Public Health Council (*Junta de Saúde*) regarding the new inner harbor reclamation project, **September 25, 1880 (transcribed in Volume 3 - Annexes)**. Document 1, September 17, 1880.

¹⁹⁹ BG, n°10, March 5, 1881, 61, Government of Macao local ordinance n°35, regarding the new inner harbor reclamation project, March 4, 1881.

²⁰⁰ AM, MNL.03.18a.Cart. This is a copy of the original plan, executed by Public Works draftsman António Heitor on December 29, 1881, probably to be included in the informative file sent to Governor Joaquim José da Graça in the wake of the District Attorney’s letter of January 9, 1882. See the full file in AM, MO/AH/AC/SA/01/00278, Letter n°18 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, January 17, 1882 and, in particular: Document 1, January 9, 1882, Letter from the District Attorney; Document 3, inscriptions on the AM, MNL.03.18a.Cart plan (Fig. 57).

²⁰¹ AM, MO/AH/AC/SA/01/00365, Letter n°62 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, September 21, 1881. Document 4, September 27, 1881.

a 30-centimeter pillar width) to the exiguously narrow walkway. A year before, at the time of the discussion with both the Public Works and Public Health Directors, Silva had already taken a stand on the riverside street width issue, stating, in one of his numerous requests, that if he were “forced to build the arcades on his own property, for which he must pay the corresponding government tax, he wouldn’t feel obliged to leave those arcades available for public use as if they were a public way, on the contrary, he would have them closed for the private use of his tenants, as would be his right as landlord.”²⁰² Thus, in the end, the October 1881 plan was just another way of expressing, without actually having to repeat the words yet again, the concessionary’s firm intention no to build even a square meter of the contested arcade.

At his arrival in Macao, Constantino José de Brito’s inspection of the whole matter was clear and irrevocable. Writing to inform the Governor of his opinion, he argued, regarding the latest projected arcade:

Such an arcade doesn’t meet, not in the least, the end for which it is planned, becoming rather an encumbrance and a nuisance for commerce, instead of serving it as benefit and comfort, and in such case it is better that it doesn’t exist at all, however, it seems that the concessionary, that has already under way some constructions at ground level, seemingly without having abided to the obligation [of previously approving its plans], must be intimidated to move back the front of his buildings over the reclamation’s riverside street, in such a way that the arcades that he is obliged to build may at least have a 2-meter width plus pillars [...]. The riverside street must have a 7,6-meter width and, being reduced to 6,7 meters, it seems that the concessionary intends to build the arcade over the ground destined for public traffic. Now, when the contract was established, it was decided that the reclaimed ground would be destined for roads and buildings; moreover, it was decided that the buildings standing over the riverside street would have arcades. It is therefore evident that the arcades must be constructed in the ground destined for the buildings and, if this clause didn’t suit the concessionary, he had the freedom of not having taken the concession, as it doesn’t seem reasonable that a concessionary abide solely by the clauses that are to his advantage, not executing the ones that he doesn’t deem convenient, without having to suffer the proper consequences.²⁰³

In response, both to Brito’s considerations and to the following District Attorney’s plea for legal action against Miguel Ayres,²⁰⁴ Governor Graça issued a local ordinance, on March 6, 1882, effectively altering the contractual clause regarding the construction of the arcades, thereby exempting the landowners from this obligation. Despite the diligent inspection of the Public Works

²⁰² AM, MO/AH/AC/SA/01/00278, Information from the Public Health Council (*Junta de Saúde*) regarding the new inner harbor reclamation project, **September 25, 1880 (transcribed in Volume 3 - Annexes)**. Document 1, September 17, 1880.

²⁰³ AM, MO/AH/AC/SA/01/00278, Letter n°18 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, January 17, 1882. Document 4, December 30, 1881.

²⁰⁴ AM, MO/AH/AC/SA/01/00278, Letter n°18 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, January 17, 1882. Document 1, January 9, 1882.

Department, read the ordinance, “unexpected circumstances had occurred that it had been impossible to remedy without halting construction, at a time when the buildings were already so advanced that demolishing them would imply the loss of great capital, not just by the concessionary but also by other individuals that had bought the already aligned and divided plots in good faith.”²⁰⁵

Moreover, read the ordinance, and Brito had said it himself, “the submitted plan of an arcade in said street, with its unacceptable scale, is inadmissible, only serving as obstacle to public traffic and considerably diminishing the main street’s width.”²⁰⁶ It is better that it doesn’t exist at all, Brito had written, and so it had been done. No one would be hindered by this decision, claimed the Governor, other than the aesthetes, concerned with the regularity of the riverfront buildings. And what importance did aesthetics have in face of “the city improvement resulting from the construction of this group of shophouses, so well advanced, and that already represents a valuable capital from which will come important profits to the public treasury, besides its importance for commerce, navigation and for hundreds of people that will find work in the new district.”²⁰⁷

Besides, as Miguel Ayres da Silva himself had noted back in 1880, the riverfront façades were far from homogeneous as, he claimed, Governor José Rodrigues Coelho do Amaral had allowed the salted fish merchants in Rua do Guimarães, “from Largo da Caldeira to Tarrafeiro,” to be exempted from the obligation to build arcades.²⁰⁸ Silva was, of course, once again elaborating a theory in his favor under false pretenses. As we have seen in Chapter I, the first inner harbor buildings to incorporate arcades were erected as part of the February 1867 Ponte e Horta reclamation project, sometime after the blocks forming Rua do Guimarães had been built by former Governor Coelho do Amaral. Following Governor Ponte e Horta’s plan, the arcades were then built up to the south side of Largo da Caldeira (Figs. 58 and 59), where the old and the new reclamations met.²⁰⁹

Finally, the ordinance also established a compensation for this exemption, in the form of an indemnity to be used for the construction of a new police station. This idea had been suggested by Miguel Ayres in his January 10, 1882 request, probably written in the wake of the District Attorney’s menacing letter. In order to have the Governor agree to let go of the arcades, Silva and

²⁰⁵ BG, n°10, March 11, 1882, 78-79, Government of Macao local ordinance n°19, altering the concession contract with entrepreneur Miguel Ayres da Silva, regarding the new inner harbor reclamation project, **March 6, 1882 (transcribed in Volume 3 - Annexes)**.

²⁰⁶ Ibid.

²⁰⁷ Ibid.

²⁰⁸ AM, MO/AH/AC/SA/01/00278, Information from the Public Health Council (*Junta de Saúde*) regarding the new inner harbor reclamation project, **September 25, 1880 (transcribed in Volume 3 - Annexes)**. Document 1, September 17, 1880.

²⁰⁹ For further reference on the location of the Largo da Caldeira, at the heart of the 1870s New Bazaar, see Fig. 22, around Rua da Felicidade.

the other four Chinese owners of the seven riverfront blocks, “understanding that the government was planning to acquire one of the reclamation houses to serve as a police station,” had offered to pay, for each shophouse facing the riverside street, 30 patacas, corresponding to a total of 1.800 patacas, to fund the government project.²¹⁰

Silva would later effectively donate to the Government a 220 square meters plot in one of his blocks (n°8), to acquit the indemnity he was due, which corresponded to the “fifteen houses he had facing the river.”²¹¹ This description corresponds exactly to the configuration of the southern blocks forming the reclamation riverside street in Figure 65, which I have named n°1 and n°2, as these were also Silva’s property.²¹² Blocks n°9 and n°10 probably completed the concessionaire real estate portfolio in the new reclamation since, as mentioned, he would later donate some plots in block n°9 to the City Senate with the purpose of building a fish market. The other investors involved in the arcade-compensation scheme were Chinese merchants Pau-leng, owner of block n°3, Chan-hoi-peng, owner of block n°4, Yu-heng, owner of blocks n°5 and n°6 and Chan-keng, owner of block n°7.²¹³

By July 1882, all debts had been payed²¹⁴ and, as Silva had intended, no arcades were ever built. Nevertheless, as we can observe from Figs. 58, 60 and 61, the ensemble has a certain practical regularity to it, particularly on its riverfront, where block and plot scaling is fairly uniform, as are the façades. Construction resumes the shophouse typology, mostly built back to back, as in the 1866 blocks built between Rua Nova de El-Rei and Rua do Guimarães (Fig. 65). The shophouse plot-type has, on average, a 4,5-meter width and a 15-meter length, which resembles the proportions of the older shophouses that can be seen, for example, between Largo do Pagode and Rua da Madeira. These harbor shophouses are therefore a bit larger and particularly deeper than the ones

²¹⁰ AM, MO/AH/AC/SA/01/00278, Letter n°18 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, January 17, 1882. Document 2, January 10, 1882.

²¹¹ AM, MO/AH/AC/SA/01/00411, Letter n°127 from the Macao Treasury Department secretary to the Government Secretary-General, regarding a donation of an urban plot on the new inner harbor reclamation, by entrepreneur Miguel Ayres da Silva, May 19, 1882. In this text, the donated plot is mentioned as being a part of block n°8, in the continuation of Rua da Madeira, which it faces on its south side; on its west side, it faces the reclamation central street (later Rua Nova do Comércio); on its north side, it faces the rest of Silva’s block; and on its east side it faces Rua do Guimarães. Figure 65 shows my interpretation of this location, based on this description, as well as on the configuration of the corresponding blocks in the 1903 historical map.

²¹² AM, MO/AH/AC/SA/01/00278, Letter n°18 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, January 17, 1882. Document 2, January 10, 1882.

²¹³ Ibid.

²¹⁴ AM, MO/AH/AC/SA/01/00278, Letter n°186 from the Macao Treasury Department secretary to the Government Secretary-General, regarding construction on the new inner harbor reclamation, July 17, 1882.

found in the old Bazaar, as well as in the 1870s New Bazaar, around Rua da Felicidade. Building techniques and materials are the same as used in these previous Bazaar extensions, with predominantly three storied buildings, even if the upper floors have abandoned the more ‘traditional’ full-width window with carved-wood blinds, in favor of two small vertical windows overlaid by prefabricated round cast moldings (as seen in Figs. 62, 63 and 64).

Negotiating power and the power of negotiation

In her analysis of British Singapore, Brenda Yeoh argues that Chinese communities organized what the author deems “passive counter-strategies” in order to inflect colonial control: “the community could adopt an outward attitude of apparent acquiescence (or at least non-protest), but in reality, disregard or even thwart the measures imposed by the colonial power.”²¹⁵ As the author posits modern urban governance and its attempts to exert control (over everything, from public space, to private practices, to property development) as a colonial instrument, designed “to facilitate colonial rule and express colonial [economic, political and ideological] aspirations and ideals,”²¹⁶ it necessarily follows in her argument that the disregard expressed by the “Asian plebeian classes” for municipal measures of public order through “relentless, repetitive action,”²¹⁷ constituted a strategy of “passive resistance”²¹⁸ to this power.

Now, as I have endeavored to show, the Macanese and Chinese entrepreneurs can hardly be portrayed as these Singaporean supposedly “powerless masses.”²¹⁹ Nor, in my opinion, can the actions of a ‘native-born Portuguese’, such as Miguel Ayres da Silva, be read as being intended to thwart Portuguese central government’s claim on urban management. Nor do they seem to be akin to James Scott’s “weapons of the weak,” depicting the “ordinary weapons of relatively powerless groups, [such as] foot dragging, dissimulation, desertion, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so on.”²²⁰

And yet, what reading can be done, for example, of Silva’s noncompliance with the state’s political-administrative apparatus, or of his strategies of dissimulation and deception? There is some level of

²¹⁵ Yeoh, *Contesting Space in Colonial Singapore*, 15.

²¹⁶ *Ibid.*, 16-17.

²¹⁷ *Ibid.*, 270-271.

²¹⁸ *Ibid.*, 119.

²¹⁹ *Ibid.*, 125.

²²⁰ James C. Scott, *Weapons of the Weak. Everyday Forms of Peasant Resistance* (New Haven and London: Yale University Press, 1985), xvi.

passive resistance in these actions, to be sure, some “form of insubordination,” which Scott also compellingly addresses as “the infrapolitics of the powerless.”²²¹ However, the author’s argument is engaged with the “often fugitive political conduct of subordinate groups,”²²² such as slaves, serfs, untouchables, or indeed the colonized peoples. As, “to the degree structures of domination can be demonstrated to operate in comparable ways,” Scott claims, these subordinate groups will “elicit reactions and patterns of resistance that are also broadly comparable.”²²³ The key nuance between this analysis and the colonial encounter at hand lies in the fact that contestation is coming from prominent financial and social groups, so most definitely not from the ‘powerless masses,’ but from what we could very well deem the ‘powerful colonized’. I would then venture that these ‘weapons’ and their goals are not just a prerogative of ‘the weak’ but possibly of all non-political or non-administratively represented groups, vis-à-vis government policies and regulations. Infrapolitics, but unconnected to problems of class struggle or even, I would argue, to anti-colonial (or anti-metropolitan) sentiments. Rather, it seems to be a matter of defending one’s legitimacy in appropriating the urban ground and in maximizing its value. Therefore, in my view, these actions may better fittingly be read as a bid for urban citizenship.

Indeed, Silva acted with the same sense of entitlement to city-building that had probably presided over the Chinese Bazaar extension and regeneration plans in the 1850s through to the 1870s, a sort of “consciousness of rights”²²⁴ to public space shared both by the Macanese and the Chinese communities. A record of tribulations and conflict only appeared when government technical and judicial institutions started attempting to exercise control over these processes as part of their own mechanisms of modern state-building. A specific “dialectic of power”²²⁵ was then set in motion, through which the government tested its own ability to enforce the new norms, and the entrepreneurs tested their limits.

As Scott puts it, “if formal political organization is the realm of elites [...], of written records [...] and of public action, infrapolitics is, by contrast, the realm of informal leadership and nonelites, of conversation and oral discourse, and of surreptitious resistance.”²²⁶ The Macanese and Chinese entrepreneurs were certainly powerful, but they were subjects nonetheless, the latter not even being allowed formal citizenship nor political representation. They would hence resort to infrapolitical

²²¹ James C. Scott, *Domination and the Arts of Resistance. Hidden Transcripts* (New Haven and London: Yale University Press, 1990), xiii, 183-184.

²²² *Ibid.*, xii.

²²³ *Ibid.*, xi.

²²⁴ *Ibid.*, 189.

²²⁵ Yeoh, *Contesting Space in Colonial Singapore*, 67.

²²⁶ Scott, *Domination and the Arts of Resistance*, 200.

tactics in order to quite literally gain their ground in the negotiation process with the formal political institutions.

Still, despite the apparent animosity portrayed in the official discourse recorded in the archival material, the “dialectic of power”²²⁷ at play in this particular circumstance seemed rather to have been one of consensual negotiation between both parties in which everyone found some sort of satisfaction. In the end, the entrepreneur got to maximize private property in his allotted ground, and the Government got a consequent revenue, either in the form of fines, or in the form of real estate. As Jyoti Hosagrahar puts it regarding late 19th century New Delhi, this type of almost customary negotiation “made public space a commodity whose value was settled between individual officials and citizens”²²⁸ on a case-by-case basis. And so, even if infrapolitical tactics of city-building were at play, I would suggest that, underlying this particular official narrative of modernity’s struggles to impose itself, the presence of local powers and communities can be found to overbear the actual imperial institutions.

On the limits of imperial power, Frederick Cooper argues that it “depended on a range of agents, [including] local elites who could find an interest in imperial circuits of commerce and power,” and that it was actually “vulnerable not only to assertions of autonomy and resistance to central authority, but to the growth of circuits that bypassed the imperial center.”²²⁹ The key to survival, financially as well as politically, seems to have been, in the case of colonial administration in Macao, to welcome and nurture these relatively autonomous networks of influence, endeavoring to find, through each of the negotiation processes, a working balance “between maintaining direct, bureaucratic authority and exercising power by linking [itself to the local] patronage structures.”²³⁰

Ultimately, we might say that this particular dialectic of power based on negotiation transcends the colonial context as it can be found in any situation where governance, regardless of how progressive it claims to be, is inherently dependent on the local communities. Weiss and Hobson describe this as the state’s “infrastructural capacity,” meaning its “increasing ability to penetrate and extract resources from society and allocate them to desired ends.”²³¹ To historian Rui Branco, analyzing the Portuguese Regeneration Public Works twin-reform of cartography, census and weights and measures, this conceptualization helps to better frame caciquism and other types of informal

²²⁷ Yeoh, *Contesting Space in Colonial Singapore*, 67.

²²⁸ Hosagrahar, *Indigenous Modernities*, 72.

²²⁹ Frederick Cooper, *Colonialism in question. Theory, Knowledge, History* (Berkeley and Los Angeles: University of California Press, 2005), 201.

²³⁰ *Ibid.*

²³¹ Linda Weiss and John M. Hobson, *States and Economic Development. A Comparative Historical Analysis* (Cambridge: Polity Press, 1995), 4.

contractualization at the governance level. By considering that these practices may be, in certain contexts, “inbuilt characteristics of state power,” it ends up actually changing the narrative of the ‘backward state’, or of the ‘weak imperial power,’ incapable of reaching a higher, almost ideal, stage of modernization.²³²

In this sense, the idea of an ‘old-fashioned modernization’ seems to describe Miguel Ayres da Silva’s reclamation project with some accuracy. Silva was indeed a representative of deeply embedded local interests, both Macanese and Chinese, set to build a piece of modern city (modern form with a modern function), by employing what could be construed as a ‘familiar’, ‘usual’ or ‘traditional’ management model. In this context, the Public Works Department engineers, as ambassadors of a more ‘progressive’ or absolute modernization model into the local realities, couldn’t help feeling exasperated at, as Governor Silveira Pinto had put it back in 1839, “the way things were done”²³³ in Macao.

Constantino José de Brito would acknowledge as much regarding a petition from one of Miguel Ayres’ Chinese partners, Yu-heng, owner of blocks n°5 and n°6, wishing to build one-storied shophouses in his lots, and arguing, to this end, that he couldn’t afford to build them two-storied as had been determined in the original contract. Addressing the Governor, Brito voiced his frustration with the City Senate, “which ought to be the first to look out for the embellishment of the city,” for complying with this request “as a way to conquer the Hong Kong Chinese capitalists’ trust and gratitude, and to attract to this province other capitalists to foster its commercial development.”²³⁴ Unsurprisingly, Governor Graça would agree with the Senate and grant the petition as, he wrote, “it didn’t harm anyone.”²³⁵

As Weiss and Hobson put it, “strong states wield infrastructural power, not despotic power,” that is to say, “strong states cultivate collaborative strategies with civil society, thus enhancing their own enabling capacities as well as those of organized social groups, [...] the most dynamic contexts [being] those in which a symbiosis occurs between an equally strong state and the dominant organizations in civil society.”²³⁶ Which is not to say that Portuguese imperial power in Macao was equivalent to that of a strong state such as, say, Great Britain and its Hong Kong global economic hub. Nevertheless, we see it engaging in similar enabling strategies designed to strengthen itself,

²³² Branco, *The Cornerstones of Modern Government*, 22.

²³³ Letter n°106 from the Governor of Macao, Adrião Acácio da Silveira Pinto, to the Minister of the Overseas, September 16, 1839. Transcribed in Dias, *Macao e a I Guerra do Ópio*, 118-120.

²³⁴ Letter n°15 from Macao Public Works Director Constantino José de Brito to the Government Secretary-General, regarding construction on the new inner harbor reclamation, February 14, 1882.

²³⁵ Ibid.

²³⁶ Weiss and Hobson, *States and Economic Development*, 5.

which undoubtedly resulted in a post-Opium Wars dynamized Macanese economy and revitalized society.

* * *

In Macao, the Portuguese Regeneration effort towards material progress was mostly put into urban development as means of establishing State hegemony over the territory, in the same way and with the same techno-scientific, legal and governance tools that were being concurrently used in the metropole and throughout the Empire. Perhaps more importantly, the paths of political economy and political medicine were being pushed, in the province, by the same group of engineering and public health experts circulating in the imperial networks of public service and public office. In this sense, I have ventured that the Regeneration Portuguese Empire was a thoroughly connected one, if not in infrastructure and communication channels, at least in techno-scientific knowledge.

Such purpose, however, was often met with local and central government's endemic roots of inertia: lack of public and/or private funding, political quarrels, public revolts, economic crisis, unfavorable geopolitical circumstances, and such vicissitudes. As seen in the previous Chapter, local economic and social forces frequently offered the most immediate means to get things done. Case in point, the tribulations of Miguel Ayres da Silva's 1877 plan reflect the difficulties, for modern institutions, as was the case of the recently-established Public Works Department, of bypassing traditional autonomous city-building practices, in their endeavor to establish an effective system of centralized planning. In the end, the Public Works experts, despite their best efforts to enforce modernized regulations and practices, were reduced to mere observers of the entrepreneurs' controversies while they unfurled under the accommodating watch of imperial government.

From the local entrepreneurs' point of view, especially the Chinese, for which the path to formal citizenship and political representation was barred, regardless of their social and financial prominence in Macanese society, this dialectic of power based on negotiation held the key to informal urban citizenship. Asserting their respective powers through balancing claims and concessions regarding city ground and city-building, the interactions between government institutions and their 'subjects' portray a rather ambiguous and nuanced imperial reality, quite far from the top-down authoritative stereotype of modern colonial governance.

In any case, the topics developed in this Chapter allow us to introduce the frame of a Portuguese 'achievable modernity', in the sense that it was the physical or, in other words, the 'material' result of an adequate compromise reached between the experts' vision and the political, financial and social means to achieve it. One of its most interesting features being that it was no longer to come

about, to materialize, solely through State-led transport and communication infrastructure, but clearly also through what was to become an institutionalized system of State-managed territorial control and local urban planning, built around the 1864-instituted General Improvement Plan.

Hoping for Catastrophe: Epidemic Threat and Political Ambition in the Early Urban Sanitation Projects, 1885-1900

By September 1894, bubonic plague was at the doorstep of Macao, having swept through the neighboring ports of Canton and Hong Kong claiming hundreds of thousands of lives in little over six months. A hastily deployed *cordon sanitaire* was successfully keeping the epidemic at bay and yet, for the Portuguese authorities, the opportunity had finally arisen to tackle the issue of urban sanitation once and for all. This was not the first time epidemic threat had been evoked to argue in favor of urban change. In 1885, a contained cholera epidemic had directly prompted the tearing down, using some of the extra budget allowed for the repairing of damage caused by a typhoon, of the Horta da Mitra (occasionally also referred to as Horta do Bispo, meaning the ‘Garden of the Bishop’), a district which had long been described in health committees’ reports as an overcrowded, insanitary breeding ground of infection. As Macao Public Health Director Dr. José Gomes da Silva (1854-1905),¹ would later put it: “With the Horta da Mitra gone, the most pressing issue was the restructuring of the Horta de Volong [‘Garden of Volong’], Macao’s Taipingshan. But we had to

¹ Born in the city of Porto on May 9, 1854, José Gomes da Silva graduated as Surgeon from the Escola Médico-Cirúrgica do Porto (the Porto Medical-Surgical School) in July 1881, at twenty-seven years of age. Almost immediately, he would be appointed 2nd class doctor (*facultativo de 2^a classe*) in the Macao and Timor Public Health Department by national ordinance of August 4, 1881. Having started his service under Surgeon-General Dr. Lúcio Augusto da Silva during the last three years of the latter’s commission, he would eventually succeed him, having been named Macao and Timor Public Health Director (*Director do Serviço de Saúde*, former Surgeon-General, *Cirurgião-Mor*) by national ordinance of March 4, 1885. One of the most prominent figures in Macao during the 1895 bubonic plague outbreak, Dr. Gomes da Silva had actually been absent from the territory when the first cases started being reported, as he had been enjoying a one-year medical leave. Having left for Portugal in early September 1894, he nevertheless decided to cut short his stay, returning to Macao in May 1895 in order to lead the combat against the epidemic. Appointed to the rank of Coronel in 1897, Gomes da Silva died in Macao, still in office, on November 1, 1905 [AHU, 445-1B-SEMU-DGU, “General Book of the Macao and Timor Public Health Staff” (*Livro Mestre do Quadro de Saúde da província de Macau e Timor*)].

wait for another typhoon, or at least an epidemic, to have legal pretext to engage again in major public works. And then came calling the Black Death.”²

Largely based on discriminating claims against the Chinese poor renting plots in the outskirts grounds to build their makeshift homes, these were the first public funded projects to be carried out since the appointment of the Macao Improvement Committee in 1883. By enforcing national legislation on expropriation, the Public Works Department would progressively be in control of street layout and infrastructure in 1885 at the Horta da Mitra, to which building alignment and foundations were added in 1894 at the Horta de Volong and, finally, architectural design for sanitary housing in 1900 at the adjoining district of S. Lázaro (‘Saint Lazarus’). But these projects also came with a clearly stated political agenda. In the name of fresh air and sunlight, deemed beyond-improvement districts were demolished and rebuilt following a clean slate planning strategy. For Portuguese administration, the time had finally come to put an end to the former “tradition of tolerance”³ responsible, according to its point of view, for the deregulated urban growth of Chinese districts. A regulated plan laid out by a centralized authority would at last bring the civilizing mission to Macao and ultimately free it from epidemic threat.

In this Chapter, looking at the Mitra, Volong and S. Lázaro restructuring projects, we will discuss how discourse on disease and sanitation, Chadwickian political medicine and institutionalized urban planning cleared the way for a more assertive public hand in the shaping of the modern urban landscape in Macao.

Taking the bull by the horns: the 1894 Canton and Hong Kong bubonic plague outbreak

The local ordinance establishing the expropriation and restructuring of the Horta de Volong was published on June 6, 1894 by Governor José Maria de Sousa Horta e Costa (1894-1897).⁴ Urging the public works department to plan and budget for this improvement and sanitation project, the ordinance claimed justification based on public interest, under the premises of hygiene and public health to which, it further claimed, this district had constituted a hazard for many years, now aggravated by the circumstance of a direct epidemic threat emanating from neighboring ports.

² José Gomes da Silva, *A Epidemia de Peste Bubónica em Macau. Relatório* (Macao: Tipografia Mercantil, 1895), 12-13.

³ Silva, *A Epidemia de Peste Bubónica em Macau*, 86.

⁴ BG, n°23, June 9, 1894, 280, Government of Macao local ordinance n°125, regarding the Horta de Volong resumption plan, **June 6, 1894 (transcribed in Volume 3 - Annexes)**.

The first local ordinance warning of the bubonic plague epidemic raging in Canton and Hong Kong had been published a little less than a month before. It highlighted the fact that little was known about the plague's causes and forms of transmission, but that it seemed nevertheless to be associated to specific urban districts "where hygienic practices were less favored."⁵ As such, the usual protocol when facing a disease of epidemic proportions was set in motion, comprising general prophylactic measures like providing potable water to the population, periodically washing the sewage pipelines, and enforcing a maritime *cordon sanitaire* designed to identify and isolate any possible patient travelling to Macao from the infected ports. On June 1, the *cordon sanitaire* was extended to the peninsula's border with mainland China.⁶

Thanks to this protocol, to climate, or to chance, as Dr. Gomes da Silva would put it, "as hard to explain as it was indisputable, the fact remained that Macao had escaped the plague epidemic of 1894."⁷ In fact, by the end of July, the disease was no longer considered epidemic in Canton. The port of Hong Kong was declared plague-free on September 4, only three months after the decision had been taken to tear down the Horta de Volong.

The bubonic plague had first been diagnosed in March 1894 in Canton, probably originating in the southwestern Chinese province of Yunnan in the 1850s, and having reached Hong Kong through the trade routes of the Pearl River estuary the following month. In the six subsequent months, it was estimated that as much as a hundred thousand people had died from the plague in Canton alone. The statistics in Hong Kong were less overwhelming but perhaps more accurate, with more than 2,600 plague deaths officially registered.⁸ Unsurprisingly, the response of the British Government to the epidemic was much harsher than the mere spiritual comfort provided by Chinese medicine in Canton. The old epidemic containment protocols were set in motion at the beginning of May, including house inspections to identify and forcibly remove all suspected or confirmed plague cases to a "floating hospital,"⁹ an old warship serving as an improvised lazaretto. After one month of implementing such practices in Hong Kong, mainly directed at its Chinese population, reports started to arise in Canton of an "anti-foreign feeling" stemming from the "intense irritation against

⁵ BG, supplement to n°19, May 15, 1894, 221-222, Government of Macao local ordinance n°113, regarding the bubonic plague epidemic in the region, May 13, 1894.

⁶ BG, n°22, June 2, 1894, 264-265, Government of Macao local ordinance n°117, regarding the bubonic plague epidemic in the region, June 1, 1894.

⁷ Silva, *A Epidemia de Peste Bubónica em Macau*, 10.

⁸ Myron Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894-1901* (New York and London: New York University Press, 2007), 29.

⁹ Ibid.

the Hong Kong government” regarding this approach.¹⁰ This quickly turned into a full-fledged theory that foreign doctors were responsible for the plague, as reported by the Portuguese acting consul in the city:

The compulsory removal of patients to a hospital, the activity of foreign doctors, the invasion of private houses in search of plague-stricken patients, and the hurried and unceremonious disposal of the dead, all these proceedings were misunderstood by the Cantonese, and were made use of by those designing agitation with the result that the bulk of the population finally believed that the worst activities were being committed in Hong Kong. [...] This state of feeling grew more and more intense and the populace being utterly demoralized by the ravages of the plague was ready to accept any explanation of this dire calamity. Unfortunately, the solution which suggested itself was that foreigners had introduced it. This was accepted as true, and a series of posters began to appear accusing foreigners, and particularly foreign missionaries, of having brought the plague, and of distributing drugs which, with pretense of averting it, had the effect of taking the victim’s life in a short space of time.¹¹

Then again, the Hong Kong Sanitary Board was not just handling patients. Linking the poor, overcrowded and unsanitary tenements with a prevalence of plague cases (which, in retrospect, may account for the probability of the concentration of rats and the odds of humans coming in contact with their transmission-agent fleas) its officials and their backup army of three hundred soldiers set upon the Chinese districts of Taipingshan and Kennedytown, from which indeed hailed almost 80 percent of plague victims, ultimately destroying hundreds of dwellings and displacing thousands of people. As historian Prashant Kidambi compellingly puts it regarding the subsequent 1896 plague outbreak in Bombay, British colonial administration’s response to the epidemic would be nothing short of an “assault, both on the neighborhoods, as well as on the bodies of the urban poor.”¹²

The decision by the newly appointed Hong Kong Housing Committee to go ahead with a Taipingshan resumption project following the example of what the Portuguese government was doing in Macao’s Horta de Volong, however, only came at the beginning of October 1894. Once the virulence of the epidemic had started to subside, the time had come to find the culprits. Virtually nothing was known about the origins and transmission of the plague at that time, although the international scientific interest that it aroused had prompted several European-trained bacteriologists to settle in Hong Kong in makeshift laboratories during the course of the epidemic, which would ultimately lead to the discovery of the plague bacillus on infected rats. The transmission mechanism from rats to humans took some more years to determine and so, in the

¹⁰ AM, MO/AH/AC/SA/01/01492, Letter from the Portuguese acting consul in Canton to the Governor of Macao, regarding the bubonic plague epidemic in the region, **June 16, 1894 (transcribed in Volume 3 - Annexes)**.

¹¹ Ibid.

¹² Prashant Kidambi, “‘An infection of locality’: plague, pythogenesis and the poor in Bombay, c. 1896-1905,” *Urban History* 31, 2 (2004): 252.

aftermath of the calamity, fingers started to point to the polluted grounds of the overcrowded tenements, in which the bacillus remained, it was believed, even after the destruction of all the infected person's furniture and belongings, and after all the whitewashing process, emanating its deadly miasma, and contaminating all creatures that came in its contact.

The miasma theory, as opposed to the more recent germ theory, was still commonplace by the end of the nineteenth century in European medical circles to explain all sorts of epidemics. It was linked directly to unhygienic living conditions and deficient drainage infrastructure that favored the saturation of the air and the pollution of soil and drinking water, producing evil smells that spread disease. It then logically followed that full responsibility over the plague outbreak and epidemic should be attributed to the population that it had targeted primarily: the Chinese laborers of Taipingshan. The only solution, deemed the Housing Committee, would be to destroy the tenements by fire, excavate the contaminated soil and restructure the district under a new urbanization plan with a modern drainage system and following more open-space hygienic principles to prevent not only the plague, but all sorts of seasonal epidemics from returning.

According to architect and researcher Cecilia Chu, this was the background for “the first major land resumption in Hong Kong, an episode hailed in colonial records as an historic turning point”, as it constituted the colonial government's first “decisive step towards long-term planning to protect the wellbeing of the population.”¹³ Sanitary reform would prove, however, a much contested process, especially by the Taipingshan landowners, who accused the government of infringing on private property rights and creating a new housing crisis, wanting to punish the tenements, while letting the true culprits, the Chinese tenants and their “dirty habits,”¹⁴ continue to pollute whatever new lodging they would settle in.

In Macao, public health reform by acting on the urban environment had been in the books for more than 30 years when the plague came calling in the summer of 1894. By then, Governor Horta e Costa presented Taipingshan as the ultimate example of a situation that provided fuel for a massive epidemic, which could no longer be tolerated in the very midst of a European town:

After witnessing the pernicious influence that the Taipingshan district had had on the Hong Kong epidemic, and having been highly solicited by the province's Public Health Council, I determined that the Volong district should be expropriated. [...] This was done and immediately followed the demolition of that terrible breeding ground of infection where one could hardly breathe, where filth was rife in every street and alley, where thousands and thousands of people lived. And all this right next to the European district and Macao's most

¹³ Cecilia Chu, “Combating Nuisance: Sanitation, Regulation, and the Politics of Property in Colonial Hong Kong,” in *Imperial Contagions: Medicine, Hygiene, and Cultures of Planning in Asia*, ed. Robert Peckham and David M. Pomfret (Hong Kong: Hong Kong University Press, 2013), 31.

¹⁴ *Ibid.*

prominent road.¹⁵

After the local ordinance authorizing the Volong resumption was passed in the beginning of June, the whole process evolved rather quickly. By the end of the month, Public Works Director Augusto César de Abreu Nunes (1851-1921)¹⁶ had already drafted a restructuring clean slate plan, including the demolition of 570 one-storied brick houses, and the landfill of 20.000 m² to level its new streets with the main road. This plan would be laid out in a regular grid creating homogeneous rectangular blocks, to be sided by “constructions of a regular type,” all connected to a brand-new drainage system integrated in the main city sewage network.¹⁷

This district, thus connected to the rest of the city by the projected landfill and by the relatively large and tree-lined streets, with its drainage connected to the general system, with its new houses following a regular type and with good light and ventilation, this heap of garbage and terrible breeding ground of infection will transform into a clean and sanitary borough.¹⁸

For the record, Abreu Nunes stated in his report that his restructuring plan for Volong had largely been based on the 1887 project drafted by Governor Horta e Costa when he had been at the helm of the Public Works Department and leading, among other projects, the province’s very first resumption operation at Horta da Mitra.¹⁹ The Volong restructuring project had then been waiting in the drawers of the public works department, as well as in the mind of the Public Health Director, for nearly a decade. Then again, as Dr. Gomes da Silva would put it, public health reform was all about seizing opportunities.

The 1885 typhoon gave Governor Tomás de Sousa Rosa the opportunity to accomplish something in favor of public hygiene. With the money he had left from repairing the damage from the storm, an expense which had been extraordinarily authorized by the metropolitan government, the Horta da Mitra was demolished; another breeding ground of infection, against

¹⁵ AHU, AHU-ACL-SEMU-DGU-RCO-005, Cx.0004, Letter n°234 from the Governor of Macao, José Maria de Sousa Horta e Costa, to the Minister of the Overseas, regarding the Horta de Volong resumption plan, July 16, 1895.

¹⁶ Born in Lisbon in 1851, Augusto César de Abreu Nunes was a military engineer, probably a graduate from the Lisbon Military School. He had started his career in the Ministry of Public Works in 1886, having served in the Northern Mondego, as well as Beira Baixa railway projects. After a short period working in the Pungué railway project in the province of Mozambique, in 1891, he returned to Portugal, where he worked in the Lisbon district Public Works Department, before being appointed Director of the Macao Public Works Department by national ordinance of October 19, 1893 (BG, n°49, December 9, 1893, 545). He would remain in office until 1904, when he returned to Portugal, subsequently having detached himself from service in the Overseas (Galvão, *A Engenharia Portuguesa*, 273-274; see also BAHSGE, PT/AHMOP/PI/023/037). For more on Abreu Nunes’ most significant projects in Macao, other than the restructuring of the Volong and S. Lázaro districts, notably regarding the Chinese Bazaar New Avenue, as well as the Inner Harbor Improvement, see respectively Chapters IV and V.

¹⁷ AM, MO/AH/AC/SA/01/01495, Horta de Volong resumption plan by Public Works Director Augusto César de Abreu Nunes, **June 27, 1894 (transcribed in Volume 3 - Annexes)**.

¹⁸ *Ibid.*

¹⁹ *Ibid.*

which the Public Health Council had insistently protested, namely because that district was situated even closer to the city, upon whose sanitary conditions it was more or less bound to interfere. The Horta da Mitra destroyed, Volong was next, separated as it was from the former only by the length of a road. But the extraordinary budget had extinguished itself, and the ordinary one was barely enough to cover budgeted expenses. We had to wait for another typhoon, or at least for an epidemic to have legal pretext to engage again in major public works. The epidemic did come, and it was of *cholera morbus*. Its scope, however, was limited to the lazaretto in which the sick passengers of the infected warship were cared for. In all truthfulness, the governor couldn't justify the need for sanitation reform on account of the hygienic conditions of a warship. And so we waited, which was the best that we could do. While we waited, an epidemic of influenza occurred. But influenza, a *high-life* [sic] epidemic, targeting mainly the rich and idle, is almost a prerequisite for the city to reach a status of hygienic, elegant and comfortable. Ask permission to sanitize a colony visited by influenza could almost be seen as a paradox. And then the Black Death came calling at the doorstep of Macao. The bull had to be taken by the horns; and that's exactly what the Governor did.²⁰

For the Public Health Director, “the bull” was urban sanitation and “its horns” were those of Macao's districts identified by both public health and public works officers as the most insalubrious. In this surprisingly ironic report on the plague, Dr. Gomes da Silva is unapologetically honest in his discourse about the issues at stake: resumption of these districts was unavoidable. To see it through, epidemic threat and other natural catastrophes provided the province with the legal opportunity to ask for an extraordinary allowance from the metropolitan government to be used on public works.

Urban sanitation as a civilizing mission: emergence and legacies of the Chadwickian public health model

The first reports on Macao's salubriousness (or otherwise) had been made by the province's Surgeon-General (*Cirurgião-Mor*), later Public Health Director (*Director do Serviço de Saúde*), and Dr. Gomes da Silva's predecessor, Dr. Lúcio Augusto da Silva,²¹ in the 1860s. Dr. Silva's reports represented comprehensive accounts of the settlement, ranging from topography to population, the latter scientifically described in terms of occupation, origin and ethnicity, as well by the apparent links between each one of these factors resulting in a specific ‘medical temperament’, which described the individual's abilities and difficulties in adapting to tropical living conditions. Dr. Lúcio Augusto da Silva also linked this medical and anthropological analysis to his study of public hygiene, where he made a clear distinction between the Chinese and the Portuguese districts. While the latter corresponded to what his vision of healthy living conditions

²⁰ Silva, *A Epidemia de Peste Bubónica em Macau*, 12-13.

²¹ For more on Dr. Lúcio Augusto da Silva's work in Macao, see Chapter II.

ought to be (large houses in wide streets, filled with sunlight, air and gardens), the former very much hurt his hygienist sensibility:

The Chinese represent a number excessively larger than any other population in Macao. They are perfectly adapted to the climate in their country. They possess, however, many habits and traditions that are anti-hygienic and inconvenient. Their houses, small and overly subdivided, with such limited overtures for air and light, the overcrowding of people, furniture, dirt and even animals, are unavoidable circumstances, inseparable from this people, that are cause for several diseases that rage endemic and epidemically between them, sometimes passing it on to the Portuguese population that has better living conditions. The unwillingness of the Chinese to change their ways is well known, even when they recognize the possible advantages of this change.²²

This 1865 Macao Health Department report proceeded with an account of the disastrous state of the drainage system, resulting in “the spreading through town of the emanations and miasmas stemming from the badly sealed sewage pipes, as well as from the holes the Chinese drill in them in front of their houses, in order to make certain discharges directly.” And it concluded with an exhortation to the Overseas authorities: “Indeed, rendering the colonies salubrious must be one of the main goals of our administration. If this principle is overlooked, instead of happiness and wealth, we will surely witness decadence, dismay and the premature death of their population, decimated by epidemic and endemic disease.”²³

By the end of the century, the next generation of young medical men working in the colonies, such as Dr. Gomes da Silva, would develop these theories into the proper research field of tropical medicine.²⁴ Which wouldn't be all about benevolence towards the indigenous populations, but rather about how the advancement of medicine could help develop the colonial enterprise, rendering it, in the words of French bacteriologist Albert Calmette, eminently humanitarian and civilizing.²⁵ Firstly, because it would enable the European type to be more resistant to tropical climate and deadly diseases, and secondly because it would allow for a slow but sure process of acculturation

²² BG, n°34, August 21, 1865, 135-137, Report on the Macao Public Health Department by the province's Surgeon-General Lúcio Augusto da Silva, **June 1, 1865 (transcribed in Volume 3 - Annexes)**.

²³ Ibid.

²⁴ Tropical medicine largely understood, in the nineteenth and twentieth centuries, as medicine ‘for the tropics’, or to be used by European doctors in the overseas tropical provinces to further European interests, as detailed further down. Which stemmed, and continued to be complemented, as we will also see in the next section, by the much earlier research work of those medical doctors primarily interested in gathering medical knowledge ‘from the tropics’. Charles Boxer, for instance, has delved into the life and work of two of these precursor physicians and botanists from the sixteenth century, Portuguese Garcia de Orta (c.1501-1568), who established himself in Goa in the 1530s, and Spanish Nicolás Bautista Monardes (1493-1588), Seville born and based, who studied products and techniques hailing from the New World. See Charles Ralph Boxer, *Two Pioneers of Tropical Medicine: Garcia d’Orta and Nicolás Monardes* (London: Wellcome Historical Medical Library, 1963).

²⁵ Albert Calmette, “Le rôle des sciences médicales dans la colonisation,” *Revue Scientifique*, 14 (1905), 417-421.

of the indigenous population: “Thanks to these doctors, we will succeed the penetration, maybe slow but surely peaceful, of European influence, which will advantageously replace the more brutal penetration of abdomens and chests by destructive projectiles.”²⁶

And yet, despite the indisputably intricate ties connecting tropical medicine to the European goals of furthering empire and colonization,²⁷ one cannot help but notice the similarities between this discourse, in its prejudice-ridden depiction of the working-class living conditions, to the one characterizing the European industrial-age slum cities. Citing an 1880 poem by James Thomson, urbanist Peter Hall called the Victorian slums “the city of dreadful night,”²⁸ representing not only pauperism as a physical condition, but also as a moral one, in how it often bred disease, vice and crime. In this context, the expression ‘plague spot’ or ‘breeding ground of infection’ could therefore be applied to characterize either or both physical and moral scales of the laboring classes’ tenements. Hall argues that “the root of the problem was simple economics. The people were overcrowded because they were poor, and because they were poor they could not afford the obvious remedy: to move out where house room was cheaper. [...] Wherever casual labour was endemic, poverty was endemic, and squalor must prevail [citing John Burns].”²⁹ Notwithstanding the profoundly biased discourses against the poor and their own responsibility in the matter because of their ‘filthy living habits’, constituting a “threat to civilization,”³⁰ in metropolitan as in overseas European hubs alike, wasn’t this really a matter of industrial-age political economy?

²⁶ Ibid.

²⁷ There is, for instance, Daniel Headrick’s classic pairing of “steamboats and quinine” as the “tools of penetration” in Africa, as part of his “Tools of Empire” repertoire; see Daniel R Headrick, *The tools of Empire: Technology and European Imperialism in the Nineteenth Century* (Oxford: Oxford University Press, 1981). For a critical overview of current historiography on the topic of ‘medicine and empire’, though, and namely of the Portuguese experience in terms of tropical medicine, see Isabel Amaral, Maria Paula Diogo, Jaime Larry Benchimol, and Magali Romero Sá. “Contribuições para a História da Medicina Tropical nos séculos XIX e XX: um Olhar Retrospectivo.” *Anais do Instituto de Higiene e Medicina Tropical* vol. 12 (2013): 13-28.

²⁸ Peter Hall, *Cities of Tomorrow: an intellectual history of urban planning and design since 1880* (Chichester: Wiley Blackwell, 2014), 14.

²⁹ Ibid., 18-19.

³⁰ Ibid., 25.

The urban development model, in London, for example, as in Hong Kong, had been one of *laissez-faire*.³¹ “Build now, plan later”³² was the most common policy. Of course, as public health historian Christopher Hamlin points out, this didn’t quite constitute a state policy. Rather, the reality of *laissez-faire* in terms of housing and public health reflected precisely the absence of a structured state:

Much is said of the nineteenth-century ‘revolution in government’; of paper-shuffling clerks at Whitehall and roving bands of expert inspectors promulgating new standards of health, welfare, and accountability; enforcing rules; offering the necessary legal, financial, medical, or technical expertise. The century did produce a modern state, but it did so through dealing with public health and similar matters, not as a precondition for dealing with them.³³

Indeed, Edwin Chadwick’s public health revolution of industrialized Britain in the 1830s and 1840s had come with a major emphasis on urban infrastructure, which in its turn presupposed and would ultimately impose a “tutelary state,” as only a strongly empowered central administration would be capable of establishing all-encompassing “water supply, waste disposal, clean streets, ventilated and roomier dwellings and public green space.”³⁴ As such, and even if this sanitarian revolution might have been conceived as an earnest Victorian humanitarian reform, it nevertheless ended up paving the way for a more assertive “state interference”³⁵ in the public sphere.

For the generation of both medical and engineering public officers starting their careers from the mid-1800s on, as was Dr. Lúcio da Silva and his successors’ case, sanitation became a major trend, aiming at correcting the visible side-effects of the industrial revolution and its liberal model of urban development, mainly unhygienic living and the procession of disease that came with it.

³¹ The term *laissez-faire* is used here in line with its Merriam-Webster “financial definition” describing it as a “capitalist precept that states that market economies function at optimal efficiency in the absence of government regulation.” (<https://www.merriam-webster.com>, visited on July 19, 2019). It has been employed in this sense by scholars such as Myron Echenberg to characterize the Hong Kong British Government labor and public health policies (Echenberg, *Plague Ports*, 19, 44), for example, or Robert Home, who refers to “the advent of *laissez-faire* doctrines in the 1840s” regarding the establishment and management of British colonies (Home, *Of Planting and Planning*, 9). Brenda Yeoh quotes this expression from a 1919 British paper, demonstrating its widespread and historic use to qualify a governance policy, either in terms of urban planning, public health or trade, to name a few, consisting of interfering as little as possible with private initiative: “the great need here [was] to bring about big conceptions of civic duty and final abandonment of the infamous policy of *laissez-faire* which had made Singapore the pigsty that it [was]” (*Straits Times*, November 21, 1919, in Yeoh, *Contesting Space in Colonial Singapore*, 48).

³² Echenberg, *Plague Ports*, 43.

³³ Christopher Hamlin, *Public Health and Social Justice in the Age of Chadwick: Britain, 1800-1854* (Cambridge: Cambridge University Press, 1998), 5.

³⁴ *Ibid.*, 4.

³⁵ Hall, *Cities of Tomorrow*, 20.

Industrial-age political economy had generated modern political medicine, that is to say, the state's policy towards public health.

Indeed, as historian Martin Melosi has pointed out, "barrister-turned-sanitarian" Edwin Chadwick (1800-1890) himself was a firm believer in the centralized, authoritarian State, for the purpose of efficiency in terms of public health policy.³⁶ His goal was the betterment of the Victorian cities' 'sanitary state' which was measured, at the time, by statistics marking the impact of epidemic diseases in urban populations and their respective mortality rates. To put it in terms the capitalists would understand, Chadwick would lay the stakes of lowering these rates as an economic issue:

Putting aside, as doctors do, mental afflictions, heavy feelings of fatally short and miserable existences, somber preoccupations, broken hopes, to see things in a purely economic point of view, and to see men as nothing more than capital investments, as a productive force, what sum of money must we align to stop the losses? [...] For the dead are a total loss, leaving behind them a heavy burden of widows and orphans.³⁷

To achieve this goal, he had envisioned, even before the publications of his famous 1842 'Report on the Sanitary Condition of the Laboring Population of Great Britain,' drawing from his work in a 1832 royal committee appointed to inquire on the local administration of the indigent population relief, the general overturn of the traditional British "primitive sort of local self-government," in favor of a high office sanitary administration in the form of a centrally and locally articulated Ministry of Public Health.

It was recognized as essential to the proper functioning of local administration that its general direction was trusted upon a central authority, invested with extended powers, and the details of execution upon paid special officers, giving their time exclusively to the fulfillment of their duties, and acting under the supervision of local representatives of authority.³⁸

As Chadwick had foreseen, upsetting the status quo would necessarily mean having to "fight against opposite interests, local, powerful interests, over the issue of financing" this new organization.³⁹ Melosi claims that the sanitarian's centralizing vision was almost impossible to achieve "in a society possessing strong decentralizing tendencies, and where private companies played a significant role in the delivery of services."⁴⁰ Thus, the 1848 Public Health Act would ultimately stand as a sort of compromise between Chadwick's expectations and the prerogatives of the "anticentralizers." Together with the 1866 Sanitary Act, it nevertheless marked "the first time

³⁶ Melosi, *The Sanitary City*, 29.

³⁷ Edwin Chadwick, *Des Attributions du Ministre de la Santé Publique et des Principes d'Organisation et d'Action Administratives Centrales et Locales* (Londres et Paris : Congrès International d'Hygiène de Paris, 1878), 4-5.

³⁸ *Ibid.*, 16.

³⁹ *Ibid.*

⁴⁰ Melosi, *The Sanitary City*, 38-39.

that the British government [or any government for that matter] took responsibility for protecting the health of its citizenry” and “the departure point for developing modern legal machinery for dealing with sanitation.”⁴¹ From hence, over time, Chadwick’s public health revolution took a globalizing turn. As Hamlin puts it, “exported to the Continent, the colonies, and the rest of the world as they became urbanized and industrialized, British sanitary systems became the universal mark of adequate public provisions for health.”⁴²

These sanitary systems were based on public infrastructures of water supply and sewerage, but also waste disposal, public gardens and forestation, ventilated and sunlit private living spaces, and geometrically regular, clean urban structures. Public health equated mostly with sanitation⁴³ or, as Chadwick himself put it, with the “new science of hygiene.”⁴⁴ Exclusively focused on the material causes of disease, this new science saw the urban environment as a sick body infecting its human populations, which was imperative to treat. Not by the medical profession, but by a new sort of expert: the hygienist/sanitarian engineer.

The new science implies work that lies outside of the medical colleges’ realm. It is no longer to the physician that the public health officer must send his prescriptions; but rather to the architect, to the engineer, to the expert engineer even. The hygienist: it is he that must establish his diagnose, over a whole town as over each individual home, so as to harmonize and maintain in proper functioning the arterial and venous system, its principal and secondary arteries, its excreting functions, its respiratory ways, etc., of this new kind of sick body.⁴⁵

Chadwick’s sanitarians were then to be focused on taking steps to suppress the “causes of insalubrity,”⁴⁶ acting according to a general plan, itself coordinated by a central authority, in order to “prevent unnecessary expenses in local projects executed outside of scientific precepts.”⁴⁷

However, and although this technocratic notion of public health was the one prevailing and expanding through the Western imperial networks of influence, this was by no means the only contemporary view on the matter. As Hamlin has pointed out in his extensive research, there was, notably among the Scottish medical circles, a concern for the physical as well as psychological well-being of the working-class, in which the notion of ‘social justice’ was at least as prominent as the material environment in the assessment of the population’s sanitary state. Medical men such as William Pulteney Alison (1790-1858), for instance, holding the sort of position “that viewed as

⁴¹ Ibid., 32.

⁴² Hamlin, *Public Health and Social Justice in the Age of Chadwick*, 2.

⁴³ Ibid., 15.

⁴⁴ Chadwick, *Des Attributions du Ministre de la Santé Publique*, 28.

⁴⁵ Ibid.

⁴⁶ Ibid., 31.

⁴⁷ Ibid., 33.

pathological the totality of social and economic conditions in which the industrial revolution had left many poor people,” and expressing “the idea that some facet of industrialization and urbanization, whether overwork, trade cycles, or tariffs, killed people.”⁴⁸ To which factors we might add, in the colonies, all sorts of ‘traffics,’ whether human or otherwise. Despite the social complexity (and ultimately political accountability) of the urban industrialization process, in Hamlin’s view, “Chadwick and company” simplified the picture by “rejecting work, wages, and food to focus on water and filth.”⁴⁹

To Chadwick’s political medicine, “representing disease as the product of bad sanitation, which could be remedied” through political action and legislation, Alison opposed a theory of “social-political medicine,” in which disease was represented rather as the product of “debilitating poverty,” caused by “economic fluctuations.”⁵⁰ His “excursions into social policy,” however, as Hamlin compellingly claims, are not to be considered as “extramedical,” but “must be seen in terms of a comprehensive pathology that forced causal questions ever further back, in search both of understating and of viable opportunities for disease prevention.”⁵¹ Disease, therefore, as the consequence of ‘debility,’ itself the consequence of ‘destitution’:

While people are in a state of unrelieved destitution, nothing that can be done will prevent their suffering that depression of strength and spirits which results from imperfect nourishment, from crowding together, and inhabiting the poorest and worst aired parts of towns, and breathing polluted air. [...] To think that one could ‘purify the air of the rooms in which the destitute inhabitants live and sleep, otherwise than by relieving the state of destitution which brought them there and crowds them together’ was absurd.⁵²

Alison was then purposefully “expanding the medical domain into the moral and political,” establishing a “diagnosis of the social causes of unhealth” and ultimately “prescribing a regimen of political change.”⁵³ This would not follow suit, as history has shown, as the more politically innocuous Chadwickian “translation of public health as sanitation”⁵⁴ pervaded and eventually prevailed as part of the techno-scientific vocabulary of the industrialized world.

⁴⁸ Hamlin, *Public Health and Social Justice in the Age of Chadwick*, 13.

⁴⁹ Ibid.

⁵⁰ Christopher Hamlin, “William Pulteney Alison, the Scottish Philosophy, and the Making of a Political Medicine,” *Journal of the History of Medicine and Allied Sciences*, vol. 61, 2 (2006): 145-146.

⁵¹ Ibid., 148.

⁵² William Pulteney Alison, *Observations on the Famine of 1846-7, in the Highlands of Scotland and in Ireland as Illustrating the Connection of the Principle of Population with the Management of the Poor* (Edinburgh: Blackwood, 1847), 14. As cited by Hamlin, “William Pulteney Alison,” 166.

⁵³ Hamlin, “William Pulteney Alison,” 167.

⁵⁴ Ibid., 182.

As members of the Portuguese Overseas administration, Macao's officials had been educated in the metropolitan and State of India medicine and military engineering schools, making their way through the imperial network of civil service. As part of the aforementioned Regeneration State's "political-administrative rationalization" effort,⁵⁵ the overseas provinces' public health service (*serviço de saúde das províncias ultramarinas*) had been reformed in 1862. Through two national ordinances, published on July 23, and October 28, a new organization was established, along with an increase of the physician's wages, designed to make work in the overseas more appealing, especially in what were considered to be the more remote, or hostile locations, such as the African provinces and Timor. The urgent purpose was to lower the death rates which, in the 1850s were reaching thousands per year in Mozambique and Cape Verde, on account of cholera, yellow fever and scurvy epidemics.⁵⁶ The Goa Medical-Surgical School would be in charge of the medical officers dispatched to the State of India, thus reaffirming the importance it still held, at least in the metropolitan point of view, for the consolidation of Western scientific knowledge in the province.⁵⁷

The Public Health Director, as president of the provincial Public Health Council (*Junta de Saúde Pública*), would be in charge, amongst other matters relating to public health, of "overseeing medical police, public hygiene and the application of its precepts" in public spaces and public buildings. This included monitoring and advising municipal action in terms of city cleaning, as well as building regulations, waste disposal, swamp sanitation and other "local or general causes of insalubriousness."⁵⁸ In this administrative restructuring context, the new Macao Public Health regulation would be hatched out by Dr. Lúcio Augusto da Silva (who had taken office in the province in January 1862, just months before the national Public Health reform was made official) and published by Governor José Rodrigues Coelho do Amaral in 1864.⁵⁹

As Porto-born-and-based physician and renowned Portuguese hygienist Ricardo Jorge (1858-1939)⁶⁰ would argue later on, in the liberal ideal presiding to the Regeneration reforms, the "right

⁵⁵ Nonell, *Porto, 1763/1852*, 37.

⁵⁶ DG, n°166, July 26, 1862, 232-234, National ordinance of July 23, 1862, organizing the public health service in the Overseas.

⁵⁷ Ibid. For a critical account of the Escola Médico-Cirúrgica de Goa and its graduates' role within the Portuguese imperial network, see Cristiana Bastos, "Medicina, Império e Processos Locais em Goa, Século XIX," *Análise Social* vol. XLII, 182 (2007): 99-122.

⁵⁸ DG, n°248, November 3, 1862, 324-331, National ordinance of October 28, 1862, establishing the public health service in the Overseas' general regulation.

⁵⁹ BG, n°13, March 28, 1864, 49-51, Government of Macao local ordinance n°4, establishing the Macao Public Health regulation, March 22, 1864.

⁶⁰ Born in the city of Porto on May 9, 1858, Ricardo de Almeida Jorge graduated as Surgeon from the Escola Médico-Cirúrgica do Porto in 1879, at the young age of twenty-one. Initially bent on pursuing neurological studies, Jorge would travel to Strasbourg and Paris to study in their respective hospitals. From 1884 onwards, he would gradually take deeper interest in what he refers to as 'social hygiene'. His conferences on the matter,

to the well-being of the body, the right to health”⁶¹ was regarded as a human right, and therefore as one of the “first duties of government in every nation.”⁶² In it, the Chadwickian governance model guided by the principle of techno-scientific centralization was paramount. Thus, Jorge looked to the British Local Government Board and to the German Imperial Sanitary Council as models of efficiency when envisioning their Portuguese equivalent:

The central [public health] council is at the top of the hierarchy, consisting essentially of doctors with different specialties: physicians, hygienists, epidemiologists, alienists, hospital assistants, etc.; by natural aggregation would follow the veterinarian, the pharmacist, the chemist, the agronomist, the engineer, the architect; and finally, the administrative element of different branches. This central power would dispose, not only of ample deliberative faculties, but also executive in most cases, making use of authorities merely as instruments of action.⁶³

Although the successive administrative reforms would never actually live up to this ideal, as Jorge himself acknowledged,⁶⁴ they nevertheless put forward several generations of young and enthusiastic hygienists, such as Lúcio Augusto da Silva and José Gomes da Silva. Backed by a government more than willing to establish a firmer grasp from Lisbon to the farthest imperial shores, they were the bearers of the Chadwickian sanitation gospel, speaking of the evils of the laborer’s ways and explaining why the greater good demanded change. As Dr. Gomes da Silva would put it:

While China remains what it is, the Chinese will be what past centuries have made him. What the Macanese authorities can do, however, by strength of energy and persistence, is to make those century-old habits more difficult to pursue, is to break off the traditions of tolerance that are prejudicial to our community, is to remind themselves that, first and foremost, we are on

published in 1885 under the title of “Social Hygiene as Applied to the Portuguese Nation” (“Higiene Social Aplicada à Nação Portuguesa”), in which Jorge argued in favor of the establishment of public health departments at the municipal level, would lead to his appointments, in 1888, as head of the Porto sanitary committee, in 1891, as municipal doctor and, in 1895, as head of the Hygiene and Forensic Medicine division in the Escola Médico-Cirúrgica do Porto [Bruno Monteiro, “Os Anos Portuenses de Ricardo Jorge. Sociologia de um Higienista ‘Militante’ (1858-1900),” in Ricardo Jorge, *A Peste Bubónica no Porto* (Porto: Deriva, 2010), 15-37]. The violent social and political unrest connected with the public authorities’ handling of the 1899 plague epidemic in Porto forced Ricardo Jorge to leave his hometown for fear of his life. He would then settle in Lisbon, being appointed Public Health Inspector-General and later Professor of Hygiene in the capital’s Escola Médico-Cirúrgica. For more on Ricardo Jorge’s life and ideals, see namely Jorge Fernandes Alves, “Ricardo Jorge e a Saúde Pública em Portugal. Um ‘Apostolado Sanitário.’” *Arquivos de Medicina* Vol. 22, 2/3 (2008): 85-90.

⁶¹ Ricardo Jorge, *Higiene Social Aplicada à Nação Portuguesa* (Porto: Livraria Civilização, 1885), 6.

⁶² Quoting from the Annals of the Public Health Council (*Anais do Conselho de Saúde Pública*), first published in 1838; Jorge, *Higiene Social Aplicada à Nação Portuguesa*, 7.

⁶³ Jorge, *Higiene Social Aplicada à Nação Portuguesa*, 32.

⁶⁴ “Thus, Gentlemen,” wrote Ricardo Jorge in 1885, “is public sanitation exercised among us. A methodical and coordinated plan, subordinated to the legitimate precepts of a progressive and restorative hygiene, is nowhere to be seen.” Jorge, *Higiene Social Aplicada à Nação Portuguesa*, 39.

Portuguese territory and that, instead of having to adapt to the Chinese environment, our natural mission is to lead the Chinese to adapt to our environment and our civilization.⁶⁵

In the aftermath of the inevitable 1895 plague outbreak in Macao, the sanitarian's tone was even harsher, pointing the accusatory finger to the Chinese poor, and accusing the local authorities of complicity. Civilization would only come through control over public and private space by a sanitary police body, managed by the strong hand of central government authority.

I am tired of hearing about how this process is cruel, inhumane, uncharitable, and other similar horrors. I should think that more uncharitable, more inhumane and more cruel is the selfish tolerance that, to satisfy an impulse of thoughtless and convenient generosity, allows the gangrene to pass from the sick limb to the whole body; and that the Europeans and Macanese, and the rational part of the Chinese population should suffer the disastrous consequences of an environment created by those that, by culture and instinct, keep to their rooted worship of filth. [...] If the modern principles of political medicine can teach us anything, is that: if local and central government, as well as the Macanese capitalists, don't wish for the return of the bubonic plague to this city, it shall not return.⁶⁶

Dr. Gomes da Silva and his colleague's understanding of these "modern principles of political medicine" may also be traced back to a Portuguese legacy in the theorization of public health matters. Indeed, as early as 1756, Enlightenment Portuguese physician António Ribeiro Sanches (1699-1783)⁶⁷ would publish in Paris his "Treaty on the Conservation of the Health of the People" (*Tratado da conservação da saúde dos povos*), widely regarded by his nineteenth century counterparts as one of the founding texts of "modern public hygiene."⁶⁸

Ricardo Jorge was one of Ribeiro Sanches' greatest admirers, having dedicated his keynote speech to the 1906 International Congress of Medicine to analyzing Sanches' Treaty. Jorge considered his predecessor as a cosmopolitan precursor of modern "sanitary practice,"⁶⁹ especially in terms of the purpose of his work, to which undoubtedly the nineteenth century sanitarian would identify himself:

⁶⁵ Silva, *A Epidemia de Peste Bubónica em Macau*, 86.

⁶⁶ *Ibid.*, 87-100.

⁶⁷ Born in the Portuguese region of Beira Baixa in 1699, António Nunes Ribeiro Sanches descended from a so-called New Christian merchant family. A 1724 Medical graduate from the University of Salamanca, he would later be driven to a life-long exile by fear of persecution from the Inquisition. Having worked as a Doctor in the cities of Genoa, Montpellier, Bordeaux and London, he would move on to study with renowned Dutch physician Herman Boerhaave (1668-1738) in Leiden. In 1731, Boerhaave would recommend Sanches to Empress Anna of Russia's court in Saint Petersburg. Member of the Saint Petersburg, as well as Paris Academies of Sciences, Sanches also joined the London Royal Society. In 1906, Ricardo Jorge would describe Sanches as having had "an extremely active scientific and practitioner's life, spent far from his homeland in the most important intellectual centers, in familiarity with the greatest scholars of his time" [Ricardo Jorge, *Discours du Président Ricardo Jorge à la Séance d'Ouverture. XV Congrès International de Médecine. Lisbonne, 19-26 Avril 1906. Section XIV – Hygiène et Épidémiologie* (Lisbonne : Imprimerie « A Editora », 1906), 7].

⁶⁸ Jorge, *Discours du Président Ricardo Jorge à la Séance d'Ouverture*, 7.

⁶⁹ *Ibid.*

“to be useful to those charged with the People,” and “to show the need that every State has of laws and regulations to prevent disease and preserve their subjects’ health; for if these are lacking, all the Science of Medicine will be of little use: for it will be impossible to Doctors and Surgeons, however scholarly and experimented, to cure an epidemic, or any other disease, in a city where the air is corrupt and the ground swamped.”⁷⁰ In Jorge’s view, this purpose fully embodied the “modern conception of sanitary policy and tutelage,”⁷¹ as would be expressed, we might add, by Chadwick himself, nearly a century later. In Sanches’ own words, his was a treaty on the “Political Order,” or on “Universal Medicine.” For, being “founded in the laws of Nature and on the indisputable knowledges of good Physics,” it was a “sort of Political Medicine.”⁷² A universal political medicine, therefore, expressed in legislation and imposed by the State for the good of the people.

As the teacher that he was, Sanches also emphasized the importance of techno-scientific education in matters of public health for those responsible for dwelling and city planning on behalf of this tutelary State:

Schools of Civil and Military Architecture have been founded, yet we don’t see that the Architects instructed therein care of general physics while practicing these arts. They learn to perfection how to build a city, a square, a temple, or any other urban building, with all the majesty, distribution and decoration, yet we don’t see them practicing the regulations contributing to the Conservation of Health.⁷³

As Jorge puts it, Sanches laid the issue of “urban and habitational salubrity” as a straightforward medical issue, as well as an architectural or engineering one:

He comments on urban topography, on the winds, exposure and ground humidity, expressing regret that physicians aren’t consulted on the establishment of cities, not even on the construction of houses. Architects mind the proportions and decoration of buildings, yet know nothing, or won’t be bothered, with the effect its interior has on those that inhabit them.⁷⁴

Concluding with the anachronical sanitarian aphorism that disease and death were primarily due to environmental causes, and particularly prevalent in the urban environment:

[Sanches] ascribed the evils of the plague to the accumulation of people, the narrowness of streets, the smallness of houses, the lack of cleanliness, and to the filth of the old medieval towns. Hence, Europe had drawn immunity from the opening of straight, large streets, from the construction of drainage, and from the improvement of housing.⁷⁵

⁷⁰ António Ribeiro Sanches, *Tratado da conservação da saúde dos povos* (Paris: Bornardel e Du Beux, 1756), 2.

⁷¹ Jorge, *Discours du Président Ricardo Jorge à la Séance d’Ouverture*, 8.

⁷² Sanches, *Tratado da conservação da saúde dos povos*, 2.

⁷³ *Ibid.*

⁷⁴ Jorge, *Discours du Président Ricardo Jorge à la Séance d’Ouverture*, 10.

⁷⁵ *Ibid.*

“To this day,” Jorge writes, “thus speak those who still think Europe is shielded against the onslaughts of the plague.”⁷⁶ Drawing from his personal knowledge of the recent epidemic and, of course, from his own professional convictions as a hygienist, Jorge couldn’t help but admire the modernity of his predecessor’s proposals for “sanitary measures” which, incidentally, may be found in many 1880s and subsequent improvement committees’ reports:

Waste taken away in carts sealed as vaults; unsanitary industries and cattle farming banned from inside the cities; construction of piping for dirty waters; potable water supply. [Sanches] cries out against the contamination of rivers by urban waste, which should be brought to the fields to fertilize the land. He specifies hygienic rules for houses, going as far as proposing that housing control should compel them to submit to a plan approved by the municipality.⁷⁷

As evidenced by his tribute to Ribeiro Sanches, during his lengthy professional life, Ricardo Jorge would be one of the front-runners of the Chadwickian public health ‘awakening’ in Portugal, having written extensively on the matter since the 1880s, and especially in the context of his work as municipal doctor in Porto. “Sanitize the city, and poverty will diminish, and well-being will grow,” Jorge would write in 1888. Quoting “the venerable” Chadwick’s results himself, he would go on to argue that the expense with hygiene would bring about equivalent economies, for “each healthy year is a precious coin in the common bank; [...] let us not preach hygiene only in the name of the life-god, but in the name of the money-god as well.”⁷⁸ In the face of “the great shortfalls of hygiene in Porto, true drains of urban life,” from which the most appalling, in his view, were the so-called *ilhas*,⁷⁹ where “the poor classes, the proletary world vegetate, sunken in damp and lugubrious caves, without air nor light, abandoned to an infamous speculation that sordidly exploits them,”⁸⁰ Ricardo Jorge would blame the municipal authorities, keepers of the “sacred collective power.”⁸¹ For it was they who were accountable for “repressing the physical ailment, as well as the moral one” as, “for

⁷⁶ *Ibid.*, 10-11.

⁷⁷ *Ibid.*, 11.

⁷⁸ Ricardo Jorge, *Saneamento do Porto. Relatório Apresentado à Comissão Municipal de Saneamento* (Porto: Tipografia de António José da Silva Teixeira, 1888), 18.

⁷⁹ The *ilhas* (literally meaning ‘islands’) were a type of urban block speculative densification mechanism that gained momentum in nineteenth century Porto. This practice mainly involved building one-storied houses in the heart of narrow plots, over the back gardens belonging to the main buildings facing the streets, which were then rented out to working class families. Besides the old harbor area, some of these inner-city poor districts were, in fact, the most affected by the 1899 plague epidemic; Jorge, *A Peste Bubónica no Porto*, 132. For more on this subject, see Manuel C. Teixeira, *The Development of Working-class Housing: the “Ilhas” in Oporto*, Doctoral thesis in History, Architectural Association School of Architecture, London, UK, 1988.

⁸⁰ Jorge, *Higiene Social Aplicada à Nação Portuguesa*, 39-40.

⁸¹ Jorge, *Saneamento do Porto*, 1.

the progress of nations, it is as fundamental to foment the economy of lives, as it is to foment riches and education.”⁸²

The same generation as José Gomes da Silva, Ricardo Jorge and the Macao Public Health Director had otherwise a remarkable number of common features, besides the firm belief in the validity of the Chadwickian notions of public health. Anecdotally, they shared a birthday on May 9, Gomes da Silva being but four years older than Jorge. Both doctors hailed from the city of Porto, and had graduated from the Escola Médico-Cirúrgica do Porto (the Porto Medical-Surgical School) in their twenties. Advancing the sanitarian agenda as institutionalized practitioners and authors, respectively at home and in the overseas in the 1880s and 1890s, both would face and eventually take the lead in the efforts to counter the late nineteenth-century bubonic plague pandemic which, as mentioned, swept the Portuguese cities of Macao in 1895 and Porto in 1899 (having spread through the ports of India and Egypt, before reaching the American continent in the early 1900s).⁸³ Following their respective experiences with the epidemic, both would write their respective reports, as was customary. These reports would both be almost immediately published by the governmental agencies, ultimately becoming historical works of reference, not just regarding the plague etiology itself but also, and perhaps most importantly, because they portrayed the experiences of public health officers coordinating the government response to an epidemic which, to this day, is perceived to have been the catalyst for a turn-of-the-century “series of monumental political [and societal] changes around the world.”⁸⁴

The publication of these reports, which was also customary, is testimony to the Portuguese government’s commitment to gathering and disseminating techno-scientific information, not just inside its own imperial network, but also on an international level, as was being done by other Western powers. In the context of the plague epidemic, for example, this commitment didn’t just pertain to publishing bacteriological and etiological results, such as the research works of scientists such as Kitasato Shibasaburō or Alexandre Yersin,⁸⁵ but also the Public Health reports pertaining to prophylaxis, as well as to protocols for handling the infected patients, belongings and dwellings. Among these are, of course, Dr. Gomes da Silva and Dr. Ricardo Jorge’s work, published as independent volumes respectively in 1895 and 1899, regarding the two major outbreaks in Portuguese territory, but also Dr. James Lowson’s *Medical Report on Bubonic Plague to the Hong Kong Government*, published in 1895 in the Hong Kong Government Gazette, as well as in 1897

⁸² Ibid.

⁸³ Echenberg, *Plague Ports*, xi.

⁸⁴ Ibid., 303.

⁸⁵ For more on the work of these scientists in search of the plague bacillus during the 1894 Hong Kong outbreak, see Echenberg, *Plague Ports*, 32-38.

in the *Indian Medical Gazette*,⁸⁶ or the same Dr. Lowson's *Report on the Epidemic of Plague from 22nd February to 16th July 1897 [Bombay]*, published in 1897,⁸⁷ for example.

This published material is actually an extremely important source to reconstitute the long nineteenth century Western imperial networks of techno-scientific knowledge, as the authors' theoretical and/or practical references can be directly traced through their mentions. For example, Ricardo Jorge, when facing the first symptoms of the bubonic plague in Porto in the summer of 1899, despite his personal initial disbelief that the disease would travel so far,⁸⁸ confidently pronounced himself certain that it was indeed the "pestilence from the East" ("*peste do levante*"),⁸⁹ or the "Asiatic pestilence" ("*peste asiática*"),⁹⁰ for its symptoms, he writes, were "similar to the observations made by Dr. Gomes da Silva in the 94 Macao epidemic."⁹¹ Jorge also mentions recognizing the "Yersin bacillus" after the first infected tissues sampling,⁹² evidencing that he was, not only already acquainted with the Swiss bacteriologist's 1894 published results, but apt to recognize them on the spot.

Moreover, the establishment of these networks can be traced back to the Enlightenment, as the example of Ribeiro Sanches has shown us, although the frequency of exchanges surely increased, reaching a global scale in the nineteenth century. In the Portuguese overseas sphere regarding Macao, for instance, there was a sort of institutionalized practice, since the 1860s at least, to publish techno-scientific reports deemed interesting for the purposes of shared knowledge, mixed with some sort of strategy for international valorization of State administration, as measure of its modernity. Dr. Lúcio Augusto da Silva's reports as Public Health Director on the cholera and dengue epidemics of 1862 and 1874, for example, had been published as independent volumes by

⁸⁶ Dr. James Lowson was the British medical officer in charge of the Hong Kong Epidemic Hospital during the 1894 plague outbreak; see James A. Lowson, "The Epidemic of Bubonic Plague in Hong Kong," *Indian Medical Gazette*, 32 (1897), 6-17.

⁸⁷ Following his experience with the 1894 Hong Kong plague outbreak, Dr. James Lowson had been called to India to serve as plague commissioner in Bombay when the epidemic was declared there at the end of 1896; see Echenberg, *Plague Ports*, 57.

⁸⁸ "The entry points most at risk," writes Jorge, "are precisely the great emporiums of trade and navigation to which everyday flow the Asiatic merchandise, hailing from the ports of China and India, more or less infected a long time ago. That the breach is being done by a subsidiary port such as ours, borders the unfathomable. [...] I am unable to detect the entry breach, and this intrusion is so incomprehensible that, on first impression, and today still, I hesitate to give the bubonic plague diagnosis, so unlikely it seems that it would travel to Porto." Ricardo Jorge, *A Peste Bubónica no Porto* (Repartição de Saúde e Higiene da Câmara do Porto, 1899), 112-113.

⁸⁹ Jorge, *A Peste Bubónica no Porto*, 88.

⁹⁰ *Ibid.*, 69.

⁹¹ *Ibid.*, 88.

⁹² *Ibid.*, 68.

the Ministry of the Overseas.⁹³ The Macao 1867 report from Chief of the Statistics Department Manuel de Castro Sampaio had been given to print that same year.⁹⁴ And the tradition would continue, most notably with the publication of military engineer Adolfo Ferreira Loureiro's vast travels and studies on the modern imperial ports, in connection with his 1884 Macao Inner Harbor Improvement Project.⁹⁵

This scientific publicity/knowledge-spreading effort was complemented by the active participation of the Portuguese technocrats in international conferences and exhibitions. I've mentioned the presence of Ricardo Jorge in the 1906 Lisbon International Congress of Medicine, as president of the Hygiene and Epidemiology Section. Directly concerning the Portuguese overseas territories in general and Macao in particular, however, there was the 1883 International Colonial Medical Exhibition in Amsterdam. This was a subsection of the International Colonial and General Exportation Exhibition, promoted by the "Dutch Association for the Advancement of Medical Science," with the purpose of "expanding the knowledge on the sanitary and medical state of the [European] colonies and overseas possessions."⁹⁶ For the Portuguese contribution, the Macao province's Public Health Department was asked, by the Minister of the Overseas himself, to "assemble a collection of administrative and municipal dispositions regarding medical police and public hygiene."⁹⁷ To which was added the provincial dispositions in terms of civil and military health provision, its collection of publications regarding medicine, surgery and pharmacy, as well as a "detailed account of the processes, instruments [and substances] used by the indigenous people in the treatment of illnesses, surgical dressings, patient transportation and childbirth, even though these might reveal ignorance of the more scientifically organized medicine."⁹⁸ For "the humanitarian goal in the natives and the colonizers being perfectly the same," meaning healthy populations in prosperous colonies, a comparative exhibition of the various colonial powers'

⁹³ Lúcio Augusto da Silva, *Relatório sobre a epidemia de cólera-mórbus em Macau no ano de 1862: apresentado ao Conselho de Saúde Naval e do Ultramar*. Lisboa: Imprensa Nacional, 1864. Lúcio Augusto da Silva, *Duas palavras sobre a dengue. Relatório do Serviço de Saúde Pública na cidade de Macau relativo ao ano de 1874*. Macau: Tipografia Mercantil, 1880.

⁹⁴ Sampaio, *Os Chins de Macau*. For more on Sampaio's work, see Chapter I.

⁹⁵ For more on Adolfo Ferreira de Loureiro and his work in Macao, see Chapter V.

⁹⁶ BG, n°2, January 13, 1883, 7-8, Notice from Minister of the Overseas requesting information from the Macao Public Health Council for the 1883 International Colonial Medical Exhibition in Amsterdam, November 28, 1882.

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

sanitary practices, as well as indigenous medical ones, was perceived to be of “capital importance.”⁹⁹ Scientifically, but also surely politically.

Land resumption policy as urban sanitation

I. The 1883 Macao General Improvement Plan

Unable or unwilling to address the economic and social issues underlying the Chinese population’s living conditions, Portuguese health and engineering public officials set their sights on how to physically improve the urban environment.

As mentioned in the previous Chapter, the Chadwickian agenda, together with the French positivistic material improvements philosophy, were extremely influential power-knowledge configurations¹⁰⁰ in European intellectual circles, representing both modernization and the civilizational leap forward of industrial age and liberal societies. Engineering and medical experts employed in the imperial network, sometimes ascending to the head of provincial government or even of central ministries, were the major vectors of expansion of this progressive governance model, approaching the territory and the people who inhabited it as technical objects to be regulated and improved, mainly in terms of mobility and hygiene.

In this sense, the newly consolidated constitutional governments, starting in the 1850s, had put forward a set of legislation tools, relating largely to the issue of private property vs. public interest, namely in which cases and in what manner resumption operations¹⁰¹ could take place. At the beginning, the purpose of these laws was to give public authority greater leeway in planning grand scale public works, as was the case, for example, of the national road, railway and telegraph networks.¹⁰² In 1864, however, resumption on the grounds of public interest was further established for the execution of the city of Lisbon’s “general improvement plan,” as part of the already-

⁹⁹ Ibid.

¹⁰⁰ For more on the use of this Foucauldian concept in recent historiography, see the Introduction.

¹⁰¹ I employ the terms ‘land resumption’ and ‘resumption operations’ to designate the processes of compulsory acquisition of land by the administrative authorities for public purposes, as translation of the Portuguese legislative term *expropriação* (expropriation). These terms are current, for example, in Australian and Hong Kong law, referring to the supreme authority’s prerogative, namely the Crown, of reassuming possession of the land; see reference in Chu, “Combating Nuisance,” 30.

¹⁰² DG, n°225, September 24, 1857, 414-415, National ordinance of September 17, 1857, “declaring of public interest, and thus regulating the necessary expropriation procedures for the construction of roads, railways, or any other works decreed by the Legislative Power.”

mentioned December 31, national ordinance.¹⁰³ Finally, in 1872, the range of this provision was widened even further, to encompass any “improvement of streets, squares, gardens and buildings existing in the kingdom’s towns and cities, as well as for the construction, in the same towns and cities, of new streets, squares, gardens and buildings.”¹⁰⁴ As Minister of Public Works João Crisóstomo de Abreu e Sousa had put it, regarding the general purpose of properly regulating property rights in the framework of resumption operations:

City design, unencumbered traffic, people’s comfort and safety, public sanitation, and the convenience of avoiding large concentrations of population demanded new solutions from the government. Without the restrictions that these solutions impose on the landowners, it would be impossible to achieve those advantages; as such, it is the State’s indisputable right to demand reasonable sacrifices from private individuals for the common good.¹⁰⁵

Hence, through the latitude granted by these legal texts, both over private property and municipal governance, as we have seen, central authority had finally managed to establish its legitimacy in putting local urban planning under its scope. To the end of assembling and setting in motion this envisioned new “highly centralized system of urban management,”¹⁰⁶ the General Improvement Plan would be the preferred operational instrument.

The notion of a global management and development plan had been primarily conceived for the city of Lisbon, as a global repository for all ideas on how modern urban planning and public health could reshape the capital, from restructuring its historical urban structure in terms of hygiene, esthetics, proper housing and traffic commodities, to planning its future extension through a system of new avenues and residential districts.¹⁰⁷ This should contemplate, not only the “indispensable requirements of light, ventilation and potable water provision,”¹⁰⁸ but also sewerage, street lighting and regulations for street width and construction height, as well as density in new districts. As such,

¹⁰³ DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements.” For more on this national ordinance, which came to be known as the text establishing the “general improvement plan” as a legal object, see Chapter II.

¹⁰⁴ DG, n°114, May 22, 1872, 56, National ordinance of May 11, 1872, “authorizing the government to decree the necessary expropriations for the opening or improvement of streets, squares, gardens and adjacent buildings, fortresses and american railways [trams].

¹⁰⁵ DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements.” Preliminary report from Minister of Public Works João Crisóstomo de Abreu e Sousa.

¹⁰⁶ Nonell, *Porto, 1763/1852*, 48.

¹⁰⁷ For more on the 1860s and 1900s Lisbon General Improvement Plans, see Chapter IV.

¹⁰⁸ DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements.”

the ordinance stipulated that Lisbon's general improvement plan should be drawn up by a committee comprising engineers and architects affiliated both to the Ministry of Public Works and to the municipal body.

Finally, stemming from the legal figure of "public and inalienable domain"¹⁰⁹ and from the operational needs of the improvement plan's specific restructuring projects, the December 31, 1864 ordinance advocated the generalization of land resumption procedures on the grounds of public interest to all properties within the boundaries of municipal administration. Which would make it the first legal document of national ambition in terms of urban planning, in the contemporary sense of restructuring and expanding the urban territory, as it promoted a standardized system of planning practices to be used by local technicians under supervision from central government.

Besides Lisbon and Porto, for which the General Improvement Plan was mandatory, the 1864 ordinance urged all provincial cities to engage in the process, starting by the appointment of Improvement Committees. This was welcomed enthusiastically by some municipalities, such as Coimbra which, under the terms of the ordinance,¹¹⁰ would request the appointment of its Improvement Committee as early as February 1865.¹¹¹ The city of Braga, for example, would make its own request in March 1869,¹¹² followed by the smaller towns of Guimarães (1869) and Viana do Castelo (1871),¹¹³ among others.

In the Portuguese northern and southern capitals, as well as in the majority of peripheral provinces, however, if the discourse on the material improvements philosophy was inspiring, it nevertheless did little to improve the grim situation of the public works annual budgets. Thus, the December 31, 1864 national ordinance momentum was firstly capitalized by the municipalities into commissioning topographic surveys of the urban territories. As the 1883 Macao Improvement Committee would later put it, the idea was that a General Improvement Plan, which the commissioners called the "general plan of the future city," could only be accurately drafted "upon

¹⁰⁹ DG, n°125, June 7, 1864, 223-226, National ordinance of June 6, 1864, regulating municipal roads.

¹¹⁰ In its Article 52°, the national ordinance specified that, besides Lisbon and Porto, "for the improvement of the Kingdom's other cities, towns and settlements, the government will appoint a committee comprising an engineer, a member of the municipality and the district Public Health delegate [...] whenever the respective municipalities so demand." DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, "regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom's cities, towns and other settlements."

¹¹¹ Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 225.

¹¹² Bandeira, *O espaço Urbano de Braga*, 104.

¹¹³ Fernandes, *Urbanismo e morfologia urbana no norte de Portugal*, 211-217.

a meticulous plan of the present one.”¹¹⁴ This was actually a process previously set in motion by a number of local representatives such as, for example, those of the cities of Guimarães, which had commissioned its general topographic map in 1863,¹¹⁵ Viana do Castelo in 1855, or indeed Lisbon in 1856/58.¹¹⁶ In Macao, as we have seen, a partial topographic map of the Chinese Bazaar had been commissioned in 1866 by Governor Ponte e Horta to the Chief of the Statistics Department Manuel de Castro Sampaio.¹¹⁷

As geographer Mário Gonçalves Fernandes points out, however, these early commissions tended to blend together the notions of improvement (*melhoramento*) and alignment (*alinhamento*), meaning that, “when speaking of improving the urban plan, this often meant aligning it, either in regard to improving existing streets, or to opening new well-aligned ones.”¹¹⁸ Even though some other concerns emerged regarding improving water provision in Guimarães,¹¹⁹ for example, which were more in line with the wider sense of the ‘general improvement’ as per the December 31, 1864 national ordinance, the regularization of street alignments, mainly in favor of traffic flow, seemed to be the priority in these early topographic surveys/improvement plans.

The same cannot be said of the subsequent commissions’ reports which, often led by the district’s Public Works Directors, would not only contemplate chapters on street alignment, but also on urban expansion through new avenues, water supply, markets, graveyards, public buildings, public lighting, gardens and embellishments, social housing (*bairros operários*) among other topics from the material improvements panoply. This was the case, for example, of the Guimarães (1869) and Viana do Castelo (1882) General Improvement Plans, both comprising written reports, as well as a collection of topographical maps detailing the committees’ suggestions.¹²⁰

According to Fernandes, however, this thoroughness doesn’t seem to have been the norm at all, with several municipalities merely appointing improvement committees or commissioning topographic surveys, without following through to the formal general improvement maps and

¹¹⁴ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**.

¹¹⁵ Fernandes, *Urbanismo e morfologia urbana no norte de Portugal*, 216-217.

¹¹⁶ Mário Gonçalves Fernandes, “Plantas do planeamento urbano e do urbanismo em Portugal (1864-1926),” in *Resumos do IV Simpósio Luso-brasileiro de Cartografia Histórica, Porto, 9 a 12 de Novembro de 2011* (<http://eventos.letras.up.pt/ivslbch/resumos/114.pdf>, 2011), 5.

¹¹⁷ For more on this subject, see Chapter I. See also Sampaio, *Os Chins de Macau*.

¹¹⁸ Fernandes, *Urbanismo e morfologia urbana no norte de Portugal*, 216.

¹¹⁹ *Ibid.*, 217.

¹²⁰ *Ibid.*, 211-227.

reports.¹²¹ The 1869 Braga committee would leave no trace of its activities.¹²² The same can be said of its 1865 Coimbra counterpart.¹²³ The Porto improvement plan, which would only be presented in 1881, consisted of a mere report and budget. The complete Lisbon plan, drafted by renowned engineer Frederico Ressano Garcia, would finally be presented in 1903, well after a number of the capital's 'new avenues' expansion plan had been inaugurated.¹²⁴ More often than not, as we will also see in the case of Macao, municipalities and district/provincial governments would prefer to engage in partial improvement plans, at smaller scales, such as for the realignment of an existing street, the opening of a new avenue, or the restructuring of an old urban district. Priority often being given to situations that had been locally identified as problematic in public works or public health reports, sometimes for decades prior to the formal projects.

This seemingly failure of the local political and technical actors to deliver results after the publication of the December 31, 1864 national ordinance, in terms of the number of identified general improvement plans completed and set in motion, has led to a certain past historiography claiming this legislation to have been practically inconsequential.¹²⁵ More recently, however, more nuanced monographic studies¹²⁶ have contributed to corroborate the idea that this legislation was probably less of a trailblazing judicial regulation to radically modernize local urban planning and practice, than it was the crystallization of Fontism's 'material improvements and sanitation' ideal for the regeneration of the nation's urban cores. As such, it most certainly drew inspiration from modern theories and practices that were already being attempted in several metropolitan and overseas territories, as we have also mentioned, framing them in the grand design envisioned by the State's technocrats, in the ideal form of a General Improvement Plan. As many of Fontism's grand designs, though, this particular one would also have to make way to technical, budgetary and political realities, meaning that it often had to adapt to local resources and, most frequently,

¹²¹ Ibid., 244.

¹²² Bandeira, *O espaço Urbano de Braga*, 104.

¹²³ Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 225.

¹²⁴ For more on the Lisbon, Porto, as well as other smaller cities' improvement plans, see Chapter IV.

¹²⁵ Mário Gonçalves Fernandes quotes, for example, Fernando Gonçalves in asserting that "the general plans established by the 1864 national ordinance left no evident marks in the shape of our urban centers." ["Evolução Histórica do Urbanismo em Portugal (1851-1988)," in *Direito do Urbanismo* (Lisboa: INA, 1989), 242]. Or Margarida Souza Lobo, claiming that "the establishment of the General Improvement Plans was nothing but a political intention, that would only take form in the twentieth century with Lisbon and Porto's first general plans" [*Planos de Urbanização. A Época de Duarte Pacheco* (Porto: FAUP Publicações, 1995), 13]. See Fernandes, *Urbanismo e morfologia urbana no norte de Portugal*, 210.

¹²⁶ See, for example: Bandeira, *O espaço Urbano de Braga*; Fernandes, *Urbanismo e morfologia urbana no norte de Portuga*; Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*.

downsize and/or wait for more favorable circumstances to be reformulated.¹²⁷ Although this adaptation and negotiation processes sometimes took decades to materialize, the letter of the 1864 national ordinance remained as reference for most general or partial urban improvement projects throughout the Empire, at least until the publication of the December 21, 1934 ordinance establishing the General Urbanization Plans (*Planos Gerais de Urbanização*),¹²⁸ as part of the first round of the Estado Novo dictatorship administrative reforms.

In the overseas, by the early 1880s, a much greater emphasis was being given to sanitation, than what was expressed in the metropolitan first improvement plans, or indeed in the legislation regarding urban planning itself, meaning that the main purpose of urban improvement was starting to be perceived as the improvement of public health. Both ‘sanitation’ and ‘improvement’ then acquired a most definite Chadwickian sense, in that investment in this branch of public works was blatantly being put in terms of financial placement in order to reduce mortality rates in the colonies.

Thus, on February 4, 1882, the Ministry of the Overseas issued a decree referring to “the excessive number of deaths that were being reported in the overseas provinces, due not only to the influence of climate, but first and foremost to the local sources of infection, as a result of the failing to comply with the proper sanitary policy requirements.”¹²⁹ Responsibility went to the municipalities, but mainly to the governors who were obligated, from that point on, among other things, to order the Public Health Directors to conduct inspections to reputedly insalubrious districts “from which alterations of public health may derive,”¹³⁰ and to request any critical sanitary measures from the government. In the case of “extraordinary circumstances requiring urgent measures that exceed the municipal budget”¹³¹ the governor was allowed to ask for an emergency budget to restore public health.

In Macao, as Dr. Gomes da Silva would put it a decade later, all that was left to do was wait for these ‘extraordinary circumstances’ to occur, as catastrophe did every so often, to launch the city’s General Improvement Plan.¹³² Preparations started with health inspections to the Horta da Mitra and Horta de Volong in July 1882 and to S. Lázaro in February the following year (Fig. 66). As

¹²⁷ For a further development of this subject, see Chapter IV.

¹²⁸ DG, n°299, December 21, 1934, 2137-2141, National ordinance of December 21, 1934, regarding the obligation for municipalities to carry out topographic surveys of their territories and to establish general urbanization plans.

¹²⁹ BG, n°16, April 22, 1882, 136, Notice from the Minister of the Overseas regarding the enforcement of sanitary policies in the overseas provinces, February 4, 1882.

¹³⁰ Ibid.

¹³¹ Ibid.

¹³² Silva, *A Epidemia de Peste Bubónica em Macau*, 12-13.

might be expected, all three districts were rated “wretched clusters of buildings, inaccessible to any sanitary measure or ordinary police inspection whatsoever, thus demanding extraordinary measures that would rearrange them into a more regular material condition.”¹³³ In this respect, instructions were issued to the Public Works Department commissioning topographic surveys of the existing districts, which should be followed by the restructuring projects to “sanitize and regularize them.”¹³⁴

Although they had long been pointed out as overcrowded and insalubrious in Dr. Lúcio Augusto da Silva’s reports from the 1860s and 1870s, this hadn’t always been the case. Only forty years before, the ‘gardens’ of Mitra and Volong were just agricultural lands,¹³⁵ as seen in the 1838 historical map (Fig. 11). In it, the Horta da Mitra is situated *intra muros*, on the slope of S. João Fortress hill, next to the 1620s city wall and to Porta do Campo. It appears to belong to the domain of the Convent of S. Clara which, together with the neighboring Convent of S. Francisco, is surrounded on its northern and eastern sides by the city wall connecting the forts of S. Francisco and S. João to the central Monte Fortress. The Horta de Volong and S. Lázaro are situated *extra muros*, right on the outer side of Porta do Campo, as seen in the 1866 historical map (Fig. 12). As we can see, S. Lázaro is an older settlement. Dating back to the 1600s, it clustered around Nossa Senhora da Esperança church and lazaret house, having later developed along Rua de S. Lázaro towards Porta do Campo. In the nineteenth century, it was mostly occupied by the Christianized Chinese population. As for Volong, which had figured in the 1838 map as Horta de Back-Man, it formed east of Rua de S. Lázaro, enclosed on its own eastside by what would later be rebuilt as one of Governor Ferreira do Amaral’s Campo new roads. According to eminent Macao historian Padre Manuel Teixeira (1912-2003), this land belonged to a certain Rita Bagmond (also spelled Backman in the primary sources), who had purchased it to Portuguese Filipe Lourenço de Matos, responsible for turning it into farmland back in 1791.¹³⁶ In 1847, it was still being referred to as “Horta Begman,” belonging to Macanese citizen Caetano Gomes da Silva, who would donate part of it for

¹³³ BG, n°28, July 15, 1882, 236, Government of Macao local ordinance n°59, regarding sanitary inspections in Horta da Mitra and Volong, July 15, 1882.

¹³⁴ Ibid.

¹³⁵ I have translated the Portuguese term *horta*, as in Horta da Mitra and Horta de Volong, as ‘garden,’ as it defines a small agricultural land, such as a vegetable garden, kitchen garden, or small orchard. The district names refer to the original landowners, probably responsible for the transformation of the marshes into arable land, a process sometimes dating back to the eighteenth century. The Horta da Mitra district is occasionally referred to in the primary sources as Horta do Bispo, which literally translates as Garden of the Bishop, as *mitra* translates as ‘miter,’ the ceremonial head-dress of Christian bishops.

¹³⁶ P. Manuel Teixeira, *Macau e a sua Diocese. Vol. VII. Padres da Diocese de Macau* (Macau: Tipografia da Missão do Padroado, 1967), 463.

the construction of the eastern Campo new road.¹³⁷ It had later been passed on to Francisco Volong, a Christianized Chinese merchant, naturalized Portuguese in 1856.¹³⁸

In 1871, the Horta da Mitra was the property of Macanese Francisco de Paula Noronha who, at that time, complained against the ongoing leveling work for the construction of the new S. Januário military hospital, on the grounds that the high level of one of the new hill roads (the future Rua Nova da Guia, Fig. 66), already being built on a strip of his expropriated land, rendered inaccessible some of the shophouses he had recently built on the slope.¹³⁹ The documents he presented, endeavoring to prove his ownership, and in order to ask for compensation from the Government, help put together a part of the district's history. For instance, it seems that, in 1778, the City Senate had yielded the empty land to the Bishop (*Mitra*) who, in 1810 would, in turn, sell it to a Francisco António Pereira Tovar.¹⁴⁰ In 1874, Dr. Lúcio Augusto da Silva would write about the opening of the new hospital access roads, mentioning that:

The ground leveling and cleaning of the [S. Januário] hill have improved the ventilation of the [Horta da Mitra] district. Its other characteristics, however, remain the same, as there can be found mounds of garbage, ditches and trenches filled with corrupt liquids, pig, cow and buffalo stables [...]. The fix and temporary porches, the street vending stalls, etc., take up part of the main streets. It would be very beneficial that this ground should have another use, keeping away those filthy dwellers, towards whom one can never be too vigilant.¹⁴¹

In 1868, Dr. Silva had mentioned some improvements made both in the Mitra and Volong districts, which might more or less correspond to the urban morphology represented in the 1884 historical map (Fig. 66). According to the Public Health Director,

The so-called Horta da Mitra and Horta de Volong are two large plots where the Chinese established their shacks, against a small rent paid to the landowners. It is therefore easy to

¹³⁷ BG, n°7, February 18, 1847, 26, Letter from Caetano Gomes da Silva to Governor of Macao João Maria Ferreira do Amaral, donating a strip of land situated in his so-called Horta Begman property, for the construction of one of the Campo new roads, February 17, 1847. For more on this subject, see Chapter I.

¹³⁸ Teixeira, *Macau e a sua Diocese*, 74.

¹³⁹ AM, MO/AH/AC/SA/01/00136, Letter n°98 from Macao Public Works Director Francisco Jerónimo Luna to the Government Secretary-General, regarding the expropriation of a plot in the Horta da Mitra, May 30, 1873.

¹⁴⁰ Ibid. Public Works Director Francisco Jerónimo Luna would remark that, even though he believed Francisco de Paula Noronha to be in the right, the documents he produced to justify his demand for compensation didn't exactly prove that he was, in fact, "Master of the property named Horta da Mitra," as Noronha had put it in his September 14, 1871 request, as nothing in them linked him to the previous known proprietor, Francisco António Pereira Tovar.

¹⁴¹ Lúcio Augusto da Silva, *Duas Palavras sobre a Dengue. Relatório do Serviço de Saúde Pública na Cidade de Macau Relativo ao Ano de 1874* (Macau: Tipografia Mercantil, 1880), 14-15.

imagine the causes of insalubrity accumulating there. A great many of these have been removed, however, by building small houses and streets with underground sewerage.¹⁴²

Nevertheless, a few years later, things had reverted back to what Silva perceived as the districts' sort of 'inescapable Chineseness':

In the so-called Hortas da Mitra and Volong were once carried out some notable improvements, by building small houses and streets, in place of the previously existing sordid shacks. The Chinese genius, however, managed to establish again in them, little by little, the old causes of insalubrity, such as mounds of garbage, ditches and trenches filled with corrupt liquids, and stilt latrines, open on the bottom, of which nobody can come near without profound repugnance, except for the Chinese. Between these two Chinese districts, hidden from view, the first by a group of shophouses and the second by a wall, every day pass the carriages and sedan chairs [*cadeirinhas*] of those going for a stroll in the fields [*campo*].¹⁴³

The health expert's first and foremost objection to the Horta da Mitra, it seems, was its location within city walls, "in front of many houses occupied by Portuguese families,"¹⁴⁴ implying that its insalubriousness could, eventually, cross over that thin barrier of shophouses hiding it from view to infect passersby in Rua do Campo or indeed the whole of the Christian city. In Silva's view, this alone sufficed to render it a priority in terms of urban renovation and land usage reassignment, though Volong and S. Lázaro didn't lag too far behind.

In the wake of the July 1882 health inspections, Governor Joaquim José da Graça (1879-1883),¹⁴⁵ probably influenced by Constantino José de Brito himself, appointed the very hands-on Public Works Director, not just to conduct the survey of the Hortas da Mitra and Volong, but to carry out a new complete cadastral survey of the city.¹⁴⁶

This was followed, on February 10, 1883, by a letter from the City Senate to the provincial government, officially requesting the drafting of the city of Macao General Improvement Plan, "in conformity with the December 31, 1864 national ordinance."¹⁴⁷ It also urged the future

¹⁴² BG, n°46, November 14, 1870, 193-194, "Report on the Macao Public Health Department, relating to the years 1865-1867" by the province's Surgeon-General Lúcio Augusto da Silva, **April 26, 1868 (transcribed in Volume 3 - Annexes)**.

¹⁴³ BG, n°14, April 3, 1875, 64-65, Report on the Macao Public Health Department following the publication of the National ordinance of December 2, 1869 organizing "the overseas provinces' public health department", by the province's Public Health Director Lúcio Augusto da Silva, **April 2, 1871 (transcribed in Volume 3 - Annexes)**.

¹⁴⁴ Ibid.

¹⁴⁵ For more on Governor Joaquim José da Graça (1879-1883), see Chapter II.

¹⁴⁶ BG, n°50, December 16, 1882, 431, Government of Macao local ordinance n°102, appointing Public Works Director Constantino José de Brito responsible for the new city cadastre survey, December 16, 1882.

¹⁴⁷ AM, MO/AH/AC/SA/01/00470, Letter n°7 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Joaquim José da Graça, requesting the drafting of the city of Macao General Improvement Plan, **February 10, 1883 (transcribed in Volume 3 - Annexes)**.

improvement committee to establish this plan in different sections, “in order to facilitate its execution.” The section to prioritize being S. Lázaro as, in Senate President Domingos Clemente Pacheco’s point of view, this was “the oldest, yet the most overlooked district, with no proper houses nor public sewerage, despite it being so close to the city’s most important buildings.”¹⁴⁸ A few days later, Pacheco would stress the responsibility of the Government in this matter, as holder of the public works expertise and, more importantly, of its budget:

Allow me to add that the Public Health Director has frequently drawn my attention to these and other causes menacing to seriously compromise this city’s salubrity. The City Senate, prevented as he is from the financial resources provided for by law, which the Government perceives in the whole, hasn’t been able, much to its regret, to meet this educated and zealous officer’s requests, which the Senate would do as its duty, for it understands that, among this province’s many needs, to improve the city’s hygienic requirements is the capital and most urgent one.¹⁴⁹

Faced with Governor Joaquim José da Graça’s caginess, arguing with the province’s limited budget to postpone setting up the General Improvement Plan procedures right away, it was up to President Pacheco to remind him of the opportunity presented to the overseas provinces for sanitation and modernization by the February 4, 1882 ministerial decree. It seems clear enough that this push for urban renovation was coming from the local representatives, strongly backed by the central government engineering and medical experts. Trying to leverage all the most recent legal instruments at their disposal, they nevertheless disclosed their intention to concentrate the initial efforts on what was then a fifteen-year-old idea, that is, in Pacheco’s words, “an improvement plan for the S. Lázaro district, as well as for the two other settlements next to it.”¹⁵⁰

In this context of institutional hesitation, Constantino José de Brito proceeded with the cadastral survey of S. Lázaro (Fig. 70)¹⁵¹ concluding, by the end of June 1883 that, “to establish a regular and suitable sewerage system covering the whole district,” massive expropriations and an altogether new restructuring plan would be necessary.¹⁵²

Resolution would come by the hand of newly appointed Governor Tomás de Sousa Rosa (1883-1886),¹⁵³ who had taken office on April 28, 1883, after having been appointed by national ordinance

¹⁴⁸ Ibid.

¹⁴⁹ Ibid. Document 4.

¹⁵⁰ Ibid. Document 5.

¹⁵¹ Ibid. Document 2.

¹⁵² Ibid. Document 1.

¹⁵³ Military officer Tomás de Sousa Rosa (1844-1918) debuted his career in the Portuguese Overseas at almost forty-years-old precisely with his gubernatorial commission in Macao, which he occupied from 1883 to 1886. The following year, on December 1, 1887, appointed as plenipotentiary, he would be the one to sign the Treaty of Peking with the Qing representatives, establishing Portugal’s perpetual occupation and

of December 29, 1882. This same ordinance exonerated his predecessor, Joaquim José da Graça, who would leave the province in the hands of a Government Council on March 24, 1883. At his departure, Governor Graça would make a statement which, in my view, would hint at where his heart lied in terms of governance and prioritizing public works:

Public treasury has prospered, and I am pleased to say that [Macao] is, among the seven Portuguese overseas provinces, that which has a greater credit balance in its coffers, after having upheld all of its ordinary and extraordinary charges. [Nevertheless,] the allocated budget for material improvements is meager, and sometimes it has been indispensable to summon extraordinary means in order to attend to imperative works; however, the budget law didn't allow for greater development of some other works that had I wished to have started, if the authorization that I asked for and for which I have urged had been granted.¹⁵⁴

Governor Graça was probably referring to the Macao inner harbor improvement project, which he had launched back in December 1882, before his exoneration ordinance had come through. In fact, on December 5, Graça had appointed what would be the first inner harbor improvement committee, bringing together the usual array of technical experts. Under the presidency of Constantino José de Brito, there would be Harbor Captain Demétrio Cinatti,¹⁵⁵ a physician from the Public Health Department, which would turn out to be young José Gomes da Silva,¹⁵⁶ and a member of the City Senate, none other than Macanese entrepreneur Miguel Ayres da Silva.¹⁵⁷ In the local ordinance appointing this committee, Governor Graça expressed his concerns over the growing difficulties the inner harbor was facing regarding its accessibility, due to the silting of the riverbed. Viewing its improvement as a matter both of the colony's material improvements, for the harbor was depicted as the main source of its livelihood, and of its salubriousness, to put an end to the pernicious swamps and stale waters along the riverbanks, this text very much echoed the ideas on this topic put forward by Constantino José de Brito in his Public Works report for the year 1882.¹⁵⁸

government of Macao. In the 1890s and early 1900s, he would go on to serve as ambassador in Washington and Paris, leaving public service at the proclamation of the Portuguese Republic in 1910.

¹⁵⁴ BG, n°12, March 24, 1883, 90-91, Outgoing Governor Joaquim José da Graça's final address to the Macao Government Council, March 24, 1883.

¹⁵⁵ For more on Harbor Captain Demétrio Cinatti and, in general, on the Macao Inner Harbor Improvement Project, see Chapter V.

¹⁵⁶ By then still working under Public Health Director Lúcio Augusto da Silva.

¹⁵⁷ BG, n°49, December 9, 1882, 424, Government of Macao local ordinance n°99, appointing the Macao inner harbor improvement committee, **December 5, 1882 (transcribed in Volume 3 - Annexes)**. See also BG, n°9, March 3, 1883, 68-69, Report from the Macao inner harbor improvement committee, **February 12, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁵⁸ BG, supplement to n°6, February 15, 1883, 41-48, Macao Public Works report by Director Constantino José de Brito, **January 30, 1883 (transcribed in Volume 3 - Annexes)**.

In the same report, however, the Public Works Director had also written extensively, among other matters, on what he called the need for “complete sewerage reform” which, in turn, would entail large-scale urban restructuring:

The Chinese take as first-rate cities Peking and Canton, where streets usually aren't even two-meters wide and so, when their houses are on a larger street, where they can open their arms without them touching the opposite walls, they understand, when the opportunity presents itself to rebuild their property, that they can do so at the expense of street width. That is precisely why some streets have been narrowed, with some houses being built over the piping, this being a shame as, every time construction is being carried out, streets and squares keep getting thinner, instead of larger. It would therefore be necessary to proceed with a complete sewerage reform; however, in the sites where the big collector pipes should go, there the largest Chinese population aggregates, and there the streets are little over three-meters, and some even two-meters wide. Sewerage reform would then imply large expropriations and the demolition of part of the city's buildings.¹⁵⁹

Together with the harbor improvement, this constituted, in Brito's view, the city's “vital issues,” already hinting at the kind of global urban thinking the general improvement plan would bring. It seems likely that Governor Graça would think it counterproductive, in terms of budget, to back the establishment of an extensive plan against what he perceived to be the province's priority. Therefore, having to line up all the urban regeneration projects the city was in dire need of, the Governor would prove to be less sensitive to the topic of the Chinese districts' urban sanitation than to the more prestigious harbor improvement project.

His successor Tomás de Sousa Rosa, however, would have a very different stance on these matters. He could certainly count on Senate President Domingos Clemente Pacheco's patriotic drive who, at the occasion of the gubernatorial handover ceremony, delivered a typically passionate discourse on material regeneration as a civilizing mission:

This city, which Your Excellency now comes to govern, established in such distant parts from the metropole, is a glorious monument to the entrepreneurial genius of our merchant forefathers. Nevertheless, it didn't just serve as a safe harbor for the commercial exploration of the Far East. It was also the door through which the truth of Christianity entered these peoples, [allowing] the light of European science [to] irradiate over this large portion of humankind, unaware and contemptuous of progress. This germ of a European civilization, brought to these remote beaches with the help of Portuguese trade, has given plenty of fruit. These peoples, which laid in conceited isolation, abhorred innovation, and clung to their old traditions as ideals, recognize today the advantages of European civilization, study its sciences, profit from its inventions and copy its institutions. These peoples live today through a great transformation, and tread quickly in the path of progress.

This city of Macao, from which once departed the first impulse for this great social transformation, must it remain stationary in the presence of such progressive movement? Must it languish little by little until complete annihilation? Certainly not!

Its geographical position, its considerable Chinese population, its citizens, whose great capital could easily be attracted back, its peace, quietness and security, are powerfully fertile elements

¹⁵⁹ Ibid.

that could regenerate Macao, and make it prosperous through commerce and industry, if they are seized by an administration that, putting aside the old routine, seeks in the true principles of science its sound rules.

These are the patriotic hopes that the Macao City Senate, in its zeal for the well-being of this municipality and in the loyalty that it pledges to the Portuguese sovereign, wishes with all its heart to see through under Your Excellency's governorship. I shall thus conclude, sincerely hoping Macao's prosperity will one day become the aureole adorning Governor Tomás de Sousa Rosa's noble front.¹⁶⁰

And so, on July 28, 1883, three months into his tenure, the new Governor commissioned a group of municipal and central administration officers presided, once again, by Public Works Director Constantino José de Brito and including Public Health Director Dr. Lúcio Augusto da Silva and Senator Miguel Ayres da Silva, to officially draw up the Macao General Improvement Plan, based on the previous February 10, request from the City Senate,¹⁶¹ and in accordance with the December 31, 1864 national ordinance.¹⁶² Their report, published the following November, offered the health and engineering sanitarian experts' scientific and critical view on the state of the city. Having visited "the filthiest neighborhoods, the foulest-smelling corners, and having seen the accumulated dirt of a people that is unaware of the most rudimentary notions of cleanliness,"¹⁶³ the committee didn't exactly come up with a general plan, but offered their insight on a number of issues pertaining to urban governance: town planning in terms of ensuring light and ventilation to the dwellings, occupation limits and hygiene of the living-space, water and sewage systems, removal of waste, forestation and public facilities such as markets, prisons and the slaughterhouse. Essentially, as architect Margarida Relvão Calmeiro put it regarding the same process in the city of Coimbra, the already-mentioned "Liberal State's array of facilities"¹⁶⁴ and services, which were being construed as modern administration's obligation towards public good.

This kind of global thinking in terms of improving the urban population's public health and material living conditions was, once again in a Chadwickian fashion, presented first and foremost in terms of budgetary economy:

To carry out isolated improvements, with no connection between them, nor to the whole of the changes that are necessary in a city built without regulations, haphazardly, or following the

¹⁶⁰ BG, n°17, April 28, 1883, 164-166, Inauguration ceremony for Governor Tomás de Sousa Rosa, April 28, 1883.

¹⁶¹ AM, MO/AH/AC/SA/01/00470, Letter n°7 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Joaquim José da Graça, requesting the drafting of the city of Macao General Improvement Plan, **February 10, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁶² BG, n°30, July 28, 1883, 263, Government of Macao local ordinance n°89, appointing the Macao material improvements committee, **July 28, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁶³ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁶⁴ Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 249.

Chinese population's whim, can sometimes be useful, but for the most part it will be squandering resources for, sooner or later, another improvement, thought more convenient, will replace the one who is no longer considered suitable [...].¹⁶⁵

The November 20, 1883 report was to be, nevertheless, a point of reference for the decades to come in terms of urban regeneration or, as the authors put it, in terms of “the multiplicity of matters pertaining to the good police of modern cities.”¹⁶⁶ A number of fundamental projects in Macao, up to the 1930s, can be traced back to this text, such as, for example, the Chinese Bazaar regeneration/gutting project,¹⁶⁷ involved the opening of a new avenue connecting the Largo do Senado (the ‘Senate square’) to the inner harbor.¹⁶⁸ Also mentioned, the project for a new road, connecting the Praia Grande and the inner harbor riverside streets, circling the south end of the Macao peninsula,¹⁶⁹ as well as the S. Domingos central market (former Grand Bazaar) restructuring project.¹⁷⁰ The inner harbor improvement would most certainly also have found its place in the committee’s report, where the Public Works Director might have reiterated his views on the convenience of the construction of new reclamations in the Patane district, were it not for the presence in Macao, since early September that same year, of military engineer Adolfo Ferreira Loureiro, on a special government mission to study the matter.¹⁷¹

Finally, in the “insalubrious districts” box, the improvement committee put “Horta da Mitra, Volong, S. Paulo, a part of S. Lázaro, Patane, Sakong, Sankiu and many areas in the Bazaar.”¹⁷²

¹⁶⁵ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁶⁶ Ibid.

¹⁶⁷ ‘Gutting’ as the literal translation of the Italian word for the “Haussmannian slice,” the ‘*sventramento*’ of the city of Naples, projected in 1868. Terry Kirk, *The Architecture of Modern Italy. Volume I. The Challenge of Tradition, 1750-1900* (New York: Princeton Architectural Press, 2005), 198.

¹⁶⁸ For more on the Chinese Bazaar New Avenue project, see Chapter IV.

¹⁶⁹ This project started to be outlined by Public Works Director José Maria de Sousa Horta e Costa around the summer of 1887, when the restructuring works in the Horta da Mitra were already finished and he was starting on the related project for Volong. Horta e Costa referred to it as “study for the construction of a road from Praia Grande to the Barra fortress” (BG, n°44, November 3, 1887, 366-373, Macao Public Works report for the year 1886/1887, by José Maria de Sousa Horta e Costa, June 30, 1887). Construction would only begin, however, in the early 1900s, the new avenue having been inaugurated as Avenida da República on December 1910, right after the establishment of the Portuguese Republic on October 5, that same year.

¹⁷⁰ For more on the new S. Domingos market, see Chapter IV, in connection with the Chinese Bazaar New Avenue project.

¹⁷¹ For more on Adolfo Ferreira Loureiro and his mission, on its connections to Public Works Director Constantino José de Brito’s previous studies and, in general, on the Macao Inner Harbor Improvement Project, see Chapter V.

¹⁷² BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**. For more on the restructuring of S. Paulo and Bazaar districts, see Chapter IV, in connection with the Chinese Bazaar New Avenue project. For more on the restructuring

Having conducted a “thorough inspection” of these “properly Chinese settlements,” the commissioners’ position was peremptory: if the purpose was to “regulate the city,” a “radical” clean slate strategy was the only way to achieve it.¹⁷³

The layout and filth of the shacks is such that only complete destruction can terminate those hotbeds of infection. To raze all existing dwellings and to determine new streets with proper subterranean piping is the only efficient disposition. The expense won’t be great, as the value of the buildings, covered in leaves for the most part, is quite low [...]. After establishing the proper alignments, if we proceeded with leasing the land divided into small plots, its income would triple, and that surplus would probably be enough to cover the capital expended with the expropriation [...].¹⁷⁴

In his comprehensive July 1882 “report on the sanitary condition of Hong Kong,” British military engineer Osbert Chadwick (1844-1913) had already made a similar claim regarding “the reconstruction of houses not capable of improvement,” stating that it was up to the Government to expropriate them, to layout the new roads and drains, and to rebuild and sell the new properties.¹⁷⁵ The author suggested this be achieved through the establishment of an improvement fund, “set aside for the purpose.”

The work would be well and cheaply done, and the annual cost to the landlord would be insignificant. It is understood that the Government of Hong Kong has certain funds derived from the licenses of gambling houses, the expenditure of which is reserved for charitable purposes. Surely the improvement of the dwellings of the poor is a charitable undertaking?¹⁷⁶

Son of famed sanitarian Sir Edwin Chadwick, Osbert Chadwick would carry out several missions of expertise on the sanitary conditions of the British colonies as Consulting Engineer on behalf of the Colonial Office. His commission in Hong Kong had been prompted by a debate between the Governor and the colonial Surgeon-General, in 1881, regarding water supply, against a backdrop of epidemic threat.¹⁷⁷ His report presents many similarities, both in terms of methods and results, with his Portuguese counterparts’ work on the Macao Improvement Committee. Both relied primarily on the direct inspection of the “various quarters of the town, the waterworks and the sewers,” sharing the purpose of being able to “form a correct idea of the average condition of the dwellings of the working classes” and of their living conditions in general.¹⁷⁸ Some thirty years

of Patane, Sakong and Sankiu districts, see Chapter V, in connection with the Macao Inner Harbor Improvement Project.

¹⁷³ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁷⁴ Ibid.

¹⁷⁵ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 30.

¹⁷⁶ Ibid.

¹⁷⁷ Chu, “Combating Nuisance,” 28.

¹⁷⁸ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 3.

later, Public Works Director António Pinto de Miranda Guedes, in his renewed take on the Macao General Improvement Plan, would even voice a similar opinion to the British Engineer regarding what he deemed the “regulated exploitation of vice” in the Portuguese colony, suggesting that the gaming revenue should be used directly to fund “charitable and embellishment works for the enjoyment of the general public.”¹⁷⁹

From the onset, though, Chadwick claimed wanting to “penetrate deeper into the mass of the people,” meaning that he wished to “ascertain the feelings of the Chinese population, and to elicit information as to their domestic institutions, so that the measures proposed might be suited to them, and have as far as possible as a basis, time-honored custom.”¹⁸⁰ To achieve this goal, he set about consulting with the main Hong Kong Chinese bodies, such as the Hospital committee, representing “the moneyed and house-owning interests,” as well as the Medical association. He also chose to consult with the Chinese Christian churches, where he could better “ascertain the feelings of the tenants,” the members of this community differing “little from the rest of their countrymen, except in religion” having been, in the author’s view, “Christianized but not Westernized.”¹⁸¹

Chadwick’s concern with understanding and accurately characterizing the Chinese population, as well as his effort to survey and document the shophouse typology, as we have seen, doesn’t appear to have found its match in the Portuguese contemporary reports.¹⁸² Consequently, the Macao Improvement Committee documents don’t go as far as offering a similar reflection on the housing conditions of the working class and on the means to improve them. As mentioned, these documents tend to dwell instead on general considerations regarding street alignment or, at best, on housing overcrowding and “cleanliness,” in a rather more resolute top-down and paternalistic approach than the one Chadwick seems to condone:

On the dwellings’ internal cleanliness subject, the Committee recommended the pertinence of carrying out house inspections, with the purpose of forcing the Chinese to keep their homes clean [...]. These inspections would also serve to verify that the air volume is proportional to the regular number of dwellers in each tenement, thus avoiding an atmospheric vitiation to so many poor wretches, whom misery or vice has thrown into these lodgings, where dozens of individuals of both sexes overnight confusedly. There should be an absolute prohibition for humans and animals to live in the same houses [...]. In truth, there is nothing more repugnant than that ignoble promiscuity in which live men and pigs, women and dogs, children and

¹⁷⁹ AHU, 451-1H-SEMUDGU mç. Macao Inner Harbor Improvement Project, by Public Works Director António Pinto de Miranda Guedes, **March 1, 1910 (transcribed in Volume 3 - Annexes)**.

¹⁸⁰ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 3.

¹⁸¹ Ibid.

¹⁸² For more on the Macao and Hong Kong shophouse typology, see Chapter I.

chickens, disputing amongst themselves the primacy of filth. By day on the street and at night indoors, this miscellaneous family drags on the foul spectacle of ultimate degradation.¹⁸³

At any rate, the June 1883 S. Lázaro survey (Fig. 70), even if not detailing the housing typologies, as Chadwick's report does for the Hong Kong Taipingshan and Sheung Wan districts, clearly shows a haphazard, additive urban structure, vaguely resembling a grid anchored on Rua de S. Lázaro, but nevertheless with no semblance of regularity nor homogeneity of the dwelling type. Looking at the district's general plan (Fig. 66), in the Mitra and Volong there seems to have been some attempt at regularization, as referred to by Dr. Lúcio Augusto da Silva. The scale of the streets and blocks, however, suggests that these late 1860s operations had little to do, for example, with the contemporary New Bazaar areas, where a program of regular and fairly dimensioned shophouses was being built. As we have seen, these ranged from two-storied to three-storied buildings in Rua and Travessa da Felicidade, over 10-meter to 12-meter-long and 3,5-meter to 4-meter-wide plots, with a main street/back lane or back-to-back typical layout, quite similar, in dimensions as in typology, to the Hong Kong housing programs.¹⁸⁴ Which seems to show, as corroborated by Chadwick's report, that the housing problem in Hong Kong had more to do with the extreme overcrowding of these tenements, with multiple horizontal, as well as vertical subdivisions, often leading to drainage deficiencies and frequent obstructions, than with the shophouse typology itself:

The pair of new houses shown [Fig. 41] are not yet fully occupied. They give a good illustration of the manner in which additional accommodation is gained by introducing floors after the building has been constructed. An ample space between floors is shown on the plans sent in for the approval of the Inspector of Buildings, which is, after construction, halved by the introduction of the cockloft [intermediate floor]. In this case it will be observed that in the rear elevation there are two rows of windows on the ground floor. It seems more than probable, therefore, that the introduction of a cockloft was contemplated from the first and provision made for it in the design.¹⁸⁵

In contrast, however, the layout in both Mitra and Volong comprised a number of parallel rows of small houses, anchored to a central street, in which the single plots must have been no bigger than 5 or 6-meter long and probably around 3-meter wide. Combined with similar drainage problems,¹⁸⁶

¹⁸³ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**.

¹⁸⁴ For reference, see the shophouse typology described in Chapter I, Figure 41.

¹⁸⁵ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 13.

¹⁸⁶ In his June 1883 assessment of the situation in S. Lázaro, Public Works Director Constantino José de Brito had written, in response to the indication of the Senate President that the new drainage system would have to be conceived with the district's existing plan in mind, as there was no budget set aside for the necessary expropriations: "In these circumstances it is impossible to establish pipelines in all streets and lanes without compromising the stability of a great many buildings, due to the width of these streets and lanes which, in some points, doesn't even reach two meters, and without hindering the access to other buildings, on account of the levelling work that has to be done in the pavements." AM, MO/AH/AC/SA/01/00470, Letter n°7 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Joaquim José da

it all indicates that the housing situation in Macao's three 'insalubrious districts' must have been quite precarious, compared even to the most problematic situations in Hong Kong.

II. The 1885 Horta da Mitra Improvement Plan

In the summer of 1885, Macao was struck by a cholera epidemic. This would prompt Governor Tomás de Sousa Rosa to publish the local ordinance of September 1, instructing the Public Works Department to immediately start drafting the Horta da Mitra improvement plan, justified with the "urgent need to prevent further development of the dangerous illness that had lately manifested itself in the city."¹⁸⁷ A few days later, Governor Rosa would request the Minister of the Overseas for authorization to fund these "urgent and extraordinary measures," in order to thwart epidemic threat by improving "the city's sanitary conditions."¹⁸⁸ Which meant, of course, as it had been discussed for years, targeting the *intra muros* Chinese working-class districts (Fig. 72) with 'sanitary' resumption and restructuring plans. In the Governor's words,

The most noxious sites to public health, where sanitation is becoming urgent, are the so-called Horta da Mitra and S. Paulo districts, populated by the Chinese and imbedded in the European town, filled with filthy wooden and straw shacks all clustered together, without streets that might establish appropriate ventilation, nor piping to evacuate the water which, in this season, is abundant and turns them into genuine swamps.¹⁸⁹

In the wake of the Minister's favorable decision, acting Public Works Director Alcino António Sauvage (1844-1914)¹⁹⁰ was promptly ready with a project "for the opening of streets, sewers and

Graça, requesting the drafting of the city of Macao General Improvement Plan, **February 10, 1883 (transcribed in Volume 3 - Annexes)**. Document 1.

¹⁸⁷ BG, n°36, September 10, 1885, 379, Government of Macao local ordinance n°67, regarding the Horta da Mitra and S. Paulo district improvement projects, **September 1, 1885 (transcribed in Volume 3 - Annexes)**.

¹⁸⁸ AHU, AHU-ACL-SEMU-DGU-1R-002, Cx.0004, Letter n°195 from the Governor of Macao, Tomás de Sousa Rosa, to the Minister of the Overseas, regarding sanitation requirements in the Horta da Mitra and S. Paulo districts, **September 10, 1885 (transcribed in Volume 3 - Annexes)**.

¹⁸⁹ Ibid.

¹⁹⁰ In the one-year span between Constantino José de Brito's departure from Macao, in November 1884, and Horta e Costa's arrival, in November 1885, the Public Works Department was headed by acting Director Alcino António Sauvage, himself appointed by the Government of Macao local ordinance n°86, November 14, 1884 (BG, n°46, November 15, 1884, 427). Born in Pangim, Goa, in 1844, Sauvage was a graduate in Artillery and Engineering from the Goa Mathematics and Military School. Appointed to the Macao and Timor Public Works Department staff in 1874, he would remain in service until 1894, when he departed for Lisbon on health leave, eventually being exonerated from his commission in Macao and integrating the Ministry of the Overseas civil staff [Alice Santiago Faria, "Alcino António Sauvage," in *Building the Portuguese Empire in the 19th Century. Public Works across the Indian Ocean and China Sea (1869-1926)*, www.buildingtheportugueseempire.org, 2015].

gutters” in the Horta da Mitra, approved by September 21, and set to begin construction by the end of October.¹⁹¹ With a few months’ delay, demolition eventually started on December 17, 1885.¹⁹²

For this first ‘clean slate’ restructuring project, there had been no resumption plan, as there was apparently only one landlord to contend with. Although this is not entirely clear from the primary sources, a deal must have been struck with this private owner, where the Public Works Department would conduct all the leveling work, including demolitions and landfill, as well as street alignment, drainage infrastructure and pavements. Afterwards, the landlord would proceed with the construction of new working-class housing, complying with the public works standards for inexpensive yet sanitary living.

Upon his arrival in Macao on November 2, 1885, young military engineer and newly appointed Public Works Director José Maria de Sousa Horta e Costa (1858-1927)¹⁹³ set about refining the Mitra improvement plan drafted by Sauvage. He started his own take on this project by laying out a thinly scaled orthogonal grid of 3.5 to 6.5-meter-wide streets and small blocks (Fig. 67). This had to do, firstly, with the need to accommodate the 10-meter height difference between Rua do Campo and Rua Nova da Guia by the construction of nine flights of stairs along the district’s main street. Secondly, as Horta e Costa put it, “this district being exclusively for the Chinese, the houses had to be small, or else any unoccupied space would be turned into a closed courtyard, giving rise to endless new sources of filth and infection.”¹⁹⁴ In short, street width and housing space were scaled down to a minimum, to achieve maximum density in the available ground with the reproduction of a model block of two back-to-back houses (Figs. 73 and 74).

By comparison to the housing tenements in Figure 71, the new Horta da Mitra dwellings seem to have adopted a more comfortable scale, whether in terms of the living space itself, but also in terms of their façade (Fig. 74). They also seem to have been drafted using a shophouse typology similar

¹⁹¹ BG, n°38, September 24, 1885, 400, Government of Macao local ordinance n°78, regarding the Horta da Mitra improvement project, September 21, 1885.

¹⁹² BG, n°11, March 18, 1886, 81, Public works report regarding the second trimester 1885/1886.

¹⁹³ Born in the Viseu district, Portugal, in 1858, José Maria de Sousa Horta e Costa was a University of Coimbra graduate in Mathematics, as well as a Lisbon Military School graduate in Engineering (Faria, *Architecture Coloniale Portugaise à Goa*, 525). He would be appointed Director of the Macao and Timor Public Works Department by national ordinance of August 5, 1885 (BG, n°41, October 15, 1885, 425), having taken office on November 2, 1885 (BG, n°44, November 5, 1885, 447). Horta e Costa would be exonerated at the end of his commission on November 8, 1888, making Sauvage, once again, acting director (BG, n°45, November 8, 1888, 384). He would return to the metropole having been, shortly after, elected deputy from Macao to the House of Representatives, later returning to the territory for a two-time three-year tenure as Governor, in 1894 and in 1900. He would also subsequently serve as Governor of the Portuguese State of India from 1907 to 1910 (Faria, *Architecture Coloniale Portugaise à Goa*, 525).

¹⁹⁴ AM, MO/AH/AC/SA/01/00750, Horta da Mitra improvement plan by Public Works Director José Maria de Sousa Horta e Costa, **May 29, 1886 (transcribed in Volume 3 - Annexes)**.

to the one developed for the 1870s New Bazaar reclamations, itself somewhat analogous to the Hong Kong cases surveyed by Osbert Chadwick, as we have seen. Built in the traditional local gray brick, each unit is thus separated from its neighbors by its own bearing walls. The commercial surface on the ground floor open towards the street by a large door, while the living spaces, on the first floor, also enjoy a large rectangular, horizontal window protected by wooden blinds. A new municipal market was also established at the heart of the new district, built by the City Senate. Its two buildings can be seen on either side of Figure 74, seemingly having been conceived as open spaces under two vast roofs supported by classical columns.¹⁹⁵

Construction proceeded in the Horta da Mitra all through the year 1886, with the new market being inaugurated by the Senate on August 6.¹⁹⁶ Even Public Health Director José Gomes da Silva gave the rebuilt district his seal of approval, although moderate, declaring, in his report for the year 1886, that “it fulfilled all the required sanitary conditions.”¹⁹⁷ By summer 1887, however, when Horta e Costa was already working on the restructuring of the neighboring Horta de Volong, he remarked on the poor state of the Mitra newly-built tenements:

Despite the example set by the public works department in building, as much as possible, with stone and sand, the most popular construction technique in Macao seems to be of poor brick and worse mortar, with no foundations and absolutely no regard for the principles of stability and solidity, with no capacity to resist the strong winds that frequently descend upon this colony. One only has to look at the houses that were built by the landowner a little over a year ago at Horta da Mitra, some of them already threatening to collapse, without even having lived through a storm, looking to the bystander as old houses posing as new!¹⁹⁸

¹⁹⁵ A similar setting can be found in the former municipal market of Taipa, rebuilt around the same time as the new Horta da Mitra district, in 1886 (BG, supplement to n°36, September 14, 1886, 351-359, Macao Public Works report for the year 1885/1886, by José Maria de Sousa Horta e Costa, July 1, 1886). Therefore, and although its author doesn't reference this explicitly, we may suppose that the Taipa project was most likely also drafted by the Macao Public Works Director. One of the two original Taipa municipal market buildings has survived to this day and has recently been renovated. The Horta da Mitra market, on the other hand, was entirely rebuilt in 1939.

¹⁹⁶ BG, n°32, August 12, 1886, 298-299, Public notice by the Macao City Senate, regarding the construction of the new Horta da Mitra market, August 6, 1886.

¹⁹⁷ BG, n°1, January 6, 1887, 2-4, Macao Public Health report for the year 1886 by Public Health Director José Gomes da Silva, January 2, 1887.

¹⁹⁸ BG, n°44, November 3, 1887, 366-373, Macao Public Works report for the year 1886/1887, by José Maria de Sousa Horta e Costa, June 30, 1887.

III. The 1894 Horta de Volong Resumption Plan

Despite this first tryout, as we have seen, Governor Tomás de Sousa Rosa's successors and Horta e Costa were forced to put the restructuring project for the Horta de Volong on hold due to the lack of ordinary funding for public works. Opportunity only came knocking again in the summer of 1894 by the hand of the bubonic plague outbreak in the Pearl River delta. By then, Horta e Costa was starting out his first appointment as Governor of Macao, with new Public Works Director Augusto César de Abreu Nunes and Public Health Director Dr. Gomes da Silva by his side. Horta e Costa's 1887 resumption plan was quickly put back on the table¹⁹⁹ and, by December, the first expropriation deals were being signed with the landowners.²⁰⁰ By March 1895, while mass was being said in the Macao Cathedral as thanksgiving for the anniversary of the city being spared from the epidemic, the first bubonic plague case was being diagnosed in a patient traveling from Hong Kong,²⁰¹ and the old Volong tenements were being demolished.²⁰²

Abreu Nunes's plan was to follow the general principle of the Horta da Mitra restructuring project, with government taking care of the resumption process, demolition and landfill, as well as street and drainage infrastructure, while private investors would later acquire the new plots and build according to a previously established housing type. However, feedback from the earlier experience led the Public Works Director to suggest that the government should also take upon itself the layout of the foundations for the new buildings. This would not only assure better solidity to the new tenements, but allow for complete control over street alignment as well.²⁰³ Work was completed at the end of 1896, having stopped while the plague epidemic was raging, giving way, as of the beginning of 1897, for the private investors to start building the new houses.

The new Horta de Volong also followed an orthogonal gridded plan, anchored to the northward extension of Rua do Campo (Fig. 68), with Porta do Campo marking the 'border' right next to Horta da Mitra. Abreu Nunes's plan cut through the century-old S. Lázaro district dividing it in two and demolishing one half (Figs. 75 and 76). The frontier was Rua de S. Lázaro, whose houses on

¹⁹⁹ BG, n°23, June 9, 1894, 280, Government of Macao local ordinance n°125, regarding the Horta de Volong resumption plan, **June 6, 1894 (transcribed in Volume 3 - Annexes)**.

²⁰⁰ AHU, AHU-ACL-SEMU-DGU-RCO-005, Cx.0004, Letter n°114 (confidential) from the Macao Treasury Inspector to the Overseas Director-General, regarding the Horta de Volong resumption plan, December 12, 1894.

²⁰¹ Silva, *A Epidemia de Peste Bubónica em Macau*, 28.

²⁰² AM, MO/AH/AC/SA/01/01554, Letter n°30 from Macao Public Works Director, Augusto César de Abreu Nunes, to the Government Secretary-General, regarding the Horta de Volong resumption project, **March 4, 1895 (transcribed in Volume 3 - Annexes)**.

²⁰³ Ibid.

either side were spared, for the time being. Public Works would also tackle the reconstruction of the Nossa Senhora da Esperança church around this time, as a new S. Lázaro church would see the day circa 1900.²⁰⁴

The Horta de Volong plan is scaled quite differently from the previous restructuring experience. Rua do Campo, as its main street, is 11-meters wide, and all secondary streets are a comfortable 8-meters wide. The blocks are also of fairly regular dimensions, from 24 to 28-meters wide. Extreme densification of the available land does not seem to have been a priority, as was the case in the Horta da Mitra. This was probably due to the resumption strategy, which allowed the Public Works engineer to fully apply and experiment with the principles of sanitary urban planning of wide streets and large plots, without having to consider the landowner's prerogatives on the maximization of rents. Indeed, here the idea was to plan qualitatively in terms of hygiene, esthetics and infrastructure, giving rise to a new type of residential suburb destined for a well-to-do population. As Abreu Nunes himself put it, "these plots, fully connected to the new drainage system, being from now on in the heart of town, may achieve a fair price. Moreover, all new buildings will start paying municipal tax, which wasn't the case before, as almost the entirety of its population was destitute."²⁰⁵

The changing scope of the urban restructuring strategy, from improving the Chinese laborers living conditions to expanding the city through the replacement of poor tenement clusters with elegant residential suburbs, was also apparent in the housing unit developed for Volong (Fig. 77). Similar to the 1870s and 1880s shophouse typology, which we have seen described in Chapter I (Fig. 41), however without provision for a commercial surface on the ground floor, it was conceived as a two-storey (plus attic) attached townhouse, with the cookhouses at the back. The most visible and striking difference, though, in comparison to the Bazaar, Horta da Mitra, or Hong Kong Sheung Wan district programs, was its European-styled street façade, pierced by large rectangular, vertical windows, and topped with decorative platbands, giving the ensemble a harmonious and elegant urban quality (Figs. 78, 79 and 80), in stark contrast with the remaining residential clusters of the neighboring S. Lázaro district. Another prominent difference, in regard to the earlier real estate development operations, where densification and optimization of the available building space was paramount, was that the Volong townhouses were no longer built with their respective cookhouses

²⁰⁴ In his Public Works report for the year 1885/1886, José Maria de Sousa Horta e Costa mentions that his Department was currently undertaking the construction of the new Horta da Mitra, as well as of the new S. Lázaro church, both rated "extraordinary works" (BG, supplement to n°36, September 14, 1886, 351-359, July 1, 1886).

²⁰⁵ AHU, 2541-1B-SEMU cx., Macao Public Works report for the year 1894/1895 by Public Works Director Augusto César de Abreu Nunes, June 30, 1895.

back-to-back, but were rather aligned with their main façades on both street sides of the block so as to clear space in its center for individual private gardens (Fig. 76).

The success of this new, European-fashionable and, furthermore, hygienic take on the traditional urban housing unit with the well-to-do Chinese population is accounted for by the report on the 1896 census, in which the author comments on the on-going construction in Volong:

As we write these lines, the old Horta de Volong no longer exists, replaced by a pleasant site, levelled with the existing streets, serviced by a regular drainage system, pierced by a series of large and rectilinear roads, and finally displaying, in firm alignment, if not majestic buildings, at least residential dwellings built according to architectural rules and principles of hygiene. It is indeed quite remarkable that, as soon as a house is finished, it is immediately rented by a Chinese, which goes to show that the benefits of hygiene have already crossed the layer of Portuguese population and are now able to be appreciated by the Chinese community as well.²⁰⁶

IV. The 1900 S. Lázaro Resumption Plan

The restructuring of the S. Lázaro district would complete this cycle of sanitarian urban transformation in Macao. Probably in the Public Works Department's books since Horta e Costa's tenure as director, it came as the necessary complement of the work undertaken in Volong, and followed exactly the same model, in both legal and planning terms. The local ordinance authorizing the start of the resumption plan was published by the Government Council, in the absence of an appointed governor, on July 26, 1900. It once again claimed public interest by stating that its complete demolition and restructuring would be the only way to "prevent bubonic plague, or any other epidemic disease that ill luck would bring to this province, to return and fester once again."²⁰⁷ Expropriation settlements started almost immediately, and the first demolitions were already taking place by fall.²⁰⁸

This time, the authority's discourse stayed relatively vague regarding any 'exceptional circumstances' supporting the decision to restructure. Still, it went back to the idea of epidemic threat which, taking into account Abreu Nunes's report of October 1900 mentioning the annual return of the plague,²⁰⁹ must have tipped the Minister of the Overseas' balance in favor of the

²⁰⁶ BG, supplement to n°6, February 12, 1897, 71-140, Population census of February 14, 1896.

²⁰⁷ BG, n°26, June 30, 1900, 309, Government of Macao local ordinance n°72, regarding the S. Lázaro district resumption plan, **June 26, 1900 (transcribed in Volume 3 - Annexes)**.

²⁰⁸ BG, n°45, November 10, 1900, 727, Announcement by the Public Works Department, regarding the S. Lázaro district resumption plan, November 8, 1900.

²⁰⁹ AM, MO/AH/AC/SA/01/27095, Letter n°259 from Macao Public Works Director, Augusto César de Abreu Nunes, to the Government Secretary-General, listing the most important public works to be undertaken in Macao, **October 27, 1900 (transcribed in Volume 3 - Annexes)**.

resumption plan. Not wholly unconnected with this reprise of old S. Lázaro's modern urban extension must also have been the return of Horta e Costa in August 1900 for a new three-year tenure as Governor.

Abreu Nunes had stayed on at the helm of the Public Works Department, and so it is no wonder that the new S. Lázaro restructuring plan should follow the same morphological, alignment and low-density principles as applied in Volong. The 1894 grid was extended through Rua de S. Lázaro and beyond to the west, reframing the church grounds, while at the same time the old city wall was finally demolished (Fig. 69). S. Lázaro district, no longer a Chinese 'clustered breeding ground of infection' had been properly assimilated into the noble Macanese urban fabric (Fig. 81).

It also had a new characteristic: its housing unit, once again reviewed and improved (Figs. 82 and 83). Quite similar to the Volong townhouse, in terms of block and plot layout, as well as façade, it featured an experiment with the urban sanitarian 'novelty' of the back lane: instead of leaving the center of the block free for open backyards or gardens, this was now occupied by a 2-meter-wide semi-private alley giving a back access to the ground floor living areas through the traditional cookhouses, now overlaid by small terraces. The aim of this layout was surely to occupy the whole block with construction, apart from the back lane, to prevent it from spontaneous occupation by the tenants.

In his 1882 report, Osbert Chadwick had already highlighted the role of the back lane in the making of a sanitary residential environment as it represented, in the British expert's view, the ideal urban structure to facilitate the establishment of proper drainage and human-waste scavenging systems.

The absence of any lane or alley giving access to the backs of the houses, a defect but too common in Victoria [Hong Kong], is a great impediment to improvement in sanitation. It is a principle, almost universally admitted, that drains should not pass under the houses, but where there are no back alleys this is impossible. The want of a backway to the house is an almost insuperable obstacle to the introduction of the dry-earth, or any other improved system of conservancy. [...] In framing regulations as to open spaces, continuous back alleys should be insisted on whenever practicable, and in any case of existing buildings, every effort should be made to introduce means of access to the back parts of them. [...] The obstruction of the alley by partitions of any sort should be absolutely prohibited in new houses.²¹⁰

Having traveled to Hong Kong in 1902 to investigate the continuance of plague outbreaks,²¹¹ and to Singapore in 1906 to report on the city's sanitary conditions,²¹² Dr. William John Ritchie Simpson (1855-1931)²¹³ published in 1908 a seminal work on tropical hygiene where he strongly

²¹⁰ Chadwick, *Report on the Sanitary Condition of Hong Kong*, 27.

²¹¹ E. G. Pryor, "The Great Plague of Hong Kong," *Journal of the Royal Asiatic Society* 15 (1975): 67.

²¹² Yeoh, *Contesting Space in Colonial Singapore*, 94.

²¹³ By 1908, Glasgow native Dr. William Simpson had been, in his own assessment, "formerly Health Officer of Calcutta; Lecturer on Tropical Hygiene at the London School of Tropical Medicine; Professor of Hygiene, King's College, London; Lecturer in Hygiene, London School of Medicine for Women; Member

promoted urban restructuring, and particularly the use of the back lane as an effective design strategy to deal with existing insanitary areas, explicitly citing the S. Lázaro project as a successful example.

Unhealthy areas [...] can sometimes be rendered healthy by clearing out a portion of the interior of the blocks and providing in addition to open spaces behind the houses back lanes for drainage and scavenging purposes (as in fig. 81) [Fig. 84]. When these alterations are insufficient or when, by reason of the narrowness of the blocks impracticable, then complete demolition of the area and rebuilding it on sanitary lines are the only remedies applicable. Fig. 82 [Fig. 85] illustrates such an improvement effected in Macao, where an insanitary area, consisting of narrow blocks, was totally demolished and rebuilt, with the happy result of freeing an infected locality from the plague.²¹⁴

In contrast to Fig. 85 (published by Simpson as Fig. 82),²¹⁵ which represents the transversal sections and top façades of the S. Lázaro model house/block with their original caption written in Portuguese, Fig. 84 (published as Fig. 81),²¹⁶ which clearly illustrates a ‘clean slate’ restructuring project, appears without a caption. This is presented, I believe, as an example of the kind of operation the author preconized in cases of irretrievable insalubrity, involving the complete demolition and reconstruction of the concerned areas. On a closer look, however, it seems Dr. Simpson has borrowed on another Macanese example to make his point, for this plan is clearly Abreu Nunes’ 1894 Volong restructuring project. Which makes it even more surprising and valuable, as no other versions of this plan seem to have been preserved in the archives.²¹⁷ Hence, it clearly demonstrates that a detailed cadastral survey had been made from the start, for the Horta de Volong and S. Lázaro as a whole, over which was drafted a general restructuring project.

In this remarkable plan, the intricate, yet fairly regular urban structure of the old Volong tenements is quite noticeable, especially in comparison with the S. Lázaro portion, revealing that the first urbanisation of the former ‘garden’ had undoubtedly been planned in the late 1860s. With a

of the Government Commission to enquire into Dysentery and Enteric in South Africa; Commissioner appointed by the Colonial Office to Investigate the Plague in Hong Kong, the Sanitation of Singapore, etc.” [William John Simpson, *The Principles of Hygiene as applied to tropical and subtropical climates and the principles of personal hygiene in them as applied to Europeans* (London: John Bale, Sons and Danielsson, 1908), i]. Though in the past his “dreary” lectures may have been described as a “maze of drains, ditches, lavatories and houses,” today he is generally considered to have been a pioneer in the field of tropical hygiene and urban sanitation in the colonies, where it is widely recognized that “the strenuous efforts he made in the direction of reforms effected a considerable change.” [R. A. Baker and R. A. Bayliss, “William John Ritchie Simpson (1855-1931): Public Health and Tropical Medicine,” *Medical History* 31 (1987): 457, 465.]

²¹⁴ Simpson, *The Principles of Hygiene*, 301-303.

²¹⁵ *Ibid*, 302.

²¹⁶ *Ibid*, 300.

²¹⁷ The partial reconstitution plans presented in this dissertation are all reinterpretations based on the Macao general historical maps of 1838, 1866, 1884, 1889 and 1912.

meticulous effort of space rationalization and densification, the single files of plots had been laid out in a grid structure, aligned parallel and perpendicularly with the old Rua de S. Lázaro. In the latter's frontage, a row of similarly small plots formed as if a wall isolating the clustered tenements from view, with a single passage to the heart of the district acting as a sort of 'gate' (Fig. 86).

The plan also details a portion of the Tap-seac district, north of Volong and lining the city Christian cemetery (Fig. 87), which would be subject to a similar resumption operation, planned in 1895 and carried out in 1900, concomitantly with the S. Lázaro one.²¹⁸ All this seems to point to Abreu Nunes' having planned the northern city expansion from Campo gate at least up to Lin-tin-chin as a whole, and using the same model house/block scaling unit, probably in the summer of 1894, maybe even based on Horta e Costa's 1887 original studies.²¹⁹ As can be seen in the 1912 Macao general plan (Fig. 15), though, construction in the new Tap-seac plots would drag on through the 1900s' first decades, as the new houses and square would only be finished in the autumn of 1913.²²⁰

Corroborating the theory that the transformation of all these *extra muros* districts was in the works around 1894/1895, the Archives of Macao possess another plan, dated precisely from August 9, 1895, which shows the Tap-seac and Lin-tin-chin detailed portion of the same cadastral survey used in the background of the Simpson-published plan, north of Rua do Cemitério (Fig. 88).²²¹ This is not, however, the same plan as, in terms of project, only the northward extension of Rua do Campo up and over Estrada Adolfo Loureiro is drafted, while the Simpson-published one already featured the future Tap-seac square and houses.

Another plan exists, also in the Archives of Macao, dated in the catalogue of 1899 (although the plan itself is undated), probably also by Abreu Nunes, showing a project to extend the Volong/S. Lázaro grid westward, towards the Monte hill, following the extension of the Calçada da Igreja de S. Lázaro and the Calçada Central de S. Lázaro (Fig. 89). This latter project was never carried out,

²¹⁸ For more details on the Tap-seac district restructuring project, see BG, n°32, August 10, 1895, 339, Government of Macao local ordinances n°112 and n°113, regarding respectively the Tap-seac resumption plan, and road work in Sakong, August 9, 1895. See also AM, MO/AH/AC/SA/01/27080, Note regarding the expropriation settlements in the S. Lázaro and Tap-seac districts, July 5, 1900 and Expropriation settlements in the S. Lázaro and Tap-seac districts, October 24, 1900.

²¹⁹ In June 1894, Abreu Nunes wrote: "It is my duty to declare that the project which I have presented for the transformation of the Volong district is, with some very slight alterations, the one found in this Department and drafted in 1887 by His Excellency the Governor [Horta e Costa] during his tenure as this province's Public Works Director, and to which I have abided completely." AM, MO/AH/AC/SA/01/01495, Horta de Volong resumption plan by Public Works Director Augusto César de Abreu Nunes, **June 27, 1894 (transcribed in Volume 3 - Annexes)**.

²²⁰ AHU, 252-2G-1S MU ex., Macao Public Works report for the year 1913/1914, August 29, 1914. End of construction for 8 houses in Tap-seac, on October 23, 1913.

²²¹ This plan has been published in Armando Azenha Cação, "Sankiu," *Revista de Cultura*, 35/36 (1998): 135.

of course, the western limit of the S. Lázaro district remaining, to this day, the S. Miguel and the former Asilo streets (Fig. 69).²²²

As for the residential units of both Volong and S. Lázaro, primary sources have scarce information on their authorship, as well as on their exact dating. Were they both designed by Abreu Nunes and then imposed by the Public Works Department upon landowners wanting to build in the new districts? Or, in the case of S. Lázaro, maybe planned by a single owner and then submitted for approval by the Public Works officials?

In the case of Volong, I would venture that the first hypothesis is the most probable, based on an indication from Abreu Nunes' summer of 1894 project. Regarding the extension of Rua do Campo northward, he had written: "Lining this street, buildings shall be erected following a regular type to be specified later."²²³ In March 1895, having completed the demolitions and arguing to the Governor regarding the advantages of taking on, besides drainage and pavements, the construction of the new building's foundations, Abreu Nunes suggested that the Public Works Department be authorized to "immediately proceed with building the load-bearing walls' foundations up to the ground level."²²⁴ Therefore, we may conclude that, not only did the Public Works Director have a clear plan of where these load-bearing walls would go, but also that he must have had some sort of building regulation in mind from the onset, which would give the new district a homogeneous aspect in terms of volumes, as well as façades. This can be seen in Figure 76, depicting the ongoing construction in Volong, where the all-alike residential units are clearly identifiable, aligned by the street fronts, with back-to-back courtyards occupying the center of the blocks. Given that, in the backdrop, the S. Lázaro district still appears intact, we may assume that this photograph dates from sometime in 1896, corroborating the information from that year's February census that construction in Volong was almost finished.²²⁵ Which would put the project for its residential units as having been drafted sometime in 1895, probably by Abreu Nunes himself.

Another element to substantiate this hypothesis can be found in the January 1895 concession contract with famed Chinese merchant Lou Kau for the construction of the Sakong working class housing district.²²⁶ In order for this new district to be built "with the proper sanitary conditions, as

²²² Rua do Asilo has since been renamed Rua de Eduardo Marques.

²²³ AM, MO/AH/AC/SA/01/01495, Horta de Volong resumption plan by Public Works Director Augusto César de Abreu Nunes, **June 27, 1894 (transcribed in Volume 3 - Annexes)**.

²²⁴ AM, MO/AH/AC/SA/01/01554, Letter n°30 from Macao Public Works Director, Augusto César de Abreu Nunes, to the Government Secretary-General, regarding the Horta de Volong resumption project, **March 4, 1895 (transcribed in Volume 3 - Annexes)**.

²²⁵ BG, supplement to n°6, February 12, 1897, 71-140, Population census of February 14, 1896.

²²⁶ In October 1894, while the first negotiations were being carried out for the resumption of the Horta de Volong, Governor Horta e Costa would launch the procedures to "build a new district in Sakong, to be

well as conveniently drained and lined with trees,”²²⁷ its general and detailed plans and elevations had been explicitly imposed to the concessionaire by the Public Works Department.²²⁸ This included instructions regarding specific proportions for doors and windows, all openings to be lined with “0,20-meter-wide frames of feigned masonry,” the use of platbands topping the façades, as well as painting the exterior walls to “feign European brick.”²²⁹ Although similar instructions can’t be found in the primary sources regarding Volong, the Sakong contemporary example shows that it must have been a common practice for the Public Works Department, under Abreu Nunes’ direction at least, to plan and oversee fairly detailed overall projects, from general street layout to building regulations and alignments, right up to the characteristics of the residential units, for each one of Macao’s future ‘epidemic-free’ districts. As the true sanitarians that they were, Abreu Nunes and Horta e Costa meticulously planned for hygienic living in a sanitized city. As Dr. William Simpson would put it:

If streets are not laid out on a definite plan and on sanitary principles or when so laid out the houses are not subject to regulations as regards their height, depth, site, the area they cover, their relation to one another and the amount of air space to secure a free circulation of air for each, a congested area is soon formed in which there is too much crowding together of houses and too many houses on too small a space. These congested areas are always filthy and always unhealthy.²³⁰

Sadly, due to present-day property development, the 1895 Volong housing program has all but disappeared. Its northern blocks can be identified in the 1960s, for the most part in their original state, in Figure 81. Figures 79 and 80 show some much decayed remaining units still standing today in Rua do Campo. Some of the better safeguarded S. Lázaro units, however, suggest that its ‘back lane model block’ must have initially derived from the Volong experience. It is the case of the Rua

occupied by poor family dwellings, with proper sanitary conditions, over an existing vacant land.” (BG, n°42, October 20, 1894, 505, Public notice by the Procurator for Chinese Affairs, regarding the new social housing district of Sakong, October 18, 1894). In his Public Works report for the year 1894/1895, Abreu Nunes would state that this district had been planned to accommodate the Chinese population forced by the resumption in Volong, “as well as from other districts yet to be expropriated,” to abandon their homes, offering them an alternative of “cheap and sanitary dwellings.” (AHU, 2541-1B-SEMU cx., Macao Public Works report for the year 1894/1895 by Public Works Director Augusto César de Abreu Nunes, June 30, 1895). For more on this operation, namely in relation to the 1900s Macao General Improvement Plan, see Chapter IV.

²²⁷ BG, n°2, January 12, 1895, 15-16, Government of Macao local ordinance n°2, regarding the new social housing district of Sakong, January 12, 1895.

²²⁸ In his Public Works report for the year 1895/1896, Abreu Nunes wrote, regarding the January 12, 1895 Sakong concession contract: “the concessionaire is obligated to build 54 houses according to the project drafted by this Department” (AHU, 2541-1B-SEMU cx. Macao Public Works report for the year 1895/1896 by Public Works Director Augusto César de Abreu Nunes, December 12, 1896).

²²⁹ BG, n°2, January 12, 1895, 15-16, Government of Macao local ordinance n°2, regarding the new social housing district of Sakong, January 12, 1895.

²³⁰ Simpson, *The Principles of Hygiene*, 297.

de S. Roque units (Fig. 78), which share the slim plot scaling of the Volong ones, and consequently the same façade design with just two vertical rows of openings each, topped by the ‘columned’ platband, which seems to be omnipresent in both districts’ elevations. This block is, however, built according to the new S. Lázaro experimental layout, with each unit having its own small terrace, instead of a backyard, opening to a narrow back street.

Looking once more at the S. Lázaro elevations published by Dr. William Simpson (Fig. 85), it seems likely that these correspond to a longitudinal section through Calçada da Igreja de S. Lázaro, showing the top façades of both the Rua de S. Roque/Rua Nova de S. Lázaro and the Rua Nova de S. Lázaro/Rua do Volong blocks. The latter is noticeably larger than the first, the extra width having been incorporated in either line of houses, making for an extra vertical row of windows on each façade. Given Simpson’s presence in Hong Kong in 1902 “on a fact-finding mission,” as Myron Echenberg puts it, to prove that the “plague was a disease of dirt and overcrowding,”²³¹ I venture that he may have come in contact, during his stay in the region, with Abreu Nunes’ work on the Volong and S. Lázaro restructuring projects, directly or indirectly, through the channels of communication of the colonial province’s public works and medical experts. The published drawings could therefore be dated from around 1901/1902 and have been among the Macao Public Works Director’s first drafts for the new sanitary housing typology.

The year 1902 is also referenced by the Archives of Macao regarding a set of twelve plans, sections and elevations of the S. Lázaro residential units.²³² According to the Archive catalogue, this ensemble of plans, broadly dated from April 1902 to September 1924, is part of a Santa Casa da Misericórdia file regarding the construction of four houses in the S. Lázaro district. The plans themselves are undated, although I believe they can be sorted into two different dates, chiefly through the inspection of the graphic elements, namely of the captions.

The first group could correspond to the April 1902 plans for the Rua Nova de S. Lázaro/Calçada da Igreja de S. Lázaro/Rua do Volong block (Figs. 90, 91, 92 and 93). The transversal sections and top elevations differ slightly from the ones published by Dr. Simpson, namely in the number of vertical rows of windows. Nevertheless, such as the latter, these drawings seem to present alternative versions, or variations on the same project. One sees the block divided into two rows of eight small houses each, with their service areas (noted as “kitchen,” “patio,” with its individual well, and “servants” room) communicating with the famous back lane or “inner street” (*rua interior*), as mentioned in the floor plan (Figs. 90, 91 and 92). The other almost merges each two

²³¹ Echenberg, *Plague Ports*, 44.

²³² AM, MNL.10.01.CART and MNL.10.01 [‘a’ up to ‘j’].CART, Plans for the new houses to be built in the S. Lázaro district (1902-1924).

units together, forming two rows of five houses each (Fig. 93).²³³ The last plan details the ground floor of one of these five units, situated in the corner of Rua Nova de S. Lázaro and Calçada da Igreja de S. Lázaro, developing symmetrically around a central staircase (Fig. 94). Differing radically in terms of graphic detail from the other ones, this plan seems to be part of a file submitted to the Public Works Department for approval. Corroborating this assumption, it is signed with the visa of “the acting director,” and it has a fiscal stamp, seemingly dated from March 3, 1911. This might therefore be a somewhat later individual project for a specific vacant lot, as construction of the ensemble must have happened some time before 1908. This is inferred from the observation of Public Works Director António Pinto de Miranda Guedes’ General Improvement Plan that same year,²³⁴ as well as of the 1912 general historical map (Fig. 15), where all of the S. Lázaro and Volong blocks appear almost completely built.

As we can see from the reconstitution of the Rua Nova de S. Lázaro/Calçada da Igreja de S. Lázaro/Rua do Volong block in Figure 95, the two-times five-house block corresponds to the layout that was eventually built. This substantiates the previously mentioned notion that, contrary to what had happened in the Hora da Mitra which, after its restructuring operation, still remained a popular, working-class district, Volong and S. Lázaro’s housing townhouse model had evolved over time into a much more comfortably scaled plan, probably in order to attract a wealthier population. The fact that a part of it was sponsored by a charitable institution such as the Santa Casa da Misericórdia doesn’t mean that this was conceived as social housing, even if the single units seem to have been much narrower in the original 1899 and 1902 projects (Figs. 90 and 91) compared to those actually built. Rather, it confirms that these new tenements were capable of appealing to ‘big business,’ as important placements for private investors, as well as considerable sources of fiscal revenue for the Government.

V. ‘Tropicalizing planning’

In spite of the blank spaces in terms of date and authorship, surely to be clarified by future archival research, the fact remains that these housing typologies, experimented-on and developed between 1895 and 1902, probably by Abreu Nunes and his collaborators in the Public Works department,

²³³ In the 1899 S. Lázaro westward extension plan (Fig. 89), this row of blocks appears divided in no less than eleven single plots (times two).

²³⁴ For more on the 1908 Macao General Improvement Plan and, in general, on the prolific work of Public Works Director António Pinto de Miranda Guedes, see Chapters IV and V.

ended up leaving something of an impression on Asian colonial circles working on tropical medicine and urban sanitation, as Dr. Simpson's reference seems to show.

Indeed, as architect and researcher Jiat-Hwee Chang puts it, Simpson worked mainly with the purpose of "codifying rules" on tropical sanitation, so that urban planning theories might "travel without distortion" throughout the British Empire and, we may assume, also throughout the Western imperial network, helping colonial governments better handle their population's mortality rates through improved urban sanitation.²³⁵ Therefore, by the 1900s, and in the Scottish doctor's view, a general publication was wanting, which would compile a sort of 'code of practice' in tropical public health for medical experts and public officials alike, to assist them in "guiding and controlling" the turn-of-the-century colonial interest in "sanitary matters."²³⁶ An interest in sanitation that he compared with the one that had "existed in the early Victorian era in England."²³⁷

Simpson's 1908 *Principles of Hygiene*, which Jiat-Hwee Chang compellingly deems a "manual on tropical sanitation"²³⁸ represents, therefore, the archetypal tool of the European global modernizing enterprise. For, even if this book's very Enlightened purpose was surely the betterment of society and the progress of civilization, it most definitely approaches the city "as a technical object to be worked on, improved and regulated,"²³⁹ mainly in terms of hygiene and mobility, erasing urban differences, names, identities, and even ethnicities, in a bid for modernity's universal solutions. In such a compendium of *bonnes pratiques*, the Portuguese engineers' work was thus codified and sent of anonymously into the greater network of imperial experts to extend an almost abstract visual influence.

Of course, as we have seen in the previous section, the edited and printed document was the main channel of dissemination and exchange, in this long nineteenth century, of techno-scientific knowledge, but also of modern architecture and town planning's new visual codes. To pick an example close to home, as Macao Public Works Director in 1887, Horta e Costa had asked for permission to subscribe to a number of international technical publications, which might "be consulted in the resolution of building or architectural problems," as well as help the province's

²³⁵ Jiat-Hwee Chang, "'Tropicalizing' Planning: Sanitation, Housing, and Technologies of Improvement in Colonial Singapore, 1907-42," in *Imperial Contagions: Medicine, Hygiene, and Cultures of Planning in Asia*, ed. Robert Peckham and David M. Pomfret (Hong Kong: Hong Kong University Press, 2013), 47.

²³⁶ Simpson, *The Principles of Hygiene*, v.

²³⁷ Ibid.

²³⁸ Chang, "'Tropicalizing' Planning", 45.

²³⁹ Rabinow, *French Modern*, 77. Going back on the discussion of nineteenth-century modernity by the hand of the public health and public works experts, as brought up in the Introduction.

technical staff to keep in touch with “the evolution of science.”²⁴⁰ Among his requests were British periodicals *The Architect* and *The Builder*, specializing in decorative art, architecture, civil engineering and construction, science and technology ‘for the general public’ magazine *Scientific American*, and general illustrated British newspaper *The Graphic*.

Simpson himself cited some periodicals as references for his *Principles of Hygiene*, though mostly related to medical issues in the British tropical provinces, such as *The Indian Medical Gazette*, *The Journal of Tropical Medicine and Hygiene*, *The Journal of the Malaya Branch of the British Medical Journal*. But likewise, “Reports of the Sanitary Commissioners with the Government of India and the Reports of the Sanitary Commissioners for the different Provinces in India, [as well as] Scientific memoirs of the medical officers of the Government of India.”²⁴¹ As previously discussed, these numerous reports, hailing from India as from all over the colonized world, were frequently published by local or metropolitan governments, in Britain as in Portugal and throughout Europe, for the purpose of diffusion and naturally also, to some extent, to serve as institutional publicity. Public Works Director António Pinto de Miranda Guedes would claim as much regarding his 1909 Macao General Improvement Plan, writing:

As soon as the plans for the new alignments and the new districts are complete, in accordance with the general guidelines of the harbor improvement project, we must, and we intend to draft a general plan, in a smaller scale, to publish. This would serve the double purpose of spreading the word in all the Far East, where Macao has been losing its rightful place, about its progress and restructuring, and also of sparking the interest of the colony’s own population and living forces in these improvements. We believe that Central Government will waste no time in requesting its publications by the Cartography Committee, whose last edition of the Macao map was the 1889 one [Fig. 8].²⁴²

Acknowledging that information on the techno-scientific achievements of the European imperial powers was actively circulating among the networks of experts, Simpson also quoted the “Colonial medical reports issued by the several Colonial Governments” as references.²⁴³

Stemming from this type of urban planning manuals’ powerful influence, this tendency to abstract from the urban reality at hand, which was already quite prevalent in Abreu Nunes’ work in view of his inclination for the ‘clean slate’ solution so much-admired by Simpson, will be even more so in his successor’s Miranda Guedes improvement projects for the Chinese Bazaar (1907) and for the

²⁴⁰ AM, MO/AH/AC/SA/01/00846, Letter n°200 from Macao Public Works Director José Maria de Sousa Horta e Costa, to the Government Secretary-General, asking permission to subscribe to several architectural and engineering journals, October 27, 1887.

²⁴¹ Simpson, *The Principles of Hygiene*, 376.

²⁴² AHU, 251-2G-1S-SEMU-DGU cx., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, on **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

²⁴³ Simpson, *The Principles of Hygiene*, 376.

Tap-seac/Lin-tin-chin districts (1908).²⁴⁴ Given his way, the Public Works Director would have cleared away vast portions of the century-old Macao central districts, to start over with a new and, in his view, properly regulated city.

In the Chadwickian race against the rise of the mortality rate, the city itself was imagined as a sick body, to be cured through regular urban planning. Or, as Simpson put it, “town planning”:

Wide streets and open spaces are necessary in the Tropics. [...] The streets should be straight and intersect one another at right angles. The principal ones should be so constructed as to be in the direction of the most prevalent and healthy wind, in order that they may act as ventilating conduits to the town or village. Shade should be obtained in the streets by planting on the foot paths suitable trees giving the maximum of shade with the minimum of obstruction to the circulation of the air.²⁴⁵

However truly universal and globally scientifically this formal remedy may have been presented to be, the actual results of the grid system and of its new housing typologies were somewhat harder to depict with scientific precision. And so, despite Simpson's peremptory affirmation on the efficacy of modern town planning in S. Lázaro on having saved Macao from the plague, this quantifying difficulty was well expressed by Dr. Gomes da Silva. On the one hand, the Public Health Director was positive that the demolition of Volong had been strategic in preventing the rise of the 1895 epidemic in Macao to catastrophic proportions:

The damage caused [by the plague], with the Volong district demolished, the present report will tell; the harm that it would have caused, if the Horta de Volong was still standing, I dare not compute, not even approximately. Probably, the 1895 epidemic in Macao would have been registered by its relative intensity together with those of Canton and Hong Kong in 1894.²⁴⁶

On the other, the certainty of his arguments wavered while analyzing other slums, such as S. Paulo, which had been set up for demolition together with the Horta da Mitra back in 1885.²⁴⁷

The predisposing causes depending on the external milieu are diverse and diversely powerful. The accumulation of individuals living in filth, lacking light and air, are undoubtedly some of the main predisposing factors to contract the bubonic plague. [...] It is difficult to discriminate the part of each one of these important factors in the development of the epidemic sources. From what I have observed, however, it seems that, if accumulation and filth have a proved effect, the lack of air and light compounds it still. Perhaps this explains the relative exemption of some Macanese districts that seemed cut out for bacterial hotbeds, such as the Horta de S. Paulo, for example, where filth abounded, and sadly abounds still in every corner. Whereas Praia do Manduco, one of the city's cleanest districts, [...] was also the most struck by the epidemic. For, although in the Horta de S. Paulo there was horrible filth, there was also light

²⁴⁴ For more on the prolific work of Public Works Director António Pinto de Miranda Guedes, and in general on the subject of ‘the regulated city’, see Chapter IV.

²⁴⁵ Simpson, *The Principles of Hygiene*, 305.

²⁴⁶ Silva, *A Epidemia de Peste Bubónica em Macau*, 14.

²⁴⁷ AHU, AHU-ACL-SEMU-DGU-1R-002, Cx.0004, Letter n°195 from the Governor of Macao, Tomás de Sousa Rosa, to the Minister of the Overseas, regarding sanitation requirements in the Horta da Mitra and S. Paulo districts, **September 10, 1885 (transcribed in Volume 3 - Annexes)**.

and air, as its site, in the slope of a hill, enjoys the sun and the wind, naturally draining itself from the torrential rains; whereas in Praia do Manduco, low and sheltered from the wind, made of dark alleys, some of them blind, the plague bacillus found more favorable conditions to develop.²⁴⁸

And so, caught up between broadly discriminating “where there is a Chinese there is filth”²⁴⁹ Orientalist sort of generalization,²⁵⁰ and the lack of reliable scientific data about the physical channels through which the disease actually spread,²⁵¹ the techno-scientific experts purposely put forward, well into the early twentieth century, as William Simpson’s published work demonstrates, the environmental remedy of rational, geometrically regular, city planning. Confident that such a codified and ready-to-use action on the built environment, to be achieved through government-led land resumption operations, would bring to the ‘sick,’ disordered tropical city districts, the urban hygienist’s aspired universal prophylaxis/panacea of ‘air and light.’

VI. Municipal vs. Provincial Public Works

Epidemic threat and the leverage it gave central government to intervene in urban management from the public to sometimes even the private sphere, also contributed to establish the Public Works Department as the province’s indisputable authority in terms of techno-scientific city building. Particularly regarding the City Senate’s aspirations to regain some of the autonomy in terms of public works that the 1842 Administrative Code theoretically conferred to the municipal authority.

²⁴⁸ Silva, *A Epidemia de Peste Bubónica em Macau*, 67-68.

²⁴⁹ *Ibid.*, 69.

²⁵⁰ To borrow on Edward Said’s well-known 1978 concept of Orientalism, understood as a “Western style [or discourse] for dominating, restructuring, and having authority over the Orient,” in which the latter emerges as “almost a European invention” [Edward Said, *Orientalism. Western Conceptions of the Orient* (London: Routledge and Kegan Paul Ltd, 1978), 1-3]. Social anthropologist Anthony Cohen’s interpretation of Said’s concept maintains that “the Western intellectual tradition created its own versions of oriental cultures which it imposed upon oriental peoples and then denigrated, thereby justifying the West’s own domination of the Orient a an essentially civilizing mission” [Anthony P. Cohen, “Culture as Identity: An Anthropologist’s View,” *New Literary History*, 24 (1993): 199].

²⁵¹ From summer 1894, news of the plague in Hong Kong had attracted an array of international bacteriologists to the British colony, competing for the discovery of the epidemic’s causal agent. Despite publications by Japanese scientist Kitasato Shibasaburō and “young Franco-Swiss Pastorian” Alexandre Yersin, respectively in August and in September 1894, identifying the plague bacillus and identifying rats as the probable major factor in its transmission (see Echenberg, *Plague Ports*, 33-35), generalized prejudices linking the disease to overcrowding and unsanitary living conditions seems to have served to fuel urban restructuring theory and practice in the ‘plague ports’ and through the global imperial network well into the twentieth century, if Dr. William Simpson’s reference is anything to go by.

This was apparently still very much a controversial issue in 1909, when the Senate was refusing to pay the contribution it was due to the salary of the provincial Public Works Department personnel engaged in municipal works. Which would prompt the Overseas Director-General to urge the Minister to publish a national ordinance stripping the Senate from any remaining technical responsibility regarding public works, while still being obligated to contribute to their financing. Thus, argued the metropolitan administrator, would Macao finally be free from the pernicious influence of its own “sons”²⁵² which, in collusion with the Chinese merchants and landowners, had been responsible for the backward state of its planning, and consequently for the recurrent appearance of cholera and plague epidemics. In the Director-General’s view, much as a local and corrupt administration had resulted in a disorganized urban pattern causing disease and death, so a central and reputedly strong authority would restructure the contaminated tissues making way for a physically, as well as socially sanitized, modern city.

What the City Senate wishes at all costs is to be the only one to command and oversee regarding municipal works, which would simply imply that the city would continue to be a tortuous labyrinth of streets, alleys and courtyards, where plague and cholera would devastate, as they have done, the greater part of the population. For Macao to keep its status of the healthiest city of the Far East it would be absolutely necessary to strip away from the City Senate, which is to say, from the influence of the wealthy Chinese, proprietors of most buildings in town, the responsibility of delivering building permits, of inspecting construction and street alignments, etc., so that only the Technical Council and Public Works Department might, with their higher standard, knowledge, and impartiality regarding local influences, lead us through the path we have already embarked upon.²⁵³

The issue was far from new, as seen in the previous chapter. It nevertheless regained momentum in the early 1880s, when responsibility for the city’s sanitary state rekindled the controversy. As Senate President Domingos Clemente Pacheco had claimed in his arguments in favor of a Government-led Macao General Improvement Plan, the December 1, 1869 administrative reform²⁵⁴

²⁵² In 1902, the Overseas Director-General had quoted the Macao Public Works Director in claiming that, in his view, the City Senate lacked the technical expertise required to oversee municipal works. At that time, Augusto César de Abreu Nunes had written that “the municipality is, in general, comprised of children of Macao [*filhos de Macau*,” or Macanese (cf. Chapter II)], and in Macao there is not and there has never been one single arts and crafts school; there is no teaching anywhere of the most rudimentary construction principles; thus, how can the municipality oversee such works without a properly qualified personnel, which is also comprised of children of Macao? To make matters worse, the municipality deems it its prerogative to alter the instructions issued by the technical department [Public Works].” AHU, 251-2G-1S-SEM-U-DGU cx., Minutes from the Overseas General Direction meeting regarding the issue of responsibility for municipal works in Macao, on September 25, 1909. Document 7.

²⁵³ AHU, 251-2G-1S-SEM-U-DGU cx., Minutes from the Overseas General Direction meeting regarding the issue of responsibility for municipal works in Macao, on September 25, 1909. Document 14.

²⁵⁴ BG, n°42, October 10, 1871, 167-170, Government of Macao local ordinance n°57, implementing the December 1, 1869 Administrative Code in the province of Macao, October 9, 1871.

clearly stated that the Public Works Department was to be in charge of planning all municipal works, which included street conservation and drainage.²⁵⁵

In reality, the situation was a bit more entangled. Despite the fact that the Macao City Senate had indeed been relieved of some the municipal attributions established by the 1842 Administrative Code, such as street conservation, drainage, docks, water supply, gardens and forestation, it was still obligated to uphold certain responsibilities, namely in terms of street cleaning and garbage disposal, as well as building regulations and permits. In the summer of 1888, facing the menace of a new cholera epidemic, what had been perceived as the Senate's shortcomings, even in this reduced list of responsibilities, and their impact on public health, had led Governor Firmino José da Costa to the extreme decision of dissolving the municipal council and calling for an anticipated election.²⁵⁶ Unsurprisingly, the Government inquest that followed was unapologetically critical of the Senate's action, or rather, inaction, both in terms of public hygiene and urban planning.

Fourteen was the number of letters sent by the Public Health Director to the now-dissolved Municipality, and some of them through the superior authority [the Governor], asking for cleanliness, as well as for preemptive measures against the smallpox epidemic that raged here, or against the cholera threat from our neighboring colony [Hong Kong]. [...] The inquest committee, having read [these letters], was astonished to realize that, in some of them, the Senator President, instead of fulfilling his duties, answered evasively with dissertations on public hygiene, arguing technical matters with the physician, a graduate from the Kingdom's schools!

[...] In regard to paragraph VII [art. 120° of the 1842 Administrative Code], we found nothing to prove the Municipality's vigilance in this branch of service [building regulations and permits]. Its action is limited to give out licenses with the invariable phrases "licensed to build, licensed to repair" and nothing more. [...] Seldom has the Municipality imposed a new alignment to the landlords; very rarely has it concerted with the Public Works Director in accordance with the December 31, 1864 national ordinance, and when it did, they have never reached consensus, and the alignment given by the Municipality prevailed. Thus, even when the municipal ground is not usurped, which is easily done, the aspect of the buildings has not improved, as the city rebuilds itself successively over its old foundations, in the same sinuous and irregular lines, with the same nooks and crannies that it had forty years ago.²⁵⁷

Surprisingly, six years later, in the midst of the first plague outburst in Hong Kong, Governor José Maria de Sousa Horta e Costa would establish that street conservation and drainage, as well as the city's public gardens, should be managed and budgeted autonomously by the Municipality, as per the letter of the Administrative Code. Horta e Costa justified this decision with the conviction that

²⁵⁵ AM, MO/AH/AC/SA/01/00470, Letter n°7 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Joaquim José da Graça, requesting the drafting of the city of Macao General Improvement Plan, **February 10, 1883 (transcribed in Volume 3 - Annexes)**. Document 5.

²⁵⁶ BG, supplement to n°31, August 4, 1888, 275, Government of Macao local ordinance n°108, dissolving the Macao City Senate, August 4, 1888.

²⁵⁷ BG, n°34, August 23, 1888, 291-295, Committee report regarding the legal responsibilities of the Macao City Senate, August 20, 1888.

“the province’s general administration has nothing to profit from an excessive centralization that absorbs the proper functions of local corporations, on the contrary, it must assign to these corporations all the authority and legitimate ability so as to make them valuable auxiliaries in its action, as component parts of a harmonious whole.”²⁵⁸

The purpose of this decision, however, was not just to selflessly emancipate the City Senate from five decades of mistrust from central administration which had “hampered its initiative and vitality.”²⁵⁹ In a very overtly manner, it was also to profit from new municipal revenues in order to inflate the road and public gardens maintenance budget, so that the provincial Public Works funds could concentrate, as the Governor put it, on the “improvements the colony demanded.”²⁶⁰ These were, at the time, the Volong and S. Lázaro resumption plans, as well as the Macao Inner Harbor Improvement Project. The latter was indeed the central and omnipresent concern of both the metropolitan and local elites, as we shall see in Chapter V, as expressed by Senate President attorney António Joaquim Basto, while positioning the Municipality in line with the Governor’s plan: “Taking into account the noble feelings that characterize [Governor Horta e Costa] and his high commitment to improving the Macao harbor navigation conditions, and wishing to cooperate as well as possible in the accomplishment of these improvements, on which depend the prosperity of this city, by lightening some of the [public works] expenses,” the Senate formally requested that some of the public works budget items be transferred to municipal administration.²⁶¹

Despite the elated expressions both Governor Horta e Costa and Senate President António Joaquim Basto used to describe one another’s role in the restoration of good relations between the province’s central and local administrations, this envisioned “new era in the municipal annals” where the City Senate would “run parallel with its Kingdom counterparts”²⁶² was unfortunately not to be.

The tendency in the metropole was actually quite the opposite to the reinforcement of local autonomy in terms of urban planning and management which Horta e Costa advocated for Macao.

²⁵⁸ BG, n°22, June 2, 1894, 264-265, Government of Macao local ordinance n°118, regarding the responsibilities of the City Senate in terms of roads, gardens and drainage system, June 1, 1894.

²⁵⁹ Ibid.

²⁶⁰ Ibid.

²⁶¹ AHU, AHU-ACL-SEMU-DGU-1R-002, Cx.0008, Letter n°270 from the Governor of Macao, José Maria de Sousa Horta e Costa, to the Minister of the Overseas, regarding the transfer to the City Senate of the responsibility over construction and conservation of city roads, gardens and drainage system, June 18, 1894. Document 1.

²⁶² Ibid. Document 3.

Faced with the lack of means of most peripheral municipalities outside of Lisbon and Porto,²⁶³ Minister of Public Works Pedro Victor da Costa Sequeira (1845-1905)²⁶⁴ would publish, in 1892, a national ordinance reorganizing not only the Ministry's staff, but its attributions as well, with the general purpose of transferring the management of all municipal public works to the districts' public works departments.²⁶⁵ Which meant that any larger scale local urban planning and infrastructure projects envisioned by the Municipal Councils were henceforth obliged to submit to the Superior Council of Public Works' formal approval, as well as to the visa of the Minister himself. In other words, exactly the kind of 'excessive centralization' the Governor of Macao was determined to rebut around the mid-1890s.

Nevertheless, on September 1900, the same Horta e Costa, by then in his second tenure as Governor of Macao, would publish a Ministry of the Overseas national ordinance establishing precisely Minister Costa Sequeira's centralizing vision of public works management in the province. The August 4, 1900 national ordinance clearly stated that, "in important settlements such as Macao," it was "convenient and admittedly advantageous" that the "conservation of public gardens, road maintenance, as well as private building inspection, in regard to alignments, solidity, hygiene and exterior appearance, should be managed by a properly established technical department."²⁶⁶ Considering the lack of such a department within the Municipality, it was decided that all public works, municipal or otherwise, would remain under the responsibility of the province's Public Works Department. Horta e Costa further supported the Ministry's ordinance by publishing a local text determining that the City Senate relinquish all projects, documentation, budgets, tools and equipment to the Public Works Department. As, henceforth, the Public Works Director, under the

²⁶³ Margarida Relvão Calmeiro illustrates the example of Coimbra which, in this context, presents some similarities with the situation in Macao. In both cities, despite the Municipality's determination to manage its own public works division, the annual budget was insufficient both to maintain a technical staff and to uphold a solid urban renovation program. See Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 301-302.

²⁶⁴ Lisbon-born Pedro Victor da Costa Sequeira is an interesting example of a second-generation 'fontist' actor in the long-Regeneration period (as in 'Fontism,' *Fontismo* in Portuguese; cf. Chapter II). Stemming from a civil and military architecture and engineering family, he was a University of Coimbra graduate in Mathematics, having earned his degree in Civil Engineering by the Paris École des Mines. On the Ministry of Public Works' permanent staff since 1868, he joined the Regeneration political party, having been appointed Civil Governor of the Beja district in 1881. He served as Minister of Public Works for merely nine months, from May 1892 to February 1893, until the fall of his respective government.

²⁶⁵ DG, n°276, December 5, 1892, 897-908, National ordinance of December 1, 1892, regarding the general organization of the Mines and Public Works Departments and of their respective technical staff.

²⁶⁶ BG, n°38, September 22,^d 1900, 595, Government of Macao local ordinance n°113, regarding the transfer of the responsibilities in terms of roads, gardens and drainage system, from the City Senate back to the Public Works Department, September 22, 1900.

Governor, would hold absolute authority over public urban planning and infrastructure project clearance and management, as well as, most importantly, over private building permits.²⁶⁷

Governor Horta e Costa would later state, in a letter to the Minister of the Overseas, that the “doctrine” of the August 4, 1900 national ordinance would bring considerable improvements to the province of Macao.²⁶⁸ Justifying his change of heart in regard to his move in favor of decentralization in 1894, he admitted his good intentions at the time had been defeated by the general unwillingness of the Senators to follow the instructions of the Public Works Director as head of the municipal public works department.

The Public Works Director was indeed appointed to oversee municipal works, however, his opinion on any give matter was largely disregarded by the Municipality, which often adopted a totally opposite opinion, giving cause to this civil servant, after a short while, to feel that he could no longer serve that office. Since then, the department of municipal works has been handed to some amateur that generally knows nothing, and therefore its execution and supervision has been handled in the worst possible way.²⁶⁹

Despite the Senate’s recurring protests over the following decade, the provincial Public Works Department kept as tight as possible a grip on urban planning through the prerogatives established by the August 4, 1900 national ordinance. The metropolitan and local Government claim being that, to save the city from epidemic threat, sanitation was paramount. And that, to this end, higher techno-scientific expertise was needed, which could only be provided by Government experts employed in a larger-scale Government-led city improvement plan.

* * *

Macao's first experiences in urban sanitation tell a story of discourse and opportunity. Of how a particular set of exceptional circumstances contributed to develop, in the last quarter of the nineteenth century, a political and social climate favorable to urban renovation, largely based in the fear of epidemic threat which was, to a certain extent, taken advantage of by the local government to legitimize and advance a (by now) decades-old political agenda of increasing its hold over territorial management.

As seen earlier, the Chinese population had been growing at an increasingly fast rate since the 1850s. In Macao’s historical maps of the 1830s, for example, the Horta da Mitra and Horta de

²⁶⁷ Ibid.

²⁶⁸ AHU, 251-2G-1S-SEMU-DGU cx., Minutes from the Overseas General Direction meeting regarding the issue of responsibility for municipal works in Macao, on September 25, 1909. Document 3, October 10, 1900.

²⁶⁹ Ibid.

Volong were still just private agricultural lands. In S. Lázaro, a small cluster of buildings formed along the district's central street, connecting the Porta do Campo to Nossa Senhora da Esperança church and its lazar house, purposely set in the outskirts of town. Whereas in the 1860s these suburbs were already overcrowded and demanding some sort of solution to the ever-growing housing problem. As had been the case in the industrialized West, the high wheels of production and trade relied on these poor laborers to continue turning, at the same time resenting them and the disorder they lived in, deeming it uncivilized, unhealthy, and dangerous.

From this dire vision evolved through the Western(ized) urban network the modern industrial-age sanitarian and material improvement philosophies, forgoing what could have been a broader rethinking of the whole political economy system, but rather joining hands to provide codified and ready-to-use environmentalist strategies based, first and foremost, on the establishment of generalized water and drainage infrastructures which implied ambitious land resumption operations, themselves coupled with rational, geometrically regular, urban restructuring plans.

In Macao, though, much like in other overseas European settings, as the urban hygienist's proclaimed universal prophylaxis/panacea of 'air and light' turned into the codified sets of rules of 'tropical planning', it still did little to solve the problem of working-class living conditions. At best, the Mitra, Volong and S. Lázaro sanitation plans contributed to cast it further from the civilized eye, sending the evicted tenants from the expropriated properties to find their own solutions in the city's other overcrowded Chinese districts in the harbor area. Still, the rise from the restructuring ashes of three brand-new elegant suburbia with the traditional shophouse evolving into avant-garde hygienic housing typologies was enough for the Portuguese Empire to claim the success of its techno-scientific civilizing mission in the international stage. On the crest of such achievements, local administration would turn its eyes back towards the Chinese Bazaar, the city's last symbolic stronghold of the old divided sovereignty system and its century-old practices of *laissez-faire* space appropriation.

Negotiating Modernity and Sanitation: the Chinese Bazaar New Avenue, 1903-1908

On the afternoon of November 15, 1893, almost forty years after the great fire which had consumed the old Chinese Bazaar in 1856, paving the way for its subsequent urban renewal and extension, a conflagration broke out in the S. Domingos market. This was the site formerly known as the Grand Bazaar, situated in the heart of the old town, right between the Senate house and the abandoned Convent of S. Domingos, onto which converged both the Chinese and Christian districts, as it remained, at the turn of the century, the city's largest and most popular market (Fig. 96). Relying mainly on the old public and private well system, the Macao fire brigade tackled the flames from the adjacent streets, managing to contain them several hours later. This time, the fire hadn't spread further onto the Bazaar streets and no lives had been lost. Nevertheless, the S. Domingos market and surrounding shophouses were, once again, almost completely destroyed.¹

In the aftermath of the 1895 plague epidemic and following the success of the Horta de Volong and S. Lázaro resumption operations, the need to rebuild the city market provided the perfect opportunity to tackle the more delicate issue of urban sanitation in the vast and intricately complex Chinese Bazaar. Twenty-year-old technical and political ambitions now seemed achievable, such as applying the clean-slate planning strategy to important portions, or even to the whole of the Chinese district. Or, in a comparatively toned-down vision, the 1883 Improvement Committee's already mentioned Chinese Bazaar regeneration/gutting project, involved opening a new avenue connecting the Macao inner and outer harbors through Largo do Senado. Emblematic gesture of urban restructuring, the latter's construction over the 1910s and 1920s would clearly respond, in its philosophy, promotion, funding and deployment, to central Portuguese governments' design of further imprinting the urban landscape with the modern imagery of geometrical, sanitary order.

In this Chapter, we will be looking at the history of planning for the Chinese Bazaar New Avenue in the larger context of the 1900s new generation of General Improvement Plans, which were being

¹ BG, n°47, November 25, 1893, 529-530, Information regarding a fire in the S. Domingos market on November 15.

deployed throughout the Portuguese metropolitan, as well as overseas cities. From this case-study, we will start by questioning the place, resources and possibilities for modernity and sanitation in the face of the resilient, century-old urban expansion model based on laissez-faire space appropriation, as well as for regularity in the face of an additive morphology. Which will lead us to question the nature of such ‘achievable modernities’, in terms of urban planning, whether they find themselves in colonial contexts or not.

‘The Avenue’ as a Marker of Modernity

I. In the 1883 Macao General Improvement Plan

The less than ideal sanitary provisions of the S. Domingos market had first been recorded by Dr. Lúcio Augusto da Silva in his Public Health Department report for the year 1870. According to Dr. Silva, it consisted of an array of “small, dark and moist” houses and sheds (Fig. 97) where vegetables, fish and meat were sold, but also where pigs and poultry were being raised and slaughtered, despite the official ban on such practices inside city limits and outside of the municipal slaughterhouse, which had been built in 1864.² Twelve years later, nothing seems to have changed, as the Public Health Director, in his 1882 report, was still protesting against these same practices.³

Therefore, it comes as no surprise that the S. Domingos market should feature in the November 20, 1883 report from the Macao material improvements committee⁴ as the prime ambassador of the Macao “pigsty” markets, an adjective deliberately used by its authors in its literal sense.⁵ The committee recommended that a new building should be erected in the same central spot, although with a much larger area, and abundantly provided with piped water so as to at least encourage the establishment of more sanitary habits. A resumption plan for the former Grand Bazaar block was also explicitly recommended, so that the new building might be conveniently spacious, as well as

² BG, n°14, April 3, 1875, 64-65, Report on the Macao Public Health Department following the publication of the National ordinance of December 2, 1869, organizing “the overseas provinces’ public health department”, by the province’s Public Health Director Lúcio Augusto da Silva, **April 2, 1871 (transcribed in Volume 3 - Annexes)**.

³ BG, n°20, May 19, 1883, 189-190, Macao Public Health report for the year 1882 by Public Health Director Lúcio Augusto da Silva, March 30, 1883.

⁴ For more on the 1883 Macao material improvements committee and Macao General Improvement Plan, see Chapter III.

⁵ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, November 20, 1883.

isolated from all other constructions, in order to facilitate proper ventilation and the unencumbered circulation of its clients, vendors and suppliers.

And since resumption plans were being considered, the committee had decided to take on the historic districts, “a city with all the flaws of the old urban construction system,”⁶ so as to evaluate how the parameters for sanitary urban planning established by the December 31, 1864 national ordinance,⁷ in terms of street width and building height, would fare in Macao. Not so much, as it turned out:

Everyone knows that the streets of Macao, even if not mentioning the Chinese districts, are crooked, narrow, varying in width almost at every building and that, except for Praia Grande, Rua do Campo, and some isolated portions of other streets, it is impossible to find any example that comes close to the [1864] legal model. Another flaw is the terrible layout taken by the streets over time, to an extent that tedious turns separate two places that nature put so close.⁸

The suggested solution, which, I would venture, may be credited to Public Works Director and 1883 Macao Improvement Committee President Constantino José de Brito, would be to plan a ‘gutting’ operation, in Portuguese ‘*abertura*’, literally meaning ‘to open’ or ‘to cut through’ the old Chinese Bazaar, in the form of a new avenue connecting the inner harbor to the Praia Grande outer sea piers, across Largo do Senado (the ‘Senate square’):

But among these evils there is one so ponderous that remedy is becoming indispensable. It is the lack of communication between the inner and the outer harbor roads. A large carriage cannot work through the complicated series of streets and lanes that currently connect these two most important points, and a small car is barely able to navigate the crowds that flow through them, especially at the [Canton and Hong Kong] steamboats arrival and departure times.

A new street that, starting from Praia Grande, east of the Governor’s palace, and passing the Senate house, would proceed to the inner harbor, should answer an urgent need and notably embellish the city, if it were adequately designed to become a large tree-lined avenue, which in time would become the center of Macanese commerce, as the European businesses would surely take up the sites situated between the Largo do Senado and the Praia Grande road, leaving to the main Chinese stores the new avenue extending through the Chinese district.⁹

Earlier that year, as mentioned, the Public Works Director had already voiced his preference for the clean-slate strategy when handling urban morphologies of an additive nature. He had done so regarding the S. Lázaro district, for which resumption and restructuring plans had been presented

⁶ Ibid.

⁷ DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, “regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom’s cities, towns and other settlements.” For more on this national ordinance, which came to be known as the text establishing the “general improvement plan” as a legal object, see Chapter II.

⁸ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, November 20, 1883.

⁹ Ibid.

as the only approach “to establish a regular and suitable sewerage system covering the whole district.”¹⁰ As we have also seen, regular sewerage infrastructure, ventilation and circulation goals, achievable through clean-slate restructuring and ‘gutting’ operations had been the very foundation of Minister of Public Works João Crisóstomo de Abreu e Sousa’s 1864 urban management reform, reinforced in 1872 by new legislation on expropriations for the benefit of, among other projects, “the opening or improvement of streets, squares, gardens and adjacent buildings.”¹¹ Brito’s discourse and pragmatic propositions for Macao were then well within the panoply of the material improvements philosophy with which the capital’s urban renovation was being envisioned and theorized.

II. In Lisbon, from the boulevard to the extension plan

As art historian Joana Cunha Leal has argued, however, Minister Abreu e Sousa’s 1864 legal framework for Lisbon’s ‘general improvement plan’ seems to have come from a broader hygienist background, as it was actually based on a report from a Congress on Sanitation which the Academia Real das Ciências (the ‘Royal Academy of Science’) had organized in December 1857.¹² This Congress had itself been planned in the wake of two cholera and yellow fever outbreaks which had set upon the capital in the years 1856 and 1857 causing over 6.000 deaths. Epidemic reality (and not just its threat) would thus bring together the city’s most prominent medical and engineering experts, as well as the entire governmental cabinet, and even King D. Pedro V himself, to address the core issue of urban improvement, as framed by the Academy’s Vice-president in the Congress invitation letter: “What are the improvements lacking in the city of Lisbon to preserve its population from the scourge of epidemics, to which it is presently exposed owing to accidental and easily removable causes of insalubrity?”¹³

¹⁰ AM, MO/AH/AC/SA/01/00470, Letter n°7 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Joaquim José da Graça, requesting the drafting of the city of Macao General Improvement Plan, **February 10, 1883 (transcribed in Volume 3 - Annexes)**. Document 1. For more on the S. Lázaro resumption plan, see Chapter III.

¹¹ DG, n°114, May 22, 1872, 56, National ordinance of May 11, 1872, “authorizing the government to decree the necessary expropriations for the opening or improvement of streets, squares, gardens and adjacent buildings, fortresses and american railways [trams]. For more on these urban management reforms, see Chapter III.

¹² Joana Cunha Leal, “A sanitização do imaginário urbano e o crescimento de Lisboa na segunda metade do século XIX,” in *Arte & Poder*, ed. Margarida Acciaiuoli, Joana Cunha Leal and M. Helena Maia (Lisboa: IHA, 2008) 122-123.

¹³ *Ibid.*

Among the participants, several committees were subsequently appointed to draft reports with which to outline the experts' responses to this query. And so it was that, in the "Fourth Committee," whose report was promptly presented in January 1858, took part none other than civil engineers Pedro José Pézerat (1801-1872)¹⁴ and Joaquim Júlio Pereira de Carvalho, respectively the Lisbon Municipal Public Works Director (*Director da Repartição Técnica da Câmara Municipal de Lisboa*) and his deputy.¹⁵ Now, eminent historian José-Augusto França has argued that Pézerat's celebrated *Mémoire sur les études d'améliorations et embellissements de Lisbonne*, published in 1865 in the context of the first Lisbon Improvement Committee (itself directly appointed in the wake of Minister Abreu e Sousa's 1864 national ordinance), must have derived from its author's knowledge and "enthusiasm" for Haussmann's Paris, which he had recently visited.¹⁶

Indeed, França argues that the December 31, 1864 national ordinance represented a milestone in terms of central government's policy on urban management, akin only, up until that point, to the importance of the Marquis of Pombal's 1756 legislation.¹⁷ Although, as the author puts it, "if the latter dealt with rebuilding a city, that of the Duke of Loulé's government (with João Crisóstomo [de Abreu e Sousa] as Minister of Public Works) answered to the requirements of a city whose expansion was slowly being prepared or inevitably predicted: a doubtless result of a Fontism only

¹⁴ Pedro José Pézerat was born Joseph Pierre Pézerat in a small Burgundy town in 1801. After graduating in civil engineering from the *École Polytechnique de Paris*, he would further his architectural studies at the *École des Beaux-Arts* [admitted to the latter in 1821, according to the AGORHA-Institut National d'Histoire de l'Art database; however, the same source notes that "no trace has been found in Paris" of Pézerat ever having been admitted to the *École Polytechnique* (see Marie-Laure Crosnier Leconte, *Pézerat, Joseph Pierre*, agorha.inha.fr, visited on November 17, 2020)]. In 1825, an international recruitment campaign from the newly independent Empire of Brazil led Pézerat to Rio de Janeiro, where he worked as imperial architect and engineer until 1831. He would then serve in the technical branch of the French Government in Algiers and Oran until 1840, when he decided to settle in Lisbon, where he started collaborating with the Municipality in a private capacity, until his official appointment to the Public Works Department (*Repartição Técnica da Câmara Municipal de Lisboa*) in 1852. Three years later, Pézerat would be heading the department, in which capacity he would be appointed to the 1865 Lisbon Improvement Committee. In the context of this government committee he would promptly present, that same year, his famous *Mémoire sur les études d'améliorations et embellissements de Lisbonne*. At the height of his professional activities, however, a long-term illness forced Pézerat to increasingly lengthy periods of absence, in which he started to be replaced by architect Domingos Parente da Silva. He died, still in office, in 1872. For more on this subject, see Rui Alexandre Gamboa Paixão, "Vida e obra do engenheiro Pedro José Pézerat e sua actividade na liderança da Repartição Técnica da Câmara Municipal de Lisboa (1852-1872)," *Cadernos do Arquivo Municipal* 9 (2007): 99-112.

¹⁵ Leal, "A sanitização do imaginário urbano e o crescimento de Lisboa," 123.

¹⁶ José-Augusto França, *Lisboa: Urbanismo e Arquitectura* (Lisboa: Ministério da Educação e da Ciência, 1980), 61.

¹⁷ The author is referring to the famous Lisbon historical central district's (*baixa*) reconstruction plan, established by then head of government Marquis of Pombal, following the devastating 1755 earthquake. For more on this subject, see "A Cidade Pombalina," in França, *Lisboa: Urbanismo e Arquitectura*, 37-50.

temporarily removed from power.”¹⁸ In the same vein, França interprets Pézerat’s global vision of an orderly and harmonious Lisbon General Improvement Plan as an ambition on a “Parisian scale,” with all new districts, vast avenues, and comfortable, beautiful buildings.¹⁹

As yet, the report from the 1857 Congress committee, in which Pézerat took part, allows for a more nuanced interpretation of the engineer’s vision, one where not all was about Fontism or some sort of abstract “modern indifference,” as França saw it, with its new avenues “cutting straight ahead in the name of progress.”²⁰ First off, the main source of inspiration for the Fourth Committee’s work was not Paris and Haussmann’s avenues, but rather London and the British 1848 Public Health Act, which had established the Central Board of Health, in the wake of yet another devastating cholera epidemic in the English capital that same year. Secondly, and unsurprisingly, improving urban sanitation and public health were the Portuguese experts’ top priorities. In a typically Chadwickian fashion, they enthusiastically proclaimed their allegiance to the British hygienists’ guidelines: “First, abundant water; second, efficient drainage. These two commandments contain all police regulations, all construction rules required for a satisfactory public sanitation regimen in modern settlements.”²¹

The committee thus presented a set of strategic guidelines for the city’s sanitary improvement, including, among others, general sewerage and slaughterhouse reforms, the “improvement of the laboring and less favored classes material living conditions,” as well as the “partial rebuilding of the city and the improvement of the maritime harbor.”²² These improvements were to be designed and supervised by a new committee which, presided by the Lisbon Civil Governor, would include “an engineer, an architect, a medical doctor and a navy officer.”²³ As Leal compellingly points out, both these guidelines and their suggested general management model would serve as foundations for Minister Abreu e Sousa’s 1864 juridical outline of the Lisbon General Improvement Plan, hence representing the actual first overall reflection on the capital’s urban planning since Pombal’s one-hundred-year-old *baixa* development plan.²⁴ And from which, moreover, would ensue most of the capital’s late nineteenth century urban restructuring and extension plans.

¹⁸ Ibid.

¹⁹ Ibid., 61-62.

²⁰ Ibid., 71-72.

²¹ Quoting from the 1857 Committee report, in Leal, “A sanitização do imaginário urbano e o crescimento de Lisboa,” 125.

²² Ibid.

²³ Leal, “A sanitização do imaginário urbano e o crescimento de Lisboa,” 127.

²⁴ Ibid., 124.

Whether or not Pézerat was a driving force of the 1857 committee report, the fact remains that he had been personally steering the municipal public works program since the 1840s into following the same strategic guidelines, which he would continue to do in his own work for the 1865 Lisbon Improvement Committee. According to França, in 1844, the French engineer was already thinking about harbor improvement, having drafted the first urban extension plans over a new Tejo reclaimed and regularized riverside, where new docks, residential districts, a military harbor and a railway were to take place, in a complex designed to link the commercial maritime networks to the European railway system, and where Lisbon would stand as its “head.”²⁵ He would also work extensively on the city’s potable water provision systems, on the new municipal slaughterhouse project, as well as on planning several new streets.²⁶

Nevertheless, and in line with França’s construal of the French engineer’s work and intellectual framework, Pézerat is most often associated with the Parisian progressive model. Such is the case in renowned art historian Raquel Henriques da Silva’s work, who describes the French engineer as “the soul of the diffuse development of Fontes Pereira de Melo’s Lisbon,” or “the incarnation of a Parisian utopia” for the municipalities under which he served consecutively over the 1850s and 1860s.²⁷ Indeed, and even though the author doesn’t credit him directly with the original idea, Pézerat must have been strongly associated with the planning of the capital’s first modern avenue, the future Avenida da Liberdade.²⁸ This Parisian boulevard, which Henriques da Silva sees as the synthesis of the bourgeois contemporary progressive imagery, would extend the Passeio Público (‘public promenade’), an *ancien regime* enclosed public garden, towards the northern suburbs and agricultural lands, both with beautification (*aformoseamento*) and communication improvement goals (Figs. 98 and 99).²⁹ Although, in the author’s opinion, the avenue project, as it was envisioned in the 1860s, was more about imprinting the city with a marker of French modernity, a “large road, promenade or boulevard, indispensable to the city’s present greatness,”³⁰ than it was about planning its extension. The same way she construes Pézerat as more of a “romantic” and slightly scattered “programmer” than an actual planner.³¹

²⁵ França, *Lisboa: Urbanismo e Arquitectura*, 62.

²⁶ Paixão, “Vida e obra do engenheiro Pedro José Pézerat,” 111-112.

²⁷ Raquel Henriques da Silva (ed.), *Lisboa de Frederico Ressano Garcia, 1874-1909* (Lisboa: Câmara Municipal de Lisboa, 1989), 19.

²⁸ *Ibid.*, 18-19, 36. Henriques da Silva credits Lisbon Mayor Júlio Pimentel with the first official proposition for the new boulevard, in July 1859.

²⁹ *Ibid.*, 21-22.

³⁰ França, *Lisboa: Urbanismo e Arquitectura*, 69. Quoting Mayor Júlio Pimentel in July 1859.

³¹ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 19.

In contrast, the embodiment of the modern planner was to be Frederico Ressano Garcia (1847-1911),³² recruited as head of the Municipal Public Works in 1874, to which he would bring, in Henriques da Silva's eyes, some much needed "firmness, authority and order."³³ In Ressano Garcia's hands, the "Lisbon central avenue" project would evolve from a practically 'modern whim' to a strategic guideline, intended to mark the first axis of the city's extension to the north.³⁴ Indeed, and since his 1879 project report, Ressano Garcia referred to his plan for a system of avenues which would irradiate from a circular square at the top of the central avenue (Praça Marquês de Pombal), leading the future urban growth from the central district (*baixa*) to the suburbs. Although progress would prove rather slow and contested for the Avenida da Liberdade works, in 1888 Ressano Garcia would be able to garner the support of the municipality in order to officially present his project for what would be known as the Lisbon 'new avenues' (*Avenidas Novas*). In turn, this project would become part of the 1903 Lisbon General Improvement Plan through which, while rekindling the 1860s sanitary purpose, Ressano Garcia would endeavor to "protect and expand the project of [his] lifetime" (Fig. 100).³⁵

Despite this 1900s revival of the sanitary idea, which would give way to a new generation of general improvement plans, as we will see,³⁶ and also despite the appearance of modernity brought to the city plan, both by the new avenues system and the new bourgeois orthogonally-laid residential districts, the laboring classes' living conditions still went largely unchanged. Indeed, fifty years after the 1857 Congress on Sanitation, the city's poor were still crowding in the Mouraria, Alfama and Bairro Alto districts, the old, additive settlements which had survived the 1755 earthquake and subsequent reconstruction (Fig. 98). Henriques da Silva mentions precisely some voices in the 1880s calling for investment, not in the northern suburbs, but in the heart of town, "from where one

³² Lisbon-born Frederico Ressano Garcia (1847-1911) was a civil engineer, of the same generation as, for instance, Macao Public Works Director Augusto César de Abreu Nunes (1851-1921). A Escola Politécnica de Lisboa graduate in 1865, he would go on to complete his education, under the scope of the Ministry of Public Works' sponsored programme to pursue civil engineering studies in France (see Chapter II), at the Paris École Impériale des Ponts et Chaussées, from which he would graduate at the top of his class. At the death of Pedro José Pézerat, he would be recruited by the Lisbon Municipality to head the Public Works Department, a position Ressano Garcia would hold from 1874 to 1909. Concomitantly, and since 1879, he would also be elected to the House of Representatives, having even been appointed as Minister of the Overseas for a brief period of roughly one year in 1889/1990. For more on Ressano Garcia's life and work, see Henriques da Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 20-21.

³³ In contrast with the municipal architect, Domingos Parente da Silva, which had been filling in for Pézerat during his long illness, and the "empiric habits" of both technicians. Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 21.

³⁴ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 22.

³⁵ *Ibid.*, 35.

³⁶ For more on the 1900s general improvement plans, see the next main section.

sees the Tejo.”³⁷ In short, advocating the idea of applying the municipal public works resources to getting back to regularizing the historic urban pattern, finishing off with the sledgehammer³⁸ what nature had begun restructuring on its own.

Apart from partial improvement projects, such as the widening or regularization of some of these streets, though, no avenues “ripping through Bairro Alto”³⁹ would ever be seriously considered, and so Lisbon’s strongest modern expression on city structure and infrastructure would remain the urban extension plan. As Henriques da Silva puts it, “the new mechanic and geometric Lisbon didn’t question the old city, developing through expansion rather than transformation.”⁴⁰

III. In Porto, from the boulevard to the Garden City

Circumstances were somewhat different in the city of Porto, where the Marquis of Pombal’s administration had been carrying out, since the 1760s, an ambitious restructuring plan. Unlike the grid layout which had been designed to tackle the reconstruction of Lisbon’s *baixa*, João de Almada (1703-1786), the Marquis’ cousin, and in his capacity both as city military Governor and president of the recently established local Council for Public Works (*Junta das Obras Públicas*), would launch, in 1763, the construction of two main arteries, one from the Praça Nova civic center towards the north, Rua do Almada, and another from the old harbor to the Largo de S. Domingos market center, Rua de S. João. As author Anni Günther Nonell puts it, these projects were nothing short of the Enlightened Despotism’s “plan to refound the city,” implemented by simultaneously tackling, in

³⁷ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 29. Quoting from eminent politician and elected member of the House of Representatives Tomás Ribeiro (1831-1901), who participated in the 1888 debates on a new draft law regarding expropriations, in view of Ressano Garcia’s ‘new avenues’ improvement plan. In the same context, the author further quotes two other members of the opposition party, José Dias Ferreira (1837-1909) and Ernesto Hintze Ribeiro (1849-1907), who also manifested themselves against the expansion plans, and in favor of improving sanitation in the city center: “Citizens are being asked to sacrifice their property to benefit the Lisbon Municipality, not so that it may pay its debts, nor to improve public sanitation, but to *beautify*, to build a park in the Avenida da Liberdade, and to build another avenue in Picoas [one of Ressano Garcia’s new avenues].” Although, the same Hintze Ribeiro, at the head of government in the early 1900s, would be responsible for renewing legislation regarding the mandatory character of the Lisbon general improvement plan. For more on these subjects, see this Chapter’s next main section.

³⁸ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 32. Quoting from a 1913 paper from the *Arquitetura Portuguesa* journal, which read: “Mouraria, Bairro Alto and others [...], what they need is the wrecking sledgehammer and pickaxe.”

³⁹ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 32. Another quote from the *Arquitetura Portuguesa* journal, this time from a 1908 paper entitled: “A rip [*rasgão*] through Bairro Alto.”

⁴⁰ Raquel Henriques da Silva, “Das Avenidas Novas à avenida de Berna,” *Revista do Instituto de História da Arte*, 2 (2006): 133.

its centralizing stride, the historic, narrow and tortuous town perched up in the Douro slopes, and its extension North (Fig. 101).⁴¹

Until its extinction by the liberal state in 1833, when the urban planning and management authority officially returned to the hands of the municipality, the Porto Council for Public Works thus carried out a vast program of urban interventions which would profoundly change the city, by introducing new legislation on expropriation and the notion of ‘public good’ for the overall renovation of the old city, its suburbs, the street network and the local public facilities. As a result, the idea of public interest, in particular, would very much become intertwined with plans to align and to ‘open’ (*abrir*), to ‘tear’, or to ‘pierce’ (*rasgar*) new streets, to use the contemporary terminology, as its main goal was to improve circulation and thus facilitate the trade activities, which were the livelihood of the city. It then made perfect sense to work primarily, almost surgically, on this system’s North/South axis, from the port to the trade center, which was still situated in the nether districts, close to the river, and from the heart of town, in the “higher districts” (“*bairros altos*”)⁴² to the suburbs and towards the country’s northern provinces. To finally bring these two trade and civic focal points together, as the latter had been chosen at the beginning of the century to establish City Hall, a project for another new street (the future Rua Mouzinho da Silveira) was presented in 1872, cutting down from near the Town square (since renamed Praça de D. Pedro) to the Largo de S. Domingos trade center, thus rounding up the improved communications system doubtlessly intended over a century before by the *ancien regime* administration (Fig. 102).

When it was finally presented in 1881, by Mayor and military engineer José Augusto Correia de Barros (1835-1908), the city of Porto General Improvement Plan would come as a natural extension of the planning work already under way.⁴³ It continued to focus on accessibility, now with connection to the railway and to the projected Luis I bridge, which would link both the lower and higher central districts to the Douro south bank. Much like in the context of the concurrent Macao Improvement Plan (1883), Mayor Correia de Barros put forward the Porto plan in the form of a written report. A topographic map would later be commissioned from military engineer Gerardo Telles Ferreira and presented in 1892. In it, Rua Mouzinho da Silveira, which had been under construction throughout the 1880s, already appears completed, as do some of the Improvement

⁴¹ Nonell, *Porto, 1763/1852*, 167-169. For more on this subject, see the comprehensive work of Joaquim Jaime Ferreira Alves, namely *O Porto na Época dos Almadás: Arquitectura, Obras Públicas* (Porto: Câmara Municipal do Porto, 1988/1990); from the same author, see also “João de Almada e Melo (1703-1786): o Homem e a Cidade,” *População e Sociedade* 16 (2008): 187-197.

⁴² Nonell, *Porto, 1763/1852*, 168.

⁴³ For more on Mayor Correia de Barros’ General Improvement Plan and, in general, on urban planning and restructuring in the last quarter of the nineteenth century in Porto, see António Cardoso, *O Arquitecto José Marques da Silva e a Arquitectura no Norte do País na Primeira Metade do Séc. XX* (Porto: Edição do Autor, 1992), namely its third chapter, “Marques da Silva e a cidade. Os primeiros projectos,” 123-198.

Plan suggestions, such as an overall realignment of the streets linking Praça de D. Pedro to the higher and lower districts surrounding it (Fig. 103).⁴⁴

A few years before, though, in 1889, civil engineer Carlos Pézerat,⁴⁵ then Director of the Porto branch of the *Compagnie Générale des Eaux pour l'Étranger*, had presented the Municipality with the project for a new city avenue, under the title of “City of Porto Embellishment Plan to serve the construction of the new City Hall and other public buildings” (“*Projecto de Embelezamento da Cidade de Porto para servir à edificação dos novos Paços do Concelho e outros edifícios públicos*”), established over the 1892 Telles Ferreira plan (Fig. 104). Given his personal and professional background, especially at the helm of the District of Lisbon Public Works, one might argue that it was only natural for Pézerat to look at Praça de D. Pedro, with its early nineteenth-century profile, and see ‘the avenue that could be’.

In his own words, building a new City Hall presented the perfect opportunity to restructure the “heart of town and its traditional forum.” With the prospect of having the railway arrive right next to it, at site of the former Convent of S. Bento (which would finally happen seven years later), this central area “demanded [...] new perspectives with which to impress its visitors, as well as the improvement of its hygienic conditions determined by largely diffused air and light.”⁴⁶ Beautification, accessibility, hygiene: in a way, a project much closer to his father’s plan for the Avenida da Liberdade in Lisbon, in both design and theoretical basis, than to his contemporary Ressano Garcia’s work on the capital’s extension plans. Indeed, Pézerat’s plan, by establishing the new avenue by drawing an axis from Praça de D. Pedro to the north up to Largo da Trindade, is more or less revisiting the 1850s Parisian boulevard idea, which had already given birth to the extension north of the old Passeio Público in Lisbon. This time, it was the Praça de D. Pedro civic center that was being extended, creating, at the same time, an almost anachronic ‘public

⁴⁴ Ricardo Figueiredo, Clara Pimenta do Vale and Rui Tavares, *Avenida dos Aliados e Baixa do Porto. Memória, realidade e permanência* (Porto: Porto Vivo SRU, 2013), 84-86.

⁴⁵ Carlos Filipe Júlio de Pézerat was born in Rio de Janeiro around 1825/1831, the son of Pedro José Pézerat, at the time working as the Emperor of Brazil’s private architect. Upon moving to Lisbon, Pézerat would follow in his father’s footsteps. Most notably, he is listed as co-author, together with brothers Francisco and César Goullard, of the “Lisbon Topographic Plan Atlas” (“*Atlas da Carta Topográfica de Lisboa*”), surveyed between 1856 and 1858 under the supervision of illustrious cartographer Filipe Folque. From July to December 1859, he would replace his father at the helm of the Lisbon Municipality Public Works while he was away in Paris for health reasons (Paixão, “Vida e obra do engenheiro Pedro José Pézerat,” 106). A civil engineer, in 1865 Pézerat would enter the Ministry of Public Works, having held the office of the District of Lisbon Public Works Director from 1881 to 1883. That same year, the French water company *Compagnie Générale des Eaux pour l'Étranger* (nowadays Veolia) established a concession in Porto, taking Pézerat on as its new Director. He would thus remain living and working in the city until his death in 1898. For more on Pézerat’s biography, see Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 375-376.

⁴⁶ Carlos Pézerat in his 1889 letter offering the new city avenue plan to the Municipality, quoted by Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 101-102.

promenade'-type garden in the avenue's central lane. The new Town Hall would occupy a block to the west, in a rather paradoxically off-center position. All in all, one might say that this project somewhat checked the accessibility and hygiene boxes, as its author intended, by redesigning some connections between the contiguous upper districts. Although, it seems that the *ancien regime* plan wasn't doing all that badly in those departments, on the contrary, it still worked on a more vast and strategic level. Therefore, we may conclude that Pézerat's boulevard was mostly about city beautification and prestige, rather than sanitation, city growth, or indeed any of the other more 'functional' goals prioritized in his father's work.

Still, and as anachronic as it may seem, especially in a city with such an important tradition of a more pragmatic sort of urban renovation and extension plans, the fact seems to be that Pézerat's revisiting of the avenue as marker of French modernity would well and truly stick on the subsequent municipalities' imaginary. It would reemerge, notably during the first years of the Republic which, incidentally, coincided with the First World War years.

And so it was that Porto businessman Elísio de Melo, then councilman in charge of Public Works for the first Republican municipality, on December 31, 1914, announced his intention to launch a call for tenders for the drafting of the "Porto Improvement and Extension Plan" ("*Plano de Melhoramentos e Ampliação da Cidade do Porto*"). This new plan was to be "established according to the tenets of the modern art of city building, taking into account local circumstances." All propositions would be evaluated following "hygienic, technic, artistic, economic and social criteria by an competent committee (...) in which will sit, if deemed appropriate by the committee, a foreign professional of repute in that art."⁴⁷

Did Elísio de Melo already have Raymond Unwin (1863-1941) and Richard Barry Parker (1867-1947) in mind when he suggested the "foreign professional" slot in the future improvement committee? His choice of words, at least, seems to echo the title of Unwin's 1909 *Town Planning in Practice. An Introduction to the Art of Designing Cities and Suburbs*.⁴⁸ Also, Barry Parker, that "illustrious British technician," somehow found himself present at the August 1915 first committee reunion, seemingly "at the invitation of the Municipality."⁴⁹ From thence to being officially appointed by the Mayor to draft the definitive improvement plan, it was a small, and rather predictable step.

⁴⁷ Minutes from the Municipality of Porto Executive Committee session of December 31, 1914, quoted by Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 105-106.

⁴⁸ Raymond Unwin, *Town Planning in Practice. An Introduction to the Art of Designing Cities and Suburbs* (London and Leipsic: T. Fisher Unwin, 1909).

⁴⁹ Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 107.

Raymond Unwin and Barry Parker had founded their architectural practice in 1894 having become, some years later, members of Ebenezer Howard's Garden City Association (1899). Howard's "principal lieutenants," as put by Peter Hall, they were firm believers in the importance of housing reform in view of social reform, and in garden cities as the "vehicles for a progressive reconstruction of capitalist society into an infinity of cooperative commonwealths." As the title of the 1898 first edition of Howard's *Garden Cities of Tomorrow* (1902) read, the Association was less about physical planning, than about setting *A Peaceful Path to Real Reform*.⁵⁰

Social reform through urban planning would certainly be an appealing notion to the Porto republicans, who had been striving for an all-around change of paradigm from their seats at the Municipal Council for some years before the official proclamation of the Portuguese Republic on October 5, 1910. As Unwin had put it in his 1909 publication, in regard to an upcoming bill which, he hoped, would restore town planning powers to the British municipal bodies:

In desiring powers for town planning, our town communities are seeking to be able to express their needs, their life, and their aspirations in the outward form of their towns, seeking, as it were, freedom to become the artists of their own cities, portraying on a gigantic canvas the expression of their life.⁵¹

A new life, in a new city, where even the implicit and explicit equation of 'material improvements' with 'modernity', that almost universal aphorism over which a great deal of nineteenth century urban transformations all over the world had been, and still was being based, it too was evolving. Hence, in Unwin and Parker's discourse and practice, the Chadwickian sanitary idea was clearly out. It had been outdated and outdone by Arts and Crafts designer and poet William Morris' (1834-1896) emphasis on 'beauty'. As Unwin saw it:

We [England] have, indeed, in all these matters [supply of pure water, drainage and removal of waste matter, paving, lighting and cleansing of streets], laid a good foundation and have secured many of the necessary elements for a healthy condition of life; and yet the remarkable fact remains that there are growing up around all our big towns vast districts, under these very bye-laws, which for dreariness and sheer ugliness it is difficult to match anywhere, and compared to which many of the old unhealthy slums are, from the point of view of picturesqueness and beauty, infinitely more attractive. The truth is that, in this work, we have neglected the amenities of life. We have forgotten that endless rows of brick boxes, looking out upon dreary streets and squalid backyards, are not really homes for people, and can never become such, however complete may be the drainage system, however pure the water supply, or however detailed the bye-laws under which they are built. Important as all these provisions for man's material needs and sanitary existence are, they do not suffice. There is needed the vivifying touch of art which would give completeness and increase their value tenfold; [...] it is the lack of beauty, of the amenities of life, more than anything else, which obliges us to admit that our work of town building in the past century has not been well done.⁵²

⁵⁰ Hall, *Cities of Tomorrow*, 88.

⁵¹ Unwin, *Town Planning in Practice*, 9.

⁵² *Ibid.*, 4.

When Barry Parker came to Porto, in the summer of 1915, he and Unwin had just parted ways, professionally speaking, as the latter had moved on to start a career in public office. Before taking office himself as consultant with the Manchester Municipality, in 1927, Parker would experiment in a solo career, notably abroad, basking in the success and international fame brought by the Garden City endeavors.⁵³ Throughout, however, he would remain true to his partnership's convictions, as his work for the Porto Municipality demonstrates.

The British architect cannot be credited with the choice of revisiting Pézerat's boulevard, though, as this was clearly what councilman Elísio de Melo had in mind from the start. Indeed, almost immediately after his December 31, 1914 announcement regarding a call for tenders that would take place in 1915, Melo put the Municipal Public Works Department to work on designing a new City Avenue on similar lines as those drafted by the Lisbon architect, that is, by 'ripping' north from Praça da Liberdade (former 'Praça de D. Pedro') to Praça da Trindade (Fig. 105). Presented to the Municipal Council and approved on February 3, 1915,⁵⁴ it effectively showed that when Melo had chosen the phrasing 'Porto Improvement and Extension Plan', still very much evocative of the Municipality's obligations regarding a more comprehensive sort of urban planning, as per the 1864 national ordinance, what he really meant was 'new avenue'.

Barry Parker's criticism of the Public Works Department 'Avenida da Liberdade' project at the above-mentioned August 1915 committee reunion would lead to his official appointment to draft its definitive plan. The international call for tenders, into which Elísio de Melo seemed to have pinned his high hopes for "hygienic, technic, artistic, economic and social" excellence a few months before, had been completely forgotten. Then again, to the Republican municipality, Parker probably embodied all those features, summing up both his and their goal in the planning gesture of "ripping the city center to create a true Civic Center."⁵⁵

Thus, true to his partnership's axiom defined by Unwin as setting "civic art as the expression of civic life,"⁵⁶ Parker's City Avenue was to be, above all, "very dignifying, opening and expanding

⁵³ Besides de Porto new avenue project, Barry Parker would notably accept a commission in Brazil, in 1916, to draft the new city of Pacaembu, near S. Paulo (1917-1920). For more on Richard Barry Parker's biography, see Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 375.

⁵⁴ Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 106.

⁵⁵ Richard Barry Parker, *Memórias sobre a projectada Avenida da Cidade da Praça da Liberdade ao Largo da Trindade* (Porto: Câmara Municipal do Porto, 1915), quoted by Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 108.

⁵⁶ Unwin, *Town Planning in Practice*, 1. "Civic art as the expression of civic life" is precisely the title of the book's first chapter.

a much-congested part of town.”⁵⁷ Vaguely addressing issues of sanitation to justify his options,⁵⁸ the British architect thus proposed a monumental plan, placing the new Town Hall at the north end of the avenue axis, in counterpoint to the Praça da Liberdade, effectively excluding the Trindade church and its square from the visual composition. This was naturally bound to please the Republican aedility, even though the church façade, as well as the statue of King D. Pedro IV, would respectively remain, in Parker’s plan, the north and south foci of the composition, as they had been both in Pézerat’s and in the Public Works’ designs. From the new Town Square would depart a system of radial and symmetrical streets, stitching the old urban tissue with its restructuring arteries (Fig. 106).

In respect to the formal qualities of the composition, it is certainly reminiscent of Unwin and Parker’s Garden City experiences, particularly of Letchworth (1904), with its radial avenues and central Town Square dominated by the monumental municipal buildings (Fig. 107). While Peter Hall has noted that this “does not work out right” with Unwin’s stated preference for the “informal approach” regarding town planning,⁵⁹ it would actually be a constant on the duo’s projects throughout their careers. Indeed, as Parker alluded to the ‘dignifying’ qualities of these compositions, Unwin essentially believed in their power to bring order and rationality to the urban space, which should become, in his view, the prerogatives of the modern city:

The informal beauty which resulted from the natural and apparently unconscious growth of the medieval town may command our highest admiration, but we may feel that it arose from conditions of life which no longer exist, and that it is unwise to seek to reproduce it. Possibly other forms of beauty will be found more adapted to our present conditions. [...] Modern conditions require, undoubtedly, that the new districts of our towns should be built to a definite plan. They must lose the unconscious and accidental character and come under the rules of conscious and ordered design. We find that in the few instances in which towns were laid out as a whole in ancient times the plans usually follow very simple rectangular lines, and are quite different in character from those which developed by slow, natural growth.⁶⁰

This search for a ‘regular’ modernity covered many sources, as the extent of Unwin’s research on town planning shows, from ancient history to the American grid models and, among the latter, particularly the City Beautiful Movement. Also, in the European classicism ‘grand manner’ front, the author dwells on a case-study which definitely presents some similarities to the vectors of

⁵⁷ Parker, *Memórias sobre a projectada Avenida da Cidade*, quoted by Figueiredo, *Avenida dos Aliados e Baixa do Porto*, 108.

⁵⁸ Ibid. In Parker’s words: “I see that you have strived to abide by the purpose of sanitizing, and at the same time dignifying the city, and I also know you to be aware that this isn’t achieved by tearing down narrow and insalubrious streets to replace them with new ones just as narrow, which eventually would become just as insalubrious.”

⁵⁹ Hall, *Cities of Tomorrow*, 103.

⁶⁰ Unwin, *Town Planning in Practice*, 13.

composition for Letchworth and Hampstead or, indeed, Porto. It is Sir Christopher Wren's 1670s plan for rebuilding the centre of London after the 1666 great fire (Fig. 108). In the author's view:

[quoting Wren's biographer] "The Exchange [as a civic center of sorts] to stand free in the middle of a piazza and be, as it were, the nave or centre of the town, from whence the 60 feet streets, as so many ways, should proceed to all principal parts of the city." [...]

Wren's plan is interesting alike for the masterly grasp of the problems to be dealt with and for the variety in the arrangement and treatment. The streets are all straight, but are not all parallel, the main roads are made to radiate from certain fixed points, to connect conveniently with thoroughfares existing in the parts of London outside the area destroyed by the fire. The plan is, indeed, laid out in the grand manner, and depends for its effect on the largeness of its scale and the length of its vistas, while no attempt is made to reproduce the enclosed places and the limited street pictures so characteristic of the medieval towns.⁶¹

IV. In the Portuguese provincial towns throughout the Empire

Parker's Porto civic center Garden City experiment in this sort of 'monumental classicism', as it were, must have played a part in the formulation of subsequent clean-slate projects by other provincial municipalities.⁶² Nevertheless, the majority of the Portuguese provincial towns' response to the 1864 national appeal to 'improve'⁶³ would mostly shy away from large-scale resumptions, often prioritizing, instead, a mix between new axes and extension plans, themselves frequently materialized in partial improvement plans. These were often established by the District Public Works engineers, as the municipal bodies seldom had the size or the funds to keep expert technical departments, as was the case with Lisbon and Porto. Finally, the provincial improvement plans' main propositions could comprise restructuring interventions of the historic nucleuses in the form of 'ripping' projects or not, as sometimes the establishment of the articulating new axes was simply made along the old towns, on vacant or low-density grounds. The only constant seems to be, as it had been in the southern and northern capital cities, the omnipresence of 'the avenue' as the preferred marker of modernity.

⁶¹ Unwin, *Town Planning in Practice*, 77-78.

⁶² For example, military engineer Luís de Pina's General Improvement Plan for the city of Guimarães (1924) (Fernandes, *Urbanismo e morfologia urbana no norte de Portugal*, 240-241), or acting Municipal Public Works Director Abel Dias Urbano's restructuring plan for the city of Coimbra's *baixa* district (1928) (Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 329-330).

⁶³ Besides Lisbon and Porto, for which the establishment of the General Improvement Plan was mandatory, the December 31, 1864 national ordinance merely urged all provincial cities to engage in the process, with no sense of obligation. For more on this subject, see Chapter III.

So it was, for example, in Coimbra, where Mondego and Barra da Figueira Public Works Director Adolfo Loureiro, fresh from his 1883/1884 commission in Macao, where he had gone to work on the inner harbor improvement,⁶⁴ drafted the Quinta de Santa Cruz General Improvement Plan (1885). The appointment of General Loureiro, together with Botanical Garden Director Dr. Júlio Henriques, for this commission, had actually come in between and in an independent capacity with regard to the 1866 and 1888 rather inconsequential city general improvement committees.⁶⁵ Loureiro and Henriques' goal was to outline an area of urban extension by creating a new residential district to the east of the city center, which is situated on a hill, all the while articulating its accessibility with the lower districts through a boulevard (referred to as Grande Avenida in a 1886 plan)⁶⁶ and radial avenue system to be built around it (Fig. 109).⁶⁷

The Coimbra boulevard, which Calmeiro deems “the key element of the [Santa Cruz] Improvement Plan and an icon of nineteenth century urbanism,” which would only be finalized in 1906,⁶⁸ had been in the municipalities' books since the 1870s. At the time, the issue in Coimbra, as in many other Portuguese cities, had to do with using the extinct religious orders' properties, which were often occupying vast and strategic plots in the vicinity of the historic centers, to create real-estate development opportunities.⁶⁹ The Quinta de Santa Cruz had thus been singled out since 1872 for

⁶⁴ Before this, around the years 1879 and 1882, Adolfo Ferreira Loureiro would actually spend some time working in Porto, on a commission for the Ministry of Public Works to advise on the Douro artificial harbor project which was being envisioned in neighboring Leixões. This would be around the time new axis Rua Mouzinho da Silveira was being built, and the city's General Improvement Plan was being drafted, as it was presented, as mentioned, by Mayor José Augusto Correia de Barros in 1881. He would also work on a similar commission in Lisbon, around 1880, where he would undoubtedly have come in contact with Frederico Ressano Garcia's earlier work. Learned personality that he was, it is not unlikely that Loureiro would have gathered all the information available on the Porto, as well as on the Lisbon urban restructuring experiments and improvement plans, using them as reference in his own urban extension plan in Coimbra. For more on engineer Adolfo Ferreira Loureiro, his trip to the Orient, his mission in Macao and, in general, on the Macao Inner Harbor Improvement Project, see Chapter V.

⁶⁵ Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 297.

⁶⁶ *Ibid.*, 256.

⁶⁷ Similarly, in the northern city of Viana do Castelo, the 1882 General Improvement Plan by the local District Public Works Director provided for an urban extension area to the northeast of the mediaeval town. This development would be structured by a large sort of beltway boulevard, with a grid of new avenues ‘stitching’ it to the historic urban road system. For more on the Viana do Castelo General Improvement Plan, see Fernandes, *Urbanismo e morfologia urbana no norte de Portugal*, 211-215.

⁶⁸ Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 259.

⁶⁹ Similarly to the Coimbra Santa Cruz improvement plan, in the northern city of Braga, the 1890s project for the future Avenida da Liberdade implied asking for central government's permission to expropriate a part of the gardens belonging to a former convent which the new avenue was to cut through. Finally presented in 1907, this project would nevertheless suffer from a very slow and painful construction process (probably due to a lack of a government-supported expropriation plan, as had also happened in Coimbra), its last section only having been built in the 1960s. For more on the subject of material improvements in Braga, see Amadeu José Campos de Sousa, *Entre Monárquicos e Republicanos numa “Cidade de Deus.” História Política e*

the construction of a public promenade (*passeio público*), which would become Loureiro's city boulevard and well-to-do residential district a decade later.⁷⁰

Quite literally worlds away was, for instance, the capital of the Portuguese State of India, which had been established by Queen D. Maria I, since 1843, in the city of Nova Goa.⁷¹ Administratively regrouping, along the Mandovi River southern bank, the decaying old city of Goa (Velha Goa), as well as the settlement of Ribandar, the heart of Nova Goa was essentially the new town of Panjim (present-day Panaji). Envisioned since the early eighteenth-century and officially planned in 1776,⁷² it still lacked virtually everything, including settlers, in the first decades of the nineteenth-century. And so, if the issue of the first Portuguese post-liberal wars governments had been, in Macao, to 'reform' the colony, Nova Goa was almost symbolically to 're-found' the State of India by building a new capital from scratch. In this context, the nineteenth-century institutional 'tools of modernization' in terms of urban planning, such as the 1864 national ordinance and surrounding legislation on expropriation, as well as the reorganization of the overseas health and public works networks of experts, did similar work as to what we have been seeing in Macao, and to what was also being done in the metropole, but with an entirely different setting.

First off, as we can gather from the configuration hypotheses presented by Alice Santiago Faria (Figs. 110 and 111), by the 1860s, there was still no clearly-solidified urban core, and the grounds were very scarcely occupied by construction. As the author herself has put it regarding Nova Goa, but also Vasco da Gama, another new town, planned since the 1880s as a port city to head the Mormugão railway, the sole constant and persistence in these towns, at least until the first decades of the twentieth century, would be their "streets filled with palm trees."⁷³ And so, although quite a few operations of riverside reclamations, layout of new streets, expropriations, legitimized by the usual discourses on air and light, as well as general hygiene and sanitation, were actually carried out throughout the 1870s and 1880s, it wouldn't be until the governorship of José Maria de Sousa

Social de Braga no Contexto Nacional (1890-1933) (Casal de Cambra: Caleidoscópico, 2017), 75-82. See also Bandeira, *O espaço Urbano de Braga*, 93-114. For more on the subject of real-estate development opportunities in connection with the extinct religious orders' vacant properties in Macao, see this Chapter's next main section.

⁷⁰ Calmeiro, *Urbanismo Antes dos Planos: Coimbra 1834-1934*, 249.

⁷¹ For a thorough look at public works and urban planning in the Portuguese State of India in the nineteenth and early twentieth centuries, see the work of Alice Santiago Faria, namely *Architecture Coloniale Portugaise à Goa*; see also "De Pangim a Vasco: o território goês no longo século XIX." In *Proceedings of PNUM 2013. Urban Form in Territories of Portuguese Heritage. Analysis, Design, Quantification*, ed. Nuno Norte Pinto and Alexandre Almeida, 193-203. Coimbra: Department of Civil Engineering of the University of Coimbra, 2013.

⁷² Faria, *Architecture Coloniale Portugaise à Goa*, 77.

⁷³ Faria, "De Pangim a Vasco: o território goês no longo século XIX," 203.

Horta e Costa (1907-1910), whom, as we know, had been one of the driving forces of urban sanitation in Macao, that the idea of a general improvement plan would start being discussed.⁷⁴ However, a general improvement plan for Nova Goa, as well as for each of one of the Portuguese India settlements, wouldn't be officially launched until the first Republican governorship in 1911, and even then, only approved by 1927, with the first avenues and planned urban extension grids to the south (Fig. 112).⁷⁵

The afore-mentioned city of Vasco da Gama actually presents an interesting example in the context of this quick survey as, for a time, it had been nothing but an avenue in the tropical wilderness, so to speak. After the Portuguese-British agreement had been signed, in 1878, for the construction of the Mormugão railway, connecting the Goan port to the British Raj railway network,⁷⁶ the British railway company proposed to the local government, in 1883 and, again, in 1885, a plan for a new town in the Mormugão bay to be built at their expense, around the projected railway station.⁷⁷ The railway itself would continue further west along the coast up to the Mormugão harbor, situated at the mouth of the Zuari River. Refuting the idea of a foreign trust managing its own town within Portuguese sovereign land, in 1886, Governor of the State of India Francisco Joaquim Ferreira do Amaral⁷⁸ authorized the construction, by his own public works department and at his government's expense, of a 500-meter-long avenue, connecting the railway station to the bay, which he ambitiously determined to be "the future city of Vasco da Gama."⁷⁹

However, at Horta e Costa's arrival ten years later, in 1907, the Governor found the city to be nothing but "half a dozen shacks with no architecture, no hygiene, no method"⁸⁰ (Fig. 113). Very slowly, throughout the following decades, construction would start to pick up over the 1880s grid (Figs. 114 and 115), although, much as in Nova Goa, that image of tropical emptiness would persist well into the 1930s. This in spite of the investment metropolitan government was channeling, through the overseas budget, in benefit both of the Mormugão railway and of its harbor improvement plan, as detailed in the next Chapter.

⁷⁴ Faria, *Architecture Coloniale Portugaise à Goa*, 68.

⁷⁵ *Ibid.*, 119-121.

⁷⁶ For more on the geopolitical context surrounding this agreement, as well for an overview of the international pressure felt by the successive local and metropolitan governments over issues of territorial sovereignty in the Portuguese overseas, in the midst of the mounting imperial rivalries of the last quarter of the nineteenth century see, in Chapter V, the section entitled "Colonial Momentum."

⁷⁷ Faria, *Architecture Coloniale Portugaise à Goa*, 169-170.

⁷⁸ For more on Francisco Joaquim Ferreira do Amaral (1844-1923), son of the ill-fated Governor of Macao João Maria Ferreira do Amaral (1803-1849), see Chapter V.

⁷⁹ Faria, *Architecture Coloniale Portugaise à Goa*, 170.

⁸⁰ *Ibid.*, 173.

But speaking of grids and avenues over patches of wilderness and palm trees, let us also look briefly at the city of Dili, in Portuguese Timor (present-day Democratic Republic of Timor-Leste), at the turn of the century.⁸¹ Established as the ‘autonomous district’ (*distrito autónomo*) of Timor, with Dili as its capital, from 1896 on, this territory had otherwise been under the responsibility of the Macao Government for most of the nineteenth-century. As such, both the public works and public health experts appointed to Macao had the responsibility of regularly conducting inspections and suggest improvements for the deployment of public service in the territory. The early 1890s finally saw the premises of some self-sufficiency in matters of governance with, for instance, the establishment of a resident director of public works in 1892. The immediate result of this reorganization would be the production of a number of cartographic elements, of which the 1893 map is a good example (Fig. 116).⁸² Established by António Heitor, former draftsman and foreman (*condutor de trabalhos*) at the Macao Public Works Department, who had been responsible for the 1889 map (Fig. 8) and was now acting Director in Timor, this map portrayed, in its empty grid, the fragility of Dili as capital of (what was supposed to be) a self-sufficient district.

With a population of little over 4.000 souls in the 1880s, Dili presented its usual array of public buildings in a central position, in which could hardly be described as a urban core, much as what we saw of Nova Goa, a main street, running parallel to the bay, and a small agglomerate of constructions next to the city market, to the east, where the Chinese merchant community had established itself. There were also some traces of the improvement works carried out in the 1890s, consisting mainly of swamp reclamation. However, the main feature of the 1893 map would be the depiction, for the first time, of the Lahane district, located in the southern hills, where the Governor Palace and other administrative buildings had been erected, far from the marshlands surrounding the bay area.⁸³

Furthermore, a sanitation committee would be established in the early 1930s, whose main concern in terms of urban planning would continue to be the reclamation of these wetlands and the management of the hydrographic regime of the Dili bay.⁸⁴ The entirety of the meager public works budget would thus go to the improvement of public buildings and services, at least up to the 1940s, which left no place whatsoever for grand gestures of urban modernity.

⁸¹ For more on public works and urban planning in Portuguese Timor in the nineteenth and early twentieth centuries, see the work of Isabel Boavida, namely *Urbanografia de Dili no Tempo da Administração Portuguesa*.

⁸² Boavida, *Urbanografia de Dili no Tempo da Administração Portuguesa*, 37-38.

⁸³ *Ibid.*

⁸⁴ *Ibid.*, 49.

One final parallel can be done with the city of Lourenço Marques in the Portuguese province of Mozambique (present-day Maputo in the Republic of Mozambique),⁸⁵ which is especially interesting, as it somehow mirrors the processes at the root of the establishment of the Vasco da Gama new town, albeit with relatively more expeditious results. Indeed, as we shall see in the Chapter V section dedicated to the Portuguese response to empire building (or rather, empire keeping) in the context of the nineteenth-century mounting international rivalries over the African and Indian hinterlands,⁸⁶ both Portuguese settlements were increasingly being put under pressure, particularly from the 1870s on, by British plans to develop modern port infrastructures at the terminals of some of their most strategic railway lines.

In Southern Mozambique, the issue was with establishing a port, properly connected by railway to the rich mining hinterlands of the Transvaal, which the British had annexed in 1877, but which possessed no sea borders. The underdeveloped Portuguese settlement of Lourenço Marques, no more than a dwindling eighteenth-century stronghold with a population of a few hundred foreigners in 1877 (Fig. 117), would have been seen as ripe for the picking. However, as would happen in Mormugão some ten years later, Portuguese government wouldn't give up its planning prerogatives in its own sovereign land without some sort of attempt at a techno-scientific fight. That same year, Minister of the Overseas Andrade Corvo would thus dispatch the first so-called 'public works expedition' to Mozambique, headed by fellow military engineer Joaquim José Machado, appointed as the province's new Public Works Director.⁸⁷

Working in several fronts, namely in putting up new makeshift public buildings, Machado's main focus would undoubtedly be the Lourenço Marques-Pretoria railway project, which he would continue to manage even after the end of his commission in 1881. He would be succeeded by António José de Araújo,⁸⁸ author of the ambitious 1887 city extension plan, which would actually be carried out throughout the following decades.⁸⁹ Once again, the grid would be the go-to layout

⁸⁵ For more on public works and urban planning in the Portuguese province of Mozambique in the nineteenth and early twentieth centuries, as well as on the present-day conservation policies of its architectural and urban heritage, see the work of Lisandra Franco de Mendonça, namely "As Obras de Saneamento e o Traçado das Primeiras Avenidas em Lourenço Marques, Moçambique." *Pós. Revista do programa de Pós-Graduação em Arquitetura e Urbanismo da FAUUSP* Vol. 25, 45 (2018): 132-148.

⁸⁶ In Chapter V, see the already-mentioned section entitled "Colonial momentum."

⁸⁷ For more on Joaquim José Machado (1847-1925), as well as on Minister of the Overseas Andrade Corvo (1872-1877) and his strategy for developing public works in the overseas provinces see, in Chapter V, the subsection entitled "Techno-scientific momentum."

⁸⁸ As his predecessor in the Mozambique Public Works Department, António José de Araújo (1848-19...) was a student of the Lisbon Military School, having graduated in artillery. Having succeeded Joaquim José Machado in 1881, Araújo is better known for having overseen the construction of the Lourenço Marques railway over the 1880s and 1890s. See Galvão, *A Engenharia Portuguesa*, 191-194.

⁸⁹ Mendonça, "As Obras de Saneamento e o Traçado das Primeiras Avenidas em Lourenço Marques," 137.

for the Public Works Director, who juxtaposed it right to the north of the old Lourenço Marques fortress and settlement, using a system of avenues to connect the historic main streets to the new geometrically regular districts, as shown in Figure 118 by architect Lisandra Franco de Mendonça. Probably on account of the geopolitical context in which the city had suddenly found itself, with the overbearing British presence in the region threatening the sovereignty of its port and, by that threat, the very foundation of the Portuguese empire, Lourenço Marques did grow, and rather quickly, given the large scale of the projected swamp reclamations, into its new grid and avenue system (Fig. 119). As we will also see in the next Chapter, this was the result of a clear metropolitan strategy regarding public works, from the 1870s on, which consisted of prioritizing investment in the African provinces, mainly Mozambique, into which flowed, by 1888/1889, one third of the total overseas budget.⁹⁰ Therefore, and although both the harbor improvement works of Mormugão and Lourenço Marques continued to be on top of the list of major infrastructures with continued support from Lisbon, at least up until the first decades of the twentieth century,⁹¹ the latter, moreover established as capital of the Mozambique province in 1898,⁹² would definitely benefit from a comparatively more constant and prolific investment from the overseas public purse, not just in the harbor and railway combination, but in urban planning and development as well.

V. In Paris, where it all began

Whether directly borrowed, or passing by the Lisbon channel, it does seem that the Parisian straight line, the “Haussmannian slice,” as art historian Terry Kirk puts it,⁹³ was the main source of inspiration for the Portuguese empire’s urban planning modern aspirations. Indeed, and even though Minister Abreu e Sousa’s 1864 legislation had most certainly been influenced by the British sanitary idea, as both had derived from epidemic crises, as suggested by Leal, the juridical, formal, discursive and symbolic values attached to ‘the avenue’ in Portuguese cities and by the long nineteenth-century Portuguese municipalities was always much closer to the French model.

Even when considering the uniqueness of the Porto architectural and urban experience, traditionally seen as coming from a more direct link to the northern city’s prominent British community of

⁹⁰ For more on this topic see, in Chapter V, the subsection entitled “Economic imperialism.”

⁹¹ Alfredo Augusto Lisboa de Lima, “Portos Comerciais Portugueses e Projecto das Obras do Porto de Macau. Conferência Realizada na Associação dos Engenheiros na Sessão Ordinária de 20 de Fevereiro de 1913,” *Revista de Obras Públicas e Minas*, 517/518 (1913): 4. For more on this subject, see Chapter V.

⁹² Mendonça, “As Obras de Saneamento e o Traçado das Primeiras Avenidas em Lourenço Marques,” 140. Historically, the capital had been the Island and city of Mozambique, in the northern part of the province.

⁹³ Kirk, *The Architecture of Modern Italy*, 198.

benefactors, artists and technical experts,⁹⁴ at least at its inception, as we have seen, it doesn't escape, so to speak, the allure of French modernity in Carlos Pérezat's avenue design. Through the second half of the nineteenth century, then, and well into the first decades of the twentieth, in Portugal as in the rest of continental and overseas European cities, "the straight line" would reconcile, as urban historian Marcel Roncayolo puts it, "the point of view of beautification, that of hygiene and, finally, the interest of commerce."⁹⁵ And not any straight line, but the Parisian *percée*, the 'piercing' Parisian new avenue or boulevard which, from the beginning, was set as model of urban transformation "in the French capital and at the scale of the French capital."⁹⁶

Roncayolo sums up the ambition of the Parisian 'haussmannian cycle' as the shattering of the eighteenth-century *Encyclopédie*⁹⁷ definition of the 'city' as "a finite and ordered set of buildings," into a capitalist landscape, where mobility and exchange, which the author deems "the flow" of people, goods and values, outweigh the traditional structures.⁹⁸ In the same book, Maurice Agulhon defines this "haussmannian cycle" as a period of roughly one hundred years, from the 1850s to the 1950s, when French cities were planned and consequently transformed in the vein of Paris' urban design and management by Georges-Eugène Haussmann, prefect of the Seine *département* from 1853 to 1870.⁹⁹ If Haussmann would end up personifying this urban model by reason of his decisive action as administrator, both its incubators and post-Second-Empire continuators would be the Saint-Simonian Polytechnique and Ponts et Chaussées engineers. That is, technical expertise surrounding, counseling and guiding the liberal policies and progressive urbanism through the Third Republic (1870-1940), and materializing in potable water, sewerage, electrical, transport and communication networks.

The main feature of the haussmannian century would thus be the establishment of these long-term network projects which, in the case of Paris, would indeed superimpose a whole new system of avenues to the historic city, crystalizing, in Roncayolo's words, both the old griefs against the "gothic town" and the "new ambitions of a capitalism for which mobility, exchange, and the

⁹⁴ Rui Tavares and Clara Pimenta do Vale, "Porto 20th Century Urban Centralities. Two study cases: Aliados administrative central pla (Barry Parker) and Boavista urban axis. Urban development between town planning and real-estate investment," in *IPHS 2012* (São Paulo: IPHS, 2012), 5.

⁹⁵ Marcel Roncayolo, "La Production de la Ville. Le Modèle Haussmannien," in *La Ville de l'Age Industriel. Le Cycle Haussmannien*, ed. Maurice Agulhon (Paris : Editions du Seuil, 1998), 99.

⁹⁶ *Ibid.*, 81.

⁹⁷ The *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers, par une société de gens de lettres*, known simply as *Encyclopédie*, was a general encyclopedia published in France between 1751 and 1772 by members of the Académie Royale des Sciences et des Belles Lettres, among others.

⁹⁸ Roncayolo, "La Production de la Ville. Le Modèle Haussmannien," 106-107.

⁹⁹ Maurice Agulhon, "Introduction," in *La Ville de l'Age Industriel. Le Cycle Haussmannien*, ed. Maurice Agulhon (Paris : Editions du Seuil, 1998), 10.

monetary factor outweighed everything.”¹⁰⁰ Therefore, and in this sense, Paris’ avenues can be seen less as the urban expression of industrialization, and more as that of the expanding Second Empire capitalist economy. In this context, better hygiene and a more efficient street policing were just, as the author puts it, complementary advantages.

At the same time liberal and authoritarian, Haussmann’s urbanism sought to give the capital’s real estate companies the room they needed to expand, by providing a general plan where property development and expansion zones would be clearly defined and also more appropriately controlled by the local administration. In this device, the juridical instruments regarding expropriation on grounds of public interest were, of course, paramount, in a process which would probably inspire Minister Abreu e Sousa’s similar reforms in Portugal, as we have seen.

However, in France, Bonaparte’s First Empire’s emphasis on public order in the name of the ‘common interest’ had already given birth to a juridical attempt at curbing the property owner’s rights through urban planning. It had come in the form of the September 16, 1807 law regarding the reclamation of swamplands which, among other dispositions, put forward the general obligation for every municipality to establish an alignment plan (*plan d’alignement*) regulating the construction of new streets (“*ouverture de nouvelles rues*”) and the widening of existing ones (“*élargissement des anciennes*”).¹⁰¹ In the sense of a regulatory plan, its purpose would be to engage the municipalities and landlords alike in a central-government-approved set of urban configuration principles, designed to limit the *ancien régime* laissez-faire collusive practices.

Though attempts were made by the following political regimes to implement the Napoleonic alignment plans, they would only start being approved at the beginning of the haussmannian cycle, in the 1850s. As Marcel Roncayolo puts it, this apparent failure of the “rational State” to impose order and control over the urban landscape, can be read as the triumph of “the laissez-faire and of private property,” which would set its limitations even to the more authoritarian haussmannisation process itself.¹⁰² Yet, in reality, municipalities most often resorted to partial alignment plans to guide them in the deliverance of building permits. This constituted a “lighter procedure,” more in tune with the local realities, and through which a certain dialogue became possible between the government’s prerogatives of urban order and the private owner’s interests.¹⁰³ From the administrator’s point of view, then, a delicate compromise between expropriating private property

¹⁰⁰ Roncayolo, “La Production de la Ville. Le Modèle Haussmannien,” 104.

¹⁰¹ Marcel Roncayolo, “Propriété, intérêt public, urbanisme après la Révolution. Les avatars de la législation impériale,” *Les Annales de la Recherche Urbaine* 43 (1989): 90.

¹⁰² *Ibid.*, 85.

¹⁰³ *Ibid.*, 92.

and attracting private capital for investment in smaller-scale plans would thus become the base of Paris' transformations through the second half of the nineteenth century.

Even if I am, admittedly, delving rather superficially in the complexity of these processes, several parallels can still be pointed out between the French and the Portuguese experiences, the latter of which we have been observing from the point of view of urban transformation in Macao. There are, of course, similarities in terms of administrative and juridical reform, but also in this same sort of balance which had to be found between each city's aspirations to modernity, the municipalities' finances, central government's ability or willingness to intervene, and the capacity and interest of private owners to yield their properties and invest their capital into making that modern ideal a reality. Ultimately, and as we have been seeing throughout the previous chapters, small-scale restructuring projects and extension plans through reclamation or over low-density grounds were most common, as local governments everywhere would naturally shy away from more ambitious and possibly controversial resumption plans. What made the Paris singularity must have been the concentration of exceptional political determination, technical expertise, and private investment.

In other contexts and at other scales, in provincial France and throughout European cities all over the world, the same aspirations, together with similar constellations of technocratic administrations and capitalist organizations, would often imprint the urban landscape with the same kind of formal expression: the new city avenue. Though comparatively less ambitious projects, these 'provincial' avenues, so to speak, were still brought to life, in most cases, through long periods of time, intermittent financing and much political contestation. Suffice it to recall the parliamentary debates surrounding the 1888 draft law regarding expropriations in view of Ressano Garcia's 'new avenues' Lisbon improvement plan, where the Regenerator opposition¹⁰⁴ equated the José Luciano de Castro Progressist government's intentions with the radical socialist 1871 Paris Commune.¹⁰⁵

Macao Public Works Director Constantino José de Brito's 1883 Chinese Bazaar new avenue idea was, therefore, an idea of its time, nothing more, nothing less. It was contemporary of Ressano Garcia's early work in Lisbon's Avenida da Liberdade, of Porto's Rua Mouzinho da Silveira construction work, of the Lourenço Marques and Vasco da Gama extension (or foundation) plans, and of the first expressions of analogous ideas in most of the Portuguese Kingdom's provincial

¹⁰⁴ The Regenerator (*Partido Regenerador*) and the Progressive (*Partido Progressista*) parties were the two halves of the Portuguese constitutional monarchy 'rotation' system (*rotativismo*), in which the country's two major political parties governed in systematic alternance. The Regenerator Party was linked to the country's conservative circles, whereas the Progressive Party espoused more liberal and centre-left ideas. This system, in full force mainly through the 1870s and 1880s, began to crumble following the 1890s political and economic crises, and namely through the rise of the Republican Party's representation in Parliament (for more on the late nineteenth century political and social unrest in Portugal, see Chapter V).

¹⁰⁵ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 29.

towns. In a similar fashion, it projected the straight line through the city's traditional urban tissue as the geometrical solution, the "urban infrastructural instrument," as Terry Kirk puts it regarding the 1868 Naples *risanamento* (sanitation) operation, to "hygienic predicaments," linked to "social pathologies," although maybe less to "potentially dangerous hotbeds of political unrest."¹⁰⁶ Still, if the latter came as a bonus, as it had in Paris, Portuguese technocratic administrators wouldn't be the ones arguing against it. There was also the alliance with the city's private capital that was still going strong, after the urban extension and development operations of the 1860s and 1870s, as well as the still ongoing Miguel Ayres da Silva inner harbor reclamation. At Macao's overseas provincial scale, conditions seemed to be met to move forward with an enterprise which would bring the city a definitive marker of modernity.

The Chinese Bazaar New Avenue

I. The 1903 Abreu Nunes Project

Despite the engineering and medical experts' commitment to urban sanitation, the 1885 Horta da Mitra improvement plan by Public Works Director Horta e Costa, and even despite central government's often reiterated insistence in the importance of establishing a general improvement plan before launching new separate projects,¹⁰⁷ the 1880s in Macao would be all about the inner harbor improvement hopes and dreams, leaving Brito's avenue idea in the backburner. At the time of his work on the improvement committee, Brito himself had already presented his own report on the harbor matter, and Military Engineer Adolfo Ferreira Loureiro, having arrived in September 1883 on a government special mission, was just starting his study of tide conditions and silt flows.¹⁰⁸ This major concern would only be put on hold, so to speak, in the early 1890s, when the bubonic plague outbreak swept through Canton, Hong Kong and Macao, as we have seen, ultimately contributing to put at least part of the administrators' focus back on urban hygiene.

¹⁰⁶ Kirk, *The Architecture of Modern Italy*, 196.

¹⁰⁷ For example, in his January 2, 1887 address at the opening of Parliament, King D. Luís would echo, again, José Luciano de Castro government's concern with budgetary restraint when managing investment in the overseas material improvements. To this end, it was determined that all new investments in that branch of "foment" should be "submitted to a general plan," which could be promptly executed as soon as balance was restored to the overseas treasury (BG, n°9, March 3, 1887, 73-74).

¹⁰⁸ For more on the harbor improvement project, see Chapter V.

At the time of the November 15, 1893 fire in the Chinese Bazaar, military engineer Augusto César de Abreu Nunes had just been appointed Director of the Macao Public Works Department.¹⁰⁹ Together with fellow military engineer Governor José Maria de Sousa Horta e Costa (1894-1897), who would take office for the first time early the following year, just as the first cases of the plague epidemic were being diagnosed in Canton, Abreu Nunes would be hard at work on the districts of Volong and São Lázaro resumption plans all through the summer of 1894.¹¹⁰ Still, rebuilding the S. Domingos municipal market must have been high on the Public Works to-do list as, the following spring, the City Senate was already advertising the launch of the respective call for tenders, to be done “according to the Public Works Director’s project,” which was available for consultation at the municipality secretariat.¹¹¹

Spring 1895 would turn out to be, however, precisely the season the plague epidemic would finally make its way into Macao, which put everything on hold, except for the ongoing demolitions in Volong. The issue of the burnt down market would only surface again three years later, in January 1898, after Abreu Nunes had finished drafting his propositions for the inner harbor improvement, under new governor Eduardo Augusto Rodrigues Galhardo (1897-1900). At that time, the President of the City Senate was backing and had already signed a concession contract with Chinese entrepreneurs Lou Kau and Vong Dai¹¹² for the construction of a new market and was asking for the Governor’s approval.¹¹³ Although, unfortunately, the actual drawings weren’t included in the file, it appears that Lou Kau and Vong Dai had submitted, in November 1897, a revised version of Abreu Nunes’s 1895 project. In the Senate President’s words, it was to be a market of “a more

¹⁰⁹ BG, n°49, December 9, 1893, 545, National ordinance of October 19, 1893, appointing Augusto César de Abreu Nunes as Macao Public Works Director.

¹¹⁰ For more on these subjects, see Chapter III.

¹¹¹ BG, n°17, April 27, 1895, 141, Public notice by the Macao City Senate, regarding the construction of the new S. Domingos market, April 24, 1895.

¹¹² According to historian Lin Guang Zhi, Lou Kau (1837-1906) had come to Macao as a twenty-year-old in 1857. Having managed to grow in wealth and influence through a diverse business portfolio comprising property development and gambling-game Fantan, he would ultimately be known as the “king of pork,” due to his long-time tenure as holder of the pork concession (Lin, *Chinese Merchants in Macau in Late Qing*, 57-64). Naturalized Portuguese in the late 1880s, he is frequently referenced in the primary sources with the honorific title of *Comendador*. Simultaneously a well-respected representative of the Macao Chinese community, Lou Kau would frequently collaborate with both the City Senate and the Governor, be it in real-estate development operations, such as the already-mentioned 1895 Sakong working class housing enterprise (see Chapter III), or government-appointed committees, as we shall see in Chapter V regarding the Macao inner harbor. As for Vong Dai, also probably born in the 1830s, he was the son of famed entrepreneur Vong Lok, extensively referenced in Chapter I as having managed the 1870s New Bazaar reclamation and development plan.

¹¹³ AM, MO/AH/AC/SA/01/01862, Letter n°4 from the President of the City Senate, António Joaquim Basto, to the Governor of Macao, Eduardo Augusto Rodrigues Galhardo, regarding the construction of the new S. Domingos market, **January 25, 1898 (transcribed in Volume 3 - Annexes)**.

modest condition” than the one originally envisioned by the Public Works Director, whose excessive “grandeur” in terms of the preconized resumption plan, as in terms of construction, had led to a bit of a deadlock, all the while leaving the ruins of the old market to slowly turn into a waste dump.¹¹⁴

From this appraisal of the situation, it can be inferred that Abreu Nunes had, from the start, taken up the 1883 material improvements committee’s idea to establish a large resumption plan over and around the former Grand Bazaar block, in order to build an accessible and properly ventilated new district, the center of which would be the new S. Domingos market.¹¹⁵ José Gomes da Silva’s December 1897 reservations regarding Lou Kau and Vong Dai’s low-key project seem to confirm as much, as the Public Health Director stressed the importance of expropriating the grounds around the market site, namely with the purpose of widening the Rua dos Mercadores, which was, traditionally, and still, at the turn of the century, one of the city’s major axes.¹¹⁶

Thus, both Gomes da Silva and Abreu Nunes seemed to be in agreement against the City Senate’s ‘more reasonable’ plan to rebuild the market site as was. In what was becoming their typical approach, taking advantage of catastrophe, so to speak, the two experts’ idea was clearly to profit from the opportunity of rebuilding S. Domingos to launch a more ambitious Chinese Bazaar improvement plan. The Public Works Director would elaborate on this almost three years later showing, by the way, that the Chinese entrepreneurs’ project hadn’t moved forward, in the context of his October 27, 1900 take on the Macao general improvement plan.

Indeed, in the second José Luciano de Castro government (1897-1900), Minister of the Overseas and military engineer António Eduardo Vilaça (1898-1900) would publish the national ordinance of November 14, 1898, with the purpose of relaunching, once again, the obligation to establish general improvement plans in the overseas provinces. In a time when Portugal’s international reputation as a modern empire had become paramount to all factions of the political spectrum,¹¹⁷ the revival of the 1864 emphasis on integral planning presented a triple interest: there was its traditional understanding as a path to economic development, the equally usual sound budgetary administration argument and, finally, a new rhetoric on furthering effective colonization. As Minister Vilaça phrased it,

¹¹⁴ Ibid.

¹¹⁵ BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, November 20, 1883.

¹¹⁶ AM, MO/AH/AC/SA/01/01862, Letter n°4 from the President of the City Senate, António Joaquim Basto, to the Governor of Macao, Eduardo Augusto Rodrigues Galhardo, regarding the construction of the new S. Domingos market, **January 25, 1898 (transcribed in Volume 3 - Annexes)**. Document 3.

¹¹⁷ For more on this subject, see Chapter V.

Considering that undertaking works and improvements of public interest is, not only one of the most powerful factors in the economic development of the overseas provinces, but also one of the most effective conditions to achieve the colonization of these territories; and thus it being of the utmost convenience that the overseas public works budget be employed in such a way that, with the least possible expenditure, works of indisputable general interest be undertaken; and given that only a previously approved plan, to be carried out methodically and persistently, may reconcile budgetary economy with the Portuguese colonies' imperious needs:

[It is determined that] all governors of the overseas provinces must layout, as soon as possible, a general plan of works to be undertaken, including roads and railways, the improvement of maritime and fluvial communications, the building of telegraph systems, public buildings, lighthouses, irrigation and sanitation networks, and others that may contribute to the development of the colonies.¹¹⁸

Unsurprisingly, and apart from resubmitting his work on the inner harbor improvement, the main focus of Abreu Nunes' answer to central government's query would be sanitation. By force of circumstances, it was the topic he had been working on almost exclusively since his arrival in Macao and, in his own words, the annual recurrence of plague outbreaks only fortified his resolve to expropriate, demolish and rebuild each and every marsh and "filthy" district in the city. With the new Volong completed, the S. Lázaro and Tap-seac resumption plans well on their way, and several of the northern suburbs already in line for similar operations, the Chinese Bazaar, with its "terrible hygienic conditions," was next for a "radical change in the name of sanitation."¹¹⁹ And when the Public Works Director wrote "radical," he truly meant it:

In my opinion, one should handle this district as follows: undertake its topographic survey at the scale of 1/1000, over which a new district would be planned with the appropriate conditions, respecting only the most important existing buildings, thus putting an end, once and for all, to those countless narrow alleys and streets which prevent the air from circulate freely.¹²⁰

Hence, and as with his previous experiences with urban sanitation, Abreu Nunes had in mind a large-scale clean-slate project for the Chinese Bazaar. This project would be executed through partial resumption plans established for the most urgent zones, together with a strict alignment policy for the rest to be enforced on all future voluntary reconstructions. Which would undoubtedly lead, he predicted, to a full and swift renovation of one of the city's oldest districts:

In a few years, as consequence of this city's numerous and frequent constructions and reconstructions, we would have a new and hygienic district, the largest of Macao, now better protected from the plague, as are other hygienic districts, such as the lately built Volong.¹²¹

¹¹⁸ DG, n°256, November 15, 1898, 810, National ordinance of **November 14, 1898**, regarding the establishment of general improvement plans in the overseas provinces (**transcribed in Volume 3 - Annexes**).

¹¹⁹ AM, MO/AH/AC/SA/01/27095, Letter n°259 from Macao Public Works Director, Augusto César de Abreu Nunes, to the Government Secretary-General, listing the most important public works to be undertaken in Macao, **October 27, 1900 (transcribed in Volume 3 - Annexes)**.

¹²⁰ Ibid.

¹²¹ Ibid.

At that time, José Maria de Sousa Horta e Costa had just arrived in Macao for his second tenure as Governor (1900-1902) which, as usual, helped move things along, at least in the sense the Public Works and the Public Health Directors thought they should be moving. Accordingly, the S. Domingos market resumption plan was finally launched on May 14, 1901, with the expropriation notice regarding the former Grand Bazaar block in its entirety, immediately followed by the first expropriation settlements.¹²² The formal local ordinance would be published by Governor Horta e Costa roughly one month later, officially establishing the resumption operation, which was justified by the “filthy” ruins of the former market and adjacent streets being “a danger to public health, as well as a disgrace to a civilized country.”¹²³

Although a design for the S. Domingos market reconstruction seems to have been drafted by Abreu Nunes since 1895, and despite the fact that a reference to an existing project for the Grand Bazaar site is included in the June 1901 local ordinance, its first available drawing is actually part of a general plan dated from February 11, 1903 (Fig. 120). This unsigned plan, entitled “Project for the construction of an Avenue from Largo do Senado to the inner harbor riverside street, and for the widening of Rua dos Mercadores, do Mastro, Aterro Novo and Travessa da Cordoaria,” is seemingly a copy made by one of the Macao Public Works Department draftsmen, and bearing Abreu Nunes’ certificate of conformity, which points to him being its original author.¹²⁴

In what concerns the Grand Bazaar block (Fig. 121), we can see that all former constructions and plot divisions have been swept clean to make way for a new composition, comprising the new market buildings in the center. To the east and west of the new market, there are four new blocks, two fronting a realigned Rua dos Mercadores, and two fronting an equally redesigned Largo do Senado. As we shall see briefly, these blocks surrounding the new market were destined to be sold for private development operations. Most importantly, we can also see that the author of the original plan, most likely Abreu Nunes, capitalized on the reconfiguration of the Grand Bazaar block to envision a heavier intervention in its surroundings, starting with the widening of Rua dos Mercadores, which had been discussed from the start, the reshaping of Largo do Senado, which is

¹²² BG, n°20, May 18, 1901, 108, Public notice by the District Administrator, regarding the construction of the new S. Domingos market, May 14, 1901. See also AM, MO/AH/AC/SA/01/27080, Expropriation settlements for the construction of the new S. Domingos market, May 15, 1901.

¹²³ BG, n°23, June 8, 1901, 121-122, Government of Macao local ordinance n°31, regarding the construction of the new S. Domingos market, **June 8, 1901 (transcribed in Volume 3 - Annexes)**.

¹²⁴ Confirming that the original plan had been drafted by Abreu Nunes himself just a month before, Spanish architect J. M. Casuso, author of the 1904 S. Domingos market project, which will be discussed in the next section, mentions as much, as part of a June 28, 1904 letter to the Macao City Senate. Casuso writes that “according to the documents I have seen regarding all projects in reference to this market by the Public Works Department, there is a plan of the site which has been drafted at the scale of 1/500 by the honorable Engineer Director Mr. Abreu Nunes, dated from January 11, 1903” (AM, MO/AH/AC/SA/01/27147, Technical report regarding the new S. Domingos municipal market, by Architect J. M. Casuso, May 11, 1904. Document 1).

here combined with the S. Domingos church square and, finally, the opening of a new artery, aligned with the Senate house, and connecting its square down to the inner harbor piers. Thus bringing to paper, for the first time and with its first layout, the twenty-year-old Chinese Bazaar New Avenue idea.

Nearly one month later, the Public Works Director would adapt this plan into two alternate versions of a project to extend the new market site over the adjacent grounds of the S. Domingos church and former convent (Figs. 122 and 123).¹²⁵ This was an aspiration, it seems, of new Governor Arnaldo Novais Guedes Rebelo (1902-1903).¹²⁶ Upon his arrival in Macao, towards the end of 1902, Guedes Rebelo wrote to the Minister of the Overseas, detailing how the expropriations were all finalized, the plots surrounding the projected market were sold, and confidently stating that construction was starting all around, with the exception of the market site itself, as there had been no offers to the new call for tenders by the City Senate.¹²⁷

These two plans differ only in the disposition of the new blocks occupying the site of the old convent which would serve, in both cases, for some additional market buildings in the center, and for private development operations on both its eastern and western sides, following the model Abreu Nunes had initially laid down for the adjacent Grand Bazaar block (Fig. 124). In comparison with the February design, though, the configuration of Largo do Senado is much reduced, the whole

¹²⁵ As mentioned in Chapter II with regard to the institutions which traditionally provided for the education of the country's higher classes, a post-civil war decree published by the first liberal governments in 1834 had established the suppression and expulsion of all religious orders from all territories within the Portuguese Empire. This policy, which had started with the Marquis of Pombal's decision to expel the Jesuits in 1759, had led to the nationalization of the majority of the orders' convents and lands, many of which, by the beginning of the twentieth century, were left abandoned and falling into ruins. It was the case, as we have seen, of the convents of Santa Cruz in Coimbra, or Remédios in Braga, whose grounds near the historic city centers would thus serve the purpose of urban extension and improvement projects. In Macao, there was the famous and most visible effect of these policies: the old Jesuit college and church of Madre de Deus, commonly known as S. Paulo, which had completely burnt down, except for its magnificent façade, in 1835. Never rebuilt, its ruins would first be used as a Christian burial ground and, later on, as the site for one of the city's most insalubrious slums, as mentioned in Chapter III. As for S. Domingos, in the 1900s, its church was still in use by the parish, whereas the convent was being occupied by "several destitute official's families," despite a serious risk of collapse, judging from Governor Guedes Rebelo's description (AHU, 251-2G-1S-SEMU-DGU cx., Letter n°69 from the Governor of Macao, Arnaldo Novais Guedes Rebelo, to the Minister of the Overseas, "requesting authorization for the demolition of the S. Domingos convent," April 22, 1903).

¹²⁶ For more on Governor Arnaldo Novais Guedes Rebelo, namely on his work in favor of the Inner Harbor Improvement Project, see Chapter V.

¹²⁷ AHU, 251-2G-1S-SEMU-DGU cx., Preliminary study for the extension of the new S. Domingos municipal market, by Public Works Director Augusto César de Abreu Nunes, March 18, 1903. Annex to the letter n°69 from the Governor of Macao, Arnaldo Novais Guedes Rebelo, to the Minister of the Overseas, "requesting authorization for the demolition of the S. Domingos convent," April 22, 1903.

operation largely increasing the surfaces of the new private construction blocks. In any case, all these extra features were marked as being “part of the Bazaar improvement plan.”

It is difficult to pinpoint the exact moment of this transition, or if indeed it had been Abreu Nunes’ intention from the start, but the fact seems to be that, somewhere along the line, between discussing its more or less ambitious scope, the project to rebuild the S. Domingos market effectively transformed into the Chinese Bazaar improvement plan. Which would, in turn, and together with Abreu Nunes’ 1897 inner harbor improvement plan, be a part of a set of two major initiatives from the Public Works Director’s 1900 Macao general improvement plan to be presented simultaneously by Governor Guedes Rebelo to the Ministry of the Overseas administration. Indeed, on April 22, 1903, Guedes Rebelo would address three separate letters to his personal friend and fellow military engineer Minister Manuel Rafael Gorjão (1903-1904),¹²⁸ requesting authorization to proceed: first, with the demolition of the S. Domingos convent (letter n°69); second, with the series of urban interventions included in the Public Works Director’s April 21, 1903 report entitled “Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets” (letter n°70);¹²⁹ and third, with the inner harbor improvement project (letter n°71).¹³⁰

Most probably, Abreu Nunes’ work on his October 1900 report in view of delivering a comprehensive plan along the lines of the 1898 national ordinance, together with the studies he had already conducted on the inner harbor, had led him to rethink his original intentions for the Grand Bazaar block. Firstly, through drafting the connection from this renovated city center to the similarly renovated harbor piers, and secondly through extending the same restructuring clean-slate principles to the S. Domingos convent. In any case, he must have started work on his Chinese Bazaar improvement plan not long after the beginning of 1901, as all of his 1903 projects are indeed laid out over the district’s new detailed cadastral plan, established at the scale of 1/500, as he had intended in his improvement plan report (Fig. 125).

Among these projects, there is also his April 21, 1903 report, which would be sent to Lisbon for approval, as mentioned, and which included a “Plan for the construction of an avenue from the Largo do Senado to the inner harbor and improvement of several streets in the Chinese Bazaar” (Fig. 126). Abreu Nunes’ most ambitious plan to date, it featured the first option for the S. Domingos market extension, other partial clean-slate operations, chirurgical street widening and

¹²⁸ For more on the professional relationship between Governor Arnaldo Novais Guedes Rebelo and Minister of the Overseas Manuel Rafael Gorjão, see Chapter V.

¹²⁹ AHU, 251-2G-1S-SEMUDGU cx., “Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets,” by Public Works Director Augusto César de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**.

¹³⁰ AHU, 451-1H-SEMUDGU mc., Letter n°71 from the Governor of Macao, Arnaldo Novais Guedes Rebelo, to the Minister of the Overseas, regarding the inner harbor improvement project, April 22, 1903.

realignment, as well as not one, but two avenues connecting the Largo do Senado to the inner harbor.

In his report, the Public Works Director describes the issue at stake: the old laissez-faire expansion model and its resulting additive morphology as the source of all urban evil.

The Chinese trade happens mainly on the inner harbor riverside street and in the Bazaar; in the inner harbor riverside street takes place the loading and unloading of the innumerable lorchas¹³¹ and other boats that use the port, especially for salted fish cargoes; in the Bazaar are situated the main Chinese commercial establishments, public houses, business offices, gambling houses and restaurants [*culaos*], which they attend daily.

The most important streets cutting through the Bazaar and connecting it with the riverside street and with the city center, in a east-west direction, are Rua da Felicidade and Rua das Estalagens [Fig. 96]; two narrow and crooked streets, at some points with a maximum width of 6,5 meters! Besides these, there are others with, in general, a 2-meter width or less! These longitudinal streets are connected transversally by others in worse shape still: Rua dos Mercadores, do Mastro, do Aterro Novo, etc.

As a result, the Bazaar, quintessentially a Chinese district, is an enormous agglomeration of business houses and of people and cars in the streets, constantly trampling each other, making traffic and commerce very difficult. To these nuisances is added, as consequence, its deplorable sanitary conditions, that is, a chronic lack of air and light in every dwelling, street and lane, and an insupportable stench all over the place.¹³²

To the modern engineer, it then followed that proper planning was the remedy. The first grand gesture was to open up a “wide and spacious avenue directly connecting the inner harbor to the city center.”¹³³ This was to be complemented by the widening of several of the old Bazaar longitudinal main streets, such as Rua dos Mercadores, Rua do Mastro, Travessa do Pagode and Travessa da Cordoaria and, finally, Rua do Guimarães (Fig. 127). All of these which, in this proposition, go from longitudinal, with regard to their traditional layout along the evolving riverside, to transversal streets, now with regard to the New Avenue. Besides the S. Domingos resumption plan, including both the former Grand Bazaar and old convent blocks, north of the realigned and also widened Rua das Estalagens, near the site of the old Chinese customs, a new regularly laid out district would be built, as the Public Works Director considered its small plots and intricate urban structure beyond hope of realignment. On the whole, the Chinese Bazaar would be transformed into regular network of 10-meter-wide new streets, articulating the old district with the inner harbor and the rest of the

¹³¹ The lorcha was a hybrid type of sailing vessel consisting of a European-style hull equipped with a Chinese sail. The hull structure made the lorcha faster and able to carry more cargo than the smaller Chinese junk.

¹³² AHU, 251-2G-1S-SEMU-DGU ex., “Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets,” by Public Works Director Augusto César de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**.

¹³³ Ibid.

city in a way that was set to accomplish the goals of improving “traffic, commerce, and the city’s sanitary condition.”¹³⁴

As for its main element, the 16-meter-wide New Avenue, it was to be bordered on each side by a 3-meter-wide public gallery, connecting the center of the Largo do Senado and its adjacent new S. Domingos market complex with the 1880s Miguel Ayres inner harbor reclamation. It would be doubled by a second 10-meter-wide avenue without galleries, aligned with the Senate house, thus creating yet another resumption zone, which would allow for the construction of a row of regular blocks linking the new city center to Rua do Guimarães. The extension of this new regular grid down to the Praia Grande avenue, as had been envisioned by the 1883 improvement committee, in order to connect the riverside inner harbor directly to the seaside bay through Largo do Senado, would be postponed “to a later time,” as it was considered less urgent, and also as the corresponding resumption plan was predictably more expensive.¹³⁵

The 16-meter-wide New Avenue and galleries were already featured on Abreu Nunes’ much more subdued February 1903 plan, as we have seen (Fig. 128). Originally, it stood by itself as the main restructuring gesture, aligned with the Senate house façade, and thus separated from the S. Domingos market by a new block. It was accompanied, as its name indicated, by the widening and realignment of Rua dos Mercadores, Travessa do Aterro Novo, Rua do Mastro (aligned with Travessa da Felicidade) and Travessa da Cordoaria. These are more or less the transversal axes which would be developed in the subsequent April 1903 plan. Nevertheless, they serve here a much clearer function of articulating between themselves the former Bazaar main east-to-west roads, Rua das Estalagens, to the north, and Rua da Felicidade, to the south, as well as articulating these roads with the New Avenue. Besides the Grand Bazaar block, which had been destroyed by natural causes, so to speak, and the piercing of the avenue, we might say that the impact of this slightly earlier version of the improvement project on the existing urban tissue was limited to much more circumscribed interventions. It would consequently be a more moderate option in terms of expropriations and demolitions. A more pragmatical option too, I might add, by focusing less on the temptation to regularize the whole of the Bazaar urban structure and more on addressing the district’s accessibility problems and circulation issues in all its forms, be they of vehicles, people, air, sunlight, or sewerage and potable water systems.

¹³⁴ Ibid.

¹³⁵ Ibid. This had to do with the value of the private property to expropriate. On the seaside, city ground was traditionally occupied by the more high-profile, European-style buildings, forming the classic nineteenth-century Macao view of the Praia Grande bay. This second phase of the avenue project would finally be launched in the 1920s, in connection with the Macao Outer Harbor project (1921), giving way to some of the most emblematic architectural projects of that time, such as the Banco Nacional Ultramarino (1926) or the Post Office (1931) buildings.

Still, Abreu Nunes and Governor Guedes Rebelo's choice fell on the more ambitious plan which, for this reason, would end up on the tables of the central government's overseas councils.¹³⁶ But restructuring ambitions also meant high budgetary costs, on a scale that had never been seen nor tested by local government up until that point. Therefore, it is perhaps understandable that the Public Works Director would spend five times more pages describing his method for carrying out the Bazaar resumption plan, than the amount dedicated to the restructuring project itself. He then starts with a key argument, designed to ease everyone's mind regarding costs:

To carry out such an important improvement, it is necessary to carry out beforehand some consequent expropriations, although, in my opinion, and considering that this improvement would be almost exclusively for the benefit of the Chinese population, they should be the ones to pay for it, thus avoiding to burden the Treasury with its expenditure, and saving its receipts to carry out other much needed improvements in the Colony, the cost of which might not be as easily assigned to them.¹³⁷

Abreu Nunes' plan was to assess property value, not by taking into account their current yield, as rents were generally high in the Bazaar, and this would consequently raise the cost of expropriation to prohibitive levels, but solely based on the value of the building itself. Which, he added, had been "the usual practice thus far, for analogous reasons." This way, and with the subsequent sale of the plots adjacent to the New Avenue and realigned streets, the project's receipts would surpass its expenditure in such an attractive way that they would even be enough to cover all expenses related to the establishment of new sewerage and potable water systems, as well as all surface treatments. Construction of the new buildings and realigned façades was also traditionally done by each landowner, one less expenditure for the public purse, and so, Abreu Nunes concluded, "no one will hesitate to undertake such an important improvement, presented in such favorable conditions!"¹³⁸

The Overseas Public Works Committee (*Comissão Superior Técnica de Obras Públicas do Ultramar*), in which took part General Adolfo Loureiro, among other government experts, would present its formal opinion on this project on June 19, 1903. This would be followed by the Overseas Council's (*Junta Consultiva do Ultramar*) take on the whole process, presented to the Minister on

¹³⁶ As mentioned, Abreu Nunes' April 21, 1903 Bazaar improvement plan was sent to the Ministry of Overseas as an annex to one of the three letters Governor Guedes Rebelo addressed to Minister Gorjão with the S. Domingos market and the inner harbor improvement projects, all dated from April 22, 1903. Being part of a correspondence from the Government of Macao to the central Overseas cabinet, today this plan is kept in the Arquivo Histórico Ultramarino in Lisbon (251-2G-1S-SEMU-DGU ex.). The February 11, 1903 plan, on the other hand, exists only in the Arquivo de Macao (MO/AH/AC/SA/01/27073), as part of a correspondence between the Macao Public Works Department and the local government secretariat, which seems to indicate that it was never brought to the attention of Lisbon's overseas bodies.

¹³⁷ AHU, 251-2G-1S-SEMU-DGU ex., "Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets," by Public Works Director Augusto César de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**.

¹³⁸ Ibid.

October 26, 1903.¹³⁹ Although, interestingly, neither of these instances would remark on the structural and morphological contents, nor on the overall transformative ambition of the project in what the urban landscape was concerned, both had a number of comments on how its execution was being envisioned.

One of the fundamental interrogations coming from the Overseas Council had to do precisely with these preliminary financial arrangements, with regard to the resumption process, which Abreu Nunes seemed to consider as being quite straightforward. In fact, the Council had quite the opposite view, severely criticizing what it considered the Public Works Director's rashness in taking for granted the Chinese population's willingness to go along with such a vast and undercompensated expropriation plan:

It isn't necessary to go into great lengths to demonstrate how iniquitous and dangerous it would be to move forward with such a violent process, which would affect the legitimate rights of the Bazaar owners, and which might incite a grave disruption among the Chinese population, with fatal consequences to our interests and our administration's good reputation. To relinquish considering the rental income of the buildings, which is that much substantial in a part of town which concentrates almost all of trade, would be reputed an unspeakable act and a violent extortion, if only the appraisal of the buildings' construction costs were to be considered.¹⁴⁰

The Overseas Council demonstrates here a keen knowledge of the Macanese reality, and mainly of the importance of maintaining that "good reputation" with the city's Chinese landowners and entrepreneurs, over which the province's prosperity, as well as all its modernizing efforts had been built. Perhaps the experience with the resumption processes in Volong and S. Lázaro had led Abreu Nunes to believe these processes to be much simpler, in terms of the properties' value, as in terms of their overall number. It is true that those were poor residential suburbs, almost slums, for the most part, and so it is probable that their rental yield wasn't that substantial. As mentioned in the previous Chapter, most of them weren't even valued enough to be eligible for property tax. On the contrary, crowded and insalubrious as its living conditions might have been, the Bazaar was indeed home to the city's extraordinarily varied commercial life, established over an intricate urban pattern of small plots and blocks, visible moreover on the 1903 cadastral survey (Fig. 125), which might begin to give us an idea of the complexity of the land property situation the improvement plan was

¹³⁹ AHU, 251-2G-1S-SEMU-DGU cx., Consultation of the Overseas Council by the Government of Macao regarding the resumption plan for the execution of the Chinese Bazaar Improvement Plan. Decision on **October 26, 1903 (transcribed in Volume 3 - Annexes)**. This report includes an overview of the whole process, including a lengthy reference to the June 19, 1903 Overseas Public Works Committee report, which is featured under the same archival reference, but rather as an annex to the March 18, 1903 'Preliminary study for the extension of the new S. Domingos municipal market', by Public Works Director Augusto César de Abreu Nunes.

¹⁴⁰ Ibid.

‘up against’. In any case, and as far as the metropolitan institutions were concerned, ‘fighting’ the practices of laissez-faire was more about collaboration than imposition.

Another interesting contribution from the Overseas Council in its October 1903 report was a draft law for the Chinese Bazaar resumption and general improvement plans, as it represented an overview of the main ideas expressed by everyone involved in the discussion up until that point, from the Macao Public Works Department and local government, to the Overseas Technical Committee, the Ministry of the Overseas Technical Division (*3ª Repartição da Direcção Geral do Ultramar*) and, finally, to the Overseas Council itself, on how to get the project done.

For instance, it acknowledged the fact that the City Senate, lacking the technical and financial resources to carry out such an ambitious and complex programme, was to be replaced in its management by the local government. This was clearly an exception to the rules established by the 1864 legislation, which had put the municipalities in charge of the improvement plans. Although many of the smaller structures would end up resorting to the districts’ Public Works technical expertise, as we have seen, it was generally the municipal administration and budget that was put on the line when it came to the pursuit of the actual works. In Macao, the historical reasons underlying the Senate’s precarious financial and administrative situation were well known,¹⁴¹ usually meaning that all significant urban interventions were decided and carried out by the central government institutions, as we have seen, for example, with the city’s first resumption plans. In this case, and once more, none of the parties seemed to think it appropriate to challenge the status quo, and so the draft law established the Government of Macao as managing entity, acting through a committee which would be presided by the Public Works Director and include a designated City Senator.¹⁴²

¹⁴¹ For more on this subject, see Chapter III.

¹⁴² The establishment of such a committee had actually been a suggestion of Governor Guedes Rebelo in a fourth April 22, 1903 letter to Minister Gorjão, marked ‘confidential’, in which he declared his unwillingness to trust the City Senate with managing the expropriation procedures. In the Governor’s opinion, “it was unlikely that the Senators of such a small town as Macao would have the impartiality and independence needed to not favor their friends nor harass their enemies in those transactions.” It then followed that the City Senators should be completely excluded from the future Bazaar Improvement Committee. Which shows that the feud between central and local governments was still very much alive in Macao at the turn of the century, as were the old stereotypes vehiculated by the Governor’s discourse in regard to the Macanese community. And so, in reality, the question of challenging the status quo in what the emancipation of the City Senate was concerned, was much more complex, as it would have implied a shift in social, political and governance paradigms, which at least Governor Guedes Rebelo wasn’t ready to make. The Governor would only yield in the face of the Ministry of Overseas Technical Division’s insistence, grudgingly accepting the presence of a Senator in the Bazaar Committee by replying: “I have someone in mind that will do little harm in the committee” (AHU, 251-2G-1S-SEMU-DGU ex., “Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets,” by Public Works Director Augusto César

There was also the question of funding the project which, as mentioned earlier, had already led the Public Works Director to the ill-advised suggestion of undervaluing the resumption grounds. Clearly, the Bazaar improvement plan was beyond the metropolitan emergency funding, which had been providential in the Mitra, Volong and S. Lázaro operations, and so the Overseas Council agreed with Governor Guedes Rebelo's suggestion that a special account should be established by the provincial Treasury, into which would be assigned all related receipts and expenditures. The Governor's intention, expressed in his letter n°70 from April 22, 1903, was to establish an independent Bazaar Improvement budget, so that, on the one hand, this vast and lengthy operation wouldn't destabilize the Public Works fixed annual budget and, on the other hand, its potential receipts would go directly into paying for the project's expenses, and not poured into the pool of the general provincial receipts budget.¹⁴³

Initially, this revenue, which the Overseas Council saw as the operation's start-up capital to launch the expropriation process, as per the draft law provisions, would come from the sale of the S. Domingos church and former convent, which Governor Guedes Rebelo had estimated at 20.000 patacas.¹⁴⁴ The sale of the building materials resulting from the demolitions, as well as of the expropriated grounds adjacent to the new streets and avenues, would make up the operation's subsequent and gradual revenue. As for the expenditure, it had to do, of course, with the compensation which had to be paid to the expropriated landowners, as well as with the cost of the infrastructure and surface works.

de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**. Document 3, report from the Ministry of Overseas Technical Division Director to the Minister, on June 5, 1903, and annexed telegrams).

¹⁴³ AHU, 251-2G-1S-SEMU-DGU cx., "Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets," by Public Works Director Augusto César de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**. Document 1. For more on budget administration in Macao and, more globally, in the Portuguese Overseas, see Chapter V.

¹⁴⁴ Originally, in his letter n°69 from April 22, 1903 requesting authorization for the demolition of the S. Domingos convent, Governor Guedes Rebelo had argued that the 20.000 patacas projected revenue from the sale of the church and convent grounds and building materials, should be invested in rebuilding S. Paulo. Thus, one church would be replaced by another and, furthermore, felt the Governor, the ruins of the former Jesuit church had come to represent "the first evidence of our poverty, as seen from a distance coming into the harbor." However, in his letter n°70 from the same date, Guedes Rebelo hinted at using this same revenue to launch the Bazaar resumption operation, a contradiction duly noted by the Ministry of Overseas Technical Division Director on his June 5, 1903 report. Although Minister Gorjão would promptly authorize the S. Domingos demolition by telegram on May 25, 1903 without further clarifications, the Overseas Council pronounced itself formally against using the ensuing revenue to rebuild the S. Paulo church. In the Council's opinion, there were already more than enough churches in Macao to attend to the city's Christian population of barely 4.000 souls. This revenue should go to where it was most needed, and that was to be used as a budgetary launching pad for the Bazaar Improvement operation. In the end, though, the S. Domingos church would never be demolished, and S. Paulo never rebuilt. For reference, see the above-mentioned documents under AHU, 251-2G-1S-SEMU-DGU cx.

Finally, the Overseas Council draft law addressed what it considered to be one of the crucial issues of the Bazaar Improvement plan, which was the expropriation process itself. Indeed, on its July 1903 report to the Minister, the Overseas Technical Division Director had already suggested its own version for the draft law, intended to “extend to the city of Macao, with the indispensable alterations, the August 9, 1888 national ordinance, already in force in the kingdom.”¹⁴⁵ The latter was the juridical text regulating the urgent expropriation, on grounds of public interest, “of all rural and urban plots comprised in the areas needed by the Lisbon municipality to build the Avenida da Liberdade park and adjacent streets, and to open the avenue from Picoas to Campo Grande and adjacent streets.”¹⁴⁶ In other words, it was the precisely the draft law for the enforcement of Municipal Public Works Director Ressano Garcia’s Lisbon ‘new avenues’ plan which, at the time of its discussion in parliament, had garnered José Luciano de Castro’s Progressist government (1886-1890) such heated accusations of unconstitutionality from the Regenerator opposition.¹⁴⁷

These accusations had to do with one of the main features of this law, which stated that the expropriations could encompass, not just the specific area needed to build the new arteries and adjacent public spaces, but also additional strips of up to a 50-meter width along the perimeters of said public spaces, measured over the private plots. The notion of extending the public authority’s right of expropriation to the grounds or buildings adjacent to the future public domain was commonly mentioned as ‘expropriation by zones’ (*expropriação por zonas*), in reference to this idea of taking proprietary control of a particular extension of urban ground, the ‘zone’, which might be needed for the layout of a new public space, but wasn’t restricted to its exact perimeter.

Eminent jurist and politician José Caeiro da Mata (1877-1963) traces the origins of this notion, unsurprisingly, to the transformations of Paris under Napoléon III and Seine Prefect Haussmann (1853-1870), noting that it had subsequently been adopted by legislators across Europe, namely having entered Portuguese jurisprudence in the context of the opening of a new street by the Porto Municipality in 1869.¹⁴⁸ As Mata puts it, to explain the appeal of the ‘expropriation by zones’ from the point of view of the administration, and particularly in matters of urban sanitation:

¹⁴⁵ AHU, 251-2G-1S-SEMU-DGU cx., “Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets,” by Public Works Director Augusto César de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**. Document 10, report from the Ministry of Overseas Technical Division Director to the Minister, on July 17, 1903.

¹⁴⁶ DG, n°184, August 14, 1888, 284-285, National ordinance of August 9, 1888, regarding the expropriation “of all rural and urban plots comprised in the areas needed by the Lisbon municipality to build the Avenida da Liberdade park and adjacent streets, and to open the avenue from Picoas to Campo Grande and adjacent streets.”

¹⁴⁷ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 29.

¹⁴⁸ José Caeiro da Mata, *O Direito de Propriedade e a Utilidade Pública das Expropriações* (Coimbra: Imprensa da Universidade, 1906), 259-260.

What advantage would there be to open new streets if the adjacent landowners refused to rebuild their properties, or if they asked extremely high compensations for their constructible lands, scaring off the speculators and capitalists? The enormous expenditure made to open a new street would be rendered useless or, at least, wouldn't deliver the expected results; and the cities' elegance would eventually be impaired by a street with no buildings. And if notions of hygiene preside to the opening of new streets, a great many inconveniences would arise if nothing stopped the miserable shacks and dark huts from being replaced with equally insalubrious dwellings. Hygiene demands the disappearance of old districts, inherited from the time when cities, imprisoned within their narrow walls, couldn't expand; and to make them disappear, it isn't enough to open some new streets; it is necessary to expropriate them entirely. City beautification would be incomplete if the rest of the old buildings, now contiguous to the new streets, didn't vanish: to this end is needed the expropriation by zones.¹⁴⁹

However, under this earnest juridical umbrella, where did the demands of public interest, or of public necessity, which were the only exceptions to the inviolability of private property consecrated by the 1822 Portuguese Constitution, where did these end, and speculation for the financial benefit of the Administration began? This was precisely the core of the quarrel over the constitutionality, or otherwise, of the 1888 law regarding the Lisbon new avenues programme: if the State expropriated with the intention of, once the new streets were created, subsequently selling the remaining property at a profit, the latter would not be physically "used" nor "employed" (*uso e emprego*) towards public good, which meant forfeiting these precise constitutional requirements. As clarified by Mata, the law would eventually pass, however, with an argument based on the latitude granted by the same Constitution to the legislative power to interpret that the "demands of public good" which were, in this case, the general goals of urban sanitation and beautification, fully justified the "use and employment" of the 'expropriation by zones'.¹⁵⁰

Thus, the August 9, 1888 national ordinance became something of a national reference for similar 'gutting projects', so to speak, as shown by the choice of the Overseas Technical Division to model the Macao Chinese Bazaar improvement draft law on its exact terms. It might have done so a bit too literally, though, as the Overseas Council would remark on its own report. For one, it provided for the expropriation "of all rural and urban plots comprised in the areas needed to build in the city of Macao a large avenue through the so-called Chinese Bazaar and adjacent streets, as well as to widen the existing ones." Secondly, it allowed the Macao 'expropriation by zones' to be extended beyond the perimeters of these projected streets in the same "up to 50-meter-wide strips."¹⁵¹

¹⁴⁹ Ibid., 261-262.

¹⁵⁰ Ibid., 265-266.

¹⁵¹ AHU, 251-2G-1S-SEMU-DGU ex., "Preliminary study for the construction of an avenue from the Bazaar to the inner harbor and improvement of several streets," by Public Works Director Augusto César de Abreu Nunes, **April 21, 1903 (transcribed in Volume 3 - Annexes)**. Document 10, report from the Ministry of Overseas Technical Division Director to the Minister, on July 17, 1903.

The Overseas Council did not question the relevance of the ‘expropriation by zones’ approach for the Macao project, on the contrary, it considered this a “very wise” resolution,¹⁵² as it had been designed to render precisely such ambitious improvement operations financially achievable, from the Administration’s point of view, by basing them on the profits generated by the resale of the infrastructurally improved and better situated plots. Given that this approach also provided for the original expropriated owners to have preference in reacquiring the new plots for construction, this was generally considered to be a win-win urban restructuring scheme.

The issues taken by the Council officials against the first draft law for Macao were that, on the one hand, the Chinese Bazaar didn’t comprehend even “a square decimeter of rural plots.”¹⁵³ Which had indeed been the circumstance in Lisbon, as the capital’s 1888 ‘new avenues’ had been drafted as an extension plan over its northern low-density and mostly agricultural suburbs. On the second hand, and in a related fashion, if laying out a 50-meter-wide strip over such vast grounds seemed practicable, as their resumption value mustn’t have been very high, the same general approach in the Chinese Bazaar would equal the resumption of the whole district and more, at a prohibitive cost, and with the complexity of having to deal with the district’s multitude of landowners and entangled interests at the two most decisive moments of the whole process: first at the expropriation settlements, and later at sale of the new plots.

Consequently, in its own take on the Chinese Bazaar improvement draft law, the Overseas Council suggested that the zones to be expropriated be restricted to an eight-meter-wide limit over the project’s new arteries’ perimeter which, moreover, would be authorized only in regard to the new avenue and parallel street. The expropriated owners would still have preference in the acquisition of the corresponding new plots, as well as the building materials resulting from the demolitions. In any case, all new buyers were required to start construction in their properties within sixty days of the acquisition, to ensure the smooth and regular progress of the improvement operation.

II. The 1905 Faria e Maia Project

By the beginning of 1904, however, both Governor Guedes Rebelo and Abreu Nunes had already finished their respective commissions and left Macao. Their April 1903 Chinese Bazaar and Inner Harbor improvement plans would consequently be suspended, and the former’s draft law would

¹⁵² AHU, 251-2G-1S-SEMUDGU ex., Consultation of the Overseas Council by the Government of Macao regarding the resumption plan for the execution of the Chinese Bazaar Improvement Plan. Decision on **October 26, 1903 (transcribed in Volume 3 - Annexes)**.

¹⁵³ Ibid.

ultimately go unpublished. The focus of local authorities, and particularly of the City Senate, would then shift back to where all the Bazaar transformative ambitions had started, that is, to the new S. Domingos market project.

The former Grand Bazaar resumption process, which had started in the summer of 1901 by Governor Horta e Costa's decision, had been concluded in a year's time. In the Senate's August 1902 budget,¹⁵⁴ the expenditure coming from the compensations payed to the expropriated landowners was balanced through a loan from Santa Casa da Misericórdia, as well as through the sale of some of the new plots to Chinese entrepreneur Lou Kau who, as we have seen, had already been involved with the new market project back in 1897, and was now seconded by his son Lou Lim Ieoc.¹⁵⁵

By spring 1904, the Senate had engaged Spanish architect J. M. Casuso to draft the S. Domingos market project, which he presented on May 11, 1904.¹⁵⁶ However, Casuso's double-building project

¹⁵⁴ AM, MO/AH/AC/SA/01/27147, Technical report regarding the new S. Domingos municipal market, by Architect J. M. Casuso, May 11, 1904. Document 2.

¹⁵⁵ Lou Lim Ieoc (1878-1927) was one of the twenty-nine children, from which seventeen were sons, Lou Kau had with his ten wives. Following in his father's multi-enterprising footsteps, he would become by far the most successful member of this extensive brood, diversifying his portfolio into the gambling and silver businesses, besides the already-established pork and real estate family empires. Most notably, Lou Lim Ieoc would be one of the founders and first president of the Macao Chamber of Commerce in 1913, as well as the first Chinese descendant to siege in the Macao province Government Council in 1918. On the occasion of his death, in July 1927, he would be given a State funeral, sealing indelibly the bond between the naturalized Portuguese Lou family and the Government of Macao (Lin, *Chinese Merchants in Macau in Late Qing*, 59-62).

¹⁵⁶ Not much is known about J. M. Casuso, other than the information he provides himself in his letter to the City Senate on June 28, 1904. He mentions being a Spanish architect, having had a rather classical education, probably in the metropolitan schools of fine arts: "Please take under consideration that we, Spanish architects, when we study at school, are made to familiarize ourselves also with sculpture and painting, so that we may rectify the constructive errors and imperfections of the workers." Casuso also mentions that he had enjoyed, to that day, an eighteen-year career as an architect, at first in Spain, but mostly in Manila (capital of the Philippines, the government siege of the Spanish East Indies until 1898, when all Spanish possessions in the Pacific were ceded to the United States of America in the aftermath of the Spanish-American war). At the time of the S. Domingos market project, Casuso had been working in Macao for "over a year," having namely "submitted several projects to the honorable Engineer Director Mr. Abreu Nunes," probably for some sort of administrative approval, such as building permits (AM, MO/AH/AC/SA/01/27147, Technical report regarding the new S. Domingos municipal market, by Architect J. M. Casuso, May 11, 1904. Document 1). This puts his arrival in Macao no sooner than the beginning of 1903. On a side note, it is important to get this latter date straight, as it has been claimed, and taken for granted by some sources, that J. M. Casuso was the author of the 1901/1902 housing experiments in S. Lázaro (see, for example, the entry "Bairro de S. Lázaro," in hpip.org, by architect Ana Tostões; see also Macanese architect Carlos Marreiros in his profile "The Renaissance Macanese" by Filipa Queiróz for Macao Magazine, published by macaue.com.mo on August 14, 2015). Although there is no clear evidence linking these innovative typologies to Abreu Nunes or any other author, as mentioned in the previous chapter, it seems at least unlikely that Casuso, having arrived later in Macao, would have had anything to do with them. Even if, according to other sources, he would go on to author the projects for the Tap Seac houses (see, for example, Margarida Saraiva and Tiago Quadros,

would apparently be deemed substandard in its technical specifications by the Macao Public Works Department acting director, a certain José Ferreira Cidade, which motivated the architect's lengthy letter of complaint to the City Senate on June 28.¹⁵⁷ Despite the acting director's qualms, the project seemed to move forward as, on June 22, new Governor Martinho Pinto de Queirós Montenegro (1904-1907) would publish a local ordinance giving it his seal of approval.¹⁵⁸ Less than two months later, on August 12, Governor Montenegro was sending the project to the Minister of the Overseas, announcing, by the way, that construction was to start briefly on one of the two projected market buildings.¹⁵⁹

With the Governor's letter was sent to the Ministry a set of beautifully drawn plans for this first building, dated from July 11 1904, and signed by the Public Works Department acting director José Ferreira Cidade (Fig. 129). In his accompanying report, the acting director makes no reference to Casuso's recent project, nor to his predecessor's extensive work on the Bazaar improvement plan, rather claiming, in a very specific manner, to have been the author of the entire technical file. This also comprised a schematic plan of the S. Domingos and Largo do Senado site showing the location of the projected market (Fig. 130).

In this site plan, the author has completely erased the former Grand Bazaar block, as well as a small part of the adjacent S. Domingos church block, probably corresponding to the global area which had been expropriated back in 1901/1902. The church and convent seem to have been left out of the resumption and demolition plans, as the convent building is now occupied with the city's fire inspection. A set of six new blocks now occupies the ground between Rua dos Mercadores and the Largo do Senado: facing these two main arteries, on the east and west sides of the new complex, are the plots destined for sale to the private entrepreneurs; at the center are the two plots where the market double buildings should go, which more or less corresponds to the layout Abreu Nunes had been developing and which he included in both his 1903 general plans. There is also a provision for the 16-meter-wide avenue to the south, as in the former Public Works Director's April 1903 plan, but there is no 10-meter-wide avenue aligned with the Senate building's façade, as the old

"Arquitectura: Conjunto edificado no Tap Seac, 1903-1910," published on December 10, 2014 by *revistamacau.com*), which were built around 1913/1914, as seen in Chapter III, as these later typologies don't relate in plan, façade, nor in any other way to the previous S. Lázaro ones.

¹⁵⁷ AM, MO/AH/AC/SA/01/27147, Technical report regarding the new S. Domingos municipal market, by Architect J. M. Casuso, May 11, 1904. Document 1. Unfortunately, these documents do not include any of the architect's original drawings.

¹⁵⁸ BG, n°26, June 25, 1904, 197, Government of Macao local ordinance n°110, regarding the construction of the new S. Domingos municipal market, June 22, 1904.

¹⁵⁹ AHU, 251-2G-1S-SEMU-DGU ex., Letter n°205 from the Governor of Macao, Martinho Pinto de Queirós Montenegro, to the Minister of the Overseas, regarding the construction of the new S. Domingos municipal market, August 12, 1904.

Rua da Cadeia and Travessa do Tintureiro are still featured at the angle where the second avenue would go. To the east, facing Largo do Senado, the private plots' demarcation line doesn't follow either one of Abreu Nunes' 1903 plans, but rather seems to align with the former Grand Bazaar block eastern curb. Thus more or less maintaining the original morphology of the adjacent public spaces, the Senate and S. Domingos squares, as we shall see further ahead. This choice probably had to do with maximizing the available ground after expropriation to increase the profits of the improvement operation, instead of giving it up to redesign or to widen the public squares. Enough had been 'lost', so to speak, with the regular grid over the Grand Bazaar, as well as with the new avenue.

The projected market would be built in the designated plot, at the center of the new complex, facing the S. Domingos church side façade. Looking more closely at Figure 129, we can see that it was conceived as an open "inner street" ("*rua interior*"), running longitudinally in the composition and parallel to Rua dos Mercadores, equipped with three wells and a central draining system, and onto which opened two symmetric series of small, covered cubicles, where the different stalls would go. Two more rows of the same cubicles would open onto the adjacent eastern and western streets, offering the possibility of being closed through individual metallic doors. All inner walls were to be pierced by large windows, also equipped with metallic grids, for the purpose of ventilation. According to Casuso's report, all structural elements were to be built in cement (*cimento comprimido*), with wooden roofs, and cast-iron gutters, brackets and other decorative elements. Moreover, the similarities between the Spanish architect's descriptions and Ferreira Cidade's project, as well as the concurrence of the dates, all suggest that this was actually Casuso's original project, at best with some one-off alterations by the acting director.

Shortly after, the Ministry of the Overseas was issuing new ordinances regarding, once again, the deployment of the 1864 general improvement plan in the provinces. The first, dating from November 30, 1904, determined that the governors of the overseas provinces, "after having conducted the appropriate studies, should inform which sanitary improvements were deemed necessary in the settlements under their responsibility."¹⁶⁰ The second, dating from December 7, 1904, emphasized the obligatory nature of the previous 1898 metropolitan law regarding this same issue.¹⁶¹ Both were signed by Minister of the Overseas Manuel Rafael Gorjão's successor, Manuel António Moreira Júnior (1904-1906), who had been appointed as part of José Luciano de Castro's third government (1904-1906). Given that the approval of these diplomas happened so close to the establishment of the new Luciano de Castro government on October 20, that same year, which had

¹⁶⁰ DG, n°275, December 6, 1904, 525-526, National ordinance of November 30, 1904, regarding sanitary improvements in the overseas provinces.

¹⁶¹ DG, n°278, December 10, 1904, 531, National ordinance of December 7, 1904, enforcing the November 14, 1898 ordinance regarding the establishment of general improvement plans in the overseas provinces.

happened at the fall of Ernesto Hintze Ribeiro's second government (1900-1904), consequently bringing Minister Gorjão's tenure of the Overseas affairs to an end, one might speculate that this turn-of-the-century revival of the general improvements idea had been in the latter Minister and his Regenerator government's books, only interrupted by its forced resignation. Indeed, military engineer Rafael Gorjão had dedicated his professional life to furthering the material improvements agenda in the overseas provinces. As Minister, he had been particularly attentive and supportive of local development initiatives, as we have seen from his collaboration with Governor Guedes Rebelo regarding the Chinese Bazaar improvement plan. In his last days as Minister, he would even sign-off on the national ordinance establishing the Macao Inner Harbor improvement plan, another one of Governor Rebelo's initiatives, as we shall see in the next Chapter.

As head of Government, Regenerator Hintze Ribeiro himself, who had so vehemently manifested against the August 9, 1888 national ordinance regulating Ressano Garcia's 'new avenues' resumption plan (at the time presented by Progressist Luciano de Castro's first government),¹⁶² would back and ultimately sign-off on the September 2, 1901 national ordinance establishing the need for a new Lisbon general improvement plan.¹⁶³ Presented in December 1903, this would be the head of the Municipal Public Works's last extension plan for the capital, consisting of a new set of avenues and a large park in Campo Grande, connecting the 1890s modern structure with Lisbon's furthest northern districts.¹⁶⁴

In any case, and even though Governor Guedes Rebelo's improvement projects were put on hold with his departure from Macao, of Gorjão from the Ministry of the Overseas, and of Hintze Ribeiro from Government, the old Regenerator ambition of fomenting colonial economy through technological and sanitary advancements would definitely endure beyond political quarrels and scandals, as proven by the promulgation of the 1904 national ordinances by the new Progressist Minister.

As such, both texts reprised the idea of the "works and improvements of public interest,"¹⁶⁵ now taking it beyond general considerations of public health to encompass the overseas territories' economic development and the wide-ranging purpose of colonization, which had already been asserted in the 1898 diploma. Once again, the sanitary idea was being made to complement the colonizer's discourse:

¹⁶² Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 29.

¹⁶³ DG, n°201, September 9, 1901, 513-514, National ordinance of September 2, 1901, regarding the administrative organization of the Lisbon Municipality and the obligation, for the Municipal Public Works Department, of establishing the capital's general improvement plan.

¹⁶⁴ Silva (ed.), *Lisboa de Frederico Ressano Garcia*, 34-35.

¹⁶⁵ *Ibid.*

It is to be regarded as an urgent necessity that a general sanitation plan be deployed in the overseas cities, to be gradually and successively established, in order to preserve the Europeans from the local sources of insalubrity and to protect the indigenous population from the endemic and epidemic diseases that frequently decimate them, with great damage to colonial progress and development.¹⁶⁶

Indeed, and while in 1898 the focus was still on grand scale material improvements, the 1904 ordinances very much take a Chadwickian accent, concentrating on the urban environment and its direct effect on the health of the overseas urban population. Together with the projects for the intended sanitary improvements such as swamp drainage, sewerage and waste disposal systems, potable water supply, housing, schools, military barracks and hospitals, governors were asked to provide statistical information on their population's birth and mortality rates, as well as predominant diseases, to effectively and "scientifically demonstrate the urgency and utility of the proposed improvements."¹⁶⁷

In Macao, Governor Montenegro would comply with these metropolitan recommendations by appointing, at the beginning of 1905, a committee responsible for the layout of a "new improvement and sanitation plan for the city,"¹⁶⁸ presided by acting Public Health Director Evaristo de Almeida, and in which took part, among others, the President of the City Senate, António Joaquim Basto, and a new acting Public Works Director, civil engineer Raúl Machado de Faria e Maia (1857-1920).¹⁶⁹

The May 5, 1905 improvement and sanitation committee report was essentially a formalization, in light of the ministerial ordinances, of the 1903 Abreu Nunes project, to which was added a statistical report. Despite the fact that other Chinese districts actually seemed more prone to the systematic and devastating epidemic crises, as evidenced by the number of deaths per urban parish, the Bazaar

¹⁶⁶ DG, n°275, December 6, 1904, 525-526, National ordinance of November 30, 1904.

¹⁶⁷ Ibid.

¹⁶⁸ BG, n°4, January 28, 1905, 29, Government of Macao local ordinance n°15, appointing the Macao improvements and sanitation committee, January 28, 1905.

¹⁶⁹ *École des Ponts et Chaussées* graduate Raúl Machado de Faria e Maia (1857-1920) was a civil engineer, whose first commission in the overseas was as assistant director of the Lourenço Marques railway, to which he was appointed in 1893. Two years later, he would go on to work as Public Works Inspector in Angola. For little over a year, in 1902/1903, Faria e Maia would be appointed as São Tomé and Príncipe Public Works Director, before moving on to Macao as engineer in the Public Works Department in the summer of 1904, at the end of Augusto César de Abreu Nunes' commission as Director. He was then made acting director until the arrival of appointed Director António Pinto de Miranda Guedes in early 1907 (for more on the latter, see the next section). In Macao until his second appointment as São Tomé and Príncipe Public Works Director in 1911, he would work closely with Miranda Guedes and Public Works Inspector José Emilio de Santana da Cunha Castel Branco on the harbor improvement project (for more on this subject, see Chapter V). The last commission Faria e Maia would serve before retiring due to poor health was, again, in Macao, from 1914 to 1917, this time as the officially appointed Public Works Director (see Faria, *Building the Portuguese Empire in the 19th Century*).

improvement plan ended up, once again, being promoted as the key feature of the Macao general plan. To justify this, the commissioners argued that “a globally methodical study of all indispensable and complex improvements of which the city was in dire need would most certainly imply its almost complete reconstruction: practically an utopia.”¹⁷⁰ It was therefore resolved to limit the studies to what were considered the most urgent public health-related improvements. And if, by chance, the bubonic plague ten-year mortality statistics compelled the provincial medical authorities to preconize specific urban restructuring interventions already drafted by the Public Works department, so much the better. Unsurprisingly, this was exactly what happened, with the committee medical official “declaring the ultimate urgency of opening a large avenue, with its convenient piping system, from the Inner Harbor to the Largo do Senado, which would not only facilitate the circulation of fresh air through the densely populated Bazaar, but also the necessary drainage of the currently stagnant pipelines.”¹⁷¹

Thus, and with the May 1905 report, Governor Montenegro would send to the Minister of the Overseas a new Bazaar improvement plan, by acting Public Works Director Faria e Maia (Fig. 131), as well as a revised draft law for the corresponding resumption plan. While the latter was clearly based on the Overseas Council 1903 version, Faria e Maia’s plan was a transposition of his predecessor’s work, although somewhat more measured in terms of its restructuring ambitions.

Looking at the project’s interpretation on Figure 132, we can see that Faria e Maia’s main gesture is still the 16-meter-wide avenue connecting the Largo do Senado directly to the inner harbor piers. The second avenue is now absent, and there is a general restraint in the propositions for widening and aligning the district’s main streets, compared to either of Abreu Nunes’ 1903 solutions. Only the transversal main axes (in regard to the new avenue) Rua dos Mercadores and Rua do Mastro seem to be significantly modified, while smaller longitudinal ones suffer mild adjustments, as is the case of Ruas do Matapau, Barca da Lenha¹⁷² and Pagode, as well as the Travessas dos Alfaiates and dos Becos.

¹⁷⁰ AHU, 251-2G-1S-SEMU-DGU cx., Letter n°103 from the Governor of Macao, Martinho Pinto de Queirós Montenegro, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, May 5, 1905. Report from the Macao improvements and sanitation committee.

¹⁷¹ Ibid.

¹⁷² Regarding these particular streets, the 1905 Macao improvements and sanitation committee had suggested that the Chinese Bazaar new avenue layout “should, if possible, completely destroy the Ruas do Matapau and Barca da Lenha, some extremely insalubrious streets where the plague has annually raged with intensity; if the avenue layout doesn’t warrant this destruction [which it didn’t, as these streets were situated some 50 meters to the south of the intended layout, in the 1870s ‘New Bazaar’ grounds], then their necessary sanitation should be carried out.” AHU, 251-2G-1S-SEMU-DGU cx., Letter n°103 from the Governor of Macao, Martinho Pinto de Queirós Montenegro, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, May 5, 1905. Report from the Macao improvements and sanitation committee.

Construction on the S. Domingos market hub, as well as on its adjacent private plots, seems to have begun, following acting Public Works Director Ferreira Cidade's 1904 plan. As such, Rua dos Mercadores has already been widened up to its ideal 10m, and the former Grand Bazaar block is now intersected by a grid of 6 to 8-meter-wide streets connecting the old Bazaar with the 'Christian city'. A new 8-meter-wide projected street cuts through the old tissue to the west, crossing Rua dos Mercadores, and connecting the market central street to Rua do Mastro. The first market building has been erected next to S. Domingos church, and the plot for its second one is still reserved, with a direct access to the projected new avenue.

The project for this building would be presented by Faria e Maia the following month (Fig. 133), and sent to the Ministry of the Overseas by Governor Montenegro in March 1906, after its call for tenders had been assigned.¹⁷³ This project follows closely the one presented by Ferreira Cidade a year before (which was probably Spanish architect J. M. Casuso's project, as we have seen), in terms of layout and façade composition, although with a more subtle quality. For instance, it replicates the 'inner street' scheme, onto which now open two symmetrical rows of open space, in order to accommodate more freely the commercial stalls. The same can be said of the market outer cubicles, which are now disposed in a way which facilitates the layout of different-sized stalls. As a result, the façade has definitely a lighter feel, even if it does rely on the same elements (Figs. 134 and 135). Construction would proceed quickly for this building, as it is already featured in the 1907 plans.

III. The 1907 Miranda Guedes Project

Around the same time Faria e Maia was focusing on completing the S. Domingos market complex, on summer 1905, that is, Minister of the Overseas Moreira Júnior had signed-off on dispatching a technical expert to Macao to deal with all things relating to urban renovation. On paper, this decision had been motivated mainly by the need to untangle the city's twenty-year Inner Harbor Improvement deadlock,¹⁷⁴ but would also hold a more ambitious and global scope in terms of urban planning, where the transformation of harbor facilities would be the driving force capable of thrusting the whole city into a modernizing dynamic. At least this is how General José Emílio de Santana da Cunha Castel Branco (1849-1920)¹⁷⁵ saw it.

¹⁷³ AHU, 251-2G-1S-SEMU-DGU cx., Project for the construction of the new S. Domingos municipal market, by Public Works Director Raúl Machado de Faria e Maia, June 15, 1905.

¹⁷⁴ For more on the Macao inner harbor improvement plan, see Chapter V.

¹⁷⁵ According to Colonel Galvão, military engineer José Emílio de Santana da Cunha Castel Branco (1849-1920) started his career in the Ministry of Public Works in 1875 by taking part in the study for the Beira Alta

General Castel Branco arrived in Macao in January 1907 on his commission as Overseas Public Works Inspector (*Inspector de Obras Públicas do Ultramar*), in the last months of Montenegro's governorship, as newly appointed Public Works Director António Pinto de Miranda Guedes (1875-1937)¹⁷⁶ was starting out. This would be the last leg of a series of similar commissions the General would serve in the Asian provinces, having started in India in 1904, thence to Timor in 1906 and finally to Macao the following year.

Thirty years before, in the summer of 1877, then Captain Castel Branco had been commissioned by the Ministry of Public Works to “visit and study the piping systems for sewerage and sanitation modernly [*modernamente*] established in the main European cities, and to report comprehensively on their workings.”¹⁷⁷ At the source of this expedition had been the issue of improving urban sanitation in Lisbon, with an emphasis on sewage disposal infrastructure. In the course of this trip, whose report would be published by the National Press shortly after Castel Branco's return, the author would have the opportunity to visit numerous cities in France, Spain, Austria, Belgium, Holland, Germany and especially England. He would also come in close contact with the engineers and architects responsible for public works and urban hygiene in those cities, as well as with their original studies, acquiring almost four-hundred publications on matters of urban sanitation and municipal administration for the Ministry of Public Works library, among which figured a few

railway. In the author's view, Castel Branco's commissions in the Overseas were incidental, his greatest distinctions having come from his position in the Lisbon Military School, where he taught several engineering courses (see Galvão, *A Engenharia Portuguesa*, 234). Despite this claim, Castel Branco both traveled extensively to study the European imperial network technological advances, as his work testifies, and had multiple impactful interventions in the provinces, especially in India (1904), Timor (1906) and Macao (1907), where he was sent on successive expert missions from the Ministry of Public Works to foment the overseas capitals' general improvement plans. For more on Castel Branco's work in Macao, and notably regarding the city's inner harbor improvement plan, see Chapter V.

¹⁷⁶ Born in the Douro region, Portugal, in 1875, António Pinto de Miranda Guedes represents the new generation of military engineers, compared to Castel Branco or Abreu Nunes, for example, starting their professional life at the turn of the century. A civil engineering and mines graduate from the Lisbon Military School, he was first appointed to the Overseas public works at the age of twenty-two, departing for São Tomé and Príncipe. In 1900, he would be appointed to Angola and then, on August 14, 1906, to Macao as Director of Public Works, where he remained roughly four years until August 1910. Under the first republican government, Miranda Guedes would serve for a year as Governor in São Tomé and Príncipe, thence returning to office in Macao for another three-year appointment, from November 1911 to April 1914. Over the next ten years, he would move on to oversee the Angola railways, to head the Mozambique Public Works Department, and back to Angola as Provincial Secretary for Public Works. After 1923, he would settle as head of the Porto Municipality Public Works. See Faria, *Building the Portuguese Empire in the 19th Century*. See also BAHSGE, PT/AHMOP/PI/023/037. For more on Miranda Guedes' most significant projects in Macao, other than the city's improvement plan, and notably regarding the Inner Harbor Improvement, see Chapter V.

¹⁷⁷ José Emílio Santana da Cunha Castel Branco, *Relatório acerca dos sistemas modernos de canalização empregados na Europa para esgoto das cidades, apresentado ao Ministério das Obras Públicas, Comércio e Indústria em 29 de Janeiro de 1879* (Lisboa: Imprensa Nacional, 1880), 1.

volumes on engineering in British India.¹⁷⁸ Thus, setting himself early-on as an expert on the matter of sanitation, the young Captain would become a prominent member of the 1880s Lisbon general improvement committees.¹⁷⁹

In 1903, Castel Branco would be appointed, by Minister of the Overseas and material improvements enthusiast Manuel Rafael Gorjão, on his commission as Overseas Public Works Inspector to the State of India. As mentioned, this would turn out to be the first of a series of similar commissions, possibly conceived from the start by Minister Gorjão as a proper tour of the Far East imperial territories,¹⁸⁰ undoubtedly in connection with the Ministry's determination to revive the 1864 legal framework on integral urban planning throughout the empire, as expressed through the above-mentioned 1904 legislation.

In this spirit, the aim of Castel Branco's mission in Goa was quite broad and ambitious, ranging from the inspection of the Mormugão railway and harbor works and finances, as well as of the Public Works Department, to the study of an improvement plan for potable water provision and the agricultural irrigation system, for the canal and river navigation, as well as the telegraph connections, for the interlinked port, railway and road systems, and finally for the fortifications and public buildings in general.¹⁸¹

In Timor, his expertise was mostly employed in studying the oil deposits and how to optimize their exploitation. To this end, upon leaving Goa in early 1906, he traveled to the British colony of Burma to visit the oil fields of the Burma Oil Co., and thereafter to Java in the Dutch Indies. In the end, his report, though published by the Lisbon Geographical Society and lauded for its thoroughness and scientific excellence, would do little to advance the metropolitan goal of establishing a proper oil enterprise in the island.¹⁸²

¹⁷⁸ Ibid., 320-329. Among these references were, for example, *India and Indian Engineering, Three Lectures Delivered at the Royal Engineer Institute of Chatham in July 1872*, by Julius George Medley, from the Corps of Royal Engineers and fellow of the Calcutta University, published in 1873. Also, the volume *India*, by Frederic Charles Danvers, a civil engineer from the public works department of the India Office, published in the Spon series "Information for Colonial Engineers" in 1877.

¹⁷⁹ Galvão, *A Engenharia Portuguesa*, 234.

¹⁸⁰ Castel Branco's commissions to India, Timor and Macao as Overseas Public Works Inspector were established by successive national ordinances. The one appointing him to Macao would be published on May 23, 1905, for example, when he was still in India and had yet to honor the Timor commission. Despite it having been signed by Minister Rafael Gorjão's successor, Minister Moreira Júnior, as mentioned, it is possible that the former might have thought of these expert missions as a whole, with the Ministry making the official appointments as funds were becoming available.

¹⁸¹ Alice Santiago Faria, "Projectos de Hidráulica em Goa nos Primeiros Anos do Século XX," *Engenharia Civil*, número 48 (2014): 45-46.

¹⁸² Galvão, *A Engenharia Portuguesa*, 235-236.

In Macao, Castel Branco's mission was to devise a General Improvement Plan, with contents ranging from potable water supply to the sewage and waste disposal systems, as well as other topics related to public hygiene and sanitation. The Inner Harbor Improvement Project was set to be the pinnacle of this much larger and comprehensive urban modernization plan. As Adolfo Loureiro had done twenty years back, he traveled through Colombo, Rangoon, Singapore and Batavia to overhaul the newest harbor works and technologies.¹⁸³

However, due to persistent health issues, Castel Branco would only stay for one year in Macao. Shortly before his departure, though, he would take part on the December 2, 1907 meeting of the Municipal and Public Works Technical Council (*Conselho Técnico de Obras Públicas e Municipais*), where Public Works Director Miranda Guedes presented the result of their common work on the Chinese Bazaar Improvement Plan.¹⁸⁴ A few days later, new Governor Pedro de Azevedo Coutinho (1907-1908), who had also arrived in Macao earlier that year, would send Miranda Guedes' report to Lisbon for approval by the Overseas Public Works Committee. The Governor's letter included the proceedings of the local Public Works Council meeting, a new draft law for the Bazaar resumption plan (which was, once again, a revised version of the 1903 text), a collection of the previous 1903 Abreu Nunes and 1905 Faria e Maia restructuring projects and, finally, Miranda Guedes' own "Bazaar District Improvement Project," dated November 30, 1907 (Fig. 136).¹⁸⁵

Driven, as his author claims in his report, by the will to establish once and for all the alignments through which should be guided all new constructions in the Chinese Bazaar, this project is definitely, and unapologetically, clean slate. With the exception of the S. Domingos church block and its adjacent market complex, in which construction seems to be finished having followed the 1904 plans (Fig. 137), the rest of the old and intricate urban fabric is completely glossed over by a mesh of regular-shaped and compact pink blocks. However, and as appropriately pointed out by Miranda Guedes as an example of the lack of proper regulation in terms of building permits which

¹⁸³ Ibid., 236. For more on the Portuguese techno-scientific momentum at the turn of the century, see Chapter V.

¹⁸⁴ At the arrival of Miranda Guedes at the head of the Public Works Department in early 1907, Faria e Maia seems to have resumed his regular post as junior engineer, as he would remain in service in Macao until 1911. He was, moreover, a member of the Macao Municipal and Public Works Technical Council, and was therefore present at the said December 2, 1907 meeting. Other members included City Senate President Francisco Xavier Pereira, Harbor Captain Francisco Diogo de Sá and Treasury Inspector Olímpio Joaquim de Oliveira [AHU, 251-2G-1S-SEMU-DGU ex., Letter n°338 from the Governor of Macao, Pedro de Azevedo Coutinho, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, **December 13, 1907 (transcribed in Volume 3 - Annexes)**].

¹⁸⁵ AHU, 251-2G-1S-SEMU-DGU ex., Letter n°338 from the Governor of Macao, Pedro de Azevedo Coutinho, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, **December 13, 1907 (transcribed in Volume 3 - Annexes)**.

ensued from the absence of a properly official improvements and alignments plan, a new 10-meter-wide street had already been consolidated to the south of the S. Domingos market blocks. This *fait accompli*, which had been achieved by the construction of “good and recent buildings, and especially of the Sam-Kai-Vui-Kun Chinese temple,” which had been built facing the market southern entrance, completely invalidated the most recent projected layout for the 16-meter-wide avenue.¹⁸⁶

Consequently, as we can see in Figure 138, Miranda Guedes’ main gesture, which is still the Chinese Bazaar new avenue, cutting straight from Largo do Senado to the Inner Harbor, is now aligned with the Senate house façade, finally reprising the Abreu Nunes February 1903 original layout. This is complemented by the widening, regularization and extension of all major arteries in both north-south and east-west directions, as well as the opening of several new 8-meter-wide connecting streets, mainly transversal to the new avenue, thus entirely obliterating and reorienting most of the old urban fabric. Indeed, the Public Works Director’s plan only left untouched the 1880s Miguel Ayres reclamation, as well as the western part of the 1860s first Bazaar reclamation. The entirety of the pre-nineteenth-century Chinese city, as well as the 1870s ‘new Bazaar’ reclamations around Rua da Felicidade were to be completely erased.¹⁸⁷ It was unquestionably the most ambitious restructuring project Macao had ever seen.

Even so, it would be wholeheartedly and quickly approved by the Overseas Public Works Committee right on February 1, 1908.¹⁸⁸ The metropolitan Committee (of which was still a part General Adolfo Loureiro, whose life, at that point, had been entangled with the vicissitudes of modernization in Macao for more than twenty years) considered that Miranda Guedes’ project represented a considerable improvement to the city and to the whole of its population.¹⁸⁹

Indeed, stated its report, the Bazaar district, as it stood, was no better than the Chinese settlements “after which it was modeled,” such as Canton and Shanghai. The first, wrote the Committee drafter, “with its two million people, doesn’t have, if I recall correctly, any street larger than 3 meters, and even if it does, for the most part, street width doesn’t exceed 2 meters. In these sorts of alleys,

¹⁸⁶ Ibid. Document 4. Bazaar District Improvement Project report by Public Works Director António Pinto de Miranda Guedes, addressed to the Government of Macao Secretariat on December 2, 1907.

¹⁸⁷ For more on the consolidation of the Chinese Bazaar district over the centuries, on its ties with the so-called Christian city, and particularly on its accelerated urban development from the 1850s on, see Chapter I. For more on the Miguel Ayres da Silva 1880s inner harbor reclamation, see Chapter II.

¹⁸⁸ On a note of context, February 1, 1908 was precisely the day King D. Carlos of Portugal and his heir apparent, prince Luís Filipe, were murdered in Lisbon’s Terreiro do Paço, by assassins with ties to the capital’s Republican organizations. D. Carlos was succeeded by his second son, crowned D. Manuel II, who was to be the last King of Portugal, having reigned up until the Republican proclamation of October 5, 1910.

¹⁸⁹ AHU, 251-2G-1S-SEMU-DGU cx., Report from the Overseas Public Works Technical Committee regarding the Chinese Bazaar Improvement Plan, **February 1, 1908 (transcribed in Volume 3 - Annexes)**.

buildings have two or three stories. As for sanitation, drainage or sewerage, there is no trace of any of it, and so one can only imagine the state of these narrow streets and the almost unbearable stench on that heap of houses.” Furthermore, and to top it all off, the Bazaar stood precisely between the inner harbor and the Praia Grande outer harbor, “which is the European, as well as the civilized Chinese district,” thus forcing the visitors and tourists to pass through its ‘uncivilized chineseness’, as the Committee seemed to imply, when walking from the Canton and Hong Kong steamboat piers to the city center. Therefore, “by completely replacing the old fabric with a new Bazaar district” Macao would finally resemble “a proper modern town, filled with air and light, which would improve its sanitary state and help tackle more proficiently the annual occurrences of bubonic plague and cholera epidemics.”¹⁹⁰

The Bazaar resumption plan would finally be put in motion by the metropolitan government through the national ordinance of March 26, 1908 which, once again, reprised the 1903 draft law, namely “extending to the city of Macao, with the indispensable alterations, the August 9, 1888 national ordinance, already in force in the kingdom,” that is, the first Lisbon improvement plan expropriation law.¹⁹¹ In the words of Governor Pedro de Azevedo Coutinho, in his letter to the President of the City Senate, informing him that the Bazaar improvement national ordinance had been published in the Government official bulletin, green-lighting this project meant that “His Majesty’s present government, as did its predecessor, continues to be decidedly committed to developing sanitation and other material improvements, of which Macao is in dire need of.”¹⁹² In his response, the President would double-down on the idea of the Governor’s influence in Lisbon’s decision-making, as well as on the latter’s commitment “to elevate the material and moral level of the vast and invaluable Portuguese overseas domain, so that, from such a rich heritage, passed on to Portugal by Providence, may thrive and shine to all its children, on both sides of the sea.”¹⁹³

Strong and solemn words for everyone involved, namely for Governor Azevedo Coutinho, who would see his commission in Macao curtailed in a matter of days. But also vis-à-vis the metropolitan government itself, in an uproar since the February regicide and the consequent fall of the João

¹⁹⁰ Ibid.

¹⁹¹ DG, n°73, April 1, 1908, 205-206, National ordinance of March 26, 1908, regarding the Chinese Bazaar Improvement Plan.

¹⁹² AHU, 251-2G-1S-SEMU-DGU ex., Letter n°114 from the Governor of Macao, Pedro de Azevedo Coutinho, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, April 15, 1908. Document 1. Letter n°514 from the Governor of Macao, Pedro de Azevedo Coutinho, to the President of the City Senate, April 10, 1908.

¹⁹³ AHU, 251-2G-1S-SEMU-DGU ex., Letter n°120 from the Governor of Macao, Pedro de Azevedo Coutinho, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, May 1, 1908. Document 1. Letter n°80 from the to the President of the City Senate to the Governor of Macao, Pedro de Azevedo Coutinho, April 15, 1908.

Franco dictatorship government which, by the way, had been responsible for Azevedo Coutinho's nomination.¹⁹⁴ Still, these discourses were symptomatic of the sacred character the Empire had acquired in the turn of the century Portuguese social and political spheres, and therefore of the general consensus throughout all sides of the political spectrum surrounding matters of investment in the overseas provinces' material improvements and economic development.¹⁹⁵ It would be, moreover, one of the preferred Republican opposition's *chevaux de bataille* against the constitutional monarchy's successive governments. But it would also guarantee some level of continuity in terms of the progression of certain urban restructuring or public infrastructural projects, as we shall also see in the next Chapter, in the context of the harbor improvement works. These large-scale projects were managed in Lisbon by the Ministry of the Overseas technical divisions, and in the provinces by the Public Works Departments, both relatively far from the political turmoil and generally unaffected by politically-motivated staff reshuffles. Also, when it came to deciding their official go-ahead, they were seldom brought into the light, least of all held hostage, by the rise and fall of the quarreling parties, or indeed of the constitutional monarchy and republican regimes.

Another case in point, in Macao, after an interim governorship by Harbor Captain Francisco Diogo de Sá, new Governor and famed 'Africanist' colonial officer José Augusto Alves Roçadas (1908-1909)¹⁹⁶ would take office in August 1908. Negotiations with the Bazaar landowners would start

¹⁹⁴ After Progressist Luciano de Castro's third tenure at the head of government (1904-1906), it was Regenerator Hintze Ribeiro's turn for a third mandate. It would, however, be an unusually short one, lasting only from March to May 1906 and ending with Ribeiro's resignation. Liberal Regenerator João Franco (a Regenerator 'dissident', who had decided to establish his own political party back in 1901) was then appointed by King D. Carlos to form a government, thus putting an end, in the pejorative expression he had coined himself, to the traditional political party 'rotation' system (*rotativismo*) which had, thus far, characterized the Portuguese Constitutional Monarchy regime. A theoretical end, at least, as the liberal regenerators were initially supported by the Progressive party, to which were affiliated some of João Franco's cabinet members. In the face of the head of government's repression of the republican opposition and other demonstrations of social unrest, the Progressist ministers resigned and Franco dissolved parliament, effectively establishing a dictatorship in April 1907. Doubling-down on the repressive tactics, João Franco presented himself as the protector of the royal institution, which ended up both associating his dictatorship government with the Constitutional Monarchy and the King himself, and polarizing the opposition, which gradually came to be spearheaded by the Republican party. For more on this subject, see João B. Serra, "O Assalto ao Poder," in *História da Primeira República Portuguesa*, ed. Fernando Rosas and Maria Fernanda Rollo (Lisboa: Tinta da China, 2011), 47.

The national ordinance of March 26, 1908 regarding the Chinese Bazaar Improvement Plan had thus been signed-off and published by the new independent government headed, from February 4, to December 26, 1908, by eminent colonial officer (and son of the famed Macau reformer Governor João Maria Ferreira do Amaral) Francisco Ferreira do Amaral, whose nomination by new King D. Manuel II had followed the February 1, 1908 regicide and the consequent fall of João Franco.

¹⁹⁵ For more on the Portuguese colonial momentum at the turn of the century, see Chapter V.

¹⁹⁶ José Augusto Alves Roçadas (1865-1926) was an officer of the Portuguese Army with a prominent career in the Overseas, namely in the African and Indian provinces. In 1905, appointed governor of the Huíla district

in the fall¹⁹⁷ and, two years later, on September 22, 1910, the demolition of twelve buildings would be established by local ordinance “for the opening of the Chinese Bazaar New Avenue’s first section.”¹⁹⁸ The Bazaar Improvement’s long-awaited operational stage was finally underway.

Back in the fall 1908, though, while the Procuratorate for Chinese Affairs was handling the resumption negotiations, Public Works Director Miranda Guedes was already hard at work on what was to be the follow-up to his Bazaar plan, the “Patane, Tarrafeiro, Sakong, S. Paulo and S. António Districts Improvement Project” (Fig. 139). This plan, dated from September 30, 1908 was, as usual, part of a report which Governor Alves Roçadas would send to Lisbon a couple of days later, for the Ministry of the Overseas’ approval. In his letter, the Governor mentioned that it represented the second part of the city General Improvement Plan, itself the more global aim of General Castel Branco’s mission to Macao. Its approval, which had Alves Roçadas’ full support, would “compel new buildings to a sure and constant guidance, bringing onto them uniformity and method, which will certainly contribute a great deal for the progress of this ancient and beautiful colony.”¹⁹⁹ Neither the Overseas Director General nor the Treasury Department made any objections to the new project, which also featured its respective resumption plan draft law, and was therefore ready to be put in motion in a similar fashion to the Chinese Bazaar plan.

In his report, Miranda Guedes started by reaffirming that the Macao General Improvement Plan or, as he calls it, the “city sanitation plan,” represented indeed the ultimate goal of his work, and that he had decided to progress toward that global end by producing one partial improvement project at a time. This method had been devised together with General Castel Branco, with whom the Public Works Director had worked closely until his retirement earlier that year. Since March 9, 1908, he claimed, Miranda Guedes had officially been made the sole responsible for the General Improvement Plan, a mission he assumed as his institutional duty, according to the obligations

in Angola, he would distinguish himself through a number of military campaigns, squashing local rebellions and consolidating Portuguese presence in the province’s southern regions, for which he received several decorations from D. Carlos. After his short appointment in Macao, the Republican revolution would see him back in Lisbon. Falling from ‘official’ grace following a 1914 unsuccessful campaign in the same southern region in Angola, this time against neighboring German forces in the context of the First World War, Roçadas would subsequently ally himself with the May 28, 1926 military coup, helping make way for the future Estado Novo dictatorship (1933-1974), but dying one month later.

¹⁹⁷ AM, MO/AH/AC/SA/01/27080, Expropriation settlements in the Chinese Bazaar, September 17, 1908.

¹⁹⁸ BG, n°39, September 24, 1910, 325, Government of Macao local ordinance n°199, regarding the demolition of twelve buildings “for the opening of the Chinese Bazaar New Avenue’s first section,” September 22, 1910.

¹⁹⁹ AHU, 251-2G-1S-SEMU-DGU ex., Note from the Overseas Treasury Inspector-General to the Overseas Director-General regarding the Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Project, November 19, 1908. Document 2. Letter n°279 from the Governor of Macao, José Augusto Alves Roçadas, to the Minister of the Overseas, sending the above-mentioned project file, October 2, 1908.

established by the 1904 legislation on the matter, but also as his moral duty, as he would be working to prevent the “periodic and constant attacks of the gravest exotic epidemics.”²⁰⁰

Therefore, and picking up where the 1907 Bazaar project had stopped, at the Rua da Tercena, Rua de N. S. do Amparo and Rua Nova de El-Rei northwestern limits (Fig. 138), the S. Paulo, S. António and Tarrafeiro Improvement Project simply wiped the northern city landscape clean, right up to the Patane shipyards and the Mong-ha district, replacing it with the author’s preferred mesh of regular pink blocks and straight avenues. Driving the renewed urban fabric would be a 16-meter-wide Patane New Avenue, connecting the Fortaleza do Monte hill and the S. Paulo district to the new riverside street (Nova Avenida Marginal). Together with the also 16-meter-wide Avenida Horta e Costa, which had already been built over the Lin-tin-chin, Mong-ha and Sankiu Chinese villages and floodplains,²⁰¹ and the Bazaar New Avenue, this projected Patane New Avenue would complete the series of straight and wide structural arteries linking the new Castel Branco-improved inner harbor to the city center, and thence to the Praia Grande outer harbor through the new Volong and S. Lázaro equally modernized districts.²⁰²

This plan also featured Miranda Guedes’ project for the new Sankiu district, which he had presented as part of his original 1907 Bazaar Improvement Project (Fig. 140). It had started as a response to one of the Overseas Council’s remarks to the Abreu Nunes project, back in its October 1903 report, regarding the need to provide for a rehousing strategy for the Bazaar population concerned by the resumption plan.²⁰³ In the Public Works Director’s mind, however, this strategy should not be devised for all the Chinese district’s inhabitants, but rather be applied by line of business, so to speak, meaning that only the Bazaar “pleasure life” should move north to Sankiu, leaving behind the “moral,” or more dignified “commercial life.”²⁰⁴

This project, already approved by the March 1908 Bazaar Improvement national ordinance, was situated right next to the Sakong social housing district, whose plan is featured in the Miranda Guedes Patane Improvement project for the first time (Fig. 139). Sakong had been planned and

²⁰⁰ Ibid. Document 3. Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Project report by Public Works Director António Pinto de Miranda Guedes, September 30, 1908.

²⁰¹ For further reference on the location of the Avenida Horta e Costa, see Fig. 15.

²⁰² For more on the 1908-1912 Castel Branco inner harbor improvement project, see Chapter V.

²⁰³ AHU, 251-2G-1S-SEMU-DGU cx., Consultation of the Overseas Council by the Government of Macao regarding the resumption plan for the execution of the Chinese Bazaar Improvement Plan. Decision on **October 26, 1903 (transcribed in Volume 3 - Annexes)**.

²⁰⁴ AHU, 251-2G-1S-SEMU-DGU cx., Letter n°338 from the Governor of Macao, Pedro de Azevedo Coutinho, to the Minister of the Overseas, regarding the Chinese Bazaar Improvement Plan, **December 13, 1907 (transcribed in Volume 3 - Annexes)**. Document 4. Bazaar District Improvement Project report by Public Works Director António Pinto de Miranda Guedes, addressed to the Government of Macao Secretariat on December 2, 1907.

built in 1895 by Chinese entrepreneur Lou Kau, at the time of the Volong and S. Lázaro expropriations and demolitions, to house at least part of these districts' displaced population.²⁰⁵ According to the Public Works Director, this “indigenous neighborhood” consisted of small one-story houses of very low rent.²⁰⁶ As the plan shows, they were aligned in three narrow blocks, possibly back-to-back, in a similar layout as the 1885 Horta da Mitra design, on both sides of the appropriately-named Rua do Lou Kau. Miranda Guedes' idea was to extend this pattern in order to create a proper working-class district to complement the one projected next to the Patane new docks as part of the Inner Harbor Improvement plan.

As the author himself would clarify in his 1909 “Urban and general sanitation of the city of Macao” report, which we'll explore further down, the development of social housing throughout the city was one of the topics Miranda Guedes was constantly trying to push forward, tirelessly petitioning the province's main benefactors, such as the Kiang Wu Chinese Hospital, behind which were the city's richest merchants, or the Santa Casa da Misericórdia, to invest in these endeavors. In the Public Works Director's own words, “before tearing down [the insalubrious districts], it is urgent to build,” which he saw as complementary obligations of public authorities:

The State, in his duties towards society, is already responsible for swamp drainage and reclamation, building streets and pipes, markets, and all elements pertaining to sanitation; therefore, it must not fail to take under its protection, stimulate, initiate and compel even, the construction of inexpensive but salubrious houses, modest but rat and weather resistant, in order to extinguish those double telluric and social swamps.²⁰⁷

This was clearly not seen as a priority for everyone involved, however, as demonstrated by the 1895 restructuring operations. As mentioned in Chapter III, there had been almost no talk of rehousing the Volong and S. Lázaro displaced population, neither from local government nor from the techno-scientific experts most closely connected with the decision-making processes (Abreu Nunes and Dr. Gomes da Silva, at the time), and certainly not on any terms of obligation. Lou Kau had indeed “generously” volunteered to establish the Sakong social housing district, but which counted a meager 100 houses.²⁰⁸ As for the Santa Casa da Misericórdia, it apparently held no social

²⁰⁵ For more on the Sakong social housing district, see Chapter III.

²⁰⁶ AHU, 251-2G-1S-SEMU-DGU ex., Note from the Overseas Treasury Inspector-General to the Overseas Director-General regarding the Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Project, November 19, 1908. Document 3. Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Project report by Public Works Director António Pinto de Miranda Guedes, September 30, 1908.

²⁰⁷ AHU, 251-2G-1S-SEMU-DGU ex., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

²⁰⁸ Ibid.

housing programs, rather having invested in the renovated district's experimental housing units, which were, as we have seen, destined for a more well-to-do population.

Thus, with the 243 units at the 1885 renovated Horta da Mitra, as well as some other smaller operations, Miranda Guedes counted less than 400 social, or working-class units in Macao. With an estimated 100.000 population and 10.000 dwellings in 1909 (the most recent official statistics report counted 74.568 souls and 7.865 dwellings in 1896), the Public Works Director assessed that "maybe half, and never less than a third" of the Macao population, that is, 30.000 people at least, "had the social misfortune of living with a low income and extremely meager resources."²⁰⁹ Proportionally, we can estimate that these workers would need around 3.000 social housing units to meet the public health standards which Miranda Guedes was aiming for, in order to decrease its exposure to endemic and epidemic diseases, and lower accordingly the mortality rates. At the turn of the century, then, only 13% of social housing needs were being met in Macao.

In any case, in his plan, the Public Works Director sought to properly organize the city's districts by zones, each one defined by a specific urban pattern according to its function and/or population. In the author's own conception, this zoning would segregate by business type, giving way to commercial, industrial, residential, agricultural, or "pleasure" central districts and suburbs, by ethnicity, "for Europeans or for Chinese" and, finally, by occupation or level of income, through the establishment of the working-class districts in the northern periphery. It would also help clarify, from the onset, the value of the urban ground, whether for the purpose of taxation, or eventually in the resumption plans' assessment processes. In what concerned the improvement plans at hand, and according to Miranda Guedes' chart, the Bazaar would continue to maintain its status as Macao's most prestigious commercial district, followed by complementary and suburban Sankiu and Mongha. S. Paulo would elevate its rank as a proper residential district, while Patane would become an industrial district connected to the new harbor and, finally, Sakong would rank the lowest, as a "poor district."²¹⁰

In its January 18, 1909 report, the Overseas Public Works Committee, in which was still taking part General Adolfo Loureiro, pronounced itself generally favorable to this project. It did, however, question the pertinence of such a densely packed layout projected over relatively vacant grounds. The Committee would have rather see these districts "cut through by large, intersecting avenues, duly lined with trees," which would widen and conveniently realign the "narrow and irregular"

²⁰⁹ Ibid.

²¹⁰ AHU, 251-2G-1S-SEMU-DGU cx., Note from the Overseas Treasury Inspector-General to the Overseas Director-General regarding the Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Project, November 19, 1908. Document 3. Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Project report by Public Works Director António Pinto de Miranda Guedes, September 30, 1908.

traditional squares, such as the Largos de S. Paulo and S. António. Also, instead of replicating the Bazaar shophouse typologies, why not profit from the extra space of the suburbs to build houses with gardens, at least for the “better ones”?²¹¹

Similar remarks from the Overseas Public Works Committee would follow with regard to Miranda Guedes’ third and last partial improvement project on the same lines as the Bazaar and Patane ones, this time for the Sankiu, Lin-tin-chin, Seac-lu-tau, Tap-seac, S. Miguel, Volong and S. Lázaro districts (Fig. 141).²¹² This had been presented to Governor Alves Roçadas in March 1909 and swiftly sent for metropolitan approval the following April 2. Still, without wanting to curb the Public Works Director’s enthusiasm and determination, the Governor was the first to caution against the recklessness of establishing such ambitious restructuring goals all at once. And this from the diverse points of view of the city residents which would have to be displaced, of public treasury, and even of the potentially large-scale consumption of agricultural lands due to the rapidly extending urbanization, on which the suburban population was largely dependent.

The Overseas Public Works Committee would then double-down on these observations, going as far as questioning the purpose and opportunity of such ambitious extension plans, coupled with such high levels of densification in a city such as Macao. While Miranda Guedes was clearly planning for the urban, social and economic development he wished the province to achieve, the Committee retorted with the much tamer guiding principles of thoughtful pondering and prudence:

When the improvement and expansion of cities and settlements is envisioned, with the creation of new districts and the opening of streets and avenues, one can envision only beautification or the enjoyment of its population, or the urgent need for hygiene, public salubrity and proper housing. The establishment of new streets and blocks can be fully justified by an acknowledged shortage in the latter department. Those expansions must be proportional, not just to present needs, but also to those of a more or less distant future. What is the current population of Macao, what is the capacity of its proper housing stock to accommodate this population, and what are its needs in terms of new construction area to fully satisfy this condition in a comfortable and hygienic manner? Also, what is the new area to be built in these districts, both planned and already under construction; what is the population they can house? In these seven districts which are now set for restructuring, what are the planned surface areas for both streets and buildings? These are the [lacking] data which the Committee would need to properly examine this project.²¹³

²¹¹ AHU, 251-2G-1S-SEMU-DGU cx., Report from the Overseas Public Works Technical Committee regarding the Tarrafeiro, Patane, Sakong, S. Paulo and S. António districts Improvement Plan, January 18, 1909.

²¹² AHU, 251-2G-1S-SEMU-DGU cx., Letter n°76 from the Governor of Macao, José Augusto Alves Roçadas, to the Minister of the Overseas, sending the Sankiu, Lin-tin-chin, Seac-lu-tau, Tap-seac, S. Miguel, Volong and S. Lázaro Improvement Plan, April 2, 1909.

²¹³ Ibid. Document 2. Report from the Overseas Public Works Technical Committee, June 1909.

Priority should be given, felt the Committee, to reclaiming and sanitizing insalubrious districts and improper dwellings, as had been done in Macao for more than twenty years, in a very “commendable effort” at that, in order to continue to improve public health standards. More ambitious and grander scale “improvements” should be put off into a “distant future,” until a more well-adjusted project could be drafted.²¹⁴

It’s true that the hygienic and elegant small-scale suburb, in the style of the experimental turn of the century Abreu Nunes’ Volong and S. Lázaro districts, and which was probably in the Committee’s mind, didn’t seem to be Miranda Guedes’ chief purpose, as he was admittedly working towards the larger goal of an all-encompassing city general improvement plan. In his own mind, this apparently included drafting the whole of the northern peninsula city growth, connecting the new harbor and railway projects to an already-established urban network. In this sense, this third project was the last piece of the puzzle, extending the 1895 Volong and S. Lázaro “modern” grid²¹⁵ towards the new Sankiu and S. Miguel districts in the north, obliterating and densifying, in the author’s typical fashion, almost every previous urban structure in its way. It was the case of Tap-seac square, a historic military training field which the Abreu Nunes plan had retained as an open public space for larger civic celebrations, but also of the S. Miguel Christian cemetery, which has completely disappeared under the relentless progression of the pink blocks. Only the S. Lázaro church seems to have narrowly escaped prospective demolition, although now engulfed in one of these blocks with almost none of its old dependencies.

Complete with its own resumption plan draft law, this was to be, as the Public Works Director had specified in regard to his previous improvement projects, more of an alignment plan, to be enforced incrementally, as new construction and reconstruction projects presented themselves. In his own words, referring to an integral vision of drainage and potable water grids, as well as fluid traffic connections with the new inner harbor, all of which this new urban pattern would facilitate: “The purpose, the goal, is thus defined; the *modus faciendi* is drafted; execution is therefore a question of firmness and perseverance.”²¹⁶

But the pinnacle of this hard-working, tireless, and genuinely earnest public officer’s efforts in view of establishing definitive guidelines for prospective planning in Macao would definitely be his above-mentioned “Urban and general sanitation of the city of Macao” report, presented on March

²¹⁴ Ibid.

²¹⁵ Ibid. Document 4. Sankiu, Lin-tin-chin, Seac-lu-tau, Tap-seac, S. Miguel, Volong and S. Lázaro districts Improvement Project report by Public Works Director António Pinto de Miranda Guedes, December 28, 1908.

²¹⁶ Ibid.

31, 1909.²¹⁷ The synthesis of all the ideas he had been developing since his arrival two years prior, it started, as I mentioned in the introductory chapter, with establishing the framework and concepts at hand. And for Miranda Guedes, the key idea was ‘sanitation’, in its broadest sense, encompassing all urban planning activities and interventions pertaining to the ultimate aspiration of improving public health. In a sort of combination of the French material improvements theory and the British Chadwickian sanitary notion, which had become the norm, as we have seen, in the ideologic construct of most turn of the century urban restructuring and expansion operations, Miranda Guedes’ ‘sanitation’ might include potentially everything, from reclamations to resumption plans. It did, however, primarily express the need to expand the province’s physical territory, creating the grounds on which the city could grow:

We have long been concerning ourselves with sanitation in Macao, an old city erected by the audacious Portuguese under the rugged and naked cliffs, and over the timid swamps of this minuscule strip of land that formed the first Portuguese concession in 1557. Everything in the city is, so to speak, artificial: the Praia Grande was created, as was the Praia Pequena, Fatiões, Praia do Manduco, etc.; in the valleys of Campo and Volong were established S. Lázaro and Tap-seac, from the floodplains of Mong-ha new districts will rise.

Many teardowns and landfills have formed the stages of a process that, before it could be translated into the nowadays well-established term of ‘sanitation’, represented the conquest of much-needed space for the burgeoning colony.²¹⁸

A monumental task, which started, as we have seen in the first Chapter, with the 1850s inner harbor reclamations. Whose pioneer in the wake of the 1856 great fire in the Bazaar, by the way, Governor Isidoro Francisco Guimarães, Miranda Guedes fails to mention, in order to promote the idea that his successor, military engineer José Rodrigues Coelho do Amaral, had been the true craftsman of the first planned urban expansion in Macao, as well as the province’s only technical expert worth mentioning until Abreu Nunes’ arrival in the 1890s.

Macao, as all ancient cities, even if far from the influence of the narrow-minded Chinese, didn’t follow, at the beginning, nor until very recently, any principle or rule of urban hygiene. One might even say, and we are pleased to do so, that apart from the intrepid effort of Coelho do Amaral, engineer and governor who, putting aside the briefcase of the colony’s superior administration, took on his old theodolite and laid out streets and roads, remembered his professional knowledge and rebuilt the S. Francisco [barracks], paved the city streets and lined them with trees, thus glorifying his memory with the double circumstance of a good governor and a good engineer, apart from that, only since 1893, with the beginning of the administration of eminent engineer Mr. Augusto César de Abreu Nunes, can we talk of sound management and proper work in terms of sanitation.²¹⁹

²¹⁷ AHU, 251-2G-1S-SEMU-DGU cx., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

²¹⁸ Ibid.

²¹⁹ Ibid.

The Public Works Director clearly saw himself as part of such an illustrious lineage of engineers, setting out to continue the modernizing work, and namely by completing the task General Castel Branco had entrusted him with. And the Macao General Improvement Plan was precisely the formal instrument to achieve this long-lasting, virtuous (and noteworthy on an international level, as Abreu Nunes' work had been in its time) goal.

A little has already been done, some of it is being handled today, but a lot remains to be accomplished in the future. [...] We mustn't expect, however, to go suddenly from bad to optimal. From what Macao is today, even if we can't hope to make it magnificent, let us at least think it and make it a [geometrically] perfect city. To reach this, a bloodless fight must be fought. A great deal must be destroyed and almost everything rebuilt. [...] The layout of the city's General Improvement Plan is the indispensable foundation of a complete and harmonious study of these sanitary changes. Moreover, its diffusion would serve the dual purpose of bringing Macao's progress and regeneration to the whole of the Far East's attention, where it was losing its rightful position, and of interesting the colony's population and living forces in its improvements.²²⁰

Miranda Guedes' improvement plan is a lengthy report whose purpose is to interconnect and give coherence to all the partial projects he had been presenting thus far. For instance, in the chapter regarding "new and old districts,"²²¹ one can better understand the motivations behind his signature pink grids. Traffic and communications are expressly featured, but in the end it's all about infrastructure: establishing proper sewerage and potable water systems throughout the city is unquestionably the author's priority. That is what primarily drives his insistence on the regular layouts of streets and blocks, sufficient street width (from seven to fifteen-meters), right-angled intersections, small-scaled housing blocks. When he writes of his efforts to turn Macao into "a perfect city," what the Public Works Director means is turning it into 'a *geometrically* perfect city'. As was Ressano Garcia's Lisbon in his eyes. At a time when the "regular, geometrical, well-defined and well-aligned" plan for the post-1755 earthquake capital was starting to be deemed as too limited for modern demands, Miranda Guedes felt that "the new Lisbon," that is, his metropolitan counterpart's improvement and extension plans, "was following the most splendid guidelines."²²² And if he couldn't make Macao as splendid, at least his set of new avenues and hygienic districts would make it as sanitary.

Finally, to put his integral plan in motion, Miranda Guedes advocated for the establishment of two provincial techno-scientific advisory bodies: a Hygiene Council (*Conselho de Higiene*), and a Sanitary Improvements Council (*Conselho de Melhoramentos Sanitários*), both presided by the Governor. The former would derive from the reformation of the existing Board of Health (*Junta de Saúde*), and would thus continue to oversee all matters pertaining to public health in the province,

²²⁰ Ibid.

²²¹ Ibid.

²²² Ibid.

with the Public Health Director as its vice-president, only now with the presence of the Public Works Director as a voting member. Conversely, the Sanitary Improvements Council, itself deriving from the existing provincial Public Works Technical Council (*Conselho Técnico de Obras Públicas*), would advise in relation to public works, under the vice-presidency of the Public Works Director and with the active voice of the Public Health Director. This way, the medical and engineering experts, once separated in each other's governmental advisory bodies, would come to pool their efforts towards the common good of urban sanitation. In Miranda Guedes' typically epic vision:

Around two centers must gravitate the system of sanitation and salubrity of any country: engineering and medicine. The former builds, prescribes rules for housing, establishes sanitation. The latter guides the engineer, examines the habitational, urban and individual hygiene, imposes and regulates the prophylaxis, tends to public health. Both cooperate and complete each other in the great task of man's battle against himself.²²³

To devise the reform of the Government of Macao advisory bodies, and particularly of the Sanitary Improvements Council which interested him the most in regard to the operative stages of the Improvement Plan, the author had drawn inspiration from the national ordinance of October 24, 1901 regarding the organization of the Ministry of Public Works, Commerce and Industry advisory bodies. An initiative of Ernesto Hintze Ribeiro's second government (1900-1904), in the wake of the already-mentioned September 2, 1901 national ordinance establishing the need for a new Lisbon general improvement plan,²²⁴ the October 24 law had been signed off by civil engineer and Minister of Public Works Manuel Francisco Vargas (1900-1903) and included the reform, among others, of the Public Works and Mines Supreme Council (*Conselho Superior de Obras Públicas e Minas*), the National Monuments Council (*Conselho dos Monumentos Nacionais*), and the national version of the Sanitary Improvements Council. In the latter, a cohort of engineers would preside, namely with the presence of the Lisbon district and the Lisbon municipality Public Works Directors, but also an equal number of the capital's public service medical doctors.²²⁵

Miranda Guedes saw this reform as nothing less than proof that Portugal was indeed "walking in the vanguard of the international army of hygiene, salubrity, and public good," by putting both ends of the techno-scientific spectrum working together for the common and connected purposes of

²²³ Ibid.

²²⁴ DG, n°201, September 9, 1901, 513-514, National ordinance of September 2, 1901, regarding the administrative organization of the Lisbon Municipality and the obligation, for the Municipal Public Works Department, of establishing the capital's general improvement plan.

²²⁵ DG, n°246, October 31, 1901, 856-860, National ordinance of October 24, 1901, regarding the organization of the Ministry of Public Works, Commerce and Industry advisory bodies.

public health and economic prosperity.²²⁶ Quoting two of his main contemporary references, British civil engineer and hygienist Baldwin Latham (1836-1917),²²⁷ as well as French engineer Georges Bechmann (1848-1927),²²⁸ the Macao Public Works Director earnestly argued that “there is no price for life, and if health is a precious capital for everyone, for the poor it’s his only fortune. Work springs spontaneously from health as the fruit does from the flower.”²²⁹ Thus, and to borrow Latham’s words, if “the preservation of life and health is in a great measure dependent on the faithful prosecution of sanitary works,” as “it should now be well known,”²³⁰ continuing on the path of urban sanitation set by the Chinese Bazaar Improvement Plan was paramount to prepare for the larger commercial boost the renovation of the inner harbor would bring. Resetting the city by “opening wide streets, drain the sewerage, pipe potable water,” would be like “carefully and diligently preparing our best room for the guest of honor,” this being the new “intense, laborious and rich population” which would flood Macao once the trans-oceanic traffic would start coming back to its new, modern harbor.²³¹ In short, sanitation at the base of the province’s pyramid of prosperity:

With the harbor comes the railway; and with both comes a new life for Macao, a new and glorious era of wealth and pride in our colonizing power. Already in the press one can catch a

²²⁶ AHU, 251-2G-1S-SEMU-DGU ex., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

²²⁷ British civil engineer and meteorologist Baldwin Latham (1836-1917) was the son of architect George Latham. Having worked for the Local Board of Health in Croydon, south of London, he would dedicate most of his research and experimental practice to the topics of sewerage, house drainage and clean water supply through pumping and piping systems, both on historical and prophylactic perspectives, insisting on the necessity of “sanitary measures” as “agents for promoting life and health.” For an extensive look at Latham’s research, see Baldwin Latham, *Sanitary Engineering. A Guide to the Construction of Works of Sewerage and House Drainage with Tables for Facilitating the Calculations of the Engineer* (London: E. & F. N. Spon, 1878), ix.

²²⁸ French civil engineer Georges Bechmann (1848-1927) was an École Polytechnique and École des Ponts et Chaussées graduate, who mainly worked as a public servant, in the Municipality of Paris’ body of engineers, and later as Director of the capital’s water and sanitation service. He is best known for his work on the later position in the 1890s, having contributed significantly to the widespread connection of the city’s buildings to the municipal sewerage system. For more on Bechmann’s research, see Georges Bechmann, *Salubrité Urbaine. Distributions d’Eau et Assainissement* (Paris: Librairie Polytechnique, 1898-1899).

²²⁹ AHU, 251-2G-1S-SEMU-DGU ex., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

²³⁰ Latham, *Sanitary Engineering*, v.

²³¹ AHU, 251-2G-1S-SEMU-DGU ex., Report on the “Urban and general sanitation of the city of Macao” by Public Works Director António Pinto de Miranda Guedes, **March 31, 1909 (transcribed in Volume 3 - Annexes)**.

glimpse of that vision for the future of Macao. We must believe it piously; and believe it because we work to promote it. Where there is a will there is a way.²³²

In 1912, General Castel Branco, now fully recovered from his illness and determined to relaunch his 1908 Macao Inner Harbor Improvement Project, would publish part of Miranda Guedes' work on the city's general sanitation plan in his harbor works report, although mainly focusing on the improvement of the sewerage and potable water schemes. And also claiming, by the way, partial authorship over the Public Works Director's report.²³³ Still, both experts agreed on the importance of pushing forward the interconnected improvements of the harbor, the Macao-Canton railway, and the urban sanitation plan. In Castel Branco's view, it was ultimately a question of national pride:

Strict obedience to this plan is indispensable and urgent to correct the incoherence and disorientation in the development of the city, which has already birthed so much evil, threatening to give rise to severe hygienic, economic and social inconveniences. [...] Thus will the Republic prove that our race can fructify and advance the colonies which, in current times, is of primary importance for the integrity and future prosperity of the Portuguese Motherland.²³⁴

Coming to the end of his commission, though, Miranda Guedes would leave Macao roughly one year after submitting his seminal report, in August 1910. This would be just days before the demolition of the first twelve buildings was established "for the opening of the Chinese Bazaar New Avenue's first section," by the September 22, 1910 local ordinance,²³⁵ signed by the last Governor of Macao to be appointed by the constitutional monarchy regime, Eduardo Augusto Marques (1909-1910).²³⁶ By then, Public Works engineer Raúl Machado de Faria e Maia had been (once more) appointed as acting director, having overseen the operational project for this first section, which was established to go from Largo do Senado to Rua dos Mercadores.

²³² Ibid. For more on the inner harbor improvement project, in connection with the Macao-Canton railway project, see Chapter V.

²³³ José Emílio de Santana da Cunha Castel Branco, *Projecto das obras a executar no Porto de Macau. Memória descritiva e justificativa precedida duma resenha histórica e seguida dum projecto de caderno de encargos e mais documentos para a execução das obras por empreitada* (Lisboa: Imprensa Nacional, 1913), 265.

²³⁴ Ibid., 267.

²³⁵ BG, n°39, September 24, 1910, 325, Government of Macao local ordinance n°199, regarding the demolition of twelve buildings "for the opening of the Chinese Bazaar New Avenue's first section," September 22, 1910.

²³⁶ Governor José August Alves Roçadas' successor, military engineer Eduardo Augusto Marques (1867-1944) arrived in Macao in September 1909, having stayed for roughly a month after the official proclamation of the Republic in the province, on October 11, 1910 (for more on this transition, see Chapter V). Having come from a year in office as Governor of Timor (1908-1909), and much like his predecessor Alves Roçadas, he would go on to support the May 28, 1926 military coup, helping make way for the future Estado Novo dictatorship (1933-1974). He would also serve as Minister of the Colonies for one of the Ditadura Nacional governments, from 1929 to 1931.

In Figure 142, I have tried to interpret what this operational project might have looked like, as there are no partial detailed plans available, based on an information the Chinese Bazaar Sanitation Works Administrative Committee (*Comissão Administrativa das Obras de Saneamento do Bazar Chinês*) sent to the acting Government Secretary-general on September 3, 1910,²³⁷ cross-referenced with the 1903 Abreu Nunes plan cadastral information, as well as with the 1907 Miranda Guedes plan topographical survey and project information. More precisely, the Administrative Committee, which was probably under Faria e Maia's technical supervision, was sending a list of the buildings to be expropriated immediately, that is, still under the 1909/1910 budgetary year, which was nearing its end. The buildings on the Committee's list (marked in red), however, do not seem to correspond to the whole extension of the New Avenue's first section (marked in blue). We may assume, therefore, that the other twelve buildings (marked in green), had precisely been the first ones to be expropriated and demolished, as per the above-mentioned September 22, 1910 local ordinance. This first section thus entailed the expropriation and demolition of an estimated thirty buildings.

Unfortunately, there is scarce information in the Secretary-General archives, on the pursuit of resumption works, given that the records of the Chinese Bazaar Sanitation Works Administrative Committee must have been consigned to the archives of the Macao Public Works, which are currently inaccessible to the general public. By comparison, though, and also looking at the 1903 cadaster, we may estimate that the Avenue's first phase, from Largo do Senado to the Inner Harbor, might have entailed the demolition of around one hundred buildings.

Still, there is news, through the correspondence with the metropole, of the August 1918 project to extend the renamed new Avenida Almeida Ribeiro to Praia Grande (Fig. 143).²³⁸ This had apparently been drafted by now officially appointed Macao Public Works Director Faria e Maia, approved by the local Public Works Technical Council on August 21, and sent to the (since reformed under the Republican regime) Ministry of the Colonies the following October.²³⁹ Otherwise showing that the Miranda Guedes projected reform of the provincial advisory bodies

²³⁷ AM, MO/AH/AC/SA/01/02814, Letter n°12 from the president of the Chinese Bazaar Improvement Committee to the Government acting Secretary-General, regarding the Bazaar resumption plan for the year 1910, September 3, 1910.

²³⁸ The Chinese Bazaar New Avenue had since been renamed Avenida de Almeida Ribeiro, in honor of Republican Minister of the Colonies Artur de Almeida Ribeiro (1913-1914), who had signed off on the resumption plan for one of its following sections. It still holds that official name to this day, although it is better known locally as San-ma-lou, meaning 'new horse road', alluding to its use in official public functions, such as military parades or religious processions. For more on this subject, see macauantigo.blogspot.com.

²³⁹ AHU, 260-2G-1S-MU-DGFTO cx., Proceedings from the Macao Public Works Technical Council reunion, regarding the extension of the Chinese Bazaar New Avenue to the Praia Grande, on August 21, 1918.

had fallen through, as there was never to be a local Sanitary Improvements Council, not in Macao nor in any other colony.

After this, and other than the actual opening of the Chinese Bazaar New Avenue from 1910 to the early 1920s, other restructuring interventions in the Chinese Bazaar would turn out to be much more restrained. Figures 144 through 148 retrace, in the city general plan, the configuration of the Bazaar district before the start of the resumption plans, as well as the four different improvement projects we have been studying in this Chapter, from the most subdued February 1903 Abreu Nunes plan, to the most radical and ambitious 1907 Miranda Guedes one. In Figure 149, I have tried to locate the most important interventions that were actually carried out by the 1930s, not just by comparing the 1903 and current topographic information, but also by cross-referencing the former with a 1919 information on one-off resumption operations in the context of the Chinese Bazaar “general sanitation plan.”²⁴⁰

There is the New Avenue, of course, following the Miranda Guedes layout in its first phase, from Largo do Senado to the Inner Harbor. Its 16-meter projected width, however, has been reduced to an actual 10-meter, with a 3-meter-wide covered public walkway on each side, as had been projected since the first Abreu Nunes drafts (Figs. 150 to 154). The Avenue’s second phase, from Largo do Senado to Praia Grande would adopt a lighter profile, maintaining the 16-meter width, but forgoing the lateral galleries, which allowed for the deployment of some larger-scaled buildings, such as the emblematic Banco Nacional Ultramarino (1926) and Post Office (1931) headquarters. Otherwise, the most important intervention connected with the 1907 Bazaar improvement plan would be the widening and realignment of Rua dos Mercadores, from Rua das Estalagens to Rua da Felicidade, erasing and replacing the layout of the old 1870s-built Travessa do Aterro Novo, and entailing the expropriation and demolition of seventy-six buildings,²⁴¹ which represented more than three-quarters as much as had been necessary for the completion of the Avenue’s first phase. Next, with a total of 45 buildings to be demolished came the widening and realignment of Rua do Mastro, so as to make it line up with Travessa da Felicidade and, again, connect Rua das Estalagens with Rua da Felicidade. These two main resumption operations may therefore be seen as complementary to the opening of the New Avenue, in the sense that they contributed to consolidate the role of Rua dos Mercadores and Rua do Mastro as the new Bazaar transversal arteries, with Rua da Felicidade and Rua das Estalagens remaining as secondary longitudinal axes.

²⁴⁰ AM, MO/AH/AC/SA/01/07377, Note n°1245 from the Government Secretary-General to the Procuratorate for Chinese Affairs regarding the expropriation of several buildings in the context of the Chinese Bazaar sanitation plan, July 23, 1919.

²⁴¹ Ibid.

As we have seen in Chapter I, though, Rua dos Mercadores and Rua do Mastro had been, through the centuries, the city's main longitudinal thoroughfares, as the riverfront expanded westward, progressively moving the harbor away, so to speak, from the heart of the city. The New Avenue's main goal was precisely to solve this problem of lack of transversality between Macao's civic center and its successive riverbanks. Still, the avenue's counter-longitudinal gesture is so powerful that, not only does it polarize the Bazaar district, but completely reorients the urban landscape, making *it* the new longitudinal axis and the historic riverbanks *its* transversal arteries. Thus claiming clearly and undoubtedly that the city's structuring route is no longer its connection to Mainland China, to the north, but its connection to sea trade, to the east.

In the end, though, the Bazaar Improvement effort wouldn't go much further than these three main restructuring interventions, allowing for the conservation of most of the old urban fabric. In what concerns the rest of the Miranda Guedes partial improvement plans, we can try to make sense of how they influenced the future urbanization of the northern part of the peninsula by looking at the Macao 1927 general map (Fig. 155). Drafted by the Macao Harbor Works Department (*Direcção das Obras do Porto de Macau*) and published by the local government, this map had been specifically designed by the service of Harbor Propaganda (*Secção de Propaganda do Porto*) to advertise Captain Hugo Carvalho de Lacerda's 1921 new outer harbor project to a both national and international audience.²⁴² This explains why most of the harbor facilities, whether in the western Patane side of the peninsula (inner harbor) or in its eastern side (outer harbor), are marked with dotted lines. The same goes for some of the new districts between them.

Starting north, we can see that the old Mong-ha Chinese village, which is still featured in the 1912 general map (Fig. 15), has almost completely disappeared under a mesh of regular and comfortably sized blocks and avenues. South of Avenida Conselheiro Horta e Costa, which is featured in both the 1908 Patane and the 1909 Sankiu and Tap-seac partial improvement plans as their northern limit, as it was actually already built at the time, we can see that the projected Sankiu roundabout and new district has been built as planned, down to the Lou Lim Ieoc garden. Towards the old Patane shipyards, Lou Kau's two social housing blocks are still standing, but there is no longer any intention of extending this model to form a proper social housing district at Sakong, as Miranda Guedes had planned. The Public Works Director's Patane New Avenue also didn't come about. There is, however, a similar axis connecting the northern face of the Monte Hill and the S. Lázaro district to Patane and the new inner harbor docks, which is drafted through the extension north of the preexisting Estrada do Repouso. Speaking of which, the S. Miguel Christian cemetery wouldn't be engulfed by the Volong mesh, contrary to what Miranda Guedes had planned, and the S. Lázaro

²⁴² For more on the subject of the 1921 Hugo Carvalho de Lacerda Macao Outer Harbor Project, see Chapter V.

church block would remain intact as would, to this day, the whole of the Abreu Nunes 1895 urban pattern. The northern part of Tap Seac would be urbanized as planned, although not fully, as a large public square would be left free of construction over the site of the old military training field.

To sum up, not all preexisting urban structures submitted to the rationalizing power of the public works engineer's regular pink grid. As mentioned earlier, the clean-slate strategy, despite its abstract appeal in the mind of the planner, could only be applied as a ready-to-use solution for low density, mostly agricultural grounds. Otherwise, it had largely proved to be expensive, time-consuming, and politically sensitive, even in a city as Macao, where public contestation hardly ever surfaced. Therefore, and most importantly, the oldest and most populated districts of Patane, Tarrafeiro, S. Paulo and S. António managed to remain, to this day, largely untouched by Miranda Guedes and his successors' modernizing drive, as did the old shophouse pattern of the Chinese Bazaar.

* * *

After the first urban sanitation experiences in Macao in the last quarter of the nineteenth century, the early 1900s Chinese Bazaar improvement projects took the Chadwickian environmentalist ambition to a whole new level in terms of the scale of the envisioned resumption plan. Inspired mainly by the formal and juridical expressions of the Lisbon General Improvement Plan, which had been conceived as an extension plan guided by a system of avenues, the Macao equivalent would venture far beyond in its restructuring ambitions, suggesting not only the urbanisation of the whole agricultural northern periphery, but also the obliteration of almost every single historic district under an all-encompassing geometrically regular grid.

This was not to be, though, probably due to the lack, in Macao, of at least one of the three pillars holding the long nineteenth century Parisian capitalist landscape model together: there was the technical expertise, to be sure, a fairly vigorous political determination as well, although with maybe a slightly less enthusiastic treasury, but no particularly forceful private investment momentum. At least not as dynamic and enduring as required for such an ambitious general plan. As a result, and over the course of a few decades, only some of the projected new arteries and districts would see the light of day, among which the Chinese Bazaar New Avenue would definitely stand out as the most emblematic.

This Macanese *percée* can be read as an imprint of colonial design into the Chinese urban landscape, as this intent is literally expressed by its contemporary administrators and technical experts, both metropolitan and local. But it can also legitimately be seen as the geometrical solution,

Terry Kirk's "urban infrastructural instrument,"²⁴³ to a pre-industrial town's negotiation in urban modernity and sanitation. Its own marker of modernity, so to speak. Indeed, similar processes of transformation had been affecting metropolitan and overseas European towns since before the 1850s. Portuguese towns as well, especially since the publication of the 1864 national ordinance and the official establishment of the mandatory general improvement plans. The same modern-industrial philosophies, legislation and technical instruments were spreading through the European imperial network, by the hands of public works and public health officials, to affect urban landscapes in similar ways, in metropolitan and in colonial contexts alike.

All over the world, urban Europe strived for its own expression of an 'achievable modernity', expressed sometimes through one isolated 'gutting', realignment, or resumption plan, one new and regularly laid out residential district or urban extension grid, one railway station and its new avenue project, sometimes laying empty for decades to come, waiting for the social and economic dynamics to follow. Can this time discrepancy be accurately interpreted as proof of their respective administrations' treasury failings or lack of authority? After all, Haussmann himself would soon enough be on the receiving end of such accusations, as exemplified by 1900s urban planner Eugène Hénard's appraisal of the great modernizer's work.²⁴⁴ Or should the blame be put on the State's incapacity to impose order and control over the urban landscape, letting "the laissez-faire and private property" triumph?²⁴⁵ Two interpretations which have been known to influence a number of historians up to this day, as we have seen in the previous Chapters, in regard to the apparent success or otherwise of the 1864 and 1901 general improvement plans legislation. As an alternative, I would venture that, although relatively circumscribed, operations such as the Chinese Bazaar New Avenue represent the formal and final expression of an intricate negotiation between the technocratic administration who conceived it (itself often grappling with its own external pressures), the capitalist forces who could see it through, and the population whose health and well-being they were supposed to improve. In this sense, they are less "indigenous modernities,"²⁴⁶ and more like a sort of gauge, indicating where that specific city was, at that specific time, on the scale of the elusive ideals of modernity and sanitation.

²⁴³ Kirk, *The Architecture of Modern Italy*, 196.

²⁴⁴ Eugène Hénard, *Études sur les Transformations de Paris. La Percée du Palais-Royal. La Nouvelle Grande Croisée de Paris* (Paris : Librairies Imprimeries Réunies, 1904), 197.

²⁴⁵ *Ibid.*, 85.

²⁴⁶ Hosagrahar, *Indigenous Modernities*, 2. For more on this subject, see the Introduction.

Colonial Momentum and Political Inertia: the Inner Harbor Improvement Deadlock, 1884-1919

In October 1919, Governor of Macao Henrique Monteiro Correia da Silva (1919-1922)¹ received a formal complaint from Canton concerning the ongoing work on the Inner Harbor Improvement Project, on the grounds that reclamation was being conducted in Chinese waters.² The unusually menacing tone of this complaint, as well as advice by his Hong Kong counterpart to suspend the dredging work, led Governor Correia da Silva to adjourn construction until a diplomatic solution could be found.³ By mid-1920, it was clear that the young and politically unstable Portuguese and Chinese Republics, the latter moreover deeply troubled by its southern provinces' separatist movements, together with the not-so-subtle British interest in the underdevelopment of Macao's harbor,⁴ wouldn't be able to reach an understanding regarding the Portuguese land and maritime borders, bringing the Inner Harbor Improvement Project to a most inglorious end. In 1922, work would resume on Macao's ocean front, far from the disputed water limits, to carry out a wholly different seaport project to be run by an international company under British influence.

This swift resolution to a forty-year deadlock would be providential to solve Macao's harbor accessibility problem. The wake-up call had come in 1881, with the first reports on the rise of the riverbed, which was starting to prevent larger vessels penetrating the canals leading to the Inner

¹ Son of Vice-admiral Carlos Eugénio Correia da Silva, Count of Paço de Arcos, and former Governor of Macao (1876-1879) (see Chapter II for more information), Macao-born Captain Henrique Monteiro Correia da Silva (1878-1935) would serve the Macao Governorship from 1919 to 1922. He would go on to serve as Minister of the Colonies for a few short months in 1925.

² António Pinto de Miranda Guedes, "Macau. As Obras do Porto e a Política Chinesa," separata da *Revista Colonial*, 89/92/93/96/97 (1920): 7-8.

³ *Ibid.*, 58.

⁴ *Ibid.*, 6-7; 23-25. See also João Tamagnini de Sousa Barbosa, "Sobre as Obras do Porto de Macau. Resumo Histórico e Situação Actual," *Gazeta das Colónias*, Ano I, 1 (1924): 24.

Harbor. At that rate, Macao would soon become inaccessible to seaborne trade, which evidently struck a chord with the Portuguese imperial pride in the settlement's pre-Opium War reputation as the prime connecting entrepôt between China and the world. From 1884 to 1915, ten projects to update harbor capacity and equipment would be presented by Portuguese engineers, either on central government special commissions or working in Macao's Public Works Department, aiming at turning the province from a 'silting backwater' serving a supporting role in regional trade into a prosperous colony of an internationally preponderant modern Empire.

Portuguese central government had been striving to build the colonial edifice in old self-governing Macao since the 1850s, as seen in the previous chapters, by overthrowing the practice of a divided sovereignty established between Portuguese and Chinese local authorities in the mid-sixteenth century, and by taking control, restructuring and expanding the urban territory, mostly with the help of private Chinese initiative, capital and workforce. Increasing colonial grasp, however, ultimately meant that all major projects needed to be vetted and backed by central government to be carried out. Unfortunately, the Empire's finances didn't match its global ambition of infrastructural modernization and, when it came to the Macao Inner Harbor Improvement, project after project was denied funding until full shutdown in 1919.

In this Chapter, examining three of these projects and the reasons they failed to materialize, we will discuss the paradox of turn-of-the-century Macao, in which the Portuguese colonial momentum, responsible for a notable urban renewal period in an initial stage of collaboration with the local entrepreneur communities, as well as for the deployment of an array of progressive engineers, by being fundamentally at odds with the reality of the province's part in regional geopolitics, later ended up stifling that same development dynamics, perhaps irreparably, by subjecting the improvement of Macao's core infrastructure to an overseas budgetary management which clearly favored the Portuguese provinces where international empire-building stakes were higher.

Colonial Momentum

I. Local ambitions

Macao Harbor Captain (*Capitão do Porto*) Demétrio Cinatti's 1881 report on ship entry statistics and how the river siltation was affecting trade⁵ is generally considered to have been the turning

⁵ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°10 from Macao Harbor Captain Demétrio Cinatti to the Government Secretary-General, regarding the inner harbor improvement, **July 20, 1881 (transcribed in Volume 3 - Annexes)**.

point for the ‘port issue’ (*‘questão do porto’*) in Macanese public opinion.⁶ Commissioned by the Overseas State Department, the Captain’s report accounted for the progression of the sedimentation phenomenon and its causes predicting that, by the 1900s, the port of Macao would reach critically low water levels and probably face shutdown. To quell this risk, Cinatti (1851-1921)⁷ recommended the implementation of a moderate-scale dredging programme designed to open up sea and river canals, liberating access to the piers and existing docks. To accommodate the silt product from the dredging works, he proposed that it be put to use in a new reclamation scheme in the northern part of the peninsula, thus narrowing the riverbed, and consequently improving river flow and reducing sedimentation, while simultaneously creating new land for agriculture.

Cinatti’s report, later picked up by the Macanese press in a sort of nationalistic campaign for the improvement of harbor conditions,⁸ had come in the wake of several contacts made by Governor Joaquim José da Graça (1879-1883) to the Minister of the Overseas regarding this issue.⁹ As early as December 1879,¹⁰ only shortly after having taken office, Graça started writing to Lisbon suggesting that part of the province’s contribution for the imperial common fund should remain in Macao to be reinvested in harbor improvement and territorial expansion:

⁶ In regard to current historiography see, for instance, Afonso, “Macao: uma experiência de urbanismo estratégico e higienista,” 234. See also Haberzettl and Ptak, “Macao and its harbour,” 299.

⁷ Born in Lisbon in 1851, Harbor Captain Demétrio Cinatti was the son of Italian architect and set designer José Cinatti, who had established himself in Lisbon around 1836, when he was commissioned to work on the São Carlos National Theatre, going on to serve an illustrious clientele, including the royal family. One of his most prestigious works would be his 1867 restoration of the roman temple of Évora, which would garner him much praise as archeologist and conservator-restorer. Unlike his father and grandfather, Luís Cinatti, also an architect, Demétrio Cinatti would pursue a career as a military officer, having graduated from the Lisbon Polytechnical School in 1870, and from the Naval School the following year. While serving his several naval commissions, he was stationed in Angola (1871/1872), as well as Macao (1873/1876). In 1878, he would return to the Far East to serve in the Macao Captaincy of the Port, which he would be appointed to oversee as interim Captain from 1880 on. In July that same year, he would be officially appointed Harbor Captain, a post he would hold until he demanded, and was granted, exoneration in December 1884. In the 1890s, Cinatti would opt for a diplomatic career, having been appointed consul in Canton (1889/1894), Zanzibar (1894/1895), Pretoria (1895/1902), Havre (1905/1911) and London (1911/1917). He would die, in Lisbon, in 1921. For more on this subject, see Jorge Graça, “Urbanização de Macau e o mapa de Demétrio Cinatti,” *Revista de Cultura*, 35/36 (1998): 149-170. See also Cinatti’s biographical note on the family’s archive, which is currently held by the Universidade Católica Portuguesa, at www2.ucp.pt.

⁸ Adolfo Ferreira de Loureiro, *O porto de Macau. Ante-projecto para o seu melhoramento*. (Coimbra: Imprensa da Universidade, 1884), 132-134.

⁹ For more on Governor Joaquim José da Graça (1879-1883), see Chapters II and III.

¹⁰ In his June 15, 1881 letter, Graça mentioned no less than six previous letters regarding his view on the urgency of launching large-scale harbor works, the first dating from December 9, 1879, a mere ten days since taking office. AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°121 from the Governor of Macao, Joaquim José da Graça, to the Minister of the Overseas, regarding the inner harbor improvement, **June 15, 1881 (transcribed in Volume 3 - Annexes)**.

Please allow me to assure His Excellency that the improvement of the port of Macao would be the beginning of a broader scale commercial and industrial development. The commercial movement in 1880 was roughly of twenty-four million patacas, and this year it will most probably be even bigger, judging from the last five months. [...] The Inner Harbor is obstructed in such a way that the steamboats docked at the piers get stuck in the mud, even those that barely demand six feet of water. Now, cleaning up the harbor can bring two great advantages: facilitating navigation and expanding the territory. There is a bay in the river that can and must be reclaimed, for this conquered land may become excellent farmland [...] which could result in a considerable improvement in public revenue should it be rented.¹¹

By this time, work was almost completed in the first stage of the latest ongoing riverfront reclamation project. With permission granted in 1877 and promoted under a concession contract by a group of Chinese entrepreneurs fronted by Macanese businessman Miguel Ayres da Silva, it also had been justified on claims of it improving public prosperity by creating new ground on which to build commercial and industrial structures, public health, by eliminating an insalubrious siltation point, and even the river flow, by realigning the pier wall, thus giving the riverfront a more regular profile.¹²

In this context, Governor Graça didn't shy away from informing colonial government of the continued (and probably ever-growing) interest of the local Chinese capitalists in the province's material improvements, and very specifically in the inner harbor works. In his June 1881 letter, for instance, he wrote to remind the Minister that earlier that year "a group of wealthy Chinese from Macao, having among them the current holder of the processed opium concession and buyer of the old customs building, had arranged to send for a dredger from England as a gift to the Government."¹³ As far as Graça knew, the order for this dredger was already underway, and so he pressed once more for authorization to fund directly "the urgent work that needs to be done in the inner harbor and, after, in the outer harbor [*rada*],"¹⁴ to see the end of which, in the Governor's view, one dredger was simply not enough.

In his July 1881 report, written at the Ministry of the Overseas' request, itself in the wake of Governor Graça's recurring correspondence,¹⁵ Cinatti corroborated and expanded the idea that, if

¹¹ Ibid.

¹² For more on Miguel Ayres da Silva's inner harbor reclamation project, see Chapter II.

¹³ AHU, AHU-ACL-SEMUDGU-3R-002, Cx.0001, Letter n°121 from the Governor of Macao, Joaquim José da Graça, to the Minister of the Overseas, regarding the inner harbor improvement, **June 15, 1881 (transcribed in Volume 3 - Annexes)**.

¹⁴ Ibid. In Portuguese, '*rada*' designates a harbor sheltered by land. In Macao this term was generally used to designate the outer or 'sea' harbor in the southeast side of the peninsula, off the coast of Praia Grande bay. It was through this outer harbor canal that all navigation coming from the eastern Pearl River delta, particularly the Hong Kong and Canton steamboat lines, reached the inner harbor, sailing around the Barra and entering the harbor through its south side.

¹⁵ Harbor Captain Demétrio Cinatti mentions that his July 20, 1881 report, by which he mainly conveys the elements regarding the import/export and navigation figures for the years 1869/1879, had been written in

the colony, with its commercial movement of twenty-four million patacas in 1880, was gaining an “extraordinary importance,” despite its “small surface of barely five square kilometers,” it was largely due to the “laborious Chinese population.”¹⁶ Indeed, the Harbor Captain was rather optimistic regarding the development of commercial and industrial activities in Macao. And this concerning both those activities of a more long-standing tradition in the city, such as the manufacturing of salt and salted fish, processed tea and steamboat coastal navigation, and some important new ones, such as the manufacturing of matchsticks and processed opium. The latter’s concession, Cinatti wrote, had lately been granted for a ten-year tenure. Together with the capital amounted by the Vac-seng lottery concession holder, the Captain was positive new commercial ventures would emerge, increasing the province’s wealth and prosperity, which would ultimately, as Cinatti put it, “restore Macao to its former opulence.”¹⁷

Some of these projects were already underway, such as the purchase of the English dredger Governor Graça had mentioned. But there were other more ambitious business ventures as well, namely linked to maritime and even trans-oceanic navigation. Cinatti mentioned, for instance, that the same processed opium concessionaire was planning on purchasing a steamboat to establish trade lines with both Cochinchina¹⁸ and America to export his merchandise.

This opium entrepreneur, I would venture, was probably Chou Iao, whom historian Guang Zhi Lin references as being the generous donor of a steam dredger to the Government of Macao in 1880, on account of which he would later receive a governmental medal of honor.¹⁹ One of the founders of the Kiang Wu Chinese hospital, Chou Iao appears relatively frequently in the primary sources as an associate to slightly better-known Chinese entrepreneur Lou Kau (1837-1906). As well-respected representatives of the Macao Chinese community, probably both from the same generation and both moreover naturalized Portuguese in the late 1880s, Chou Iao and Lou Kau would frequently work on government-appointed committees alongside the most politically eminent Macanese senators, such as Pedro Nolasco da Silva.

response to a questionnaire sent to the Governor of Macao by the Overseas Director-General and dated from November 29, 1880. Which, in turn, had probably been motivated by the copious written solicitations Governor Graça had addresses to the Minister regarding the state of the harbor.

¹⁶ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°10 from Macao Harbor Captain Demétrio Cinatti to the Government Secretary-General, regarding the inner harbor improvement, **July 20, 1881 (transcribed in Volume 3 - Annexes)**.

¹⁷ Ibid.

¹⁸ Cochinchina is a southern region in present-day Vietnam. A French colony from 1862 to 1954, its principal city is Saigon.

¹⁹ Lin, *Chinese Merchants in Macau in Late Qing*, 43.

Such was the case of the 1889 committee appointed to “determine the reasons for the decay of coastal navigation in Macao” from 1884 to 1887.²⁰ This committee’s report is an interesting document, as it gives some detail into the local and regional networks of trade based in Macao at the time the ‘port issue’ started emerging. The most important junk trade (*comércio dos juncos*)²¹ was, then, the export of foreign merchandise to Chinese ports. According to the committee, this had amounted to 40% of the total merchandise passing through Macao, which had been on the rise again in 1888. Among these foreign commodities, rice seemed to be one of the most valuable, or at least one where the committee could see Macanese companies take the lead over their Hong Kong counterparts in supplying the wealthy inner Guangdong port cities up the Pearl River estuary, due to its more favorable geographic position. Exporting foreign merchandise was complemented by exporting Chinese products, mainly originating from the western Guangdong coast, to the same inner ports. Although trading in less valuable merchandise, these local networks seem to have been the most important in terms of the sheer number of inbound and outbound junks in the Macao harbor.

The third type of junk trade was the import of Chinese products destined to be exported abroad. In the committee’s view, Macao was not only losing this trade line to Hong Kong, but becoming increasingly dependent on the British colony’s direct links to the major foreign trade hubs to export its products. Typically, by the 1880s, commodities destined for export, but also any correspondence or shipments, whether official or not, would sail from Macao in the steamboat line to Hong Kong, and only from there to the rest of the world.

Therefore, both countering this tendency to depend on Hong Kong companies for export trade and general communication, and fostering the existing Macao-based local and regional trade network were seen as key to an increased development of the junk industry in the province. Moreover, as mentioned, since the early 1880s, Chou Iao and his partners, maybe among which was already Lou Kau, were setting their sights on the transnational and transoceanic trade networks which, directly from Macao, would carry their opium production to the French Asian colonies and to the Americas. Undoubtedly with this in mind, the committee concluded that improving the entrance canals and the inner harbor itself was paramount, so as to allow unrestricted access to steamboats, whether by day or by night, and in any tide.

The shadow of the Hong Kong ascendancy over Macao’s commercial, industrial and consequently social future, had already been summoned by Cinatti in 1881 to make his case for harbor

²⁰ BG, supplement to n°45, November 12, 1889, 343-349, Report from the committee informing on the causes of decadence of navigation in the Macao harbors, appointed by the Government of Macao local ordinance n°27, September 27, 1889.

²¹ The term ‘junk’ derives from the Portuguese word *junco*, itself of Malay origin, which designates a traditional Chinese sailing ship, mainly used for coastal or cabotage navigation.

improvement. In the Harbor Captain's view, Great-Britain, despite (or precisely due to) being "a country where economic and administrative science achieved its highest development," had established a more or less official policy of outrightly enticing local trades to leave Macao and establish themselves in Hong Kong and Kowloon.²² It continued to be the case for the profitable business of Chinese emigration (banned in Macao since 1874),²³ as well as for the opium and tea processing companies. All this compounded by smearing campaigns in the press, through which the legitimacy of Portuguese administration in Macao and the status of the colony were frequently questioned. Even the gaming industry was apparently 'fair game':

The Fantan and Vae-seng lottery, for which they berate us constantly, is tolerated to some degree [in Hong Kong], even paying indirect taxes. There are more than twelve Fantan and eight Vae-seng houses. They aren't generally harassed, but from time to time are 'discovered' and fined 300 or 400 patacas.²⁴

Put in such patriotic terms, and especially if coming from all quarters of Macanese society, the call for infrastructural modernization could not fall on deaf ears. Particularly considering the local Portuguese administration's colonial momentum which, as we have seen in the previous chapters, had been manifesting itself since the 1850s, namely in progressively controlling city ground, as well as reshaping and expanding the urban landscape. Indeed, much of the post-Opium War Government reforms had had a strong land use, management and expansion component which, although largely leveraged through the Macanese and Chinese entrepreneurs, had aimed at establishing Portuguese sovereignty over the whole of the Macao peninsula.

Still, throughout the second half of the nineteenth century, the territorial sovereignty issue would remain officially unresolved, particularly as a result of the blatant Chinese disinterest in the definition of any land or maritime borders, a blurry situation which would particularly affect harbor works. The shadow of the divided sovereignty system, established since Portuguese settlement in 1557, by which both administrations coexisted and established jurisdictions each over their own subjects and affairs, persisted and had even become, in the face of the thriving British Hong Kong colony, a source of violently conflicting points of view: to the Viceroy of Canton, delegate of the

²² AHU, AHU-ACL-SEMUDGU-3R-002, Cx.0001, Letter n°10 from Macao Harbor Captain Demétrio Cinatti to the Government Secretary-General, regarding the inner harbor improvement, **July 20, 1881 (transcribed in Volume 3 - Annexes)**.

²³ According to Captain Cinatti, in 1880, his Hong Kong counterpart had given notice of more than 50.000 emigrants having left through the British colony for Australia, Manila, Portland, Oregon, S. Francisco, the Straits Settlements and Vancouver. For more on the business of Chinese emigration in Macao, also known as 'coolie trade', see Pinheiro, "Macao's Coolie Trade." For an insight on what was happening in Hong Kong, see Carroll, *A Concise History of Hong Kong*, 35.

²⁴ AHU, AHU-ACL-SEMUDGU-3R-002, Cx.0001, Letter n°10 from Macao Harbor Captain Demétrio Cinatti to the Government Secretary-General, regarding the inner harbor improvement, **July 20, 1881 (transcribed in Volume 3 - Annexes)**.

Qing administration in the Guangzhou province, Macao was still considered more or less as a leased property with no territorial waters, in which land use and construction policies should have remained Chinese prerogatives. To Portuguese government, it needed to be more than that.

In the aftermath of the Second Opium War (1856-1860), Governor Isodoro Francisco Guimarães (1851-1863) had pressed Lisbon to officially enter negotiations with the weakened Empire to ensure that Portugal signed a treaty which would set straight once and for all, both in the eyes of the belligerent parties and of international law, the sovereignty issue in Macao.²⁵ Appointed as plenipotentiary, it was up to Guimarães himself to lead the negotiations in Peking, which ended successfully with the signature of the August 13, 1862 treaty. This text established, on the one hand, that any previous written or verbal agreements regarding Sino-Portuguese relations or the relations between the city of Macao, “formerly in the province of Canton,” and Chinese authorities, was henceforth to be held as annulled and nonexistent. Signed on equal terms by the plenipotentiaries of both states, it was to be the sole reference to regulate these relations. Also, and consequently, Portuguese government would allow for the presence in Macao of a representative of the Celestial Empire, only with powers “similar to the consuls of France, England, America and other nations residing in Macao and Hong Kong and managing their affairs while harboring the national flag.”²⁶

Two years later, when the time came to ratify the 1862 treaty, however, Governor Guimarães’ successor, José Rodrigues Coelho do Amaral, was faced with the blatant opposition of his counterpart regarding the consul status of Qing officials residing in Macao. The emperor could not agree to this disposition, he argued, as Macao had never ceased to be Chinese territory. To which Governor Amaral, leaving Tianjin with the unratified treaty, had purportedly replied: “Then go and conquer it!”²⁷ Despite this frustrating outcome, Amaral himself admitted that, at least for the time being, an internationally-binding treaty of cooperation with China was a mere formality,²⁸ as business continued as usual in Macao.

The issue ended up resurfacing again in the 1880s, as a result of the first harbor improvement studies and project outlines, as detailed in the following sections of this Chapter. Questions of territorial waters and sovereign material limits suddenly gained prominence in the public eye, as

²⁵ Once again, Portuguese local and central governments had remained officially neutral during the armed conflict. This meant, of course, that Portugal would be left out of the first round of treaties following the 1860 ratification of the Convention of Peking, signed by the emperor’s ministers with Britain, France, Russia, the United States and Prussia. For more on this subject, see Dias, *Sob o signo da transição*, 151-159. For more on Governor Isodoro Francisco Guimarães’ twelve-year governorship in Macao, see Chapter I.

²⁶ Citing from the Sino-Portuguese treaty of August 13, 1862, article 9, transcribed in Dias, *Sob o signo da transição*, 157.

²⁷ Dias, *Sob o signo da transição*, 155.

²⁸ *Ibid.*, 158.

never before, starting to be addressed as key unresolved issues on which the province's future development was heavily dependent. And so, when the opportunity came knocking again, in 1885, by the hand of an agreement the British and Chinese government were trying to finalize regarding the opium trade networks passing through Hong Kong and Macao, the Portuguese metropolitan government wasted no time putting a new treaty on the table as a nonnegotiable condition for collaborating in the regulation of opium traffic in the southern Guangdong region.

The Sino-Portuguese Treaty of Friendship and Commerce (*Tratado de Amizade e Comércio entre Portugal e a China*) started by a protocol, signed in Lisbon, in March 1887, by the Portuguese Minister of Foreign Affairs himself, and ultimately resulted in the Treaty of Peking, signed on December 1, 1887, by plenipotentiary (and former Governor of Macao) Tomás de Sousa Rosa²⁹ and the Qing representatives. It would be ratified five months later, on April 24, 1888. In it was stated that “China confirms, in its entirety, [...] the perpetual occupation and government of Macao by Portugal.” Followed by “Portugal confirms, in its entirety, [...] the engagement never to alienate Macao without previous agreement with China.”³⁰

According to historian Fernando Figueiredo, the latter clause might have had something to do with a discussion that had taken place in the Portuguese parliament in 1885, probably in the wake of the Berlin Conference, regarding the idea of trading the provinces of Macao and Guiné³¹ with France, in exchange for the much-coveted regions of the French Congo.³² In any case, the ambiguous phrasing of the treaty clause regarding territorial alienation could certainly give way to contradictory interpretations. In legal sociologist Boaventura de Sousa Santos' view, if the first article assured Portuguese administrative legitimacy, the second ostensibly assured China's ultimate “territorial sovereignty” over Macao.³³ Despite the ambiguity, both parties declared their satisfaction regarding this outcome, unanimously viewing it as a pacifying turning point for Luso-Chinese diplomatic relations: Portugal finally saw its presence in Macao sanctioned before international law, and China assured Portuguese cooperation in the regulation of the opium trade.³⁴

²⁹ For more on Governor Tomás de Sousa Rosa (1883-1886) and on his work in Macao, see Chapter III.

³⁰ Citing from Articles II and III of the 1887 Sino-Portuguese Treaty of Peking, transcribed in Fernando Figueiredo, “A conjuntura política: depois de Hong Kong,” in *História dos Portugueses no Extremo Oriente*, ed. A. H. de Oliveira Marques, vol. 3 (Lisboa: Fundação Oriente, 2002), 71-72.

³¹ Today the Republic of Guiné-Bissau, Guiné was a former Portuguese province on the West Africa Atlantic coast, bordered north and south, respectively, by the former French colonies of Sénégal and Guinée.

³² Figueiredo, “A conjuntura política: depois de Hong Kong,” 71.

³³ Santos, *Macau: o pequenissimo dragão*, 36.

³⁴ Article IV of the 1887 Sino-Portuguese Treaty stated that Portugal assured full cooperation with China in levying government tax over the exported opium destined for Chinese ports. Santos, *Macau: o pequenissimo dragão*, 36.

Corroborating this optimistic stance, the Macanese and Chinese entrepreneurs forming the previously mentioned 1889 committee on the state of the coastal navigation passing through the province, identified the tipping point in the tendency for decay precisely with the 1888 ratification of the Sino-Portuguese treaty. As they put it, with the clarification of the city's political status, the Chinese merchants' confidence grew, thus attracting the capitals to reactivate commercial transactions. Which were furthermore facilitated by Chinese customs officials, who reportedly "treated the Macao Chinese merchants and their ships in a rather liberal fashion, approving demands and making concessions, in a way that has given trade a great impulse."³⁵

And so, despite some persistent diplomatic gray areas, the 1880s in Macao were indeed a time of prosperity and confidence, as Governor Joaquim José da Graça had put it. In his view, and expressing the aspirations of the city's commercial and social living forces, the time had come for the colony to reclaim its rightful place in the international trade routes by making the harbor accessible, not only to the Canton and Hong Kong steamboats and other small coastal navigation, but also to larger modern ships. Updating port capacity and facilities, improving its accessibility, and possibly gaining considerable reclaimed construction land in the process was definitely befitting Macao's growing colonial ambition.

II. Metropolitan prerogatives

In Lisbon, and all over Europe for that matter, the 1880s were a time of colonial momentum as well, albeit with possibly a less positive premise. Minister of the Overseas Luís Augusto Rebelo da Silva's 1869 administrative reforms³⁶ had managed to quell some voices of dissent regarding the empire and the toll it was taking on metropolitan finances after the emancipation of Brazil some fifty years prior. Establishing the general principle of decentralization and of local government autonomy, Minister Rebelo da Silva posited, in legislative form, that which was to be the prevailing view on the imperial enterprise coming into the last quarter of the nineteenth century.³⁷ Both asserting and projecting the provinces' riches and potential, as well as emphasizing their symbolic

³⁵ BG, supplement to n°45, November 12, 1889, 343-349, Report from the committee informing on the causes of decadence of navigation in the Macao harbors, appointed by the Government of Macao local ordinance n°27, September 27, 1889.

³⁶ For more on Minister Rebelo da Silva's 1869 administrative reforms, regarding the enforcement of the metropolitan administrative code in the overseas provinces, as well as the restructuring of the overseas public works and public health departments, see respectively Chapters II and III.

³⁷ DG, n°280, December 9, 1869, 609-616, National ordinance of December 1, 1869, organizing public administration in the Overseas. Preliminary report from Minister of the Overseas Luís Augusto Rebelo da Silva.

role as landmarks of the Portuguese national epic, this rhetoric was paradigmatic of what historian Valentim Alexandre deems the public reaffirmation of the “sacred heritage and El Dorado myths.”³⁸

Indeed, Alexandre argues that the 1870s in Portugal were a time of renewed “colonial euphoria,” where stable public finances were allowing the State to start projecting investments both in the metropolitan as in the overseas provinces’ development. In the larger context of the burgeoning international ‘scramble for Africa,’ public discourse regarding the empire drew on the old combined nationalistic ideologies of the scattered colonies both as monuments to the glorious past of Portuguese navigation prowess and conquests, the “sacred heritage myth,” and as the stepping-stone for the country’s economic progress and geopolitical standing, the “El Dorado myth.” The author traces the intricate correlation of these lines of essentially political rhetoric to parliamentary debates taking place as early as the 1820s,³⁹ and analyzes their resurgence, namely in the Lisbon and Porto press, from the 1870s on.⁴⁰

Together with the afore-mentioned modernizing drive of the material improvements and public health philosophies and policies, 1870s Portuguese imperialism would materialize, among other institutional expressions,⁴¹ in the establishment of the Sociedade de Geografia de Lisboa (the Lisbon Geographical Society) on December 31, 1875. Founded by a group of private merchants and entrepreneurs with ties to the African colonies, later joined by military and civil officials with knowledge of overseas matters, among which figured prominently former governors and public works engineers, as well as by politicians and other theorizers of empire, the Geographical Society would serve all through the following decades, in the words of Alexandre, as a sort of “colonial parliament” or “sounding board,” which would also occasionally serve as pressure group when colonial policies were being discussed in the actual governmental chambers.⁴²

According to its bylaws, the purpose of the Geographical Society was “the study, discussion, teaching, research and geographical scientific explorations in its different branches, principles, relations, discoveries, progress and applications,” particularly with regard to the “Portuguese

³⁸ Alexandre, “A Questão Colonial no Portugal Oitocentista,” 92.

³⁹ *Ibid.*, 30.

⁴⁰ *Ibid.*, 95-96.

⁴¹ Among these figures prominently the Banco Nacional Ultramarino (Overseas National Bank), which was established in 1864 as part of a foment strategy for the development of the overseas provinces, particularly those perceived as having higher potential, such as the African and Indian territories, through the influx of metropolitan capital. Therefore, the first branches to open were in the African capitals of Luanda (Angola) and Praia (Cabo Verde) in 1865, followed by those of São Tomé and Príncipe, Margão (State of India) and Lourenço Marques (Mozambique) in 1868. The Macao branch would only be established in 1902.

⁴² Alexandre, “A Questão Colonial no Portugal Oitocentista,” 96.

Nation.”⁴³ In February 1876, its (albeit unofficial, prior to 1880) political ties were established by a national ordinance carried by imperial reformer Minister of the Overseas João Andrade Corvo, creating a permanent scientific committee in charge of collecting and compiling all documents that might inform on the “geography, ethnological history, archeology, anthropology and natural sciences regarding the Portuguese territory and especially the overseas provinces,” where the majority of the members were Geographical Society partners.⁴⁴

For mathematician and military engineer Minister Andrade Corvo (1824-1890), serving as Minister of Foreign Affairs (1871-1878) as well as of the Overseas (1872-1877), in Fontes Pereira de Melo’s first turn as head of government, and also formerly having served as Minister of Public Works in the 1860s, the time had come to leave behind the dark age of slave trade, forced labor and isolationism, and bring the empire forward to the light of civilization. Which meant, in the best tradition of the Regeneration philosophies, trade liberalization policies allied to the fostering of transport and communication infrastructures, so as to better extract and enhance colonial riches, while simultaneously earning the respect of Portugal’s imperial peers.

As its European counterparts were doing since the beginning of the century, so too the Lisbon Geographical Society served as the scientific branch of this new imperial modernizing ambition, namely in promoting the first government-sponsored expeditions to explore the Center-South regions of the African continent. As, it turns out, the Portuguese three-century-old vision of holding a ‘coast to coast’ African empire connecting Angola and Mozambique, was still very much alive in the mid-nineteenth century. Be that as it may, by the time the first Portuguese explorers Hermenegildo Brito Capelo, Roberto Ivens and Serpa Pinto set out in the summer of 1877, David Livingstone had already successfully mapped the course of the Zambezi river, and had returned from his second journey to seek the source of the Nile (1866-1871). In Livingstone’s wake, Verney Lovett Cameron, thus commissioned by the British Royal Geographical Society, had also already completed his crossing of equatorial Africa (1873-1875) from Zanzibar to Benguela, having seen the copper, coal and gold reserves of the Katanga region. For these exploits, Cameron would even be awarded an honorary medal from the Lisbon Geographical Society in 1876.

Sponsored by his employer, the New York Herald, American-raised British journalist Henry Morton Stanley had also completed his first expedition, in 1871, to find David Livingstone in the Lake Tanganyika region where he was presumably lost. Stanley would return to the central African Lakes, on a mapping mission, in 1874, again sponsored by the New York Herald, as well as by its British counterpart, the Daily Telegraph. Upon successfully completing this mission, in 1877, he

⁴³ Ângela Guimarães, *Uma corrente do colonialismo português. A Sociedade de Geografia de Lisboa. 1875-1895* (Porto: Livros Horizonte, 1984), 11.

⁴⁴ *Ibid.*, 13-14.

would eventually meet Serpa Pinto and Brito Capelo in Angola, informing them that he had just finished the hydrographic survey the Portuguese explorers had been commissioned to do.⁴⁵

In the meanwhile, Italian-born Pierre Savorgnan de Brazza was advancing the French Equatorial African agenda through his own expedition up the Gabon and Ogooué rivers (1875-1878). This was followed by a second expedition to the Congo Basin (1879-1882), in an attempt to thwart Belgium's ambitions in the region. Indeed, by this time, King Leopold II had already established his International African Association (1876) and recruited Stanley to start carving out his own piece of Africa, in the form of the Congo Free State.

By the time the Portuguese explorers returned to Lisbon, properly hailed as heroes, after having completed a coast-to-coast crossing from Angola to Transvaal (Serpa Pinto), and mapped the inner-Angola hydrographic network (Capelo and Ivens), respectively in 1879 and 1880, African fever was running high all over Europe, and Portugal's historic claims were starting to be seen as a nuisance by the new competing interests. Which was not, it goes without saying, the point of view of Lisbon's political and economic circles. Quite the opposite. European African fever was being met with a nationalistic rhetoric at its peak among the capital's elites.

The Associação Comercial de Lisboa (Lisbon Trade Association), whose associates were members of both the Geographical Society and Minister Andrade Corvo's permanent scientific committee, for example, had been a major influence and financial sponsor in favor of the Portuguese African expeditions. Through its government channel, in a summer of 1876 report, it justified the urgency of taking a stand in the "highly economic and civilizing movement" which other states had been fostering, through their own geographical societies, to "vanquish Central Africa's resistance to the influence of industry and capital."⁴⁶ Particularly after Cameron had unveiled the soil, minerals, hydrographic network and climate riches of the Congo, thus "greatly damaging the old-established Portuguese interests" in the region, it concluded that Portugal couldn't just stand by and exclude itself from the international scramble. On the contrary, the scientific commissioners were positive that "everything predisposes us [to take part in it]: an ancient ownership, a well-established relationship with the indigenous population to the farthest regions of the continent, and maybe even a racial aptitude to undertake such an enterprise, which other nations don't possess as we do."⁴⁷

Even so, Minister Andrade Corvo had a more diplomatic view of the matter arguing, in his own words, for a "close alliance" and "constant cooperation" with the European powers, particularly Britain, based on the reciprocity of interests of both nations, namely in regard to the more strategic

⁴⁵ Ibid., 30.

⁴⁶ Ibid., 27.

⁴⁷ Ibid.

African and Indian colonies.⁴⁸ In this context, Andrade Corvo established, for example, the 1878 treaty regarding the construction of the Mormugão railway, connecting the Goan port to the British Raj railway network. The Minister would also push forward the infamous 1878-1879 Lourenço Marques treaty, regarding the railway connection between the Mozambican port and British-occupied Transvaal.

The port of Lourenço Marques had long been coveted both by the South African Republic and the British. Cooperation with the first contender, for the purpose of allowing the Boer Republic access to sea trade through the Portuguese port, officially started in 1869 with a treaty of commerce. This would evolve, in the early 1870s, into joint ventures for the construction of road communications with Pretoria and, finally, in 1875, into a new treaty of commerce contemplating the construction of the Pretoria-Lourenço Marques railroad.

British expansionist ambition in South Africa had already led to a diplomatic entanglement with Portugal regarding Lourenço Marques, which British officials claimed wasn't rightfully Portuguese. The issue had been settled by the arbitration of French President Patrice de MacMahon in 1875, confirming Portuguese possession of the port and defining its southern borders with the British colony of Natal. Two years later, in the face of the growing Luso-Boer influence in the region, British government simply gave the go-ahead to annex the Transvaal. After that, from the British point of view, the projected railroad had no interest as, strategically, a 'domestic' sea connection through Durban or Cape Town was preferable. However, a military and weapons trade access through the Portuguese port presented itself quite favorably in the context of British conflicts and alliances with the neighboring African tribes. As for optimistic Minister Andrade Corvo, the railroad negotiations with the newly-British Transvaal represented an opportunity to establish renovated trade relations "with all of the British African empire."⁴⁹

With the ideas of trade liberalization and infrastructure development in mind, the treaty of Lourenço Marques was signed on May 30, 1879, the same day Andrade Corvo's government resigned on an unrelated treasury matter.⁵⁰ The new government delayed discussing the ratification of the treaty for more than a year. When it finally came up again, at the beginning of 1881, it was seen by public opinion, as expressed by the press and even by Geographical Society reports to parliament, as a clear retrocession from the MacMahon arbitration regarding Portuguese prerogatives in the Southern-Mozambique region, and nothing short of a national humiliation (to paraphrase the nationalistic Chinese rhetoric regarding the post-Opium Wars treaties with the Western powers).

⁴⁸ Alexandre, "A Questão Colonial no Portugal Oitocentista," 105.

⁴⁹ *Ibid.*, 106.

⁵⁰ Marques, "A conjuntura," 493.

The public aftershock would eventually lead to the government's collapse and to the inevitable withdrawal of the treaty.

Thus, the colonial issue would provide significant fuel to what Valentim Alexandre deems precisely “a strong streak of radical nationalism” which, as we have seen, had been emerging in the urban milieus since the 1870s, and would literally take over the debate regarding the overseas all through the 1880s.⁵¹ To which would also greatly contribute the republican movement, more or less consolidated since 1876, and officially established as the Portuguese Republican Party in 1883.⁵² Taking the axiom of the Lourenço Marques “iniquitous treaty,” all through its early 1880s parliamentary debate, republican press mercilessly attacked both the progressive and conservative parties (which were rotatively asked by the constitutional monarch to govern), accusing them of ineptitude and of working to dismember the national “colonial domain,” thus “reducing Portugal to the inevitable condition of a Spanish province.”⁵³

Despite public tensions, diplomatic cooperation with Britain resumed in 1882, with another one of former Minister Andrade Corvo's treaty projects being put back on the table, this time regarding Portuguese sovereignty over the Zaire (or Congo) estuary in northern Angola. By then, the Congo region was on the expansionist radar of every major power in Europe, especially King Leopold's, France's and, for the first time, Germany's. In exchange for British support in claiming possession over the northern and southern banks of the Zaire, Portuguese government was ready to concede, not only to open the river to British traffic, but also to adjust the traditionally protectionist customs regulations to favor British interests. The new treaty was indeed signed in London, on February 26, 1884, by Minister of Foreign Affairs José Vicente Barbosa du Bocage, in the name of the last Fontes Pereira de Melo government (1881-1886).

This time, one of the major voices of contestation had come, already during the negotiation process that had taken place the previous year, from the influential Lisbon Trade Association, which demanded that customs regulations remain “reasonably protective of national commerce and industry.” Otherwise, it stated, the adjusted tax would “completely suppress the important trade that exists between the metropole and those possessions, which is, to this day, the one bringing the most commercial traffic to the port of Lisbon, a traffic through which, in turn, the Country receives its just compensation for the burdens of keeping its dominions.”⁵⁴ At the same time, the treaty further fueled what Alexandre calls the “plundering myth,” particularly dear to the progressive and

⁵¹ Alexandre, “A Questão Colonial no Portugal Oitocentista,” 108.

⁵² Fernando Rosas, “A Crise do Liberalismo Oligárquico em Portugal,” in *História da Primeira República Portuguesa*, ed. Fernando Rosas and Maria Fernanda Rollo (Lisboa: Tinta da China, 2011), 26.

⁵³ Alexandre, “A Questão Colonial no Portugal Oitocentista,” 108-109.

⁵⁴ *Ibid.*, 111.

republican press. In this particular rhetoric, not just the riverbanks, but a great part of the inner Congo Basin was understood to have been historically under Portuguese influence, of which ensued that the government's "wretched" treaty was condoning the "theft of our colonial domain."⁵⁵

Faced with the contestation of the competing European powers, and fearing the repeat of the Lourenço Marques ratification fiasco, instead of moving forward to parliamentary debate, Minister Barbosa du Bocage suggested that an international conference be held to discuss and arbitrate the matter.⁵⁶ Thus, Chancellor of the German Empire Otto von Bismarck, in accordance with the government of the French Republic, organized the series of meetings between the representatives of Germany, Great-Britain, France, Belgium, Holland, Spain, the United States of America and Portugal, which came to be known as the Berlin Conference.

Held between November 1884 and February 1885, its aim was, as King D. Luís I would optimistically state in his speech at the opening of parliament in December 1884, "together with other powers interested in the African trade, to establish the principles regulating commerce and navigation in the Zaire and the Niger, as well as the formalities to observe regarding new occupations in that part of the world."⁵⁷ Published in the Macao government bulletin a few weeks before the participants signed the Conference's General Act, the King's speech shows that the 'sacred heritage' and 'El Dorado' rhetorics were very much alive regarding his government's representatives' mission to protect and enhance "Portugal's centuries-old rights in those regions":

Our situation as a colonial power demands the utmost attention from public powers. Africa, above all, opens an extremely vast field to national activity and, in the immense regions that constitute the Portuguese dominions, can be found such riches which, through commerce and industry, largely compensate us from any sacrifice. To this end, the government has already established a contract for the construction of a telegraphic line connecting us to our possessions in Western Africa, which is already under way. To explore the inner Angola province, a public tender has been announced for the construction of a railway between Luanda and Ambaca.⁵⁸

As it turns out, optimism and faith in the Portuguese so-called 'historic rights' was not enough, as the Berlin Conference General Act of February 26, 1885 ended up establishing King Leopold's rights to the northern bank of the Zaire estuary, as the sea gate to his newly-instituted Congo Free State. As for the 'formalities' regarding new occupations in the African continent, the General Act established the principle of recognized sovereignty in the coastal regions depending on the obligation of ensuring therein an authority capable of upholding it, as well as of enforcing the

⁵⁵ Ibid., 112.

⁵⁶ Marques, "A conjuntura," 498.

⁵⁷ BG, n°6, February 7, 1885, 67, His Majesty King D. Luís' address at the opening of Parliament on December 15, 1884.

⁵⁸ Ibid.

appropriate regulations of trade and traffic.⁵⁹ In theory, the notion of ‘coastal occupation’ opened the vast African hinterland up for grabs, on the base of establishing zones of influence through negotiations with the locally established powers, whether indigenous or not. The aftermath of the Conference would then lead to a new surge of competing geographical-military expeditions, as well as of missionary (both catholic and protestant) and ‘civilizing’ stations, in which the Portuguese government also took part.

At the same time, the ever-diligent Portuguese diplomatic field was busy turning the setback of seeing its geopolitical ambitions in the upper Congo region thwarted by King Leopold’s claims into a new strategy for expanding Lusitanian influence in the coveted African hinterland. Sights were set further south, to the area between Angola and Mozambique, and to the old vision of the African Portuguese empire ranging from the Atlantic to the Pacific coast. Poured into a map where the would-be Portuguese-influence regions appeared rose-colored (the infamous *mapa cor-de-rosa*), this vision of renovated geopolitical ambition was presented, by Minister of Foreign Affairs and of the Overseas Henrique de Barros Gomes, as part of an 1886 set of treaties that sought to establish its frontiers with the territories of French and German influence.

This time backed by Lisbon’s commercial circles, as well as by public opinion and the press, as Portuguese government was finally assuming a more independent and aggressive stance vis-à-vis British imperial policies, Minister Barros Gomes gave ample publicity to the so-called ‘rose-colored map’ and the ambitious vision it entailed.⁶⁰ All the while holding off British contestation at home, which came as early as the summer of 1887, Barros Gomes sanctioned a new wave of expeditions,⁶¹ as well as some military interventions in the coveted territories against indigenous tribes under British protectorate. He also didn’t hesitate to go against British interests in re-nationalizing the Lourenço Marques railway concession, as well as in undermining the established traffic in arms through the Zambezi river in Mozambique.⁶² The escalation of the diplomatic conflict, enticed further by Barros Gomes’ attempt, since 1888, to engage Germany as an ally against the overbearing British interests in Southern Africa, reached a breaking point at the dawn of 1890, with the so-called ‘British ultimatum’.

The war of words, which was being fought very publicly, and namely through the official press, didn’t bode well for a peaceful outcome. The Macao government bulletin, for example, which occasionally published its newest developments, gave central stage to a note sent by the British Prime Minister and Minister of Foreign Affairs, the Marquess of Salisbury, to Minister Barros

⁵⁹ Guimarães, *Uma corrente do colonialismo português*, 145.

⁶⁰ Marques, “A conjuntura,” 499.

⁶¹ Ibid.

⁶² Alexandre, “A Questão Colonial no Portugal Oitocentista,” 116.

Gomes, on November 21, 1889, protesting against a recent Portuguese national ordinance which effectively “established and partially demarcated the new Zumbo district in the province of Mozambique.” It followed with Barros Gomes’ unflinching, passionate response, dated from November 28: “Portugal, who conquered India and made Brazil, has a past that no other nation can surpass. That past is what gives it the right to hold on to the hope of a renewed national radiance. Only Africa can promise this. Therein upholding its rights, it upholds its future.”⁶³

A few weeks later, on the morning of January 11, 1890, through the British Legation in Lisbon, the Marquess of Salisbury issued a formal note to the Portuguese government demanding:

[...] that telegraphic instructions be sent immediately to the governor of Mozambique, commanding that each and every Portuguese military force, currently stationing in the Chire and in the country of the Makololos and Mashonas, retire at once. [...] [Head of the British Legation] Mr. Petre will be obliged, complying with his instructions, to leave Lisbon immediately, with all the members of the Legation, if a satisfactory answer to the above-mentioned intimation doesn’t reach him this afternoon; furthermore, Her Majesty’s warship *Enchantress* is in Vigo [Galicia] awaiting its orders.⁶⁴

Faced with the overt double threat of breaking off diplomatic relations and military action, the latter taken very seriously, as reports were reaching the government that British warships were moving not just towards Lourenço Marques and Cape Verde, but to Madeira and Lisbon itself,⁶⁵ Barros Gomes had no choice but to heed Salisbury’s intimation, to which followed the inevitable fall of the government. Despite it representing the most likely outcome of the Minister’s policies in view of the larger geopolitical heavyweight picture, this decision nevertheless brought the dream of a vast Portuguese African empire to a most humiliating end.

Portuguese historiography is unanimous in considering the outcome of the ‘British ultimatum’ as the breaking point of the positivistic Regeneration period, as well as the beginning of the end for the constitutional monarchy system. After months of anti-British, anti-government and anti-monarch protests, rallies and violent demonstrations in the country’s urban centers, in which stood out the most prominent figures of the republican movement, on January 31, 1891, from the city of Porto, came the first attempt at military and political revolution. The repression that followed only enticed the sentiments of frustration and exploitation of the marginalized working class, taken on by an equally deeply dissatisfied and politically conscious urban small-bourgeoisie, and compounded by the early 1890s global economic recession. After the regicide of February 1, 1908,

⁶³ BG, n°5, January 30, 1890, 37-40, Exchanges between the British Prime minister and the Portuguese Minister of the Overseas, regarding Portuguese territorial claims in Mozambique, on November 28, 1889. By the time these exchanges were published, however, the crisis unleashed by the January 11, 1890 ‘British ultimatum’ was already in full swing. As a result, the Portuguese government had renounced its claim over the contested territories and Minister Barros Gomes had resigned, along with the whole of his government.

⁶⁴ Quoting from the original document, in Marques, “A conjuntura,” 507.

⁶⁵ Marques, “A conjuntura,” 507.

the “liberal-royalist formula would exhaust itself,” giving in “without a fight, by simple telegraphic report throughout the country,” and throughout the empire, to the republican revolution of October 5, 1910.⁶⁶

The imperial enterprise, on the other hand, came out of the crisis stronger than ever. As Valentim Alexandre puts it: “Active, although sometimes disputed, in the previous decades, the sacred heritage myth attained [in the aftermath of the ultimatum] an overpowering prevalence, ultimately defeating the more pragmatic currents that accepted reconfiguring and even reducing the imperial territory [...]. Henceforth, the colonial domain had become untouchable.”⁶⁷

III. Economic imperialism

On December 17, 1888, Henrique de Barros Gomes signed what would be his last budget as Minister of the Overseas. As mentioned, Barros Gomes would go on to have a decisive role in his cumulated office of Minister of Foreign Affairs in the diplomatic crisis which culminated in the January 11, 1890 ‘British ultimatum’. Only just a year before, his focus had been on managing the imperial enterprise, coherently in tone with the government’s renewed African chimera that would ultimately lead to that crisis. A brief look at how the empire was being budgeted at such a pivotal time, may also contribute to the understanding of how the Macao province was faring in the overall tendency for infrastructural investment.

Such as his eminent predecessor in the cumulative Overseas and Foreign Affairs offices João Andrade Corvo, Barros Gomes (1843-1898) was a Lisbon Polytechnical School graduate in military and civil engineering. As such, in the true spirit of the Regeneration, it is no surprise that the emphasis of the 1888/1889 overseas budget was on public works, same as it had been since Barros Gomes had taken office. Although the final balance presented a deficit, the Minister’s report noted that the overall receipts from the provinces had increased, when compared with those from the previous year. This had actually led to the decrease of the overall deficit, which might even have been completely absorbed, Barros Gomes claimed, if he hadn’t decided to prioritize an amplified budget specifically dedicated to “public improvements,” amounting to over 500.000\$000 reis, which represented 12% of the overall expenditure budget.⁶⁸

⁶⁶ For more on the “inexorable breakdown of the constitutional monarchy political system” leading to the establishment of the Portuguese Republic on October 5, 1910, see Rosas, “A Crise do Liberalismo Oligárquico em Portugal,” 15-26.

⁶⁷ Alexandre, “A Questão Colonial no Portugal Oitocentista,” 117.

⁶⁸ BG, supplement to n^o9, March 1, 1889, 57-81, Overseas Provinces general budget for the year 1888/1889, December 17, 1888. This percentage seems quite exceptional indeed, at least when compared to the Macao

In turn, the overseas public works budget was dispatched among the provinces in proportion. On top came the African provinces of Mozambique and Angola, evidently, with endowments representing 33% and 32% respectively, followed at a distance by the State of India with 15%. Lagging behind were Macao, with 7%, as well as São Tomé and Cape Verde, each with 6%. Rounding up the list came the small province of Guiné with a mere 1%. Specifically, the public works budget for the province of Mozambique had been raised by a third for general public works, telegraph construction and maintenance, as well as harbor improvement. In São Tomé and the State of India, the increase had also been of approximately one third. For Angola, the general public works budget had more than doubled, to which was added a provision of an extra 17% for “colonizing expenses in the district of Moçâmedes.”⁶⁹ As for the Macao province, the public works budget had already been doubled five years before, in the 1883/1884 fiscal year, in order to accommodate a provision for “harbor studies and improvements,”⁷⁰ following the Adolfo Loureiro commission.⁷¹ In the 1888/1889 budget, Minister Barros Gomes would allow for a further 5% increase to develop coffee plantation in the district of Timor.⁷²

Although Barros Gomes still employed the rhetoric of the “sacrifices undertaken by the metropole to foment progress and development in the overseas dominions,” in which he included covering the province’s deficits, as well as taking on credits to fund specific projects, his was definitely the discourse of an optimistic administrator, seeing in the 15% increase in overseas receipts a positive tendency for growth and an assurance that investing in the colonies’ infrastructural development was not only possible, but fairly sustainable.

His Majesty King D. Carlos I, on his first-ever address at the opening of Parliament on January 2, 1890,⁷³ while reflecting on the diplomatic entanglements with the “patriotic aspirations of the British nation, and of Her Majesty’s government, to broaden their vast possessions in Africa,” which would lead, in a matter of days, to the ‘ultimatum’, gave way to his own patriotic optimism

province budget, where, as we shall see, in the more favorable 1890s, the public works endowment barely attained 8% of the general expenditure budget.

⁶⁹ Ibid.

⁷⁰ BG, supplement to n°4, February 1, 1884, 35-55, Macao Province budget for the year 1883/1884.

⁷¹ For more on military engineer Adolfo Loureiro and his role in the Macao inner harbor improvement project, see this Chapter’s next main section.

⁷² Timor was a district of the Macao and Timor Province, among other periods of more or less autonomy, from 1866 to 1896, when it would become an ‘autonomous district’, directly connected to the metropolitan government.

⁷³ With the death of his father, King D. Luís I, on October 19, 1889, D. Carlos rang in the year 1890 as the new and, in hindsight, second-to-last, constitutional monarch. He would fall under the bullets of republican revolutionaries, in Lisbon, on February 1, 1908.

over the perceived success of the Portuguese imperial enterprise.⁷⁴ The geopolitical focus was, as the budgetary one continued to be, naturally, in Mozambique and Angola. The former, taking up the laurels of patriotism (and its corresponding expenditure) in the “encouraging success” of the latest expeditions, the acquisition of ships to establish fluvial routes, the construction of the telegraph network, the establishment of new missions, and the re-nationalization of the Lourenço Marques railway construction contract. The latter also with its own railway project well underway, connecting Luanda to the Ambaca northern hinterland, and another at draft stage, which would connect Benguela to the Bié central province. To which the government aspired to add a plethora of new projects, so as to “satisfy what is expected of us by civilization.” These included yet another railway for Angola, this time launching through the hinterland from the southern port of Moçâmedes, the reform of the sea connection with India and Macao, and the general reorganization of the civil and military overseas corps.⁷⁵

The latter project had already been a part of Minister Andrade Corvo’s reformatory agenda in the mid-1870s, now reprised by Barros Gomes, still in the pursuit of ever-elusive budgetary optimization and efficiency under metropolitan control. As Andrade Corvo had put it in 1874, “with the current system, one will never be able to judge a single overseas account. The powers that be determine the budget in the kingdom; the [treasury] councils, however, each in its province, order the expenditure according to the more or less abundant receipts, in a blatant disregard for the law.”⁷⁶

The result of these autonomous local practices of budget management was that the actual expenditure went far beyond what was allocated by the ministerial annual budget decrees. Andrade Corvo and, later, Barros Gomes’ administrative reforms, specifically regarding the imperial treasury staff, were meant to curb those practices, so that the individual provinces’ eventual deficits or surpluses would more efficiently be pooled together in a global overseas budget. In turn, this common budget allowed the Ministry of the Overseas to redispense the credits to the provinces according to its own set of priorities. Which, by the late 1880s, as we have seen, were centered around public works and infrastructural development in Mozambique and Angola, to the detriment, one might say, of the lesser strategic provinces in the global geopolitical context.

This was clearly the case for Macao and its inner harbor whose impasse, as late as 1903, was being examined by the Overseas Treasury General Inspection in terms of whether or not the province had the resources to see the project through. In its report, the treasury inspector was quite optimistic,

⁷⁴ BG, n^o9, February 27, 1890, 65-66, His Majesty King D. Carlos’ address at the opening of Parliament on January 2, 1890.

⁷⁵ *Ibid.*

⁷⁶ Quoted in Minister Barros Gomes’ report. BG, supplement to n^o9, March 1, 1889, 57-81, Overseas Provinces general budget for the year 1888/1889, December 17, 1888.

not just because Macao's surplus (together with the expected income from the sale of the new reclaimed ground) would be enough to start the construction work, even without contracting extra loans, but mainly because receipts from the other provinces were expected to increase, thus effectively relieving that surplus in the overseas budget pool. As, up until that point, read the report, Macao's surplus had been (and, in reality, would continue to be) "entirely absorbed, as it was destined to balance the deficits from the other provinces."⁷⁷

Still, the metropolitan institutional effort bore its fruits in terms of imperial administrative reform, transforming the wide-ranging overseas budget from an aspiration, in the early 1870s, to a more or less functioning reality ten years later. And so, from the early 1880s on, both the ministerial and the provincial budgets started to be published annually in the several government official bulletins, stressing the coherence between each other, as well as with some of the local specific department budgets. Such was the case of the public works budget, for example, which, apart from being published on its own, started figuring in the Macao and Timor provincial budget as an independent item since the fiscal year 1882/1883.⁷⁸

By this time, discussion on the harbor issue had been intensifying locally for two years. The publication, in April 1883, of the Macao public works annual allowance which, at less than 12.000\$000 reis, barely represented 3% of the total expenditure, couldn't fail to strike a negative chord in the minds of those striving for a more ambitious improvement plan for the province. Especially given that the annual budget balanced with a significant surplus.⁷⁹ The province's optimistic financial situation must have been a decisive factor in the Ministry's decision to double the Macao public works budget, as mentioned, in the following fiscal year. Thus, from 1884 on, at 24.000\$000 reis, the public works allowance reached a stable 6% stake of the total expenditure budget, with half the fixed amount specifically allocated for harbor improvement works.⁸⁰ The bulk of the remaining expenditure, namely over 90%, was spent on salary expenses for the military and administrative personnel.

The budgetary surplus of more or less the amount run in 1883 would become something of a constant for the next five years. This not only gave grounds for hope regarding the inner harbor, but also allowed for other measures of financial impact to emerge, such as the projects to nationalize

⁷⁷ AHU, 451-1H-SEMU-DGU mç., Letter n°71 from the Governor of Macao, Arnaldo Novais Guedes Rebelo, to the Minister of the Overseas, regarding the inner harbor improvement project, April 22, 1903. Annex n°16.

⁷⁸ BG, supplement to n°15, April 14, 1883, 133-149, Macao Province budget for the year 1882/1883.

⁷⁹ Ibid. For the fiscal year 1882/1883, the Macao and Timor Province budget ran a surplus of 141.350\$000 reis, with receipts at 551.044\$000 reis and expenditure at 409.695\$000 reis.

⁸⁰ BG, supplement to n°4, February 1, 1884, 35-55, Macao Province budget for the year 1883/1884.

all goods exported from Macao to the metropole, to establish a shipping company connecting the imperial ports from Lisbon to Macao, as well an agriculture, commerce and shipping company based in Timor. Public service was also in the improvement books, with projects to establish a postal service and improve public education, for example.⁸¹

These plans were in line with the more prevalent metropolitan views on increasing relations between Lisbon and the colonies so as to globally foster the empire's economic development. Such protectionist theories were naturally supported by the nationalist associations with ties to the colonial commercial networks, as we have seen, namely the Lisbon Geographical Society, and by the Porto and Lisbon Commercial Associations as well. Indeed, the existing customs system determined that commodities imported from the overseas territories were taxed in the metropole as foreign, and that effectively foreign commodities could enter the overseas ports relatively freely. This meant that, under the current circumstances, there was no real incentive for strengthening the commercial bond between Portugal and its colonies. As a result, Angela Guimarães argues, trade in the ports of Angola, Guiné, Mozambique and India, to which list one could safely add Macao, “almost completely eluded Portugal.”⁸²

This was compounded by the lack of transportation networks with national interest, the majority of the freight passing through the overseas ports being shipped by foreign companies, which were subsidized by the Portuguese government for specific services. This was the case in Macao, as we have seen, but also in the African colonies. Out there, while the western coast ports were connected to Lisbon through the *Empresa Nacional de Navegação* (National Navigation Company), the eastern ones were served by the British India Company, to which the government allegedly payed a substantial allowance. The metropolitan conservative trade associations thus demanded an increase of the protectionist agenda, with more support for national commerce and navigation companies, namely through enforcing the Portuguese Commercial Code's clause on long-haul cabotage navigation across the imperial ports.⁸³

In the only Portuguese imperial free port of Macao, however, where customs revenues had long been replaced by the gaming and commodities concession system, everyone was well aware that the province's financial bliss was largely based on unstable profits.⁸⁴ Indeed, looking at the same

⁸¹ BG, n°17, April 28, 1883, 164-166, Inauguration ceremony for Governor Tomás de Sousa Rosa, April 28, 1883. The President of the Government Council's address at this occasion.

⁸² Guimarães, *Uma corrente do colonialismo português*, 81.

⁸³ *Ibid.*, 81-82.

⁸⁴ BG, n°17, April 28, 1883, 164-166, Inauguration ceremony for Governor Tomás de Sousa Rosa, April 28, 1883. The President of the Government Council's address at this occasion. To illustrate the fickle nature of the province's budgetary receipts, the President of the Government Council gave the example of the pork concession, which had dropped by half between 1882 and 1883.

budget for the fiscal year 1882/1883, 63% of the receipts came from the gaming concessions, 6% from the processed opium concession, and 5% from the pork and fish concessions. Income and property tax ran below 6%.⁸⁵ And yet, although from time to time some voices were heard arguing against the “precariousness and contingency” of the Macao financial system and in favor of “normal taxation,” founded on the principle of “the citizen’s contribution to public expense in proportion to their income,” the province’s status as one of the few Portuguese overseas territories to balance their finances at a surplus was apparently too precious to jeopardize with tax reform.⁸⁶

Five years later, the province’s budgetary situation was decidedly less cheerful. For the fiscal year 1887/1888, the overall budget was running a deficit almost as high as the precedent surplus.⁸⁷ Expenditure had increased 25%, again compared with the 1882/1883 budget, which was primarily due to a general wage growth, but also to the already-mentioned significant increase of the public works budget: since 1883, it had gone from 12.000\$000 up to 24.000\$000 reis for Macao, and from 6.000\$000 up to 12.000\$000 reis for Timor. It was now reaching 7% of the overall expenditure.⁸⁸

At the same time, confirming the administrator’s worst predictions, the receipts had taken a 24% plunge, determined by the sudden drop of the Vae-seng lottery concession income, which lost over 83% of its previous value, while the Fantan concession also dropped 8%. With the slight rise of the processed opium concession at 10% of the overall provincial receipts, as well as property and income tax at 8%, and the pork and fish concessions at 7%, the gaming concessions had decreased their margin to (a still substantial) 45%.

Naturally, the following year, the persistence of this grim situation would impact on Minister Barros Gomes’ 1888/1889 overseas budget, who recorded a further increase of the province’s deficit.⁸⁹ This time, receipts had plummeted on the previously-stable fish concession, as well as on the already-not-so-stable Fantan concession. Barros Gomes lamented this fact, recalling “that remote

⁸⁵ BG, supplement to n°15, April 14, 1883, 133-149, Macao Province budget for the year 1882/1883. Breaking down the gaming concessions’ 63% stake in the budgetary receipts, the Vae-seng lottery yielded 32%, the gambling-game Fantan yielded 24% and the Pacapiao lottery 7%.

⁸⁶ BG, n°17, April 28, 1883, 164-166, Inauguration ceremony for Governor Tomás de Sousa Rosa, April 28, 1883. The President of the Government Council’s address at this occasion.

⁸⁷ BG, supplement to n°11, March 21, 1888, 97-115, Province of Macao’s budget for the year 1887/1888, with footnotes regarding the establishment of the concession monopolies, as well as property tax. For the fiscal year, the Macao and Timor Province budget ran a deficit of 94.330\$000 reis, with receipts falling to 417.780\$000 reis and expenditure at 512.110\$000 reis.

⁸⁸ *Ibid.*

⁸⁹ BG, supplement to n°9, March 1, 1889, 57-81, Overseas Provinces general budget for the year 1888/1889, December 17, 1888. The balance for the Macao and Timor Province budget is set at a deficit of 101.395\$648 reis.

province's formerly widespread surpluses," all the while acknowledging that, either way, these were not a reflection of the colony's prosperity.⁹⁰

Avoiding the tricky issue of the concession system's contingency, the Minister saw Macao's future in the expansion plans of its Chinese trade navigation community, but also in establishing closest communication and commercial ties with the metropole and with the empire. Evidently, in Barros Gomes' vision, an efficient network of communication and commerce equaled the strong Portuguese empire which the nationalists at home, whether monarchists or republicans, were striving for:

To ensure [Macao's] prosperity, regular communications should be established with Timor; the maritime connection with our colonies should also be completed by establishing, through a stipend, which shouldn't be too great, granted to one of the foreign steam navigation companies, direct communication between Lisbon, Portuguese India and Macao.

It would then be possible, under an adequate fiscal legislation, reestablish direct commerce with our Asian colonies, and particularly that of the tea from Macao, thus rekindling the relationship between the metropole and that old *Cidade do Santo Nome de Deus de Macau*, [the city's traditional name] which to this day preserves, together with Goa, rightfully called Rome of the Orient, so many remains of its past splendor and power, awakening both their names in the heart of all the Portuguese, and with them the patriotic memory of the most glorious feats of our nation's history.⁹¹

Although with less of such 'sacred heritage' rhetoric, the Minister set similar priorities for all the provinces. In the "old and historic possession" State of India, which was, together with the Cape Verde, the only province balancing its budget at a surplus that year, all resources would concentrate in maintaining the Mormugão railway. Supporting the thesis that all provinces were pooling their funds together for a stronger and centrally-managed common overseas budget, itself part of the global balance of the State budget, Barros Gomes added that the State of India's surplus would allow "to compensate, although indirectly, the great sacrifice the State was making in supporting the interest on the Mormugão railway company guaranteed loan which, for the time being, was being paid in full as, contrary to what had been expected, the railway's net product was being absorbed by exploitation and conservation costs."⁹²

As for the Angola and Mozambique budgets, both had seen their customs receipts grow encouragingly. The corresponding deficits stemmed, as mentioned, from the increased investment in transport and communication infrastructures, in order "to foment and activate the great progress the provinces are capable of." Particularly in Mozambique, which the Minister considered "our richest and most important" overseas province and for which he was requesting parliament

⁹⁰ Ibid.

⁹¹ Ibid.

⁹² Ibid.

extraordinary funds from the overseas budget, Barros Gomes aspired to apply the same “care and capital” which he saw as being already more or less established in Angola:

Consolidate our dominion through effective occupation, the [native] leader’s allegiance, and expeditions to the north and west hinterlands; establish the province’s borders with the Musanate and Amátonga leaders, with the British and German possessions and protectorates, and with the Transvaal Republic; develop steam navigation up the Zambezi and Chire rivers; study the Zambezia railway project; encourage the development of religious missions, of mining, of port lighting and demarcation, and of public works; put an end to the obstacles preventing the Lourenço Marques railway to connect with the South African Republic’s capital, Pretoria.⁹³

In spite of the political and social earthquake that would shortly follow Barros Gomes’ December 1888 report, the post-ultimatum subsequent governments would choose to stay his course of imperial management, both in terms of budgetary and investment strategies. Four years later, Minister of the Overseas Francisco Joaquim Ferreira do Amaral⁹⁴ would state as much, by taking credit, in his office’s name, for having leveraged the growing investment of private companies and international credit in the Portuguese overseas through a strong and determined infrastructural development strategy or, as Ferreira do Amaral himself called it, an “energetic initiative in the path of material improvements”: “Despite the errors, precipitation and inexperience characterizing the first works, it is unquestionable that that time [Andrade Corvo’s ministry] set the beginning of an extremely important transformation in Portuguese Africa.”⁹⁵

This didn’t seem to be just empty ministerial rhetoric as indeed, by the 1900s, the provinces’ receipts had vastly increased, running at double the 1888 budgeted amount in Angola and Guiné, and growing fourfold in Mozambique. Also, whereas in Barros Gomes’ time only the Cape Verde and the State of India balanced at a surplus, in the 1900/1901 budget Macao had joined them at the top, while Angola and Mozambique ran small deficits, respectively at 5% and 10% of their expenditure accounts (versus 40% and 25% in 1888).⁹⁶

Actually, the financial situation in Macao had already considerably improved since the early 1890s, with the budgetary balance being restored at a surplus. In the fiscal year 1893/1894, this surplus was even reaching higher levels as those of the optimistic early 1880s, with receipts having

⁹³ Ibid.

⁹⁴ Francisco Joaquim Ferreira do Amaral (1844-1923) was the son of the ill-fated Governor of Macao and strong-willed colonial reformer João Maria Ferreira do Amaral (1803-1849). A Lisbon Polytechnical School and officer of the navy, he would have a prominent career as colonial administrator, having held the office of governor in São Tomé (1879), the Portuguese State of India (1886) and, most notably, in Angola (1882-1886). Minister of the Navy and Overseas in 1892, he would go on to serve as Prime Minister following the February 1, 1908 regicide.

⁹⁵ BG, n°44, November 3, 1892, 379-385, Report on the reform of the Overseas Public Works Department, August 29, 1892.

⁹⁶ BG, n°3, January 19, 1901, 20-22, Overseas Provinces general budget for the year 1900/1901.

increased by almost 50% in comparison with the 1887 low, and expenditure decreasing over 10%.⁹⁷ Despite the effort to control public spending, the public works budget remained stable, which meant that it raised to represent almost 8% of the annual expenditure. As for the receipts, the Vae-seng, Fantan and Pacapiao concessions all yielded better profits than six years prior, still holding a 35% share on the public purse. As for the processed opium concession, it had doubled its profits since 1877, running at a 16% share, followed by property tax, still at 8%, and the newcomer *Misericórdia* lottery,⁹⁸ also at 8%. The pork and fish concessions had both fallen to 5%.

In conclusion, it seems that, around the time of the ultimatum and beyond, the Portuguese Overseas was actually functioning as a well-oiled and smooth-running modern imperial enterprise. Centrally managed and locally enforced in an adequate fashion, its results, from a strictly on-paper budgetary perspective, come out as frankly positive. Or, at least, as a far cry from the acid caricature of the Portuguese ‘colonial issue’ made by famed Portuguese realist writer Eça de Queirós, reflecting the disenchanted view of the matter by his group of Lisbon intellectual elite in the 1870s:

The relations between Portugal and its colonies are unique. They give us no yield: we give them no improvements. It is a sublime struggle: of abstention. [...] If anything, sometimes, the metropole sends to the colonies: a governor. Grateful, the colonies send to the motherland: a banana. Before such vast movement of interests and exchange, Lisbon proclaims: What riches hold our colonies! We are indeed a nation of navigators!⁹⁹

However, as mentioned in the previous section, this disenchanted portrait of the perceived poorly-managed and subsequent disastrous state of empire, together with the patriotic myths calling for change, whether both founded on actual facts or not, fueled most (if not all) public opinion and political opposition discourse on the issue in the decades leading up to the republic revolution of 1910. Compounded by an emphasis given to diplomatic setbacks where the British empire appeared as a systematic victor over Portuguese interests, the same disenchanted outlook ended up persistently pervading Portuguese historiography, from contemporary accounts to this day.

Eminent historian Valentim Alexandre, for instance, whose work over the last thirty years is considered to be “the most relevant contribution to the understanding of the colonial issue in

⁹⁷ BG, supplement to n°39, September 30, 1893, 445-462, Macao Province budget for the year 1893/1894. For the fiscal year, the Macao and Timor Province budget ran a surplus of 153.764\$000 reis, with receipts rising to 610.360\$000 reis and expenditure falling to 456.596\$000 reis.

⁹⁸ The *Santa Casa da Misericórdia* is a Portuguese charitable institution established as early as the fifteenth century, and which had branches in the metropole and in the overseas. In 1783, the Lisbon *Misericórdia* was granted the privilege of holding a national lottery with the purpose of funding its non-profit activities. In 1893, this privilege evolved into a monopoly framework (for more on this subject, see the institution’s website at scml.pt). Probably following national legislation guidelines on the matter, and although there are records of the *Misericórdia* lottery’s previous existence in Macao, the 1893/1894 province budget is the first time it appears as a taxable ‘monopoly’, and thus as a major contributor to the public treasury, at the same level as the Chinese gaming concessions.

⁹⁹ Eça de Queirós, *Uma Campanha Alegre, de “As Farpas,”* 1871 (Lisboa: Livros do Brasil, 2001), 100-101.

contemporary Portugal,”¹⁰⁰ or British historian William Gervase Clarence-Smith, whose global synthesis on the “economic imperialism” of the so-called Third Portuguese Empire¹⁰¹ is still regarded as “unsurpassed,”¹⁰² both struggle with the rhetoric heritage of disenchantment, or ‘decadence’, to quote another construct favored by the 1870s Lisbon intellectual elite.¹⁰³ Meaning that, due to the overbearing weight of that heritage, and albeit unwittingly, historians have systematically adopted the outlook of trying to make sense, as historian Pedro Aires Oliveira puts it, of the “apparent paradox of a weak power such as Portugal emerging from the ‘scramble’ with vastly great territorial dominions in Africa” or, again, of the fact that the “Hobsonian and Leninist premise” of nineteenth century Western imperialism being the ultimate outcome of the capitalist system, could hardly be applied to “a country as poor and backward as Portugal.”¹⁰⁴

Eça de Queirós had also painted a compelling picture of the Portuguese imperial ‘paradox’ which, in its desperate and almost irrational attempts to cling to its overseas territories, was condemning the metropole to starvation and backwardness:

Why do we have colonies? [...] Europe must think that these vast territories, just because of the unfortunate circumstance of belonging to Portugal, mustn’t perpetually be sequestered from the march of civilization; and that, removing the colonies from our national inertia, is to conquer them for universal progress. We have them locked in our own prison of misery. It won’t be long before, in Europe, one will think about freeing them. To avoid that humiliating day, let us be vilely avaricious, as a nineteenth century nation should be, and sell the colonies.

Yes, yes! We know! National honor, Afonso Henriques, Vasco da Gama, etc.!

But we are poor, gentlemen! What would you say of a nobleman (when there were noblemen) that let his children around him in hunger and filth, so as not to sell his forefather’s silver platters? Everyone would say he was an imbecile, a scoundrel!

Well, these 4 million Portuguese are the starving children of the State, to whom the colonies are like old family platters at the corner of a cupboard. [...] If the country could restructure, well then, the colonies, in the future, would be an asset. But thus! With this progressive, unforgivable decadence...¹⁰⁵

¹⁰⁰ Pedro Aires Oliveira, “A diplomacia do Terceiro Império,” in *O Império Colonial em Questão (sécs. XIX-XX). Poderes, Saberes e Instituições*, ed. Miguel Bandeira Jerónimo (Lisboa: Edições 70, 2013), 90.

¹⁰¹ William Gervase Clarence-Smith, *The Third Portuguese Empire, 1825-1975: A Study in Economic Imperialism* (Manchester: Manchester University Press, 1985).

¹⁰² Oliveira, “A diplomacia do Terceiro Império,” 91.

¹⁰³ For more on the subject of ‘decadence’ as a nineteenth century critique of Portuguese politics and society, see Antero de Quental, *Causas da Decadência dos Povos Peninsulares nos Três Últimos Séculos*. 1871 (Lisboa: Tinta da China, 2008).

¹⁰⁴ Oliveira, “A diplomacia do Terceiro Império,” 91-95.

¹⁰⁵ Queirós, *Uma Campanha Alegre, de “As Farpas,”* 1871, 107-108.

In the 1960s, there was a general penchant for explaining that ‘paradox’ through the ‘uneconomic imperialism’ theory, notably popularized by British historian Richard Hammond,¹⁰⁶ in which biased notions of ‘natural propensity and tenacity’, or ‘national pride and glory’ were presented as being at the core of Portuguese nineteenth and twentieth centuries imperialism, rather than capitalist factors, as had been the case in the rest of the Western imperial family.

From the 1980s on, Angela Guimarães and Valentim Alexandre’s work, to which this Chapter’s previous section is largely indebted, would vehemently deconstruct this rhetoric, contributing to breakdown the (up until then) established notion, as Guimarães puts it, “that Portuguese modern colonization had been a series of disorganized acts in the dormant and archaic atmosphere in which Latin people indulged.”¹⁰⁷

However, while striving to look at facts and figures to support the ‘economic imperialism’ thesis, in 1985, Clarence-Smith, for instance, goes straight back to the Queirozian 1870s dilemma, negatively positing, by way of conclusion: “As the dust settles over Portugal’s imperial debacle, one question springs to mind: did Portugal gain or lose from the third empire?” Or further interrogating history in “whether the colonies [had] lost or gained from having Portugal as their imperial master.”¹⁰⁸ The author’s answer, although suitably mitigated, would be in general agreement with Eça’s ironic hundred-year-old take, in that he considered that the State should have gotten rid of the colonies to concentrate on a more powerful Iberian federation, and that the colonies would have fared better under a “wealthier colonial power.”¹⁰⁹

Valentim Alexandre himself occasionally gave way to a similar disenchanted streak, although much more balanced with a rigorous socio-political analysis, for example when synthesizing his account of the nineteenth century Portuguese ‘colonial issue’ and its legacies:

Modernizers, but incapable of effecting concrete action, allowing archaic social structures, related to human traffic and slavery to perpetuate in the overseas, Portuguese elites tended to take refuge in rhetoric and legislation, producing never-applied legal documents, serving mostly to comfort the nation’s good-conscience and to build arguments with which to fight off external attacks. Although this is no longer a specific problem to the colonial issue: but rather a part of the tragedy [debacle?] of Portuguese modernity.¹¹⁰

¹⁰⁶ Richard J. Hammond, *Portugal in Africa. A Study in Uneconomic Imperialism 1815-1910* (Stanford: Stanford University Press, 1966).

¹⁰⁷ Guimarães, *Uma corrente do colonialismo português*, 10.

¹⁰⁸ Clarence-Smith, *The Third Portuguese Empire, 1825-1975*, 19.

¹⁰⁹ Ibid.

¹¹⁰ Alexandre, “A Questão Colonial no Portugal Oitocentista,” 126.

In any case, and for all this negative phraseology, both authors are adamant, as is Guimarães, about the country's "economic development along capitalist lines"¹¹¹ having been at the core of the Portuguese imperialist drive. Although, Clarence-Smith argues, this had mostly come in the form of a "new-mercantilist" project which would "impel Portugal into the scramble for Africa" in the century's latter decades, so as to tackle the effects of the early-1890s international economic crisis. In this, at least, the author puts the country reacting to a global "looming bankruptcy" hand-in-hand with the other states of western Europe, both in terms of timing and of economic motivation, but also through the implementation of simultaneously protectionist and expansionist strategies.¹¹²

Now, at this point in my dissertation, I would argue that the late nineteenth century Portuguese governments weren't so much 'impelled into the scramble for Africa' in search of economic relief, as they were met at the century-old doorstep of their overseas territories by new competing and overlapping interests. As we have seen, Portuguese administration had already been present in these territories for centuries. Civil, judiciary and military structures were already established and periodically reformed, and economic interests and capital gain also seemed to persist with more or less favorable results, both from the local and metropolitan points of view, depending on the surrounding context.

Therefore, the long nineteenth century's scramble not just for Africa, but for global control over productive hinterlands, export outputs, and commercial networks, which we saw, for example, intensify dramatically in the South China Sea from the 1830s on, would cyclically force Portuguese imperial management to reorganize and to modernize in order to keep up, but also to take a definite stand on the indivisible, inalienable and imprescriptible nature of the overseas territories as national ground in order to protect its own and already-established economic interests. This had happened in Macao, as mentioned, from the 1840s on, when Portuguese influence in China was threatened by the Opium Wars international coalitions, and would happen in Angola and Mozambique in the last quarter of the nineteenth century, effectively hampering the coast-to-coast Portuguese African chimera. In this sense, I wouldn't say, as argued by Clarence-Smith, that the 1891 'British ultimatum' socio-political crisis "*engendered* the idea that every portion of national territory was sacred,"¹¹³ but rather that it *confirmed* that sanctity in the public mind.

Thus, and despite the diplomatic setbacks, once untangled from the Queirozian-like internal public contestation of 'poor and backward' Portugal's legitimacy to hold, and capacity to manage its empire, subsequent governments (indeed up to the 1970s) felt empowered and patriotically-bound to continue pursuing that old Regeneration vision of transforming the port of Lisbon into a vast

¹¹¹ Clarence-Smith, *The Third Portuguese Empire, 1825-1975*, 81.

¹¹² *Ibid.*

¹¹³ *Ibid.*, 83.

metropole connected to all its provinces, independently of geographical situation, through a modern network of communication infrastructures.¹¹⁴ From the capital's political and administrative point of view, Portugal was the empire and the empire was Portugal, as it had been from the start of the Discoveries. Its territorial integrity was inviolable, unquestionable.

In this sense, the question of “whether or not the colonies really were a drain on the public purse,”¹¹⁵ as Clarence-Smith puts it, becomes somewhat irrelevant. Inasmuch as they were considered to be national territory, the overseas territories were managed, as was their continental counterpart, in the most balanced, efficient way possible, by the Lisbon-based State, acting overall as *bon père de famille*.¹¹⁶ In the relatively trustworthy 1880s overseas budgets there were deficits, to be sure, but there were surpluses as well, and responsibility for the general debit was assumed and justified, in fomenting material improvements through the increase of the public works budgets, for example, or in making overseas careers more appealing through increased wages. Much as, I suppose, the State budget itself was being balanced. Or much like even the other Western empires' State and overseas budgets, although probably with smaller numbers.¹¹⁷

Still, as we have seen, the Portuguese overseas budget tended more towards balance than not, with the better part of the extra investment going to the African provinces being supported by the other province's surpluses through the budgetary pooling system. According to Clarence-Smith, by the time the republican regime decided to reform this system, in 1914, in order to allow each province to direct their own resources towards local investment, only “3 to 5 per cent of total government expenditure was accounted for by colonial expenses,” falling to 1 to 2 per cent after the reform,¹¹⁸ which was still considerable, given its decentralization purpose.

However, Clarence-Smith also points out that, regarding the overseas, “most of the expenditure in Lisbon took the form of government guarantees to railway companies, so that a minimum level of profit would be assured by the state.”¹¹⁹ Minister Barros Gomes had mentioned this circumstance,

¹¹⁴ BG, n°20, May 16, 1864, 78-80, Address by the Minister of the Overseas to the House of Representatives, on **January 23, 1864 (transcribed in Volume 3 - Annexes)**.

¹¹⁵ Clarence-Smith, *The Third Portuguese Empire, 1825-1975*, 86.

¹¹⁶ In Roman law, the term *bonus pater familias* (good family father) defines the standard of care and diligence expected from a reasonably cautious, or prudent person in charge of some sort of administration or management. It is used in English, Spanish and Portuguese law. Its use in French law filtered to common language in the expression ‘*bon père de famille*’.

¹¹⁷ These are topics for future research into complementary in-depth comparative studies, which would have given the hypotheses introduced in this section some much-needed support.

¹¹⁸ Clarence-Smith, *The Third Portuguese Empire, 1825-1975*, 117.

¹¹⁹ *Ibid.*, 86.

in his 1888/1889 budget report regarding the Mormugão railway.¹²⁰ On the same line, there were also the subsidies to shipping companies, which were all, as Clarence-Smith puts it, “really a form of public investment rather than simple expenditure.” This system seems to have long been the norm throughout the European imperial network when it came to negotiating investment risk between governments and private companies in the context of such grand-scale projects. Headrick mentions as much regarding the first 1840s Calcutta and Bombay railway projects, for example, underlining its importance in jumpstarting British investment, as “it turned what would have been a risky speculation in railroad construction into a gilt-edged investment in the solvency of the Indian government and in its ability to tax the Indian people.”¹²¹

As such, “any effective calculation of the balance sheet of empire would need to work out the long-term returns, which were considerable in the case of some railways.” To add to the difficulty of judging whether or not Portugal was being a *bon père de famille* in what balancing the State and the overseas budgets was concerned, these numbers didn’t (and couldn’t) account for “how much revenue the treasury in Lisbon was obtaining from import duties on colonial produce and other sources,” or from re-exports of colonial produce, the most successful commodities being cocoa from São Tomé and Príncipe, as well as rubber and coffee from Angola.¹²²

Unable to immediately provide satisfactory answers to these questions, and as a way of conclusion, Clarence-Smith generously conceded that “all that can be said is that the African colonies were not the fiscal milch cow that Brazil had been in the eighteenth century.”¹²³ Not praise, but not synonymous with ‘imperial debacle’ either. Going back to a notion introduced in Chapters II and IV, that of a Portuguese ‘achievable modernity’ characterizing the Regeneration period, and although it certainly lacks both the pomp and circumstance of the pre-1960 historiography, or the pathos of the contemporary and (some of the) current one,¹²⁴ I would claim that the long nineteenth

¹²⁰ BG, supplement to n°9, March 1, 1889, 57-81, Overseas Provinces general budget for the year 1888/1889, December 17, 1888.

¹²¹ Headrick, *The tools of Empire*, 183-185.

¹²² Clarence-Smith, *The Third Portuguese Empire, 1825-1975*, 86-87.

¹²³ *Ibid.*, 86.

¹²⁴ In terms of realigning current historiography on the so-called Third Portuguese Empire with local realities, both metropolitan and overseas, through delving into the imperial archives, with the purpose of “deconstructing [some common misconceptions on] the ongoing business of empire and colonial rule on the one hand, and the role of colonial and indigenous societies on the other in different spaces, periods and contexts” see, for instance, the work authored and edited by historian Miguel Bandeira Jerónimo, namely “Historical Trajectories of the Third Portuguese Empire: Re-examining the Dynamics of Imperial Rule and Colonial Societies (1900-1975),” co-edited with Cláudia Castelo and Philip J. Havik (*Portuguese Studies Review*, vol. 25, 1 (2017): 9; as well as *O Império Colonial em Questão (sécs. XIX-XX). Poderes, Saberes e Instituições*. Lisboa: Edições 70, 2013. Also, for a thorough deconstruction of the “ideologies of exceptionality” regarding the Portuguese empire, namely as perpetuated through some of the lesser self-aware discourses on the ‘heritage of Portuguese influence’ see the author’s “Colonialismo Moderno e Missão

century Portuguese empire was, in all modesty, an ‘achievable empire’, in the sense that it ended up being the result of an adequate compromise reached between national ambition and the internal and external geopolitical, financial and social means to achieve it. Which doesn’t make it more successful, or ‘better’ than the rest of the contemporary Western empires but, in my view, it also doesn’t make it ‘worse’, or more ‘tragic’, at least not from a strictly budgetary point of view.

IV. Techno-scientific momentum

Speaking of an ‘achievable modernity’, let us now look more closely into the State’s investment in the overseas province’s public works, in order to better put the Macao inner harbor conundrum in perspective. According to Clarence-Smith, to rebound one last time from the British historian’s caustic vision of Portuguese modernity, the Lusitanian engineers were going to the colonies armed with the advantage of being backward enough so as to “better grasp the ‘intermediate technology’ needed for poor countries.”¹²⁵ I wonder what Ministers Andrade Corvo and Barros Gomes would have to say about that.

Inspired by the 1860/1870s African scientific expeditions, and probably influenced by the covetous geopolitical context, in 1876 Minister of the Overseas Andrade Corvo designed a couple of special commissions to the Angola and Mozambique provinces, which were styled “public works expeditions,”¹²⁶ possibly by Corvo himself. The aim of these commissions was to relaunch the 1869 administrative reform which had been envisioned by his predecessor, Minister Rebelo da Silva,¹²⁷ only this time specifically targeting Portuguese Africa. The rhetoric used to convince public opinion and parliament to embark on this costly adventure was also somewhat derived from the ‘dark continent’ imaginary, where African territories were depicted as mysterious and deadly, where no engineer dared penetrate (for such meager salaries as the overseas public works allowed), save for some “engineering graduate from the Goa school” or other.¹²⁸ This rhetoric, set up for the African provinces, but which could also work for the whole of the empire, underlined the notion that there

Civilizadora,” in *Patrimónios de Influência Portuguesa: Modos de Olhar*, ed. Walter Rossa and Margarida Calafate Ribeiro (Coimbra: Imprensa da Universidade de Coimbra, 2015), 113.

¹²⁵ *Ibid.*, 19.

¹²⁶ BG, n°44, November 3, 1892, 379-385, Report on the reform of the Overseas Public Works Department, August 29, 1892. See also Navarro, *Um Império Projectado pelo “Silvo da Locomotiva,”* 74.

¹²⁷ For more on Minister Rebelo da Silva’s 1869 overseas public works administrative reform, see Chapter II.

¹²⁸ João de Andrade Corvo, *Estudos sobre as Províncias Ultramarinas*, vol. I (Lisboa: Academia Real das Ciências, 1883), 220.

were no properly functioning public works departments before Andrade Corvo's reform. Hence, in the Minister's own words, the aim of the public works expeditions would be "to undertake a painful and difficult work of exploration; to open new horizons for colonial administration; to teach what was not known; to shed light into that darkness which the centuries hadn't lifted; and to solve a twofold problem, technical and economical, penetrating with science and work where none but ignorance and indolence had entered."¹²⁹

Now, as we have been seeing through the example of Macao, the situation on the ground was probably not as dire as seen through this distorted metropolitan lens. Which was possibly even a purposely distorted one, as Andrade Corvo's aim with such a discourse was doubtless to gain momentum for an increased program of public investment in the overseas' material improvements. Still, this picture of intellectual and infrastructural desolation would end up clinging to and through historiography, particularly in the Estado Novo accounts, as we can see from the way Colonel Galvão still described the public works expeditions' purpose sixty years later, as having been "to accomplish everything, as everything remained to be accomplished."¹³⁰ But clinging also to current historiography as, for example, in technology historian Bruno Navarro's take, who deems the expeditions "those intensive learning grounds in the overseas," and "what was to be the first effort of Portuguese colonial foment."¹³¹

In this quote, the author is referring to the role of Minister Andrade Corvo's two main appointees, young military engineers Manuel Rafael Gorjão (1846-1918)¹³² and Joaquim José Machado (1847-1925),¹³³ who were to head the 1877 expeditions, respectively to Angola and to Mozambique. "In

¹²⁹ Ibid., 236-237.

¹³⁰ Galvão, *A Engenharia Portuguesa*, 37.

¹³¹ Navarro, *Um Império Projectado pelo "Silvo da Locomotiva,"* 143.

¹³² Nobleman Manuel Rafael Gorjão (1846-1918) was a Lisbon Polytechnical and Military School graduate in military engineering. He started his professional life in the Overseas as Director of Public Works in Cabo Verde in 1874, having been transferred to Angola in 1876 to oversee Minister Andrade Corvo's public works expedition and railway study. After some administrative experience in Moçambique, in 1900 he would take office as Governor of that province, where he once again distinguished himself as the force behind the launch of the Lourenço Marques harbor improvement project. Back in Lisbon since 1902, Gorjão would then serve as Minister of the Overseas, from February 1903 to October 1904. See Galvão, *A Engenharia Portuguesa*, 171-175.

¹³³ Born in Lagos, Algarve, in 1847, Joaquim José Machado was a Military Engineer, having graduated from the Lisbon Polytechnical School in 1870, and from the Military School in 1873. Three years later, at the young age of twenty-nine, he would be appointed as the province of Mozambique's Public Works Director by Minister of the Overseas João Andrade Corvo, namely, to head the Minister's so-called "public works expedition" to Mozambique. Back in Lisbon with the end of his commission in 1880, Machado continued to make a name for himself in colonial circles as member of the Lisbon Geographical Society, right around the time the Macao 'port issue' discussion was reaching the metropole. His sights, however, were set far away from the Orient, on the Lourenço Marques-Pretoria railway project, of which he would be in charge, from conception in 1882 to techno-diplomatic negotiations with the Transvaal administration in 1885. Much later,

the face of such emptiness,” Navarro writes, the expeditionary teams, as true heroes of modernity, “launched themselves in drafting and implementing all kinds of infrastructures: public buildings, railways, roads, harbors, canals, reclamations, lighthouses, telegraphs.”¹³⁴ After the three-year commissions, back on the podium at the Lisbon Geographical Society, engineers Gorjão and Machado would emerge, at thirty-four and thirty-three years of age, as undisputed experts and voices of authority regarding the commercial, industrial, agricultural and civilizational development policies needed in Portuguese Africa.¹³⁵ They became, as Ângela Guimarães put it, paradigms of the modern colonialist.¹³⁶ The selfless public servant, guided by the highest moral standards and techno-scientific credibility, driven by his faith in the civilizing mission, to bring progress through roads, railways and telegraphs, thus confirming and enhancing the empire, and fortifying the nation.¹³⁷ In Machado’s own words:

A perfected weapon, a steam engine, a large and well-built road, a railway, the whistle and movement of a locomotive, etc., will be of much greater impact towards the intellectual advancement of the African native than any masses and sermons by the most virtuous of missionaries.¹³⁸

To extend Portuguese influence through modernization, and namely through advancing infrastructure, would be, as mentioned previously, the official motto throughout the 1880s, and especially around the turn of 1884/1885, when the Berlin Conference was taking place.¹³⁹ Which, in the most recent studies of this techno-scientific momentum, such as those by already-mentioned historians Bruno Navarro or Maria Paula Diogo, is described as a process of “exporting the matrix of Portuguese growth [the *Fontismo*, based on the European industrial-age material improvements theory] to Africa, thus putting technology at the heart of colonial politics.”¹⁴⁰ This ‘exporting’ theorization borrows on Daniel Headrick’s concepts of “technology transfer” or “cultural diffusion

after having served three tenures as Governor of Mozambique and one as Governor of the State of India, his son, Álvaro Machado, would end up serving in the Macao colonial administration, at the same time as Major Machado’s own appointment as royal commissioner in the 1909-1910 Luso-Chinese conferences for the demarcation of Macao. For more on Joaquim José Machado, see Navarro, *Um Império Projectado pelo “Silvo da Locomotiva,”* 141-209.

¹³⁴ Navarro, *Um Império Projectado pelo “Silvo da Locomotiva,”* 144.

¹³⁵ *Ibid.*, 147.

¹³⁶ Guimarães, *Uma corrente do colonialismo português*, 122.

¹³⁷ Navarro, *Um Império Projectado pelo “Silvo da Locomotiva,”* 140.

¹³⁸ Guimarães, *Uma corrente do colonialismo português*, 122.

¹³⁹ BG, n°6, February 7, 1885, 67, His Majesty King D. Luís’ address at the opening of Parliament on December 15, 1884.

¹⁴⁰ Maria Paula Diogo, “Um Olhar Introspectivo: A Revista de Obras Públicas e Minas e a Engenharia Colonial,” in *A Outra Face do Império*, 69.

of Western technologies to non-Western peoples”¹⁴¹ and, of course, of how these processes were used as “tools of Empire,” in the sense of how technology was literally instrumental in furthering Western influence and territorial control in Africa and Asia.¹⁴²

In the contemporary discourse, however, where the ‘overseas provinces’, or ‘colonies’, were seen as integral parts of the nation, as also previously discussed, there was no distinction between fomenting development through material improvements ‘at home’ and ‘abroad’. The empire was conceptualized as an administrative whole, to be managed and enhanced through the industrial age technopolitical approach. In this sense, and in this context, empire-building equaled state-building, and state building equaled fostering transport and communications infrastructures. As anthropologist Brian Larkin has put it, “infrastructures [...] reveal forms of political rationality that underlie technological projects, and which give rise to an ‘apparatus of governmentality’.”¹⁴³ In the Portuguese context, as can be seen in Ministers Andrade Corvo and Barros Gomes’ rhetoric, such an ‘apparatus’ borrowed, not just on the physical potential of infrastructure in terms of territorial control, but also, and simultaneously, on its symbolic features, which Larkin calls “the poetics of infrastructure,”¹⁴⁴ to enforce itself on the ideological level as on the actual metropolitan and overseas ground level.

A telling example of how this conceptual and governmental framework of the Portuguese modern nation-empire persisted well into the twentieth century, over and above the changing political regimes, as it was perpetuated by the self-proclaimed apolitical class of the technoscientific experts, is the conference military engineer, and future Minister of the Colonies, Alfredo Augusto Lisboa de Lima¹⁴⁵ gave at the Associação dos Engenheiros Cívicos Portugueses (Portuguese Civil Engineers

¹⁴¹ Headrick, *The tentacles of progress*, 15-16.

¹⁴² Headrick, *The tools of Empire*, 11-12.

¹⁴³ Brian Larkin, “The Politics and Poetics of Infrastructure,” *Annual Review of Anthropology*, 42 (2013): 328. Larkin is borrowing on Foucault’s concept of ‘governmentality’ which, combining the terms government and rationality, refers to governments’ ability to shape the conduct of its people (Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979*. New York: Picador, 2010).

¹⁴⁴ *Ibid.*, 329.

¹⁴⁵ Born in Lamego, Portugal, in September 1866, Alfredo Augusto Lisboa de Lima was a Porto Polytechnical School and Lisbon Military School graduate in military engineering. In 1898, in his early thirties, Lisboa de Lima would be appointed secretary to Manuel Rafael Gorjão, then serving as Governor of the Manica and Sofala districts in the province of Mozambique. Several years later, in 1903, now Minister of the Overseas Gorjão would put Lima in charge of the Mozambique-Swaziland railway project, to which would follow a commission as head of the Lourenço Marques-Transvaal Railway Department. In Mozambique until 1910, he would also head the Lourenço Marques harbor works and serve as Public Works Inspector. Back in Lisbon, he was incorporated into the republican regime’s newly established Directorate-General for the Colonies, having worked closely with General José Emílio Castel Branco in the last stages of his 1912 Macao Inner Harbor Improvement Project (see the following sections of this Chapter). Lima’s 1913 conference came in the wake of this collaboration. That same year, he would go on to head the Directorate-General Public Works

Association), in February 1913, on the topic of the Macao harbor works. Immediately published in the Association's *Revista de Obras Públicas e Minas* (*Journal of Public Works and Mines*), Lisboa de Lima titled it "Portuguese Commercial Ports," setting the tone for a thorough assessment of the State's performance on the whole modernization-through-infrastructure enterprise.¹⁴⁶

Although he mainly focuses on analyzing the state of the overseas ports, the author clearly puts the discussion from the start in terms of the "development and progress of Portuguese territories," be they continental Portugal, the Atlantic islands, or "the colonies."¹⁴⁷ Thus, independently of geography, the picture was decidedly gloomy, and embarrassingly so, especially when those territories belonged to a former nation of discoverers. Safe for the harbors of Lourenço Marques and Mormugão, Lima claimed, "it seems that worshipping the past has hindered our initiative, and we have remained absorbed in preserving the bays that our seafaring ancestors have bequeathed to us, in the exact same state as they were found."¹⁴⁸

And so, looking to the Far East, Lima's take on the Macao harbor impasse was that this was more the norm than the exception. The absence of modern port infrastructures along the string of Portuguese territories on the way to the South China Sea was undeniable, astonishing even, compared to the investments that were being made in railroad connections to hinterlands and foreign (mainly British) hubs, namely in Mozambique and in India. Therefore, there was some consequent effort being made by the Portuguese State in developing infrastructure. It just didn't seem to be directed to fortifying itself through stronger connections between the hinterlands under Portuguese influence, its ports and its capital. Looking at Lima's overview, one gets the impression that geopolitical pressures, sometimes at play in a much higher ground than the local spheres, seem to have diverted this effort of modernity, effectively hindering the results it could have borne in terms of enhancing nation-and-empire-building through increased territorial connectivity.

The paradoxically paradigmatic case in this scenario was the autonomous district of Timor, practically unconnected to the Portuguese imperial network, almost unreachable to central government and its many conflicting interests, and thus relatively unhindered in its local initiative-based development processes. As Lima put it:

Department, to which would follow, in 1914, roughly a year as Minister of the Colonies, as part of socialist Bernardino Machado's government. For more on Lisboa de Lima, see Navarro, *Um Império Projectado pelo "Silvo da Locomotiva,"* 209.

¹⁴⁶ Alfredo Augusto Lisboa de Lima, "Portos Comerciais Portugueses e Projecto das Obras do Porto de Macau. Conferência Realizada na Associação dos Engenheiros na Sessão Ordinária de 20 de Fevereiro de 1913," *Revista de Obras Públicas e Minas*, 517/518 (1913): 3-45.

¹⁴⁷ Lima, "Portos Comerciais Portugueses," 4.

¹⁴⁸ *Ibid.*, 5.

[In Timor] there is no disproportion between what the State has done for the colony's development and what it has done to turn the Dili bay, Timor's natural harbor, in an acceptable commercial port; and there is no disproportion because the State's action in any field is little more than null; and if private initiative in working the colony hasn't been null as well, nor its efforts completely null, maybe the reason lies in the fact that Timor still isn't connected to the rest of the world, hence to Lisbon, by telegraph.¹⁴⁹

This was not, as we shall see in detail over the next section, the case of Macao, where conflicting political and economic circumstances had long been curbing any local or metropolitan initiative regarding the harbor works. Which, although frustrating in terms of national pride and, of course, local development goals, nevertheless provided a perfect, forty-year opportunity for Portuguese technoscientific expertise to be put on display.

A striking figure in this quest for technological excellence was Military Engineer Adolfo Ferreira Loureiro (1836-1911),¹⁵⁰ whom the Ministry of the Overseas would eventually appoint on a famous seven-month expert mission to Macao to study harbor conditions, from September 1883 to April 1884. General Loureiro's fifteen-month trip, and the number of publications that ensued, really are a testimony of how committed the Portuguese engineers were to learning, practicing and sharing knowledge on European modernity, as well as to how they effected the role of modernizers (or at least pushed for modernization as energetically as they could), whether through their stations as public servants at the public works institutional level, or as public representatives at the central and

¹⁴⁹ Ibid., 17.

¹⁵⁰ Born in the city of Coimbra on December 12, 1836, Adolfo Ferreira Loureiro was already an experienced engineer when he was called by the Ministry of the Overseas for his commission in Macao. The same generation as, for instance, former Macao Public Works Director Constantino José de Brito, at 47 years of age in 1883, Loureiro had been at the helm of the Mondego and Figueira Harbor Works Department (*Direcção das Obras do Mondego e Barra da Figueira*), since 1872. A Mathematics graduate from the University of Coimbra, while already enlisted with the armed forces, in 1856 he would enroll simultaneously in the Polytechnical and Military Schools. In the first he would attend a political economy course, and in the latter, he would go on to enroll in the civil engineering course. Which probably explains the fact that, by 1860, young civil engineer Loureiro was being requested by the Ministry of Public Works, effectively detaching him from the Ministry of War tutelage, to work under the wing of the Figueira Harbor Works Director. Under this new tutelage, and for the next ten years, he would frequently cumulate his own commissions with the Coimbra Public Works Department, and even with the interim direction of the Figueira Harbor Works Department, a position in which he would ultimately be formally invested from 1872 to 1888. In Loureiro's lengthy and highly influential career, he would frequently be commissioned by the Ministry of Public Works to study and advise on the most prominent national harbor improvement works, such as the Douro artificial harbor project in Leixões (1879-1882), as well as the harbor projects of Ponta Delgada (1881), Macao (1883-1884), Lisbon (1886-1888), Viana do Castelo (1887) and Aveiro (1889). Up until his retirement in 1902, Loureiro would also ascend in the Ministry of Public Works hierarchy, having been appointed Public Works and Mines Director-General in 1898, Vice-president of the National Railway board (*Conselho de Administração dos Caminhos de Ferro do Estado*) in 1899, member of the Superior Council of Public Works (*Conselho Superior de Obras Públicas*) in 1900, and General Inspector of Public Works in 1901. For more on Adolfo Ferreira Loureiro's distinguished career, see I. B. Mota Oliveira, *Adolpho Ferreira de Loureiro, 1836-1911. Nota Biográfica* (Lisboa: Delegação Portuguesa da AIPCN, 2003).

local government level. As Loureiro himself would put it, while pondering on the decline of empire after the “glorious” time of the discoveries:

A new era seems to be making its way in our overseas dominions. Many distinguished men, in whom patriotic love and strong will are plenty, are making a strong case for our colonial future. Governments are starting to study these issues, and are putting their administration in the hands of individuals who are determined and talented enough to succeed. Let their intent and effort be crowned with victory, so that, over the ruins of our ancient and glorious fortresses, over the remains of our old palaces and the spires of our collapsed churches and the wreckage of our many abandoned convents, should rise, as in Bombay, the universities, the schools, the tribunals, the railway stations, the commercial associations, the factories, and all those powerful elements from which sprout excitement, education, wealth, tolerance, justice, morality and work, the nations’ essential vital elements.¹⁵¹

Loureiro left the Mondego and Figueira Harbor Works Department in late April 1883, barely ten days after his ministerial appointment,¹⁵² bound for Paris¹⁵³ and, after a few days, thence for London,¹⁵⁴ to equip himself with the appropriate technical instruments.¹⁵⁵ Before boarding the steamship that would take him from Naples to Bombay, he took advantage of his stay in central Europe to go on a tour of “several commercial ports of France, Belgium, Holland, Germany, Italy and Austria.”¹⁵⁶ Having departed Naples on July 26, aboard the Italian packet liner *China*, and after the mandatory stop in the Port Saïd new artificial harbor, on August 1, Loureiro began what must have been one of the highlights of his journey: the passage through the “great Lesseps”¹⁵⁷ Suez canal. Although officially inaugurated in 1869, the three-day journey from Port Saïd to Suez would only be open to regular steamship traffic a decade later, which meant that, in the summer 1883, Loureiro was indeed witnessing technological history in the making. Indeed, as he remarked, on-site work was ongoing and relentless (as it would continue to this day): “steam dredgers are

¹⁵¹ Adolfo Ferreira de Loureiro, *No Oriente: de Nápoles à China. Diário de viagem* (Lisboa: Imprensa Nacional, 1896), 162. The author is reflecting on the comparison between the cities of Bombay and Goa and, extrapolating, between the thriving British empire and the decadent Portuguese one.

¹⁵² AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°222 from the Governor of Macao, Tomás de Sousa Rosa, to the Minister of the Overseas, regarding the arrival in Macao of Military Engineer Adolfo Loureiro, September 27, 1883. Annex n°5: copy of Minister of the Overseas José Vicente Barbosa du Bocage’s decision, on April 16, 1883, of commissioning Loureiro for the Macao harbor improvement study.

¹⁵³ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°185 from Military Engineer Adolfo Loureiro to the Overseas Director-General, informing him of his departure for his commission in Macao, April 25, 1883.

¹⁵⁴ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°222 from the Governor of Macao, Tomás de Sousa Rosa, to the Minister of the Overseas, regarding the arrival in Macao of Military Engineer Adolfo Loureiro, September 27, 1883. Annex n°1: Letter from Loureiro to the Overseas Director-General, informing him of his imminent departure for London, May 2, 1883.

¹⁵⁵ Oliveira, *Adolpho Ferreira de Loureiro*, 10.

¹⁵⁶ Loureiro, *No Oriente: de Nápoles à China*, 7.

¹⁵⁷ *Ibid.*, 92.

constantly working to widen and deepen the canal, their product being carried away, whether to the deepest lakes, or to reclamations in the banks.”¹⁵⁸

This need for constant update didn't derive from deficiencies on the engineering knowledge of the time. As Headrick points out, “all over the world harbors and ships' channels were being deepened and enlarged to accommodate the ever-increasing size and number of ships.”¹⁵⁹ The issue at the Suez “hinge of East and West”¹⁶⁰ was, therefore, the dramatic expansion in transoceanic trade, enabled (and also coupled) by the spectacular progress of steam navigation technology around the 1870s. Which would give rise to a global wave of harbor renovation and, in turn, to the shift of balance regarding the chosen major hubs on the international sea-trade routes:

By 1914, all important seaports had a minimum depth at dockside of thirty-six feet. Harbors deep and spacious enough to handle the new ships were enlarged and protected with concrete breakwaters. Among the most important ports of the post-Suez era were brand-new colonial cities such as Karachi, Mombasa, Singapore, Port Saïd, and Aden. Older cities like Shanghai and Bombay were transformed beyond recognition. By 1892, Hong Kong, the little island wrested from China in the Opium War, cleared more shipping than Liverpool and almost as much as London.¹⁶¹

A few weeks later, Loureiro would comment precisely on the “majestic and beautiful” Hong Kong harbor, “extremely ample, deep, protected and accessible through several entry points,” however “completely crowded with ships of all banners and sizes.”¹⁶² In this context, at a glance, prospects for the Macao inner harbor, with its muddy waters and a dockside barely six-feet deep, were decidedly poor.

Still in Bombay, and as the confirmed anglophile that he was, Loureiro particularly admired the water supply technologies, such as dams, some of them akin to “great monuments, for their grandeur and ornamentation,” but also the agricultural irrigation system through a network of canals, as well as the city reservoirs.¹⁶³ And also, of course, the Bombay Port Trust Reclamations, establishing the city's newest and “elegantly drafted” eastern extensions.¹⁶⁴ Here, Loureiro met with G. Ormiston, the Port Trust resident engineer, who personally informed him on the Bombay harbor management and work, leaving his Portuguese counterpart inspired:

It truly is amazing. The Port Trust was established in 1873, in order to undertake important work with extremely heavy costs. Still, the administration didn't tremble at the deficit and,

¹⁵⁸ Ibid., 90.

¹⁵⁹ Headrick, *The tools of Empire*, 153.

¹⁶⁰ Ibid., 155.

¹⁶¹ Ibid., 168.

¹⁶² Loureiro, *No Oriente: de Nápoles à China*, 280.

¹⁶³ Ibid., 167.

¹⁶⁴ Ibid., 174.

even before concluding the first project, it already had new, greater, and more important ones in line. In ten years' time, the Port Trust's revenue was running a considerable surplus, while the administration lowered harbor taxes, for the good of commerce and navigation.¹⁶⁵

The proper engineer's field trip, the Reclamations offered Loureiro a master class on state-of-the-art harbor technology. Plan in hand, he set out exploring and taking notes:

I spent a lot of time in the Prince's Dock, thoroughly examining the pier walls, the warehouses, the engines and hydraulic crane, the dredgers, the service railways connecting with the main company ones [facing the dock, a new railway station was under construction], the system for dock management, as well as fire management, etc., etc., the beacons and markers, as well as the lighthouses that shape the harbor. So many interesting aspects for the engineer. [...] I spent the afternoon visiting the other many docks in the Bombay harbor, including the so-called cotton harbor, where there are several hydraulic presses which pack it with a minimum volume to be shipped to England. The movement and excitement are extraordinary throughout the harbor.¹⁶⁶

Loureiro also met with Bombay city engineer Rienzi Walton, with whom he discussed the municipal water supply and sewerage systems. Given the opportunity to read through the sanitation department's reports, studies and projects, as well as to examine the city's general measures in terms of public and domestic hygiene, Loureiro was positive that British public administration, simple and effective as it was, "had managed to turn Bombay into a salubrious city, despite its less favorable conditions and low altitude."¹⁶⁷

On board the *Deccan*, the Peninsular and Oriental steamship liner to Hong Kong, Loureiro docked first on the Colombo newly built artificial harbor, in British Ceylon. There he had the opportunity to meet with the harbor works resident engineer, a certain J. Kyde, "a true enthusiast of the harbor construction system," who supplied his Portuguese counterpart with plans, a guided tour of the docks and port reclamations, and a plethora of information.¹⁶⁸ The trip then proceeded to the island of Penang, facing the Malaysian peninsula, in the British Straits Settlements and, through the Malacca Strait, to Singapore where, once again, Loureiro would meet with the harbor engineer to discuss the ongoing projects.

Arriving in Hong Kong in early September, Loureiro met with the British government public works director, a Mr. Price, who provided him with the harbor and city plan, as well as the (already customary) information on the city water supply and sanitation systems. The solidity, economy and state of conservation of sanitary infrastructure in Hong Kong clearly left a superior impression in the Portuguese engineer's mind, especially after getting acquainted with Osbert Chadwick's 1881

¹⁶⁵ Ibid., 185.

¹⁶⁶ Ibid., 190-191.

¹⁶⁷ Ibid., 193.

¹⁶⁸ Ibid., 222.

report on the subject.¹⁶⁹ Indeed, Loureiro would later comment on the fact that “housing sewerage, pipe ventilation and separation, etc., etc., are matters which have warranted special care from the public powers, as they should have everywhere, and yet remain thus overlooked in countries wanting to enter the ranks of civilization, but where hygiene and public health are often regarded as limited and unimportant services.”¹⁷⁰

After completing his commission in Macao, on his journey back, Loureiro would visit Saigon, Batavia, Calcutta, Madras, Pondicherry, Benares, Agra and Delhi. He would also return to the United Kingdom for a tour of the London, Newcastle, Edinburgh, Glasgow, Liverpool and Southampton ports.¹⁷¹ Upon his arrival in Lisbon, on August 6, 1884, Loureiro’s work on the Macao inner harbor was almost immediately published by the Ministry of the Overseas.¹⁷² It was soon followed by his comparative report on “some commercial ports of Europe, Asia, Africa and Oceania, and several aspects regarding civil engineering,” published by the same Ministry in 1886.¹⁷³ Finally, Loureiro would begrudgingly publish the journal of his trip ten years later, coerced by the Lisbon Geographical Society, of which he was a member, as part of the fourth centennial celebration for the discovery of the sea route to India, that “fact of the highest reach for humanity and the world, for which glory goes entirely to Portugal.”¹⁷⁴

Although this journal is filled with interesting and picturesque impressions of the nineteenth century traveler, it is also, in a way, a sort of preface to the more formal publication on the world trade hubs that would follow, in the sense that Loureiro uses the personal format to openly express his modern engineer perspective on harbor technology and the imperial network. For example, in what Headrick’s “tools of empire” are concerned, Loureiro offers his take on the Portuguese colonial system, in comparison with what he perceived as the efficacy of the contemporary British and Dutch ones:

¹⁶⁹ For more on Osbert Chadwick’s work and, in general, on public sanitation in Hong Kong and Macao, see Chapter III.

¹⁷⁰ Adolfo Ferreira de Loureiro, *Estudos sobre alguns Portos Comerciais da Europa, Asia, Africa e Oceânia e sobre diversos serviços concernentes à Engenharia Civil* (Coimbra: Imprensa da Universidade, 1886), 297.

¹⁷¹ Loureiro, *No Oriente: de Nápoles à China*, 7-8.

¹⁷² Adolfo Ferreira de Loureiro, *O porto de Macau. Ante-projecto para o seu melhoramento*. (Coimbra: Imprensa da Universidade, 1884).

¹⁷³ Adolfo Ferreira de Loureiro, *Estudos sobre alguns Portos Comerciais da Europa, Asia, Africa e Oceânia e sobre diversos serviços concernentes à Engenharia Civil* (Coimbra: Imprensa da Universidade, 1886).

¹⁷⁴ Loureiro, *No Oriente: de Nápoles à China*, 10. After his retirement in 1902, Loureiro would start working on what would be his last and most ambitious project, published just before his death in November 1911. The *Portos Marítimos de Portugal e Ilhas Adjacentes* was to be, once again, a comparative study of the entirety of Portuguese ports, complete with historical notices, statistics, plans and photographs, published in five volumes, from 1904 to 1910 (Oliveira, *Adolpho Ferreira de Loureiro*, 14-15).

What seems certain is that the Portuguese, as well as the French, weren't born to colonize, and that, among those systems, ours is the worse, colonizing with the sword and the cross, and making them instruments of persecution and intolerance. Today, colonization is building roads and railways, opening harbors and canals, respecting people's beliefs and traditions, administering justice and spreading education.¹⁷⁵

It is no wonder, then, that his "study of commercial ports" would focus on how this technology was planned, organized and managed to better enhance and harness the overseas territories' resources. Which meant coordinating port capacity with navigation needs and numbers, but also with the road and railway systems, so as to connect more efficiently "production and trade centers in the hinterland," as he observes, for example, regarding the Saigon harbor.¹⁷⁶ Sanitation and water supply to urban centers was another indispensable factor for the success of the colonial enterprise, in Loureiro's view, to enable proper living conditions and the health of the workforce, which he observed as being adequately dealt with in the British dominions, particularly in Hong Kong and Bombay. Liberal management of harbor improvements, along the Singaporean model, for example, also seemed like a beneficial measure, where private companies were directly responsible for their own piers, docks and warehouses.¹⁷⁷ The general establishment of Port Trusts, and the commitment to invest in conservation dredging and concomitant reclamation planning, along the lines of the Bombay harbor management scheme were, for Loureiro, crucial examples of how "cities should develop and extend, how the country's resources should be capitalized." In his eyes, the British "bold and enterprising spirit" was certainly in the lead in matters of technological, and therefore, of colonial development.¹⁷⁸

This is also Headrick's conclusion, summing up British lead in the steam-engine and metal-hull industries, as well as coal-provision station system, as nothing short of the "truly global thalassocracy" that was Great Britain in the nineteenth century: an empire endowed with "a superior technology and an economy to back it up."¹⁷⁹ Of course, and despite its political and techno-scientific elites' best efforts to keep up, not just in terms of furthering knowledge, as Adolfo Loureiro did, but also in terms of groundwork infrastructural development, as Joaquim José Machado, Manuel Rafael Gorjão, Lisboa de Lima and so many others did, Portugal had no upper hand on these matters, and therefore, in the end, could not aspire to play in the same league.

¹⁷⁵ Loureiro, *No Oriente: de Nápoles à China*, 270.

¹⁷⁶ Loureiro, *Estudos sobre alguns Portos Comerciais*, 262-263.

¹⁷⁷ *Ibid.*, 305-306.

¹⁷⁸ *Ibid.*, 386.

¹⁷⁹ Headrick, *The tools of Empire*, 175.

Inner Harbor Improvement

I. The 1884 Adolfo Loureiro Project

Amidst this new era of global thalassocracies, to borrow again from Headrick, in which Western technology had shattered not only traditional trade, but also the world's geopolitical balance,¹⁸⁰ Macao represented the past: the long, difficult, and costly Cape route, and the unbalanced European import of precious goods in the face of a total absence of exports. Hong Kong, on the other hand, represented the future: easily connected by steamship to the Straits, India and Europe through the Suez route, as well as to the Americas across the Pacific, offering to “exchange bulky commodities at low freight rates,” and spreading European (but mostly British) cotton cloth, machinery, iron and coal all over the world.¹⁸¹

What is more, as Loureiro himself would put it, the Hong Kong harbor “needed nothing.” Sheltered, and with depths from 25 to 65 feet at berth along Victoria bay, it was naturally tailored to offer all navigation, independently of size or tonnage, the appropriate comfort and security.

Not one of the great works in which modern engineering has excelled, and which are common in European harbors, is to be found here. It does not possess the great and spacious docks of British ports, nor the magnificent deep-water piers of the French, Belgian and Dutch ones, nor the railway service, maritime installations, and powerful machines which perform, in every other port, the swift loading and unloading operations, [...] nor, finally, the onerous dredging equipment.¹⁸²

As for the ships' loading and unloading, it was done through an extremely competitive system based on small Chinese boats and “as many coolies as needed,” payed such low wages for their service that “one could not imagine a machine competing with them in workload or cost.” As for the absence of dredgers, the harbor's own natural features rendered them pointless as, according to Loureiro, its depth was unchangeable, with no deposits to remove. If anything, in time, the harbor was getting deeper.¹⁸³

The situation in Macao was quite the opposite, from the geopolitical as from the geographical point of view. Loureiro had remarked it himself upon crossing the Pearl River delta from the clear blue waters surrounding Hong Kong to what he called the “Canton sea,” a large extension of muddy and yellow waters, carrying sediment from the upstream provinces, in the midst of which stood the

¹⁸⁰ Ibid., 177.

¹⁸¹ Ibid., 176.

¹⁸² Loureiro, *Estudos sobre alguns Portos Comerciais*, 288.

¹⁸³ Ibid.

Macao peninsula (Fig. 156).¹⁸⁴ The western Pearl River delta silting riverbed thus presented the most obvious obstacle to the Macao inner harbor improvement project, as the predicted scale of the dredging works alone meant that, this time, local Chinese capital would not be enough to see it through. Metropolitan Government backing and financing, as well technical expertise, were essential to support it, while simultaneously legitimizing such a grand-scale project in the eyes of the Qing administration.

But then again, estimating the exact scale of the project had never been an easy task. It would, in fact, vary greatly throughout the decades-long deadlock, and often according to the expert designated to assess the issue, himself influenced by changeable economic and geopolitical circumstances. In key with the early 1880s confidence in the future of the colony portrayed by Governor Joaquim José da Graça, for example, Harbor Captain Demétrio Cinatti, in his July 20, 1881 report, was fairly optimistic about what had to be done:

I don't believe it to be a difficult enterprise. It is essentially a matter of dredging work on loose silt up to two feet (*pés*) and coarse after, which perfectly takes the cut, as I have had the opportunity to experience. Having studied the improvement works on the harbors of Portsmouth, Marseille, Cherbourg, Havre, Ramsgate, Saint-Nazaire and others, there is no hesitation to be had in the face of the insignificant works which would render the Macao harbor fit for navigation. The expense to carry this out, in comparison with the above-mentioned ports, is also insignificant.¹⁸⁵

Clearly, Cinatti was looking to both sides of the English Channel for reference, as well as to the French Mediterranean port of Marseille and Atlantic port of Saint-Nazaire, to which information he probably had had access through the international press. In his view, two years and 124.000\$000 reis would be enough to accomplish the essential work, which generally involved improving the inner harbor piers, as well as employing two dredgers to open a canal, 160-feet wide and 16-feet deep at low tide, down to the Praia Grande bay (*rada*). Cinatti also suggested that these dredgers could remain in service for the regular conservation of the harbor access canal, “as is custom in the ports where the riverbed is made of silt, such as Saint-Nazaire and others,” and that the extracted muds “could be used to fashion a new reclamation between the Ilha Verde and the isthmus, from which would result, in addition to winning new ground, the acceleration of the river flow, and the sale of a small part for rice floodplains.”¹⁸⁶ Finally, and echoing Governor Graça's own request to

¹⁸⁴ Loureiro, *No Oriente: de Nápoles à China*, 301.

¹⁸⁵ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°10 from Macao Harbor Captain Demétrio Cinatti to the Government Secretary-General, regarding the inner harbor improvement, **July 20, 1881 (transcribed in Volume 3 - Annexes)**.

¹⁸⁶ *Ibid.*

the Minister of the Overseas,¹⁸⁷ Cinatti recommended that an “experienced hydraulic engineer” should be hired to study the matter and draft the harbor improvement project.

Although Governor Graça’s original idea was that this expert should come from inside the ranks of the Ministries of Public Works or Navy, in subsequent letters sent through the summer of 1881,¹⁸⁸ he also opened up the possibility of the Ministry of the Overseas’ recruiting “a Dutch hydraulic engineer of recognized merit” for this job. This is mentioned in a report written at the bequest of the Directorate-General for the Overseas in January 1882, in which the (unidentified) author examines the Governor’s arguments and advises on the recruitment of an experienced Portuguese engineer, more familiar with the comings and goings of imperial public service. He goes on to suggest possible candidates, such as “the engineer currently serving as Macao Public Works Director,” which had “a reputation for being intelligent, studious and honest.” The author is referring, of course, to Constantino José de Brito, who was deemed, nevertheless, too occupied with his department’s affairs to be able to dedicate several months exclusively to harbor studies. Also mentioned is the name of Military Engineer Joaquim José Machado who, according to the author, “had given much proof of zeal and intelligence in the Mozambique Public Works Department, as well as in other public service commissions in which he had taken part.”¹⁸⁹

Although this document is incomplete, its author was probably Military Engineer Agostinho Leite who, according to Adolfo Ferreira Loureiro, had been asked by the Minister of the Overseas to assess the situation following Governor Graça’s early correspondence.¹⁹⁰ One year later, in March 1883, Loureiro himself was called to the Ministry to weigh in on Leite’s report, which would directly lead to his own appointment for the Macao harbor improvement study, decided by Minister

¹⁸⁷ In his June 15, 1881 letter, Graça had requested authorization from the Minister of the Overseas “to proceed with a hydrographic study of the Macao, Taipa and Coloane harbors, as well as of the river and inner harbor, for which it would be convenient to dispatch from its corporation to this province a hydrographic engineer to oversee the hydraulic work.” AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°121 from the Governor of Macao, Joaquim José da Graça, to the Minister of the Overseas, regarding the inner harbor improvement, **June 15, 1881 (transcribed in Volume 3 - Annexes)**.

¹⁸⁸ Namely this reference: AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°166 from the Governor of Macao, Joaquim José da Graça, to the Minister of the Overseas, sending the Harbor Captain Demétrio Cinatti’s report on the inner harbor improvement, August 1, 1881.

¹⁸⁹ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Report by Military Engineer Agostinho Leite regarding the inner harbor improvement, January 28, 1882.

¹⁹⁰ Loureiro, *O porto de Macau*, 9, 14. Loureiro mentioned having consulted engineer Agostinho Leite’s report on the Macao harbor upon being called to the Ministry of the Overseas, on March 7, 1883, to come up with an improvement plan. Namely, he stated his agreement with Leite’s suggestion that an experienced engineer should be sent to Macao to study the matter in situ. Other than these references, virtually nothing is known about Agostinho Leite, and he seems to have left no other visible marks on the Macao inner harbor improvement project.

of the Overseas José Vicente Barbosa du Bocage on April 16, 1883.¹⁹¹ At that time, as we have seen, forty-seven-year-old General Loureiro, was already a well-respected Ministry of Public Works official, with more than twenty years of experience in producing and reviewing the empire's plans for restructuring its ports.

After his nearly five-months tour of (mostly) European imperial ports, Loureiro arrived in Macao on September 15, 1883, having been received with much joy by the “young, hard-working and Macao enthusiast” Harbor Captain Demétrio Cinatti,¹⁹² as well as by “the distinguished and amiable” Governor Tomás de Sousa Rosa, who had just taken office exactly five months prior. In his own assessment of the situation, Loureiro was met, both by the Macanese elite and by the local government representatives, as nothing less than the “savior of their beloved country.”¹⁹³

Undaunted, Loureiro started work two days later, setting up an office at the Government Palace, and starting by requesting all available information on the inner harbor, in terms of meteorological and hydrographic studies, from the Harbor Captain, as well as from Director of Public Works Constantino José de Brito. Despite everyone's willingness to cooperate, “unfortunately,” as he put it, this information “didn't amount to much.”¹⁹⁴ One of Loureiro's first concerns was with the existing city plan and riverbed surveys, in which to base his own studies and future project. He then turned to the work Cinatti had recently completed on the city survey.¹⁹⁵

In fact, shortly after his appointment to the Captaincy of the Port, in September 1878, Demétrio Cinatti was commissioned by Governor Carlos Eugénio Correia da Silva (1876-1879)¹⁹⁶ to take part in the committee in charge of redrafting the city cadastre (*“comissão do tomo das*

¹⁹¹ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°222 from the Governor of Macao, Tomás de Sousa Rosa, to the Minister of the Overseas, regarding the arrival in Macao of Military Engineer Adolfo Loureiro, September 27, 1883. Annex n°5: copy of Minister of the Overseas José Vicente Barbosa du Bocage's decision, on April 16, 1883, of commissioning Loureiro for the Macao harbor improvement study.

¹⁹² Loureiro, *No Oriente: de Nápoles à China*, 311. More precisely, Loureiro qualified Demétrio Cinatti as “an intelligent young man, considerate, dedicated, hard-working, an enthusiast of Macao and all things pertaining to our colonies, with an impressionable heart and an educated and chivalrous spirit. I would find in him an important assistant and a valuable friend.”

¹⁹³ *Ibid.*, 321.

¹⁹⁴ *Ibid.*, 324.

¹⁹⁵ AHU, 760-11-SEMU-MU-DGU mç., Letter n°5 from Military Engineer Adolfo Loureiro, president of the inner harbor improvement committee, to the Governor of Macao, regarding the use of Harbor Captain Demétrio Cinatti's city survey as reference for the improvement project, September 29, 1883. In this letter, Loureiro writes that Lieutenant Cinatti “has been of great service to this commission by willingly allowing it to extract a copy of the plan of the Macao Peninsula, which he surveyed, at the scale of 1/500.”

¹⁹⁶ For more on Governor of Macao Carlos Eugénio Correia da Silva (1876-1879) see Chapter II.

propriedades foreiras à fazenda”).¹⁹⁷ Which meant that, even though Cinatti would spend roughly the next year officially in the service of the Captaincy, in reality he was taking the lead in drafting a new general city map to serve as reference for the Treasury. Indeed, before Public Works Director Constantino José de Brito was formally charged with the cadastre commission, in December 1882, by Governor Joaquim José da Graça,¹⁹⁸ his predecessors Augusto César Supico or Raimundo José de Quintanilha don't seem to have been involved at all in these committees, even though the statistics department was supposedly under their formal responsibility. In any case, by the time Brito took charge of the cadastre business, Cinatti had long left the committee and taken up his post as Harbor Captain. But not before having completed the city survey which, according to his own information, was almost finished by October 1879.¹⁹⁹ Completed in 1880, and subsequently printed, Cinatti's general map (Fig. 157) would remain, through the following decades up until the 1912 survey of the Macao Cartography Commission (Fig. 9), the reference for all map-making requirements in the province.²⁰⁰

However, and probably because he was working with the purpose of serving the cadastre committee and the requirements of the Treasury, this map was solely focused on the Macao peninsula, and therefore didn't offer any new information regarding the harbor and its access canals. In his July 20, 1881 report, Cinatti himself took as reference the riverbed measurements recorded by British

¹⁹⁷ BG, n°38, September 21, 1878, 150, Government of Macao local ordinance n°61, appointing lieutenant Demétrio Cinatti to the committee in charge of redrafting the city cadastre, September 20, 1878. This committee had originally been appointed by the local ordinance n°10, January 26, 1877, also signed by Governor Correia da Silva, itself reforming another committee, which had been appointed in 1875 to the same end (BG, n°4, January 27, 1877, 13).

¹⁹⁸ BG, n°50, December 16, 1882, 431, Government of Macao local ordinance n°102, appointing Public Works Director Constantino José de Brito responsible for the new city cadastre survey, December 16, 1882.

¹⁹⁹ BG, n°40, October 4, 1879, 231, Government of Macao local ordinance n°122, regarding lieutenant Demétrio Cinatti's work on the committee in charge of redrafting the city cadastre, October 1, 1879. In this ordinance, Governor Correia da Silva commended Cinatti, not only for his commitment to the committee's "topographic work" with "knowledge, diligence and effort," but also for being willing to conclude the city survey work while being simultaneously reinstated in his post at the Captaincy of the Port. Some years later, in April 1882, Cinatti would receive similar praise from the King himself, being made a Knight (*Cavaleiro da antiga, nobilíssima e esclarecida Ordem de São Tiago do Mérito Científico, Literário e Artístico*), in recognition of his tireless work on the city survey, on "some navigation and commerce statistics" (referencing Cinatti's July 20, 1881 report on the inner harbor improvement), and on the establishment of the Macao meteorological observation department (Graça, "Urbanização de Macau," 151).

²⁰⁰ Unfortunately, Captain Demétrio Cinatti's general map of the Macao peninsula has been lost. Figure 157 depicts its only reproduction known today, which is a photograph of the original, kept by the Archives of Macao, ref. AM, MNL.05.09.CART. The Archives database references the original map as a printed document, dating from c. 1880. Nevertheless, it seems certain that the Macao city plan depicted in Adolfo Loureiro's project (Fig. 7, published in 1884) is indeed the faithful copy of Cinatti's survey, as can be inferred from the General's above-mentioned letter of September 29, 1883 (AHU, 760-II-SEMU-MU-DGU mç.).

engineer W. A. Read in his 1865/1866 map (Fig. 6), comparing them to his own admittedly uncharted observations, to demonstrate how the silting was progressing.²⁰¹

Therefore, and together with Cinatti himself and some of the Macao Captaincy of the Port staff, General Adolfo Loureiro spent most of his first weeks in Macao navigating the surrounding waterways and placing tide gauges in strategic points. Which, in retrospect, may have been precisely where the trouble started for the whole harbor improvement project, with the local mandarin making their first objections to Loureiro's extending his survey to Chinese waters. As he exasperatedly put it:

In vain I have exhausted myself in demonstrating to them that my mission is strictly peaceful and scientific, and that its purpose would eventually interest China even more than the Portuguese in Macao. It was hopeless. Finally I even proposed to set up several tide gauges in Chinese territory, which would be marked with Chinese characters and according to Chinese measures; to be surveyed by the sons of the Celestial Empire themselves, to whom I would nevertheless offer payment; that the record of these surveys would be presented to the local mandarins, so that they could verify its complete innocence; but that later I would be allowed to make in those territories some graphic, levelling and survey work. *We will see and decide*, was their answer. It was the Chinese system; to never definitely decide on anything, and to indefinitely stall even the simplest questions.²⁰²

Despite these diplomatic setbacks, which would indeed be the first of many, Loureiro's report, finished in April and published almost immediately upon his return, in August 1884, under the title "Preliminary study for the improvement of the Macao Harbor,"²⁰³ may rightly be considered to have been the first ever Macao Harbor Improvement Project. Having labored closely with Cinatti, as well as with Constantino José de Brito, Loureiro's work clearly reflects the local experts' view of the problem.²⁰⁴ In it, the author makes a comprehensive study of the Pearl River Delta geography,

²⁰¹ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Letter n°10 from Macao Harbor Captain Demétrio Cinatti to the Government Secretary-General, regarding the inner harbor improvement, **July 20, 1881 (transcribed in Volume 3 - Annexes)**.

²⁰² Loureiro, *No Oriente: de Nápoles à China*, 349-350.

²⁰³ Adolfo Ferreira de Loureiro, *O porto de Macau. Ante-projecto para o seu melhoramento* (Coimbra: Imprensa da Universidade, 1884).

²⁰⁴ In addition to acknowledging Cinatti's work, in his publication, Loureiro also mentioned the previous studies conducted by the Public Works Director on the harbor issue, which he had rendered on his Department report of **January 30, 1883** (BG, supplement to n°6, February 15, 1883, 41-48) (**transcribed in Volume 3 - Annexes**), as well as on the **February 12, 1883** harbor improvement committee report (BG, n°9, March 3, 1883, 68-69) (**transcribed in Volume 3 - Annexes**). The latter had been an initiative, again, of Governor Joaquim José da Graça, to anticipate the arrival of the Chinese merchant's dredger [BG, n°49, December 9, 1882, 424, Government of Macao local ordinance n°99, appointing the Macao inner harbor improvement committee, **December 5, 1882 (transcribed in Volume 3 - Annexes)**]. In this report, commissioners Constantino José de Brito, Demétrio Cinatti, Dr. José Gomes da Silva and Senator Miguel Ayres da Silva reinforced the local view that it was simply a matter of dredging the silted portions of the harbor, and of dispatching its product to form a new reclamation connecting the Ilha Verde to the peninsula in the Patane

tides and weather, from which he draws the conclusion that a permanent solution would only come from the general redirection of the conflicting currents that were causing the silt to accumulate in the peninsula western coast. Which meant nothing short of realigning the riverbanks well beyond the Macao peninsula to the north, as well as constructing a 1.600-meter jetty, from Taipa island northward, cutting the *rada* canal in half (Fig. 158). Extensive dredging would follow, using the extracted silt to form new reclaimed land to the north of Ilha Verde.

Figure 159 focuses on the projected reclamation area in the northern part of the peninsula, according to Adolfo Loureiro's "Preliminary study." This is the core zone of Loureiro's project, both in terms of riverbank restructuring and of territorial expansion. Since Governor Ferreira do Amaral's time, the border of Portuguese-administered territory was set at the northern outpost of Portas do Cerco, located at the end of the narrow isthmus connecting the Macao peninsula to Mainland China.²⁰⁵ However, in his effort to comprehensively work on correcting the river flow, Loureiro proposed to go beyond this point and reclaim a vast area to the north in order to create a smoothly curved river bank designed to accelerate the current. Loureiro was adamant that these were still Portuguese waters, at least up to the cape of Pac-seac which, in this project, closed the great reclaimed bay to the north, marking what the author saw as the actual historic limit of the leased land (Fig. 158).

Loureiro proposed to stabilize this reclaimed land through a series of dams connecting the old and new banks. One of these would connect the isthmus to Ilha Verde, separating the area destined for farmland to the north of the bay, from the area destined for urbanization and the construction of new docks to the south. The northern area of the peninsula had long been occupied by floodplains used as rice fields, and its riverside by the Patane shipyards. Loureiro's plan was to maintain that important industry, upgrading it to a new dock complex which could also serve as refuge in the event of a typhoon. This complex would be completed with the construction of an industrial and working-class district, connected to the city by the extension of the riverside avenue up to Portas do Cerco road.

In Loureiro's view, this project represented a somewhat moderate ambition for Portuguese Macao. Its aim was mainly to ameliorate the existing harbor in order to maintain, or at best slightly ameliorate, its trade dynamics. Although praised by the administration for its thoroughness and technical qualities, it was nonetheless deemed too ambitious, too expensive, and out of touch with the province's needs. Having taken office in November 1885, new Public Works Director José Maria de Sousa Horta e Costa regretfully reflected on the contradictions between the experts'

district. This new urban extension would offer new ground on which to establish factories and agricultural holdings, as well as a new dock complex.

²⁰⁵ For more on the Macao 1840s territorial expansion issues, see Chapter I.

ambitions and his department's financial restrictions in his July 1, 1886 report,²⁰⁶ probably already amid the Macao Government budgetary downfall that would manifest itself the following year.²⁰⁷

Shortly after, and trying to tackle the impasse, new Governor Firmino José da Costa would appoint a special committee to study Loureiro's proposals and come up with a prioritized construction plan.²⁰⁸ Co-written by Horta e Costa and new Harbor Captain António Teodorico da Costa e Silva, the 1887 committee report endeavored to tone down the 'port issue' by demonstrating that shifts in regional and transcontinental trade, and not just the natural shallowness of the harbor waters,²⁰⁹ were to blame in the decline of navigation through Macao:

It is undeniable that the silting problem goes back many years, having become more sensitive lately, not due to its aggravation, but because light has been shed on its effects. [...] All the plans and ancient accounts of the province agree that the Inner Harbor was never very deep, even if it allowed entrance to ships with larger capacity than those that access it today. [...] In 1871, when large scale emigration [coolie trade] was done from Macao, statistics showed that 120 seagoing vessels entered the port. The movement was extraordinary then. In 1885, the same statistics show the entrance of merely 62 ships. At that time, there was great interest in coming here. Today there isn't, but we cannot truthfully claim that this decline is due to the silting of the river.²¹⁰

Moreover, the Viceroy of Canton and the local mandarin, who had met Loureiro's demands to extend his study of the river tides onto Chinese waters with a contemptuous silence, must have manifested their disaccord regarding the projected northward reclamation, as the committee reported that this could not be carried out, "since it clearly affected land that didn't belong to Portugal."²¹¹ This controversy would ultimately contribute to the establishment of the 1887 Sino-Portuguese Treaty of Peking, in which Portuguese administrative rights (although not full sovereignty) were finally recognized by the Qing Government. The 'border issue' (*questão dos limites*), however, was once again postponed, set to be decided after the intervention of a bilateral committee that was yet to be appointed. Chinese authority delayed this appointment indefinitely,

²⁰⁶ BG, supplement to n°36, September 14, 1886, 351-359, Macao Public Works report for the year 1885/1886, by José Maria de Sousa Horta e Costa, July 1, 1886.

²⁰⁷ For more on this subject, see this Chapter's previous section titled "Economic Imperialism."

²⁰⁸ BG, n°35, September 2, 1886, 329, Government of Macao local ordinance n°89, appointing a committee for the inner harbor improvement, August 28, 1886.

²⁰⁹ In his 1855 *Six Months Among the Malays; and a Year in China*, French traveler Dr. Melchior-Honoré Yvan remarked depreciatively on the unfavorable characteristics of the Macao inner harbor for ocean-faring vessels: "[...] the port itself is but shallow, and only suited to light vessels; on account of these inconveniences, it belongs almost entirely to the Chinese, and is the exclusive domain of the *fai-ting*, the junk, and the *tanka*" (Dr. Yvan, *Six Months Among the Malays*, in Jorge, *Viagem por Macau*, 156).

²¹⁰ BG, supplement to n°6, February 16, 1887, 47-51, Report from the inner harbor improvement committee appointed by the Government of Macao local ordinance n°89, February 10, 1887.

²¹¹ *Ibid.*

so that it would never come to resolution. Nevertheless, the 1887 committee prescribed a solution basically reprising Loureiro's idea of dredging an access channel through the *rada* all the way to the Inner Harbor, using the resulting silt to construct a smaller scale docks and reclamation project, south of the isthmus-Ilha Verde dam.

Our port, even with all these improvements, will never become a port in good condition, deep enough and equipped enough to compete with other more advantageously served neighboring ports. Should the Government make such great sacrifices for such a small compensation? Surely not. Yet, we may assume that, even if harbor improvement doesn't increase its movement, if we keep failing to address the causes of its ruin, the movement that it attracts today will surely diminish excessively. Thus, all efforts must be applied to prevent this from happening. The answer lies in dredging.²¹²

To facilitate this project's successful outcome, complete also with the regularization of the riverside road and piers, from Barra to Patane, the Public Works Director and the Harbor Captain preconized the establishment of a Company, or a Trust, to better ensure and manage the cooperation between public and private capital. However, and apart from the 1884 concession to a group of Chinese businessmen for the construction of a single dock according to Loureiro's plan (Lam-mau dock in Figure 161),²¹³ no cooperation project would ever see the light of day, and political decision dragged on. In 1889, Public Works Director Amâncio de Alpoim de Cerqueira Borges Cabral²¹⁴ was still insisting on a minimum programme, appealing to the immediate acquisition of a new, more powerful and efficient steam-powered bucket dredger, as a strong sign of commitment from the Government to the local capitalists for the success of the improvement plan:

Various attempts have been made by private initiative to undertake, partially, and according to each other's convenience, part of the reclamation works, which have not been authorized on the grounds of non-compliance to the only existing general improvement plan, which is Mr. Loureiro's. This shows how easily, when construction starts and demonstrates its value, private capitals will flow, [...] easing the Government of its initial burden. I should add that not only

²¹² Ibid.

²¹³ The concession for the construction of a wood-storage dock in the Patane bay was granted by Governor Tomás de Sousa Rosa under the principle of its project having been drafted "in harmony with the harbor works general plan," and therefore "without prejudice [to this plan] when it takes place" (BG, n°38, September 20, 1884, 351, Government of Macao local ordinance n°81, September 18, 1884).

²¹⁴ Very little is known about Amâncio de Alpoim de Cerqueira Borges Cabral. He arrived in Macao in May 24, 1889, taking office as Public Works Director and thus succeeding interim director Alcino António Sauvage, who had been filling in since Horta e Costa's departure in November 1888. A Mathematics graduate from the University of Coimbra, and most certainly military engineer, he would remain in office in Macao probably until the summer of 1892 [Although referenced in the primary sources for the last time in December 1890, the national ordinance appointing his successor mentions the vacancy of the Public Works Director post since August 20, 1892 (BG, n°49, December 9, 1893, 545, National ordinance of October 19, 1893, appointing Augusto César de Abreu Nunes as Macao Public Works Director)]. He was probably the younger brother of better-known José Maria de Alpoim Cerqueira Borges Cabral (1858-1916), a nobleman and politician originally from the Vila Real district in Portugal, who ascended to the office of Minister of Justice in the final years of the constitutional monarchy.

the Macanese population, but the Chinese as well, [...] accustomed as they are to the freedom in conception and easiness in execution that generally presides over public works in Hong Kong, regret the slow and disrupt progress of a plan on which depend the commercial and industrial development of the city and, as consequence, the well-being of its inhabitants.²¹⁵

While small-scale dredging and pier wall construction continued all through the late 1880s,²¹⁶ a more decisive step for implementing Loureiro's and the 1887 committee's plan was only taken by newly arrived Governor Custódio Miguel Borja (1890-1894) in 1890. A firm believer in the fiscal and administrative autonomy of local government,²¹⁷ ten days after taking office he approved the project for the Ilha Verde dam (Fig. 161), ordering construction to start immediately, all the while making inquiries about the optimal way to launch the dredging works as soon as possible.²¹⁸ To this end, a new Harbor Improvement Committee was also appointed, gathering the usual public works and navy experts, including Borges Cabral and the new Harbor Captain António Talone da Costa e Silva, who had previously worked alongside General Loureiro as Cinatti's aid.²¹⁹ The December 1890 committee report summed up the general belief that the Governor's arrival, and particularly the beginning of construction of the Ilha Verde dam, would be a turning point in the Inner Harbor Improvement deadlock, in the sense of finally materializing Loureiro's vision:

Unless we are being blinded by optimism, we see in the beginning of these works the greatest indisputable step do give our colony a new impulse of prosperity, now with no fear of disruption. Today, one is no longer deluded into thinking that Macao could ever become a great emporium for European trade, visited by great steamers of all nations; opposing this, no matter how prodigious our colonial savvy might be, and also disregarding the thriving neighboring foreign ports, gifted with extraordinary natural conditions, there would always be the issue of its layout, which was never excellent to begin with, nor can it ever aspire to excellence. But we have other resources; Macao is not condemned. Once the Ilha Verde dam is completed, with the use of the dredged mud, vast reclamation land will necessarily follow, broadening our

²¹⁵ BG, supplement to n°48, December 3, 1889, 369-376, Public works report for the year 1888/1889, by Amâncio de Alpoim de Cerqueira Borges Cabral, July 1, 1889.

²¹⁶ Ibid. In his report, Borges Cabral complained about the 12.000\$000 reis which featured in the public works budget as the provision for harbor improvement, demonstrating that, with such an exiguous sum, the riverside road project alone, budgeted at almost 190.000\$000 reis, would take more than fifteen years to build. Not to mention the rest of the projected improvements which were still considered indispensable, such as the Ilha Verde docks and reclamations, or the channel from the *rada* to the inner harbor.

²¹⁷ Upon taking office on October 16, 1890, Governor Custódio Miguel Borja had expressed his views on the overseas organic law, pushing for reform on Minister Rebelo da Silva's 1869 overseas administration law and even on Minister Costa Cabral's 1842 Administrative Code (cf. Chapter II). The point of this reform being, in the Governor's mind, to allow the provinces' more freedom of decision and action, which meant more control over local budgets and consequently more leeway in establishing the local improvement programs (BG, n°43, October 23, 1890, 361-363, Inauguration ceremony for Governor Custódio Miguel Borja, October 16, 1890).

²¹⁸ BG, n°44, October 30, 1890, 370, Government of Macao local ordinance n°146, approving the Ilha Verde dam project, October 27, 1890.

²¹⁹ BG, n°47, November 20, 1890, 395, Government of Macao local ordinance n°157, appointing a committee regarding the inner harbor improvement, November 17, 1890.

domain solely with the arms of peace and work. Private industry, specifically the Chinese, will inevitably collaborate with this enterprise. With reasonable government concessions, rice fields will quickly flourish, docks and shipyards will rise, and that working district envisioned by Mr. Loureiro [...] will finally come to be.²²⁰

In Mai 1891, however, the Minister of the Overseas issued a direct telegraphed order to Governor Borja to stop any further work until a general improvement plan could be approved.²²¹

II. The 1897 Abreu Nunes Project

The ‘port issue’ was only picked up again in earnest in the aftermath of the 1895 plague epidemic, by Governor José Maria de Sousa Horta e Costa and new Director of Public Works Augusto César de Abreu Nunes.²²² In fact, right in the last month of his governorship, which was January 1897, Horta e Costa gave the order to proceed with the Ilha Verde reclamation works, south of the new dam, picking up where his predecessor had left.²²³ This was promptly followed by his successor, Governor Eduardo Augusto Rodrigues Galhardo (1897-1900) who, upon arriving in Macao roughly five months later, appointed yet another Harbor Improvement Committee,²²⁴ this time including Abreu Nunes, as well as António Talone da Costa e Silva, still heading the Captaincy of the Port, and other navy officials, but also Artur Tamagnini de Abreu da Mota Barbosa, the province’s Treasury Inspector,²²⁵ so as to better grasp the budgetary issue. As the committee had been presided

²²⁰ BG, supplement to n°2, January 12, 1891, 11-13, Report from the committee regarding the inner harbor improvement, appointed by the Government of Macao local ordinance n°157, December 31, 1890.

²²¹ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0001, Information to the Minister of the Overseas by the Overseas Director-General confirming that the Governor of Macao has been instructed not to authorize new work before the formal approval of a general improvement plan, May 22, 1891.

²²² For more on the 1895 plague epidemic in Macao, as well as on the respective roles of Governor José Maria de Sousa Horta e Costa and Director of Public Works Augusto César de Abreu Nunes regarding the interconnected issues of urban sanitation and urban expansion in its aftermath, and notably the Chinese Bazaar New Avenue project, see Chapters III and IV.

²²³ BG, n°1, January 2, 1897, 2, Government of Macao local ordinance n°2, regarding the Ilha Verde farmland reclamation project, January 2, 1897.

²²⁴ BG, n°23, June 5, 1897, 301, Government of Macao local ordinance n°84, appointing a committee for the inner harbor improvement, June 4, 1897.

²²⁵ Artur Tamagnini de Abreu da Mota Barbosa was a Portuguese military official stationed in Macao since 1877, who was appointed as the province’s Treasury Inspector from 1884 to 1898 (nenotavaiconta.wordpress.com). He was the father of Macao-born Artur Tamagnini de Sousa Barbosa (1881-1940), who would serve three times as Governor in the First Republic (1918-1919) and Estado Novo (1926-1929 and 1937-1940), as well as of João Tamagnini de Sousa Barbosa (1883-1948), a military engineer, who would serve several terms under the First Republic governments as Minister of the Interior (Home Secretary), Treasury, War and Colonies (1917-1918).

by Abreu Nunes, its August 9, 1897 report was probably, to a large extent, written by the Director of Public Works himself, as it was nothing short of a revised Inner Harbor Improvement Project, complete with a draft layout of the intended works (Fig. 160). As we can see in the interpretation of this project (Fig. 161), Abreu Nunes' plan was still largely based on the main ideas put forward by Loureiro for the Ilha Verde reclamation and docks complex. The major difference lied in the greatly reduced extension of the projected farmland to the north, which Nunes chose to limit through a new dam aligned with the Portas do Cerco border, reflecting the relentless underlying political tensions:

The committee has chosen not to extend the new piers north of Ilha Verde for, having received instructions not to project any construction pertaining to the Chinese coastline, and although it shares the Honorable Engineer Adolfo Loureiro's opinion that until Pac-seac the coast is still Portuguese, the fact remains that it is currently being occupied by the Chinese down to Portas do Cerco. It is only natural, therefore, that the Government would wish to maintain the status-quo.²²⁶

Now, in the fifteen years which had elapsed since his mission to Macao, General Loureiro had followed the whole harbor situation from a close distance, through his connections, as well as through his expert appointments inside the Ministry of the Overseas. In 1891, for example, he had been asked to weigh in on Governor Borja's plans. Although certainly unwittingly, Loureiro's unwavering belief in the need for a comprehensive improvement project and budget to ensure an efficient and affordable result would ultimately be instrumental for the Ministry in cutting the Governor's stride short.²²⁷ Therefore, as the highest technical authority on the matter, at least within metropolitan circles, Loureiro must have felt the need to express himself publicly on what was already becoming established as the Macao harbor deadlock.

The selected stage would be, of course, the Lisbon Geographical Society regular meetings. Loureiro then presented his exposé before his peers on November 4, 1895, in a conference setup, which would be published almost immediately by the National Press. In his view, the main issue had to do with defining purpose: fifteen years after Cinatti's initial reports, there was still no clear official stance on what the port of Macao was to be.

Should [it] be transformed into one of those modern ports, frequented by the colossal ships that make the crossing to America and the Orient, and whose drafts exceed 8 meters, transporting

²²⁶ AHU, 451-1H-SEMU-DGU mç., Letter n°267 from the Governor of Macao, Eduardo Augusto Rodrigues Galhardo, to the Minister of the Overseas, regarding the inner harbor improvement project, including the report of the committee appointed by the Government of Macao local ordinance n°84 of June 4, 1897, by Public Works Director Augusto Abreu Nunes, September 7, 1897.

²²⁷ AHU, 760-1I-SEMU-MU-DGU mç., Information regarding the Macao Inner Harbor Improvement Project, by Military Engineer Adolfo Loureiro, January 31, 1891.

7.000 tons and more, or should it be restricted to its regular navigation, of sailing as of steam ships, with a maximum draft of 7 to 7,5 meters.²²⁸

In other words, was it to be made a major hub in the transoceanic network, or remain a reliable, although improved reference for local sea-and-river-faring trade, relying on the Hong Kong layover for its transcontinental connections? There clearly were no technical issues preventing either option. It was, as it had always been, all a matter of financial and, mostly, of political stance. In Loureiro's view, upgrading the Macao harbor in view of creating a competitive modern hub in the Pearl River Delta would threaten, as Abreu Nunes would later put it, the province's geopolitical status quo:

It would be a blow for Hong Kong's prosperity, for which the British would never forgive us, and for which damage they would know how to largely compensate themselves at our expense. China itself, seeing the great merchant and warships coming to our port, would start looking at us with its usual mistrust, and maybe take away the advantages bestowed upon Macao, as the genuinely Chinese port that it is.²²⁹

Hence, the wise decision, claimed Loureiro, in political, as well as budgetary terms, would be to focus the scope of the improvement project on the existing local traffic. This meant dredging the inner harbor and its access channels down to a reasonable 7-meter depth, along with the rest of his 1884 comprehensive improvement and conservation project, on which the 1897 committee revised plan would be based.²³⁰

However, and apart from second-time Governor Horta e Costa's 1901 initiative to start construction on the inner harbor piers extension following the committee general plan and Abreu Nunes' detail plan for the Chinese Bazaar riverfront (Figs. 162 and 163),²³¹ roughly another six years elapsed in discussions about which dredger to acquire and hesitations on where to start dredging. This went on until the arrival in Macao, on December 1902, of new Governor and military engineer Arnaldo

²²⁸ Adolfo Ferreira de Loureiro, *Macao e o seu porto. Conferência feita na Sociedade de Geografia na sessão de 4 de Novembro de 1895* (Lisboa: Imprensa Nacional, 1896), 35.

²²⁹ *Ibid.*, 36.

²³⁰ AHU, 451-1H-SEMU-DGU mç., Letter n°267 from the Governor of Macao, Eduardo Augusto Rodrigues Galhardo, to the Minister of the Overseas, regarding the inner harbor improvement project, including the report of the committee appointed by the Government of Macao local ordinance n°84 of June 4, 1897, by Public Works Director Augusto Abreu Nunes, September 7, 1897.

²³¹ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0002, Note from the Overseas Director-General to the Minister regarding the Governor of Macao's decision to build a new pier in the context of the Macao inner harbor improvement, May 2, 1901. In the same reference, see also Letter n°229 from the Governor of Macao, José Maria de Sousa Horta e Costa, to the Minister of the Overseas, regarding ongoing public works, July 17, 1901. In the latter, Governor Horta e Costa mentions that the two major ongoing public works projects are the S. Lázaro resumption and the inner harbor piers extension plans, this last one having been approved by local ordinance on September 27, 1900 and subsequently sanctioned by the Minister in his letter of June 4, 1901.

Novais Guedes Rebelo (1902-1903),²³² a clear partisan of the Loureiro/Nunes global solution. A few months later, fellow military engineer and the new Governor's personal friend Manuel Rafael Gorjão would take the helm at the Ministry of the Overseas (1903-1904).²³³ Together with Abreu Nunes, still in office at the Macao public works department, this trio of engineers would push the harbor project forward, almost to the point of concretization.

Indeed, by summer 1903, hope was rising again in public opinion that this time the improvement enterprise would actually take off, which seemed to be confirmed by the Governor's dispatch to the Overseas State Department, on September 25, of a fully updated version of the 1897 Abreu Nunes Project, to serve as the basis for an international public bid (Fig. 164).²³⁴ The corresponding national ordinance authorizing both the project and the public bid would even be published one year later by the Metropolitan Government, encompassing the inner harbor piers and docks, the Ilha Verde reclamations, and the dredging of the appropriate *rada* and inner river access channels, a list which still "would not prevent construction of more ambitious works in the future, such as those included in the 1884 project."²³⁵

An article published in the *The Hong Kong Telegraph* on July 7, 1903, reported on the joy that had met the long-awaited announcement of the Macao inner harbor improvement project approval in "that mediaeval colony." In a praising, yet extremely demeaning way, this piece gave a brief overview of the project's history, or debacle, as seen from abroad, starting with Loureiro's work. The 1884 "voluminous report," claimed the author, remained to that day:

"... a monument of Portuguese indifference and neglect of a most valuable colonial possession over which other Powers have more than once cast covetous eyes and under any one of whose administration the little island, with its splendid geographical situation, might have been

²³² According to Colonel Galvão, Porto-born Arnaldo Novais Guedes Rebelo (1847-1921) was a graduate in Engineering from the Lisbon Military School. Having started his career in the Ministry of Public Works, he would take part in the 1876-1881 public works expedition to Angola, having been commissioned to draft the Luanda-Ambaca railway. Governor of Cape Verde from 1900 to 1902, he would be appointed to Macao, after Horta e Costa (1900-1902) was exonerated from the governorship. He would later be appointed as Governor of the State of India (1905), as well as member of the Overseas Council and Director of the Overseas Railways (*Caminhos de Ferro Ultramarinos*). See Galvão, *A Engenharia Portuguesa*, 200-202.

²³³ According to Colonel Galvão, Manuel Gorjão had personally asked Arnaldo Novais Guedes Rebelo to join the expedition team. See the Minister of the Overseas' biographical note in the previous section, based on Galvão, *A Engenharia Portuguesa*, 200.

²³⁴ AHU, 451-1H-SEMU-DGU mç., Letter n°71 from the Governor of Macao, Arnaldo Novais Guedes Rebelo, to the Minister of the Overseas, regarding the inner harbor improvement project, April 22, 1903. Document 19. See also AHU, 760-11-SEMU-MU-DGU mç., Macao Inner Harbor Improvement Project, by Public Works Director Augusto César de Abreu Nunes, September 24, 1903.

²³⁵ AHU, 451-1H-SEMU-DGU mç., Letter n°212 from the Governor of Macao, Martinho Pinto de Queirós Montenegro, to the Minister of the Overseas, regarding the inner harbor improvement project, August 26, 1904. Document 24. DG, n°215, September 26, 1904, National ordinance of September 21, 1904, regarding the Macao Inner Harbor Improvement Project, signed by Minister of the Overseas Manuel Rafael Gorjão.

capable of possibilities undreamt of and uncared for by lethargic and apathetic figure-heads adorning the cabinet of Lisbon.”²³⁶

Still, the “present Governor [enjoying] the reputation of being a well-known civil engineer” and being a wholehearted supporter of the project, the news from Lisbon were indeed cause for celebration and hope. Especially as Portugal was “still the fourth colonial power in the world,” buttressed, the author claimed, by its alliance with Great Britain, “an absolute guarantee of the Colonial dominion of Portugal in its integrity.”²³⁷

Rebello’s governorship, however, ended abruptly after barely one year in Macao, and his successor, Martinho Pinto de Queirós Montenegro (1904-1907), would decide to take a step back. Labeling the Loureiro/Abreu Nunes project an “enormity” which would “commit the Government to immediate expenses with no guarantee of immediate results,” the new Governor would rather keep to the Public Works’ small but sure annual budget, continue building the new Chinese Bazaar piers... and buy a new dredger.²³⁸

By summer 1905, a bitter divide was splitting the local officials: on one side the Governor, hostile to the improvement project, and on the other Abreu Nunes, who ended up leaving the helm of the Public Works Department that same year, despite the Harbor Captain, as well as all the members of the Improvement Committee’s support. Manuel Gorjão had also left the Ministry, and so the Overseas State Department, having published the still-born decree supposed to launch the public bid for construction but having no one in the administrative machinery willing to see it through, considered its choices to get out of yet another Macao inner harbor predicament. The easiest and most innocuous step, once again, seemed to be sending in a third party, the archetypal “competent technical officer, to study the matter on the ground and give its opinion.”²³⁹

III. The 1908-1912 Castel Branco Project

As mentioned in the previous Chapter, General Castel Branco arrived in Macao in January 1907 on his commission as Overseas Public Works Inspector, in the last months of Montenegro’s

²³⁶ “Macao and the Luso-Chinese Treaty,” *The Hong Kong Telegraph*, July 7, 1903, in AHU, 760-1I-SEMUMU-DGU mç.

²³⁷ Ibid.

²³⁸ AHU, 451-1H-SEMUMU-DGU mç., Letter n°212 from the Governor of Macao, Martinho Pinto de Queirós Montenegro, to the Minister of the Overseas, regarding the inner harbor improvement project, August 26, 1904.

²³⁹ Ibid. Document 18. Report from the Overseas Director-General to the Minister, on July 12, 1905, regarding Governor Queirós Montenegro’s plans for downsizing the inner harbor improvement project.

governorship, as new Public Works Director Miranda Guedes was starting out.²⁴⁰ By summer 1908, though, due to his struggling health, and after four years working in the Far East Portuguese imperial provinces, Castel Branco had already returned to the metropole. Lisbon-based Colonel António de Vasconcelos Porto (1855-1924),²⁴¹ a former acting-Minister of the Overseas and member of the Overseas Public Works Committee, was then asked to collect all of the General's research and compile his vision into a preliminary Inner Harbor Improvement Project. Vasconcelos Porto's report was presented on Mai 31, 1909, and immediately shipped to Macao to gather the views of the Macao Public Works Director.²⁴² The latter would then be commissioned to draft the complete and definitive plan, which he completed one year later, on March 1, 1910.²⁴³ Both engineers agreed on the necessity of starting the dredging work right away to open up a large Inner Harbor access channel, which would be supported by the realignment and the widening of the pier, from Patane to the south entrance of the port. The depth of the access channel would allow for larger ships to moor directly to the piers, while the new 25-meter-wide pier would welcome them with all the structures and support equipment a modern port demanded. This would also allow for the deployment of a new coastal railway, connecting the port to a central station to be constructed in the Patane reclamation, in turn connected to the city of Canton through the rich Heung-shan district.

Vasconcelos Porto's project, however, was concerned only with the first part of the Improvement Project, concentrating on the design of the pier up to Lam-mau dock (Fig. 165), and on budgeting the dredging works, which he considered to be urgent in face of the harbor's current state and the dragging on of the central political decisions. It was only by 1912 that Castel Branco, fully recovered, was finally able to put together, within the newly republican Ministry of the Colonies, a Macao Harbor Study Committee, which would later publish the complete Inner Harbor Improvement Project the way he had intended it in 1908 (Figs. 166 and 167).

In Figure 168, we can see the author's ideas for the Ilha Verde bay, which is, once again, largely based on Loureiro's docks and reclamation plan. Nevertheless, a new transformative ambition for

²⁴⁰ For General Castel Branco's and Public Works Director Miranda Guedes' biographical notes, as well as for more information on their most significant projects in Macao, other than the Inner Harbor Improvement, and notably regarding the city's general improvement plan and its impact in the transformation of the Chinese Bazaar, see Chapter IV.

²⁴¹ Not much is known about Colonel António de Vasconcelos Porto (1855-1924), other than that he was a military engineer who worked mainly with the Royal Portuguese Railway Company (*Companhia Real dos Caminhos de Ferro Portugueses*). He had also briefly filled-in as acting Minister of the Overseas in 1907.

²⁴² AHU, 760-1I-SEMU-MU-DGU mç., Macao Inner Harbor Improvement Project, by military engineer António de Vasconcelos Porto, May 31, 1909.

²⁴³ AHU, 451-1H-SEMU-DGU mç. Macao Inner Harbor Improvement Project, by Public Works Director António Pinto de Miranda Guedes, **March 1, 1910 (transcribed in Volume 3 - Annexes)**.

this new part of town is expressed by adding to it the Macao railway central station, just south of the Portas do Cerco border, as heart of the new housing and industrial district and facing a solemnly-named Praça da República ('Republic Square'), overlooking the docks. To the end, Castel Branco remained a firm believer in the triad of interconnected improvements that would change the face (and fate) of Macao: the harbor, the Macao-Canton railway, and the urban sanitation plan.²⁴⁴

Still, and yet again, none of these would ever be, at least not in the global territorial development terms these improvements were being envisioned in the early 1900s. The Macao-Canton railway project, in particular, would never make it off the drawing board. Although the idea dated back to the Sino-Portuguese treaty of 1887, negotiations only started in 1901, when Plenipotentiary Minister José de Azevedo Castelo Branco travelled to Beijing to discuss the ever-postponed Macao 'border issue', as well as the terms of the concession.²⁴⁵ After three years of talks, the Macao-Canton railway concession was finally established in 1904. The following year, however, a similar concession was signed with the Hong Kong government for a Kowloon-Canton line. According to Miranda Guedes, in September 1911, while not even the establishment of a Trust was being considered on the Portuguese side, the British and Chinese companies had already finished building their respective sections and the new railway was fully functioning. "The most expensive railway in the world," in Guedes' words, its project had apparently answered less to infrastructural economy than to political prerogatives, as Hong Kong Governor Sir Frederick Lugard himself had put it in 1909: "[having been drafted in haste], its study and resulting budget were extremely lacking, both having had to be amended many times since; a circumstance which, in any case, mattered less than actually building the line [...] before anyone else."²⁴⁶ In the face of such "positive and productive colonial administration," designed to "retain and ensure undisputed hegemony to its Southern-China port," the public works engineer despaired that Portuguese local and metropolitan governments answered only with their "modern colonial insufficiency."²⁴⁷

The hesitations regarding major state investment in large-scale transport and communications infrastructure were, of course, strongly affected by the vague stipulations of the 1887 treaty and the open interpretations these allowed for in terms of borders and territorial waters. The proclamation of the Portuguese and Chinese Republics, respectively in 1910 and 1911, both with their own

²⁴⁴ José Emílio de Santana da Cunha Castel Branco, *Projecto das obras a executar no Porto de Macau. Memória descritiva e justificativa precedida duma resenha histórica e seguida dum projecto de caderno de encargos e mais documentos para a execução das obras por empreitada* (Lisboa: Imprensa Nacional, 1913), 96; 267. For more on the Macao general sanitation plan, see Chapter IV.

²⁴⁵ "Macao and the Luso-Chinese Treaty," *The Hong Kong Telegraph*, July 7, 1903, in AHU, 760-11-SEMUMU-DGU mç.

²⁴⁶ Guedes, "Macau. As Obras do Porto e a Política Chinesa," 33-35.

²⁴⁷ *Ibid.*, 35, 38, 45.

powerful and opposing nationalistic streaks, only compounded the frictions over the bargaining table, where no consensus would be reached until the aftermath of the Second World War.²⁴⁸

In what concerned the inner harbor, to which the railway project was, and would be well into the following decade, intrinsically tied,²⁴⁹ by April 1911, the new (and first officially republican) Governor Álvaro de Melo Machado (1910-1912)²⁵⁰ would express his doubts about the “overly ambitious” Castel Branco project, preferring to go ahead with a “more modest” deal he was about to break with a Hong-Kong-based British dredging company.²⁵¹ The Improvement Project was once again put on hold as permission was granted from metropolitan Government to dredge the access sea channel to the south of the peninsula,²⁵² even though all three engineers had declared that this was never part of their project and solely the Governor’s idea.²⁵³

Dredging started in June 1911, once again putting Qing local delegates, already on edge about looming republican uprisings, on full nationalistic mode. In July, the Viceroy of Canton started raining down protests printed in the local press, stating that Portugal had no right to territorial waters and that its true purpose in harbor development was surreptitiously to annex more land in the islands around the Macao peninsula.²⁵⁴ The breakout of the Wuchang revolt in October, however, probably

²⁴⁸ Santos, *Macao: o pequeníssimo dragão*, 40.

²⁴⁹ Hugo Carvalho de Lacerda, “A valorização do novo porto de Macau como base de maior ressurgimento da colónia,” in *Congresso Colonial Nacional de 8 a 15 de Maio de 1930. Actas das sessões e teses* (Lisboa: Sociedade de Geografia de Lisboa, 1934), 16. Much as would happen to the Inner Harbor Improvement Project, the Macao-Canton railway idea fell through in 1919, probably due to the same political pressures, having been replaced by a motorway project.

²⁵⁰ Álvaro de Melo Machado was serving in Macao as the Government’s Secretary-General when the republican proclamation in Lisbon reached the Far East, by telegraph, some days after the actual October 5, 1910 revolution. Governor Eduardo Augusto Marques had been ordered to stay in office, having decided to mark the transition through a public ceremony six days later. On November 17, Melo Machado was officially appointed Governor. Public life more or less continued as it was. In the new Governor’s words, “before the proclamation, there were no republicans in Macao, and after it there were no monarchists.” See Célia Reis, “Conjuntura e vida política,” in *História dos Portugueses no Extremo Oriente*, ed. A. H. de Oliveira Marques, vol. 4 (Lisboa: Fundação Oriente, 2003), 18-22.

²⁵¹ AHU, AHU-ACL-SEMU-DGU-3R-002, Cx.0002, Letter n°29 from the acting Governor of Macao, Álvaro de Melo Machado, to the Minister of the Overseas, regarding the inner harbor improvement project, April 14, 1911.

²⁵² AM, MO/AH/AC/SA/01/02846, Letter n°57 from the acting Governor of Macao, Álvaro de Mello Machado, to the Minister of the Overseas, regarding the inner harbor improvement project, May 31, 1911.

²⁵³ Castel Branco, *Projecto das obras a executar no Porto de Macau*, 51. See also Guedes, “Macao. As Obras do Porto e a Política Chinesa,” 17-18.

²⁵⁴ AM, MO/AH/AC/SA/01/03218, Information regarding the protest by the Chinese authorities against the inner harbor dredging work, July 19, 1911.

led to a quieting down of the political contestation, as dredging seems to have proceeded as scheduled.²⁵⁵

Governor José Carlos da Maia (1914-1918), arriving in June 1914, endeavored once more to take up the Castel Branco Project, with the support of new Public Works Director Raúl Machado de Faria e Maia, launching the first Patane reclamations in December 1915 (Figs. 169 to 172).²⁵⁶ One year later, however, Governor Carlos da Maia was exonerated and ordered back to Lisbon, under the accusation of abuse of power.²⁵⁷ Budget was drastically cut by the metropolitan government, leading the work to a full stop in April 1917.²⁵⁸

The very last effort to relaunch the Inner Harbor Improvement Project would be attempted by Macao-born Minister of the Colonies João Tamagnini de Sousa Barbosa in Mai 1918, by separating the harbor from general Public Works management, and putting Vice-Admiral and hydrograph engineer Hugo Carvalho de Lacerda Castelo Branco (1860-1944)²⁵⁹ at the helm of the newly created Committee for the Improvement of the Macao Harbors (*Missão de Melhoramentos dos Portos de Macau*).²⁶⁰

Seven years prior, Hugo Carvalho de Lacerda was serving his commission as Harbor Captain in Macao when Governor Álvaro de Melo Machado put him in charge, on December 22, 1911, of the

²⁵⁵ The Wuchang revolt, which started in the beginning of October 1911, was an armed uprising against Qing rule in the Hubei central China province. It is considered to have been the beginning of the Xinhai Revolution which overthrew the imperial power and established the Republic of China upon the abdication of the Last Emperor, on February 12, 1912.

²⁵⁶ AHU, 2536-1B-MU-DGFTO mç., Harbor Works report from December 2, 1915 to May 31, 1916 by Administrative Council delegate Raúl Machado de Faria e Maia, May 31, 1916.

²⁵⁷ Barbosa, “Sobre as Obras do Porto de Macau,” *Gazeta das Colónias*, Ano I, 1 (1924): 23-24. Governor José Carlos da Maia was exonerated and consequently left Macao in 1916, having been reinstated in 1918 by João Tamagnini de Sousa Barbosa himself, during his tenure as Minister of the Colonies (1917-1918). Carlos da Maia never returned to Macao, though, having asked that the local Government Council continue to replace him, until the appointment, in October 1918, of Minister Barbosa’s brother, new Governor Artur Tamagnini de Sousa Barbosa (1918-1919).

²⁵⁸ AM, MO/AH/AC/SA/01/06857, Report on the Harbor Works for the year 1917/1918, September 30, 1918.

²⁵⁹ Hugo Carvalho de Lacerda Castelo Branco (1860-1944) was a naval officer and hydrograph engineer. Other than his remarkable work in Macao, Carvalho de Lacerda’s most notable commissions in the overseas happened from the 1900s on as Public Works Inspector in the African provinces, where he managed the Lourenço Marques, as well as the São Tomé and Príncipe harbor improvement projects (macauantigo.blogspot.com).

²⁶⁰ National ordinance of May 8, 1918. The Committee regulation would be published a year later. See BG, n°10, March 8, 1919, 102-104, Government of Macao local ordinance n°41, establishing the Committee for the Improvement of the Macao Harbors regulation, March 8, 1919.

ongoing dredging work.²⁶¹ A couple of months later, on assessing the terms of the second phase of the dredging contract which was about to start, he would write what would be his first report on the harbor issue, published on the Government bulletin the following April.²⁶² In it, while carefully avoiding stepping on the British dredging company's toes, Lacerda made a clear case for the necessity to resume the more comprehensive Castel Branco project under the management of a Harbor Improvement Committee, as the only viable solution to ensure the unity and coherence of the final result. Six years later, with the support of Minister of the Colonies João Tamagnini and of the Minister's brother, new Governor Artur Tamagnini de Sousa Barbosa (1918-1919), Lacerda would then find himself at the head of the newly instated Committee, intent on resuming the Patane reclamations.

Despite the work that had been carried out in 1915/1916 under the supervision of Faria e Maia, in 1918, the docks complex, as it had been imagined almost forty years before, was still in a state of "complete neglect," as the Public Works Director himself had put it in his 1917 report (Figs. 173, 174 and 175).²⁶³ Which, in turn, was no doubt somewhat similar to the unfortunate situation described by then Harbor Captain Lacerda in 1912:

Presently, there is the great bay that completely dries up on low tide, but where the junks and other boats come for shelter in times of typhoon, up to where the drafts of water allow them to come; a small reclamation under construction by the Tarrafeiro pier, next to the Lam-mau dock, which is used as a garbage and fecal dump; the Lam-mau dock [...] is used to store wood; [...] after that, a series of haphazardly built Chinese shipyards, connecting with the water by several passages cut through the riverside road, which is called Rua das Pontes ['bridges street'], in reference to the great number of bridges over those passages; [...] to the north of the bay, there is the street connecting the peninsula with Ilha Verde, over a reclamation. [...] The two small docks next to Lam-mau [...] are occupied by numerous *tancás*, which are used as dwellings, in impressive promiscuity and sordidness. This situation alone [...] calls for immediate improvement and safety measures.²⁶⁴

Lacerda and the Improvement Committee's 1918 plan was to start here in order to provide, first and foremost, a refuge for the city's river population and, secondly, a better, saner environment for the lumber and shipyard businesses. The Castel Branco project would be revised, however, in what concerned the extension of reclaimed land to the north of Ilha Verde (Fig. 176). The Abreu Nunes 1897 line between the island and Portas do Cerco was more or less taken as the new Patane

²⁶¹ AM, MO/AH/AC/SA/01/03218, Appointment of Captain Hugo de Carvalho Lacerda Castelo Branco as "delegate of the Government to the harbor dredging work," December 22, 1911.

²⁶² AM, MO/AH/AC/SA/01/03454, Report by Captain Hugo de Carvalho Lacerda Castelo Branco on the "requirements of the Macao Harbor," March 5, 1912. BG, supplement to n°13, April 4, 1912.

²⁶³ AHU, 2536-1B-MU-DGFTO mç., Harbor Works report from July 1914 to June 1917 by Administrative Council delegate Raúl Machado de Faria e Maia, June 1917.

²⁶⁴ AM, MO/AH/AC/SA/01/03454, Report by Captain Hugo de Carvalho Lacerda Castelo Branco on the "requirements of the Macao Harbor," March 5, 1912.

reclamation northern limit, with the excess dredged silt being taken to the Praia da Areia Preta, on the east side of the isthmus. This was a cautious option, as Lacerda would argue later, in view of the ever-present political frictions regarding the port issue. After the harbor works full shutdown in October 1919, Lacerda resubmitted to the Minister of the Colonies the idea of building a new artificial port on the peninsula's seaside, the future Macao Outer Harbor, which was to be accessible to transoceanic steamboats and would indeed become a reality throughout the next decade (Figs. 176 and 177).²⁶⁵

The forty-year inner harbor improvement plan had thus come to a more or less definitive end, leaving behind a desolate landscape of unfinished work (Figs. 178 and 179), and bitter public works engineers. Case in point, Miranda Guedes would write in 1920:

To go from a project, accepted with such difficulties on account of it being too grand, it was said, and which, to this day, still hasn't been built, to another arch-grand project, sprinkled with fantastic visions of tourism and Eldorados, coming from the other side of the Pacific,²⁶⁶ precisely at a time when thirty thousand Chinese, representing a third of their respective population, have abandoned Macao, in an afflictive exodus, and when the minuscule ongoing dredging and reclamation works have been forcibly suspended... isn't this too much wishful thinking, reminiscent of the old and wise saying 'he who wants it all may lose it all'?²⁶⁷

Indeed, and despite Lacerda's high hopes and ambitious projects, which were even published by the government in the already-mentioned 1927 general map (Fig. 180) as a way to project confidence in the future of Macao,²⁶⁸ the early 1920s would see emerge new voices of doubt and criticism, such as that of former Minister João Tamagnini,²⁶⁹ whether regarding the terms of the building concession contract made with the Netherlands Harbor Works Company in 1922,²⁷⁰ the local government's intention of placing the Outer Harbor management in the hands of an international trust under British influence or, again, the ever-present hesitations over financial

²⁶⁵ Lacerda, "A valorização do novo porto de Macau," 10-11. See also Hugo Carvalho de Lacerda, *Porto Artificial na Rada de Macau. Anteprojecto. Discussões a que deu lugar e resumo de documentos principais que lhe dizem respeito até a sua aprovação definitiva* (Macao: Conselho de Administração das Obras dos Portos de Macau, 1921) 1-4.

²⁶⁶ At that time, the new Macao Outer Harbor project was being promoted, together with the Macao-Canton railway concession, by a Canadian enterprise, the Pacific Construction Company. See Guedes, "Macao. As Obras do Porto e a Política Chinesa," 28, 47.

²⁶⁷ Guedes, "Macao. As Obras do Porto e a Política Chinesa," 30.

²⁶⁸ For more on the 1927 Macao general map, see Chapter IV.

²⁶⁹ Barbosa, "Sobre as Obras do Porto de Macau," *Gazeta das Colónias*, Ano I, 1 (1924): 24.

²⁷⁰ The Netherlands Harbor Works Company was chosen by the Macao Harbor Works Department, under Vice-admiral Hugo Carvalho de Lacerda's direction, and through a public tender, to build the first section of the city's Outer Harbor in September 1922, with the official concession contract being signed on October 12, that same year. For more on this subject, see Conselho de Administração das Obras dos Portos de Macau, *Contrato entre a Direcção das Obras dos Portos e a Casa Construtora Nederlandsche Maatschappij Voor Havenwerken*, Macau: Imprensa Nacional, 1922 (AHU, 1725-B 1C MU DGCO r mç.).

burden vs. exploitation yield.²⁷¹ As seen in Figures 178 and 179, though, some of Lacerda's ideas for the inner harbor would actually be carried out throughout the 1920s and 1930s, simultaneously with the outer harbor reclamations. Indeed, looking at the 1941 aerial photograph of the Macao peninsula (Fig. 181), as well as at its interpretation plan focusing on the Patane area (Fig. 182), we can see that a new riverside avenue did, in fact, materialize, connecting the old Tarrafeiro district up to the Ilha Verde dam avenue and thence to the Portas do Cerco road. Linked to this improvement is the new Mong-ha district, with its grid of avenues, all leading up to the new Patane piers and shipyards. And some new reclamations as well, the most important of which would develop, mainly in the post-World War II years, into the first large-scale and long-sought working-class housing districts in Macao, just south of Portas do Cerco.

* * *

In this account of the Macao Inner Harbor Improvement Project forty-year deadlock, I have painted a picture of political inertia as a set of complex hesitations and indecisions dragging through the years. With both local and metropolitan causes, engaging in delicate and unresolved issues of regional politics, namely the everlasting sovereignty dispute over the Macao peninsula and territorial waters, but also in economic, political and social issues. In the context of the nineteenth century Portuguese colonial momentum in Macao, a great deal of this inertia, affecting the outcome of the Harbor as well as of other grand-scale projects, was probably coming from a grave discrepancy between the positivist imagining of the province in an equally imagined gloriously ancient Empire, and both realities in the context of the Portuguese possessions' role in the global political and commercial networks.

As had been repeatedly pointed out since the beginning of the harbor improvement discussion, after the First Opium War, Macao had been reduced to an intermediary outpost between the interoceanic routes coming to Hong Kong and the West Pearl River Delta provinces. Nothing more, but also nothing less. By the same token, and despite its techno-scientific elites' best efforts, the Portuguese Empire was no match for the rest of the European imperial powers, and particularly for the British so-called "global thalassocracy."²⁷² Not because science and technology were unknown or out of reach, nor due to poor administrative or budgetary management, on the contrary, Portugal in the long Regeneration period (1850s to the 1920s) could very well be described as a well-oiled and

²⁷¹ The successes and failures of the Macao Outer Harbor should make for a rich and interesting topic of subsequent and complimentary research.

²⁷² Headrick, *The tools of Empire*, 175.

smooth-running modern imperial enterprise, but probably because Portuguese economy wasn't dynamic enough to get the transcontinental industrial dream of territorial interconnectivity going. As such, this century-old empire would eventually persevere into the twentieth century, mostly by adopting a strategy of collaboration with the multidirectional political pressures of the European age-of-empire scramble, not just for Africa, but for the whole of the global South's networks of influence.

Be that as it may, and pushed by those same techno-scientific elites, the material improvements philosophy would lead to important interventions in Macao, as in other metropolitan and overseas cities over the turn of the century. All around, though, the State's relatively meager means meant that infrastructural projects concerning other than the prioritized African and Indian provinces, in which (predominantly) British pressure to demonstrate effective colonization through urban and infrastructural development was more intense, often ended up at the bottom of the Public Works Departments' drawers. Maybe, as in Lisboa de Lima's account of the underdeveloped Timor province,²⁷³ a little more distance to the overbearing and indecisive metropolis would have gone a long way in keeping the 1850s-through-1870s colonial momentum going in Macao, allowing perhaps for a more consensual, and locally promoted Harbor Improvement solution to be found.

²⁷³ Lima, "Portos Comerciais Portugueses," 17.

Perspectives on Modernity and Conservation

Focused on shedding light on the advent of nineteenth century modernity in Macao through the prism of urban history, this thesis has undertaken to observe and make sense of urban transformation. It has tried to unravel, in both written and mapping forms, the attempts at transition of this Portuguese provincial city, from ‘unsanitary’ to ‘sanitary’, from geometrically ‘disordered’ to ‘planned’, from ‘divided’ in its sovereignty to ‘united’, as epitomized by the 1909 introductory citation by Director of Public Works Miranda Guedes, which reflected its conceptualization precisely by its most fervent advocates, the public works and public health experts. A process of transition effectively centered around the gradual destruction, restructuring and expansion of an early-modern urban landscape in the name of the province’s progress and socio-political regeneration. In Macao, as in most Portuguese and European cities throughout the world, the material result of this process would be something akin to an achievable modernity by an achievable empire, in the sense that it was an adequate compromise reached between the techno-scientific experts’ vision and the state’s political, financial and social means to achieve it.

Immediately in the years following the First Opium War, the issue of asserting exclusive Portuguese sovereignty over the territory acquired a fundamental expression in the control and management of the urban ground. Initially with Governor Ferreira do Amaral’s Campo roads, stretching the governance territorial limits up to the isthmus barrier and, ten years later, with Governor Guimarães’ taking advantage of the 1856 fire in the Chinese Bazaar to impose cadastral and population surveys, government-registered property titles, property taxes and building regulations, all providential instruments of scientific measurement, knowledge, and interconnected juridical regulation to assert Portuguese administrative legitimacy. Particularly, the Governor’s swift action in planning and building this exclusively Chinese district’s first regular-layout urban extension in the wake of the fire would have ground-breaking significance, not just in terms of introducing the first elements of change into the Macanese urban landscape, but also in what it meant for its communities.

The booming city building and urban regeneration enterprise, in Macao as throughout the post-Opium War European concessions in the South China sea, would become a proverbial land of opportunity for the local Chinese fortunes. The Bazaar first government-led reconstruction and expansion twenty-year timespan, for instance, would see the emergence and consolidation of a fundamental bond between Portuguese sovereignty and Chinese entrepreneurship, which would prove decisive in the making of Macao's modern urban landscape for decades to come. As, even if the urban layout would indeed be planned by the public works engineers in charge of the operation, as would happen in most of the subsequent city restructuring and extension plans, the capital and workforce, as well as the architectural typology of the units composing the new geometrically optimized urban fabrics were, more often than not, of Chinese origin.

In the regularly-aligned 1850s through 1870s new Chinese Bazaar, the immediate material result of this changing social, political and technical dynamics was the emergence of the shophouse as the typological instrument for the maximization of house space and urban density. Built by adapting Southern China regions' low and middle-class housing architectural and construction vocabularies and materials to the space optimization effort of the real estate development plan, it became the quintessential commercial and residential unit of modernized Macao working-class urban living. A new moderate-cost Chinese housing typology in a new liberally-managed urban landscape.

The 1880s saw an increase on the Portuguese Regeneration effort towards establishing state hegemony over the Macanese territory, in the same way and with the same techno-scientific, legal and governance tools that were being concurrently used in the metropole and throughout the Empire. Perhaps more importantly, the paths of political economy and political medicine were being pushed, in the province, by the same group of engineering and public health experts circulating in the imperial networks of public service and public office. In this sense, I have ventured that the Regeneration Portuguese Empire was a thoroughly connected one, if not quite in terms of transportation and communication infrastructures, at least in terms of techno-scientific knowledge. One of its most interesting features being that it was no longer to come about, to materialize, solely through the development of State-led road, railway, and harbor works, but clearly also through what was to become an institutionalized system of State-managed territorial control and local urban planning built around the 1864-instituted General Improvement Plan.

However, such modernizing purpose, carried by the local Public Works and Public Health officials, was often met on the ground with resilient traditions of autonomous city-building. From the local entrepreneurs' point of view, especially the Chinese community, for which the path to formal citizenship and political representation was barred regardless of their social and financial prominence in Macanese society, resorting to practices of negotiation held the key to informal urban citizenship. Asserting their respective powers through balancing claims and concessions regarding city ground and city-building, the interactions between government institutions and their

‘subjects’ portray a rather ambiguous and nuanced imperial reality, quite far from the top-down authoritative stereotype of modern colonial governance.

This institutional and entrepreneurial dynamic, together with exceptional circumstances brought about by a series of epidemic occurrences in the Pearl River Delta region towards the end of the century, among which the 1894/1895 bubonic plague outbreak-turned-pandemic would definitely have the most enduring impact, would foster the first urban sanitation experiences in Macao. Directed exclusively towards the Chinese working-class districts, deemed interrelatedly as unhealthy and uncivilized, these operations aimed at establishing, first and foremost, generalized water and drainage infrastructures, which were considered to be, by the industrial-age techno-scientific experts in the Chadwickian tradition, as the base of the modern urban hygiene and material improvement philosophies regarding the city. Coupled with the proclaimed universal prophylaxis/panacea of ‘air and light’, which was starting to be codified at that same time, through the shared knowledge on similar operations throughout the overseas European settings, into the rules of urban planning for the tropics, or ‘tropical planning’, this sanitation strategy typically consisted in vast land resumption operations, followed by rational, geometrically regular, urban restructuring plans.

In Macao, the latter operation, carried out on the S. Lázaro suburb over the turn of the century, would also set the stage for the evolution of the traditional shophouse into an avant-garde hygienic housing typology, giving rise to the Portuguese Empire being able to claim the success of its techno-scientific civilizing mission in the international stage. On the crest of such achievements, local administration would turn its eyes back towards the Chinese Bazaar, the city’s last symbolic stronghold of the old divided sovereignty system and its century-old practices of *laissez-faire* space appropriation.

The early 1900s Chinese Bazaar improvement projects took the Chadwickian environmentalist ambition to a whole new level in terms of the scale of the envisioned resumption plan. Inspired mainly by the formal and juridical expressions of the Lisbon General Improvement Plan, which had been conceived as an extension plan guided by a system of avenues, the Macao equivalent would venture far beyond in its restructuring ambitions, suggesting not only the urbanisation of the whole agricultural northern periphery, but also the obliteration of almost every single historic district under an all-encompassing geometrically regular grid.

This was not to be, though, probably due to the lack, in Macao, of at least one of the three pillars holding the long nineteenth century Parisian capitalist landscape model together: there was the technical expertise, to be sure, a fairly vigorous political determination as well, although with maybe a slightly less enthusiastic treasury, but no particularly forceful private investment momentum. At least not as dynamic and enduring as required for such an ambitious general plan. As a result, and over the course of a few decades, only some of the projected new arteries and

districts would see the light of day, among which the Chinese Bazaar New Avenue would definitely stand out as the most emblematic: a geometrical solution, or urban infrastructural instrument, to a pre-industrial town's negotiation in urban modernity and sanitation. Its own marker of modernity, so to speak.

Throughout the many formulations of the Macao general improvement plan, from the 1880s to Public Works Director Miranda Guedes 1909 ambitious report, the city's ultimate marker of modernity would have been, in the minds of the many officials involved during its forty-year discussions, the Inner Harbor Improvement Project. It would never come about, though, to the dismay of the Portuguese overseas experts and strategists, due to intertwining local and metropolitan causes engaging in delicate and unresolved issues of regional politics, namely the everlasting sovereignty dispute over the Macao peninsula and territorial waters.

In the context of the nineteenth century Portuguese colonial momentum in Macao, a great deal of this inertia, affecting the outcome of the Harbor as well as of other grand-scale projects, was probably coming from a grave discrepancy between the positivist imagining of the province in an equally imagined gloriously ancient Empire, and both realities in the context of the Portuguese possessions' role in the global political and commercial networks.

As had been repeatedly pointed out since the beginning of the harbor improvement discussion, after the First Opium War, Macao had been reduced to an intermediary outpost between the interoceanic routes coming to Hong Kong and the West Pearl River Delta provinces. Nothing more, but also nothing less. By the same token, and despite its techno-scientific elites' best efforts, the Portuguese Empire was no match for the rest of the European imperial powers, and particularly for the British so-called global thalassocracy. Not because science and technology were unknown or out of reach, nor due to poor administrative or budgetary management, on the contrary, Portugal in the long Regeneration period (1850s to the 1920s) could very well be described as a well-oiled and smooth-running modern imperial enterprise, but probably because Portuguese economy wasn't dynamic enough to get the transcontinental industrial dream of territorial interconnectivity going. As such, this century-old empire would eventually persevere into the twentieth century, mostly by adopting a strategy of collaboration with the multidirectional political pressures of the European age-of-empire scramble, not just for Africa, but for the whole of the global South's networks of influence.

The Portuguese Estado Novo (1933-1974) would subsequently launch another stage of empire, formally its last, the impact of which in the Chinese SAR should be interesting to measure through looking at the successes and failures of the Macao Outer Harbor Project as a starting point. The comparative analysis of both this and the urban expansion schemes around the old inner harbor project site may constitute an interesting line of future work, in the sense of continuing the search for the norms and forms of now twentieth-century urban modernity in Macao. An urban modernity by then moving slightly away from the overbearing metropolis, due to the changing internal and

external political context of both the Portuguese and Chinese Republics, and probably also closer to being reconciled with its own place in the Southern China Sea regional dynamics.

As it grappled with urban transformation, however, this thesis also had another product of nineteenth century modernity in mind: heritage conservation. Although this would definitely make for an exciting whole other topic of research, here it was envisioned, through some succinct entry points, as a possible operational path for the thesis in the context of current urban planning practices in the Macao SAR. Overall, the idea was to start an approach to heritage conservation in the context of a more integrated sort of city planning by increasing historical knowledge in order to ultimately better understanding this modern landscape in all its visually diverse features. This included the Chinese Bazaar shophouse typology, its evolution into middle-class residential districts in a tropical planning experimentation context, the old districts' gutting and restructuring projects, new avenues, city expansion and the disappearance of traditional agricultural settings and communities, new coastlines, new grounds, new harbors, and ever-changing connection channels to local and international interests.

Better understand and better document the past, so as to better decrypt the present and, hopefully, better factor these elements in terms of their universal value in preserving them for the future. Even in present-day Macao, with its status as the gambling capital of the world, I believe that, when appropriately integrated in the planning tools, the operability of historical knowledge on the layering of the urban landscape may hold a key to taking the World Heritage property from tourist attraction to instrument and guarantor of a more sustainable urban change.

To conclude, and looking towards a broader perspective within in the postcolonial conceptual framework, itself still very much under the influence of the lasting Eurocentric vision of the world produced by the age of imperialism, setting modern vs. traditional environments and equating these respectively with Western vs. non-Western societies, the purpose of producing globally aware case studies must be to help dissolve these dichotomies into a more complex, multicentered, architectural and urban history. As such, by shedding light on the Third Portuguese empire's political, juridical and administrative machinery by historicizing government sponsored public works and urban planning in Macao, this thesis may also contribute, I would hope, to foster the current discussion on disassembling some common misconceptions regarding the Portuguese nineteenth-century failed modernization and weak imperial power, and to reconcile the historiographical understanding of metropolitan and peripheral, Northern and Southern (European), Western and non-Western modernities into a single, if diverse, narrative of modernity.

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445-1B-SEMUDGU

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451-1H-SEMUDGU mç.

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Letter n°71 from the Governor of Macao, Arnaldo Novais Guedes Rebelo, to the Minister of the Overseas, regarding the inner harbor improvement project, April 22, 1903.

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252-2G-1S-MU ex.

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2536-1B-MU-DGFTO mç.

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260-2G-1S-MU-DGFTO ex.

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MO/AH/AC/SA/01/00003

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MO/AH/AC/SA/01/00113

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MO/AH/AC/SA/01/00136

Letter n°98 from Macao Public Works Director Francisco Jerónimo Luna to the Government Secretary-General, regarding the expropriation of a plot in the Horta da Mitra, May 30, 1873.

MO/AH/AC/SA/01/00205

Letter n°169 from the Macao Treasury Department secretary to the Government Secretary-General, regarding the request by entrepreneur Miguel Ayres da Silva to carry out the construction of a new inner harbor reclamation, **June 7, 1877 (transcribed in Volume 3 - Annexes).**

MO/AH/AC/SA/01/00278

Undated letter from Miguel Ayres da Silva to the government Secretary-General, October 1879, filed between the letter n°60 from Macao Public Works Director, October 22, 1879, and a request from entrepreneur Miguel Ayres da Silva, October 28, 1879. Includes the plan and elevation for the first block of the new inner harbor reclamation, MNL.03.18.Cart.

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Letter n°60 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, November 29, 1880.

Letter n°8 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, January 29, 1881.

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Letter n°15 from Macao Public Works Director Constantino José de Brito to the Government Secretary-General, regarding construction on the new inner harbor reclamation, February 14, 1882.

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MO/AH/AC/SA/01/00365

Letter n°62 from Macao Public Works Director Raimundo José de Quintanilha to the Government Secretary-General, regarding the new inner harbor reclamation project, September 21, 1881.

MO/AH/AC/SA/01/00411

Letter n°127 from the Macao Treasury Department secretary to the Government Secretary-General, regarding a donation of an urban plot on the new inner harbor reclamation, by entrepreneur Miguel Ayres da Silva, May 19, 1882.

MO/AH/AC/SA/01/00470

Letter n°7 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Joaquim José da Graça, requesting the drafting of the city of Macao General Improvement Plan, **February 10, 1883 (transcribed in Volume 3 - Annexes)**.

MO/AH/AC/SA/01/00580

Letter n°30 from the President of the City Senate, Domingos Clemente Pacheco, to the Governor of Macao, Tomás de Sousa Rosa, regarding a donation of an urban plot and 16 houses by entrepreneur Miguel Ayres da Silva, April 21, 1884.

MO/AH/AC/SA/01/00740

Letter n°124 from Public Works Director José Maria de Sousa Horta to the Government Secretary-General regarding the inner harbor improvement, September 16, 1886.

Letter n°26 from Harbor Captain António Teodorico da Costa e Silva to the Government Secretary-General regarding the inner harbor improvement, September 17, 1886.

MO/AH/AC/SA/01/00750

Horta da Mitra improvement plan by Public Works Director José Maria de Sousa Horta e Costa, **May 29, 1886 (transcribed in Volume 3 - Annexes)**.

MO/AH/AC/SA/01/00846

Letter n°200 from Macao Public Works Director José Maria de Sousa Horta e Costa, to the Government Secretary-General, asking permission to subscribe to several architectural and engineering journals, October 27, 1887.

MO/AH/AC/SA/01/01325

Letter n°39 from the Macao Public Health Director, José Gomes da Silva, to the Government Secretary-General, concerning the need for a sanitation project regarding the Sakong district and the Sankiu canal, October 24, 1892.

MO/AH/AC/SA/01/01372

Letter n°69 from the Macao District Administrator (*Administrador do Concelho*) to the Government Secretary-General, regarding a sanitary inspection to several districts, May 3, 1893.

MO/AH/AC/SA/01/01492

Letter from the Portuguese acting consul in Canton to the Governor of Macao, regarding the bubonic plague epidemic in the region, **June 16, 1894 (transcribed in Volume 3 - Annexes)**.

MO/AH/AC/SA/01/01495

Horta de Volong resumption plan by Public Works Director Augusto César de Abreu Nunes, **June 27, 1894 (transcribed in Volume 3 - Annexes)**.

MO/AH/AC/SA/01/01554

Letter n°30 from Macao Public Works Director, Augusto César de Abreu Nunes, to the Government Secretary-General, regarding the Horta de Volong resumption project, **March 4, 1895 (transcribed in Volume 3 - Annexes)**.

MO/AH/AC/SA/01/01802

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MO/AH/AC/SA/01/01862

Letter n°4 from the President of the City Senate, António Joaquim Basto, to the Governor of Macao, Eduardo Augusto Rodrigues Galhardo, regarding the construction of the new S. Domingos market, **January 25, 1898 (transcribed in Volume 3 - Annexes)**.

MO/AH/AC/SA/01/02814

Letter n°12 from the president of the Chinese Bazaar Improvement Committee to the Government acting Secretary-General, regarding the Bazaar resumption plan for the year 1910, September 3, 1910.

MO/AH/AC/SA/01/02846

Letter n°57 from the acting Governor of Macao, Álvaro de Mello Machado, to the Minister of the Overseas, regarding the inner harbor improvement project, May 31, 1911.

Correspondence between the acting Governor of Macao, Álvaro de Mello Machado, with the acting Consul of Canton regarding a protest by the Chinese authorities against the inner harbor dredging work, June 25, 1911.

MO/AH/AC/SA/01/03209

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MO/AH/AC/SA/01/03218

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MO/AH/AC/SA/01/03454

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MO/AH/AC/SA/01/06857

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MO/AH/AC/SA/01/07377

Note n°1245 from the Government Secretary-General to the Procuratorate for Chinese Affairs regarding the expropriation of several buildings in the context of the Chinese Bazaar sanitation plan, July 23, 1919.

MO/AH/AC/SA/01/27080

Note regarding the expropriation settlements in the S. Lázaro and Tap-seac districts, July 5, 1900.

Expropriation settlements in the S. Lázaro and Tap-seac districts, October 24, 1900.

Expropriation settlements in the S. Lázaro district, March 15, 1901.

Expropriation settlements for the construction of the new S. Domingos market, May 15, 1901.

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Expropriation settlements in the Mong-ha district, August 2, 1901.

Expropriation settlements in the Mong-ha district, August 27, 1902.

Expropriation settlements in the Lin-tin-chin district, May 11, 1907.

Expropriation settlements in the Chinese Bazaar, September 17, 1908.

MO/AH/AC/SA/01/27082

Letter n°133 from the Macao Chinese Bureau to the Government Secretary-General, sending translations of several news articles published in Hong Kong papers, December 2, 1907.

MO/AH/AC/SA/01/27095

Letter n°259 from Macao Public Works Director, Augusto César de Abreu Nunes, to the Government Secretary-General, listing the most important public works to be undertaken in Macao, **October 27, 1900 (transcribed in Volume 3 - Annexes).**

MO/AH/AC/SA/01/27147

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BG, Boletim do Governo da Província de Macau ('Government of Macao Official Bulletin'),
in reference to: *Boletim do Governo da Província de Macau, Timor e Solor (1846-1856)*, *Boletim do
Governo de Macau (1856-1867)*, *Boletim da Província de Macau e Timor (1867-1890)*, *Boletim Oficial
do Governo da Província de Macau e Timor (1891-1896)* and *Boletim Oficial do Governo da Província
de Macau (1896-1913)*.

BG, n°7, February 18, 1847, 26, Letter from Caetano Gomes da Silva to Governor of Macao João Maria
Ferreira do Amaral, donating a strip of land situated in his so-called Horta Begman property, for the
construction of one of the Campo new roads, February 17, 1847.

BG, n°7, May 22, 1847, 75, Transcription of the list of subscribers to Governor of Macao João Maria Ferreira
do Amaral's fundraiser for the construction of the Campo new roads.

BG, n°64, May 12, 1849, 23-24, Transcription of the balance of receipts and expenditures regarding the construction of the Campo new roads, December 31, 1848.

BG, n°12, June 3, 1852, 48, National ordinance of December 11, 1851, granting Alexandrino António de Melo the title of Baron of Cercal.

BG, n°17, December 7, 1852, 61-62, Government of Macao local ordinance (*portaria*) n°101, regarding the establishment of the cadastre for the peninsula's farmlands, November 5, 1852.

BG, n°11, **January 5, 1856**, 42-43, Information regarding the January 4 fire in the Chinese Bazaar **(transcribed in Volume 3 - Annexes)**.

BG, n°12, January 12, 1856, 72-73, Government of Macao local ordinance (*portaria*) n°2, regarding the rebuilding of the Chinese Bazaar, **January 7, 1856 (transcribed in Volume 3 - Annexes)**.

BG, n°12, January 12, 1856, 72-73, "Instructions for rebuilding the Bazaar" by Governor Isidoro Francisco Guimarães, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

BG, n°12, January 12, 1856, 72-73, Public notice (*edital*) by Governor Isidoro Francisco Guimarães, regarding the rebuilding of the Chinese Bazaar, January 11, 1856.

BG, n°13, January 19, 1856, 49, Public notice by Milner, Marques and Silva, regarding the rebuilding of the Chinese Bazaar, **January 8, 1856 (transcribed in Volume 3 - Annexes)**.

BG, n°13, January 19, 1856, 49, Public notice by Milner, Marques and Silva, regarding the rebuilding of the Chinese Bazaar, January 13, 1856.

BG, n°14, January 26, 1856, 53, Government of Macao local ordinance n°6, regarding the rebuilding of the Chinese Bazaar, January 22, 1856.

BG, n°15, February 2, 1856, 57, Government of Macao local ordinance n°7, regarding the rebuilding of the Chinese Bazaar, January 30, 1856.

BG, n°21, March 15, 1856, 81, Public notice by Governor Isidoro Francisco Guimarães, regarding the rebuilding of the Chinese Bazaar, March 14, 1856.

BG, n°30, May 21, 1859, 117, Review of the gaming concessions for the years 1851-1859 and of the Fantan concession since its establishment in 1849.

BG, n°40, July 30, 1859, 157-159, Province of Macao's budget for the year 1858/1859.

BG, n°1, December 9, 1859, 1-2, regarding a fundraiser to fund construction work in the Tarrafeiro district.

BG, n°23, May 12, 1860, 89-90, Copy of the minute report from the City Senate (*Senado da Câmara*) meeting, detailing an inspection to the Bazaar streets, on February 14, 1860.

BG, n°32, July 14, 1860, 125, Public notice by the City Senate, informing of the establishment of construction permits, on July 11, 1860.

BG, n°24, May 18, 1861, 93, Draft law (*projecto de lei*) presented in the House of Representatives (*Câmara dos Deputados*) by Joaquim José Gonçalves de Matos Correia, representative from Macao, on March 13, 1861.

BG, n°16, March 22, 1862, 61, Government of Macao local ordinance n°10, regarding the establishment of the city cadastre, March 15, 1862.

BG, n°33, July 19, 1862, 132, Address by Joaquim José Gonçalves de Matos Correia, representative from Macao, to the House of Representatives, on April 25, 1862.

BG, n°9, January 31, 1863, 33-34, National ordinance of November 26, 1862, establishing the framework for the naturalization of the Chinese and management of their inheritances under Portuguese citizenship.

BG, n°30, June 27, 1863, 118, Report from the president of the Government Council, J. Ferreira Pinto, delivered at the investiture session for Governor José Rodrigues Coelho do Amaral, on June 23, 1863.

BG, n°20, May 16, 1864, 78-80, Address by the Minister of the Overseas to the House of Representatives, on **January 23, 1864 (transcribed in Volume 3 - Annexes)**.

BG, n°13, March 28, 1864, 49-51, Government of Macao local ordinance n°4, establishing the Macao Public Health regulation, March 22, 1864.

BG, n°38, September 19, 1864, 151-152, “Unofficial section” regarding the enforcement in the overseas provinces of the existing national legislation on expropriation for public use.

BG, n°40, October 3, 1864, 159-160, Address by Joaquim José Gonçalves de Matos Correia, representative from Macao, to the House of Representatives, on June 1, 1864.

BG, n°34, August 21, 1865, 135-137, Report on the Macao Public Health Department by the province’s Surgeon-General Lúcio Augusto da Silva, **June 1, 1865 (transcribed in Volume 3 - Annexes)**.

BG, n°26, June 26, 1865, 104, Government of Macao public notice, regulating the rights of the landowners on the Rua Nova de El-Rei piers, June 19, 1865.

BG, n°47, November 19, 1866, 189, Government of Macao local ordinance n°19, regarding the establishment of the Macao statistics department, November 15, 1866.

BG, n°2, January 14, 1867, 7, Information regarding several ongoing public works.

BG, n°4, January 28, 1867, 15-18, Information regarding several ongoing public works.

BG, n°6, February 11, 1867, 26, Government of Macao local ordinance n°16, regarding the inner harbor realignment project, February 8, 1867.

BG, n°8, February 25, 1867, 41, Information regarding several ongoing public works.

BG, n°9, March 4, 1867, 47, Information regarding several ongoing public works.

BG, n°12, March 25, 1867, 61-64, “Unofficial section”; Report on the responsibilities of the city of Macao’s Procuratorate for Chinese Affairs, by the committee appointed by Governor José Maria da Ponte e Horta’s local ordinances of November 22, 1866, and February 6, 1867, March 21, 1867.

BG, n°18, May 6, 1867, 97-98, Report from the Statistics Department by Manuel de Castro Sampaio, May 3, 1867.

BG, n°21, May 27, 1867, 122, Information regarding several ongoing public works.

BG, n°24, June 17, 1867, 139, Information regarding several ongoing public works.

BG, n°30, July 29, 1867, 176, Information regarding several ongoing public works.

BG, n°36, September 9, 1867, 211, Information regarding several ongoing public works.

BG, n°37, September 16, 1867, 213, Government of Macao local ordinance n°31, appointing a committee in charge of laying out “a plan to organize a public works special body to oversee this branch of service in the colony”, **September 14, 1867 (transcribed in Volume 3 - Annexes)**.

BG, n°38, September 23, 1867, 219-224, Conclusion of the population statistics report of June 14, 1867, September 17, 1867; 224-226, “Project for the organisation of a public works special body” in Macao, **September 18, 1867 (transcribed in Volume 3 - Annexes)**.

BG, n°44, November 4, 1867, 255, Public notice regarding the sale of a plot of land in Patane, by the committee for public works, October 26, 1867.

BG, n°2, January 13, 1868, 8, Information regarding several ongoing public works.

BG, n°7, February 17, 1868, 37, Notice from the Minister of the Overseas regulating the alienation of land in the overseas provinces, December 17, 1867.

BG, n°7, February 17, 1868, 38-41, Supplement to the population statistics report of January 25, 1868, February 12, 1868.

BG, n°8, February 24, 1868, 45, Information regarding several ongoing public works.

BG, n°9, March 2, 1868, 48, Housing statistics report of February 27, 1868.

BG, n°18, May 2, 1868, 87-88, Information regarding several ongoing public works.

BG, n°26, June 27, 1868, 117-119, Report from the statistics department regarding the Chinese population of Patane.

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BG, n°49, December 7, 1868, 226-227, Report from the advisory committee in charge of studying the “alterations that must be made to the Administrative Code of March 18, 1842, that it may [...] be enforced in this colony”.

BG, n°11, March 15, 1869, 63, Government of Macao local ordinance n°44, appointing a committee in charge of surveying and establishing the names of the city’s public spaces, March 12, 1869.

BG, n°30, July 26, 1869, 141, Report from the committee in charge of surveying and setting the names of the city’s public spaces, by head of the statistics department Manuel de Castro Sampaio, appointed by Governor Sérgio de Sousa.

BG, n°10, March 7, 1870, 42-47, National ordinance of **December 3, 1869**, organizing “the Overseas public works department” (“*serviço das obras públicas no Ultramar*”) (**Preliminary report transcribed in Volume 3 - Annexes**).

BG, n°13, March 25, 1870, 59, Government of Macao local ordinances n°22 and n°23, regarding, respectively, the confirmation of the Macao public works staff and the establishment of the Macao public works technical council, March 23, 1870.

BG, n°46, November 14, 1870, 193-194, “Report on the Macao Public Health Department, relating to the years 1865-1867” by the province’s Surgeon-General Lúcio Augusto da Silva, **April 26, 1868 (transcribed in Volume 3 - Annexes)**.

BG, n°52, December 26, 1870, 218-219, Report on the Macao Public Health Department relating to the year 1869, by the province’s Public Health Director Lúcio Augusto da Silva, March 10, 1870.

BG, n°14, April 3, 1875, 64-65, Report on the Macao Public Health Department following the publication of the National ordinance of December 2, 1869, organizing “the overseas provinces’ public health department,” by the province’s Public Health Director Lúcio Augusto da Silva, **April 2, 1871 (transcribed in Volume 3 - Annexes)**.

BG, n°42, October 10, 1871, 167-170, Report from the advisory committee in charge of “reviewing the Administrative Code established by the December 1, 1869 national ordinance, in order to propose the convenient amendments for the implementation of the same Code regarding the peculiar circumstances of this colony,” August 31, 1871.

BG, n°42, October 10, 1871, 167-170, Government of Macao local ordinance n°57, implementing the December 1, 1869 Administrative Code in the province of Macao, October 9, 1871.

BG, n°3, January 18, 1873, 9, Government of Macao local ordinances n°6 and n°7 regarding, respectively, the inner harbor realignment project and the drainage infrastructure project for the New Bazaar, January 17, 1873.

BG, n°16, April 19, 1873, 62, Public works report regarding the first trimester of 1873, by Lieutenant-Colonel Francisco Jerónimo Luna.

BG, n°19, May 10, 1873, 75-77, Population census of December 31, 1871.

BG, n°23, June 7, 1873, 92-93, Public works report regarding the year 1872, by Lieutenant-Colonel Francisco Jerónimo Luna.

BG, n°2, January 10, 1874, 6-8, Inauguration of the St. Januarius Military Hospital.

BG, n°23, June 6, 1874, 90-92, Report on the administration of the overseas provinces, by Minister João de Andrade Corvo, March 26, 1874.

BG, n°23, June 6, 1874, 90-92, Government of Macao local ordinance n°44 establishing the Macao public works budget for the year 1874/1875, June 2, 1874.

BG, n°27, July 4, 1874, 109-110. Information regarding the assignment of several concession contracts.

BG, n°32, August 8, 1874, 129, Inauguration of the new Indian police barracks (*Quartel dos Mouros*).

BG, n°33, August 15, 1874, 138, Notice from the Minister of the Overseas exonerating Macao Public Works Director Francisco Jerónimo Luna, June 25, 1874.

BG, n°5, January 30, 1875, 22-24, Public works report detailing the ravages of the September 1874 typhoon, by Colonel Francisco Jerónimo Luna, January 15, 1875.

BG, n°33, August 14, 1875, 139, Government of Macao local ordinance n°88, exonerating acting Macao Public Works Director Feliciano Henrique Bordalo Prostes Pinheiro and appointing Augusto César Supico for the same position, August 12, 1875.

BG, n°19, May 6, 1876, 75, Government of Macao local ordinance n°24 regarding the construction of a new slaughterhouse, May 2, 1876.

BG, n°19, May 6, 1876, 75, Public works report regarding the first trimester 1876, by Major Augusto César Supico.

BG, n°22, May 27, 1876, 87, Government of Macao local ordinance n°43, appointing a public health committee, May 23, 1876.

BG, n°28, July 8, 1876, 112, National ordinance of May 11, 1872, widening the scope of the existing legislation on expropriation for public use.

BG, n°1, January 6, 1877, 1-3, Report from the outgoing Governor, José Maria Lobo de Ávila, delivered at the inauguration ceremony for Governor Carlos Eugénio Correia da Silva, on December 31, 1876.

BG, n°4, January 27, 1877, 13, Government of Macao local ordinance n°10, reforming the 1875 committee in charge of redrafting the city cadastre, January 26, 1877.

BG, n°8, February 24, 1877, 30, Public notice by the Procurator for Chinese Affairs, regarding fire regulations and the access to private wells, February 22, 1877.

BG, n°27, July 7, 1877, 109-110, Government of Macao local ordinance n°64, establishing the concession, to entrepreneur Miguel Ayres da Silva, for the construction of a new inner harbor reclamation, **July 2, 1877 (transcribed in Volume 3 - Annexes)**.

BG, supplement to n°32, August 13, 1877, Government of Macao local ordinance n°77, establishing the end of the concession system regarding the gaming industry, August 12, 1877.

BG, n°9, March 2, 1878, 33-34, His Majesty King D. Luís' address at the opening of Parliament on January 2, 1878.

BG, n°36, September 7, 1878, 141, Notice from the Minister of the Overseas regarding the 1878 Vae-seng lottery concession, July 18, 1878.

BG, n°38, September 21, 1878, 150, Government of Macao local ordinance n°61, appointing lieutenant Demétrio Cinatti to the committee in charge of redrafting the city cadastre, September 20, 1878.

BG, n°47, November 23, 1878, 185-186, National ordinance of September 27, 1878, exonerating Macao Public Works Director Augusto César Supico and appointing Raimundo José de Quintanilha for the same position.

BG, n°26, June 28, 1879, 138-139, Government of Macao local ordinance n°59, regarding the new inner harbor reclamation project, June 27, 1879.

BG, n°32, August 9, 1879, 171, Government of Macao local ordinance n°83, regarding a construction project for a new dock in the Praia Grande bay, August 1, 1879.

BG, n°39, September 27, 1879, 223, Minute from the Government Council session of June 6, 1877, regarding the new inner harbor reclamation project.

BG, n°40, October 4, 1879, 231, Government of Macao local ordinance n°122, regarding lieutenant Demétrio Cinatti's work on the committee in charge of redrafting the city cadastre, October 1, 1879.

BG, n°41, October 11, 1879, 251-252, Minute from the Government Council session of **June 26, 1879**, regarding the new inner harbor reclamation project (**transcribed in Volume 3 - Annexes**).

BG, n°10, March 6, 1880, 64, Government of Macao local ordinance n°13, regarding the new inner harbor reclamation project, March 3, 1880.

BG, supplement to n°52, December 25, 1880 and December 31, 1880, 1-47, Population census of December 31, 1878.

BG, n°10, March 5, 1881, 61, Government of Macao local ordinance n°35, regarding the new inner harbor reclamation project, March 4, 1881.

BG, n°21, May 21, 1881, 131, Notice from the Minister of the Overseas regarding construction regulations in the new inner harbor reclamation project, March 22, 1881.

BG, n°21, May 21, 1881, 131, National ordinance of March 23, 1881, exonerating Macao Public Works Director Raimundo José de Quintanilha and appointing Constantino José de Brito for the same position.

BG, n°47, November 19, 1881, 344, Government of Macao local ordinance announcing that Constantino José de Brito has taken office as Macao Public Works Director, November 14, 1881.

BG, n°10, March 11, 1882, 78-79, Government of Macao local ordinance n°19, altering the concession contract with entrepreneur Miguel Ayres da Silva, regarding the new inner harbor reclamation project, **March 6, 1882 (transcribed in Volume 3 - Annexes)**.

BG, n°16, April 22, 1882, 136, Notice from the Minister of the Overseas regarding the enforcement of sanitary policies in the overseas provinces, February 4, 1882.

BG, n°28, July 15, 1882, 236, Government of Macao local ordinance n°59, regarding sanitary inspections in Horta da Mitra and Volong, July 15, 1882.

BG, n°31, August 5, 1882, 264-265, Government of Macao local ordinance n°66, regarding the opening of a new public fountain, August 5, 1882.

BG, n°31, August 5, 1882, 264-265, Public notice by the Procurator for Chinese Affairs regarding the city's sanitary policies, August 8, 1882.

BG, n°42, October 21, 1882, 374-377, Government of Macao local ordinance n°91, regarding a public health inspection on a silk factory, October 18, 1882.

BG, n°43, October 28, 1882, 384, Announcement (*anúncio*) by the Public Works Department regarding the paving of the new inner harbor reclamation riverside street, October 24, 1882.

BG, n°46, November 18, 1882, 404-405, Government of Macao public notice naming the new inner harbor reclamation streets, November 15, 1882.

BG, n°49, December 9, 1882, 424, Government of Macao local ordinance n°99, appointing the Macao inner harbor improvement committee, **December 5, 1882 (transcribed in Volume 3 - Annexes)**.

BG, n°50, December 16, 1882, 431, Government of Macao local ordinance n°102, appointing Public Works Director Constantino José de Brito responsible for the new city cadastre survey, December 16, 1882.

BG, n°1, January 6, 1883, 1, Government of Macao local ordinance n°1, confirming Miguel Ayres da Silva as City Senate representative in the Public Works technical council for the year 1883, January 3, 1883.

BG, n°2, January 13, 1883, 7-8, Notice from the Minister of the Overseas requesting information from the Macao Public Health Council for the 1883 international colonial medical exhibition in Amsterdam, November 28, 1882.

BG, supplement to n°6, February 15, 1883, 41-48, Macao Public Works report by Director Constantino José de Brito, **January 30, 1883 (transcribed in Volume 3 - Annexes)**.

BG, n°9, March 3, 1883, 68-69, Report from the Macao inner harbor improvement committee, **February 12, 1883 (transcribed in Volume 3 - Annexes)**.

BG, n°14, April 7, 1883, 117, National ordinance of February 17, 1883, confirming Macao Public Works draughtsman António Heitor in his position.

BG, n°12, March 24, 1883, 90-91, Outgoing Governor Joaquim José da Graça's final address to the Macao Government Council, March 24, 1883.

BG, supplement to n°15, April 14, 1883, 133-149, Macao Province budget for the year 1882/1883.

BG, n°17, April 28, 1883, 164-166, Inauguration ceremony for Governor Tomás de Sousa Rosa, April 28, 1883.

BG, n°20, May 19, 1883, 189-190, Macao Public Health report for the year 1882 by Public Health Director Lúcio Augusto da Silva, March 30, 1883.

BG, n°24, June 16, 1883, 219, Notice (*aviso*) by the Macao Port Authority (*Capitania do porto de Macau*) regarding the start of the dredging operations in the inner harbor, June 12, 1883.

BG, n°30, July 28, 1883, 263, Government of Macao local ordinance n°89, appointing the Macao material improvements committee, **July 28, 1883 (transcribed in Volume 3 - Annexes)**.

BG, n°37, September 15, 1883, 325, Public notice by the Macao City Senate regarding the opening of a new fish market in the Chinese Bazaar, September 10, 1883.

BG, n°1, January 5, 1884, 2-7, Report from the Macao material improvements committee, **November 20, 1883 (transcribed in Volume 3 - Annexes)**.

BG, supplement to n°4, February 1, 1884, 35-55, Macao Province budget for the year 1883/1884.

BG, n°8, February 23, 1884, 82, Macao City Senate regulation (*postura*) regarding the opening of a new fish market in the Chinese Bazaar, February 20, 1884.

BG, n°11, March 15, 1884, 117-119, Government of Macao local ordinance n°20 regarding a reclamation project in the island of Taipa, by entrepreneur Ho Cheong-seng, March 8, 1884.

BG, supplement to n°48, December 5, 1884, 453-456, Harbor Captain Demétrio Cinatti's report on the inner harbor improvement, May 8, 1884.

BG, n°38, September 20, 1884, 351, Government of Macao local ordinance n°81, regarding the construction of a dock in the Patane bay, September 18, 1884.

BG, n°44, November 1, 1884, 411, Commendation from His Majesty King D. Luís to engineer Adolfo Ferreira Loureiro for his mission of expertise regarding the Macao inner harbor improvement project, August 25, 1884.

BG, n°46, November 15, 1884, 427, Government of Macao local ordinance n°86, announcing the end of service for Macao Public Works Director Constantino José de Brito, and appointing Alcino António Sauvage as acting director, November 14, 1884.

BG, n°47, November 22, 1884, 435, National ordinance n°73 of October 4, 1884, regarding the obligation, for the Macao public works department staff, to serve temporarily and as needed, in Timor.

BG, n°47, November 22, 1884, 435, National ordinance of November 19, 1884, exonerating Macao's Public Health Director Lúcio Augusto da Silva and appointing José Gomes da Silva for the same position.

BG, n°50, December 13, 1884, 479, Macao Public Works report for the years 1879/1884.

BG, n°6, February 7, 1885, 67, His Majesty King D. Luís' address at the opening of Parliament on December 15, 1884.

BG, n°13, March 28, 1885, 149, National ordinance of February 5, 1885, exonerating Macao Public Works Director Constantino José de Brito and appointing Manuel Francisco da Costa Serrão for the same position.

BG, n°25, June 20, 1885, 266-267, Contract between the City Senate and Chan-Mui-Hin for the collection and disposal of night soil, July 11, 1885.

BG, n°25, June 20, 1885, 266-267, Report on the forestation of Macao, by the province agronomist, Tancredo Caldeira de Casal Ribeiro, July 15, 1885.

BG, n°28, July 11, 1885, 295, Government of Macao local ordinance n°62, ordering the dismantlement of all *tancá* camps along the riverfront, July 11, 1885.

BG, n°33, August 20, 1885, 359-360, Notice by the Government of Macao Secretary-General regarding the 1885 cholera epidemic, August 18, 1885.

BG, n°36, September 10, 1885, 379, Government of Macao local ordinance n°67, regarding the Horta da Mitra and S. Paulo district improvement projects, **September 1, 1885 (transcribed in Volume 3 - Annexes)**.

BG, n°37, September 17, 1885, 389, National ordinance of July 4, 1885, exonerating Manuel Francisco da Costa Serrão from his appointed position as Macao Public Works Director.

BG, n°38, September 24, 1885, 400, Government of Macao local ordinance n°78, regarding the Horta da Mitra improvement project, September 21, 1885.

BG, n°41, October 15, 1885, 425, National ordinance of August 5, 1885, appointing José Maria de Sousa Horta e Costa as Macao Public Works Director.

BG, n°44, November 5, 1885, 447, Government of Macao local ordinance announcing that José Maria de Sousa Horta e Costa has taken office as Macao Public Works Director, November 2, 1885.

BG, n°6, February 11, 1886, 34-35, Macao City Senate regulation regarding construction permits, February 1, 1886.

BG, n°11, March 18, 1886, 81, Public works report regarding the second trimester 1885/1886.

BG, n°13, April 1, 1886, 98, Public notice by the Macao City Senate, regarding the construction of the new Horta da Mitra market, March 30, 1886.

BG, supplement to n°13, April 1, 1886, 105-122, Macao Province budget for the year 1885/1886.

BG, n°17, April 28, 1886, 148-149, Macao Public Health report for the year 1885 by acting Public Health Director Augusto Pereira Tovar de Lemos, February 1, 1886.

BG, n°25, June 26, 1886, 225, Government of Macao local ordinance n°65, regarding the Horta da Mitra and Horta dos Parsis improvement projects, June 23, 1886.

BG, supplement to n°36, September 14, 1886, 351-359, Macao Public Works report for the year 1885/1886, by José Maria de Sousa Horta e Costa, July 1, 1886.

BG, n°32, August 12, 1886, 298-299, Public notice by the Macao City Senate, regarding the construction of the new Horta da Mitra market, August 6, 1886.

BG, n°32, August 12, 1886, 298-299, Discourse by the Governor of Macao, Tomás de Sousa Rosa, on the inauguration ceremony for his successor, Firmino José da Costa, August 12, 1886.

BG, n°35, September 2, 1886, 329, Government of Macao local ordinance n°89, appointing a committee for the inner harbor improvement, August 28, 1886.

BG, n°42, October 21, 1886, 351-359, Announcement regarding the passing of Miguel Ayres da Silva, October 15, 1886.

BG, n°1, January 6, 1887, 2-4, Macao Public Health report for the year 1886 by Public Health Director José Gomes da Silva, January 2, 1887.

BG, n°3, January 20, 1887, 13-15, Government of Macao public notice, regarding the new Horta da Mitra street names, January 19, 1887.

BG, supplement to n°6, February 16, 1887, 47-51, Report from the inner harbor improvement committee appointed by the Government of Macao local ordinance n°89, February 10, 1887.

BG, n°7, February 17, 1887, 57-61, Public works report regarding the first trimester 1886/1887.

BG, n°9, March 3, 1887, 73-74, His Majesty King D. Luís' address at the opening of Parliament on January 2, 1887.

BG, n°44, November 3, 1887, 366-373, Macao Public Works report for the year 1886/1887, by José Maria de Sousa Horta e Costa, June 30, 1887.

BG, n°50, December 15, 1887, 411, Instructions from the Government Secretary-General to the Public Works Director regarding the report from the inner harbor improvement committee appointed by the Government of Macao local ordinance n°89, December 14, 1887.

BG, supplement to n°11, March 21, 1888, 97-115, Province of Macao's budget for the year 1887/1888, with footnotes regarding the establishment of the concession monopolies, as well as property tax.

BG, n°17, April 26, 1888, 150, Government of Macao local ordinance n°51, ordering the dismantlement of two *tancá* camps in Sankiu, April 20, 1888.

BG, n°22, May 31, 1888, 150, Government of Macao local ordinance n°57, ordering the dismantlement of all *tancá* camps in the city, May 30, 1888.

BG, n°26, June 28, 1888, 227, Public works report regarding the second trimester 1887/1888, by José Maria de Sousa Horta e Costa, January 1, 1888.

BG, n°27, July 5, 1888, 238-239, Notice by the Public Health Department (*Serviço de Saúde*) regarding the 1888 cholera epidemic, July 1, 1888.

BG, n°28, July 12, 1888, 242, Government of Macao local ordinances n°99 and n°100, respectively regarding the construction of an extension of the inner harbor pier, and the Sankiu improvement project, July 11, 1888.

BG, supplement to n°31, August 4, 1888, 275, Government of Macao local ordinance n°108, dissolving the Macao City Senate, August 4, 1888.

BG, n°33, August 16, 1888, 281, Government of Macao local ordinance n°116, appointing a committee for the establishment of the new Port Authority and Opium Superintendence, August 16, 1888.

BG, supplement to n°33, August 21, 1888, 287-289, Notice by the Government of Macao Secretary-General regarding the 1888 cholera epidemic, August 21, 1888.

BG, n°34, August 23, 1888, 291-295, Committee report regarding the legal responsibilities of the Macao City Senate, August 20, 1888.

BG, n°35, August 30, 1888, 299-300, Information from the Public Health Council (*Junta de Saúde*) regarding the 1888 cholera epidemic, August 29, 1888.

BG, supplement to n°35, September 1, 1888, 305, Notice by the Government of Macao Secretary-General regarding the 1888 cholera epidemic, August 31, 1888.

BG, n°37, September 13, 1888, 313, Government of Macao local ordinances n°129, n°132, n°134 and n°136, regarding the 1888 cholera epidemic, September 12, 1888.

BG, n°38, September 20, 1888, 325, Report from the committee for the establishment of the new Port Authority and Opium Superintendence appointed by the Government of Macao local ordinance n°116, August 28, 1888.

BG, supplement to n°38, September 24, 1888, 327-341, Report on the 1888 cholera epidemic in Macao, by Public Health Director José Gomes da Silva, September 22, 1888.

BG, n°45, November 8, 1888, 384, Government of Macao local ordinance n°156, announcing the end of service for Macao Public Works Director José Maria de Sousa Horta e Costa, and appointing Alcino António Sauvage as acting director, November 8, 1888.

BG, n°49, December 6, 1888, 412, Government of Macao local ordinance n°164, regarding the budget for the Sankiu improvement project, November 25, 1888.

BG, n°7, February 14, 1889, 38-39, Inauguration ceremony for Governor Francisco Teixeira da Silva, February 5, 1889.

BG, n°9, February 28, 1889, 51, Government of Macao local ordinance n°27, appointing a committee to inform on the causes of decadence of navigation in the Macao harbors, February 25, 1889.

BG, supplement to n°9, March 1, 1889, 57-81, Overseas Provinces general budget for the year 1888/1889, December 17, 1888.

BG, supplement to n°9, March 1, 1889, 57-81, Macao Province budget for the year 1888/1889.

BG, n°22, May 30, 1889, 169, Government of Macao local ordinance n°42, regarding Amâncio de Alpoim de Cerqueira Borges Cabral taking office as Macao Public Works Director, May 24, 1889.

BG, n°26, June 27, 1889, 200, Two announcements by the Public Works Department, regarding the construction of an extension of the inner harbor pier and the Sankiu improvement project, June 19, 1889.

BG, n°31, August 1, 1889, 231, Public works report regarding the forth trimester 1888/1889, by Amâncio de Alpoim de Cerqueira Borges Cabral, July 1, 1889.

BG, supplement to n°31, August 17, 1889, 247-259, Overseas Provinces general budget for the year 1889/1890, June 27, 1889.

BG, supplement to n°45, November 12, 1889, 343-349, Report from the committee informing on the causes of decadence of navigation in the Macao harbors, appointed by the Government of Macao local ordinance n°27, September 27, 1889.

BG, supplement to n°48, December 3, 1889, 369-376, Public works report for the year 1888/1889, by Amâncio de Alpoim de Cerqueira Borges Cabral, July 1, 1889.

BG, n°5, January 30, 1890, 37-40, Exchanges between the British Prime minister and the Portuguese Minister of the Overseas, regarding Portuguese territorial claims in Mozambique, on November 28, 1889.

BG, n°9, February 27, 1890, 65-66, His Majesty King D. Carlos' address at the opening of Parliament on January 2, 1890.

BG, n°29, July 17, 1890, 229, Government of Macao local ordinance n°100, regarding a sanitary inspection in the Praia Grande bay, July 11, 1890.

BG, n°29, July 17, 1890, 229, Government of Macao local ordinance n°102, regarding the donation to the Government of the Barra dock, July 18, 1890.

BG, n°32, August 7, 1890, 259, Public works report regarding the third trimester 1889/1890, by acting director Alcino António Sauvage.

BG, supplement to n°39, September 27, 1890, 317-333, Macao Province budget for the year 1890/1891.

BG, n°43, October 23, 1890, 361-363, Inauguration ceremony for Governor Custódio Miguel Borja, October 16, 1890.

BG, n°44, October 30, 1890, 370, Government of Macao local ordinance n°146, approving the Ilha Verde dam project, October 27, 1890.

BG, n°47, November 20, 1890, 395, Government of Macao local ordinance n°157, appointing a committee regarding the inner harbor improvement, November 17, 1890.

BG, n°48, November 27, 1890, 403, Government of Macao local ordinance n°158, authorizing the new Barra dock project, November 26, 1890.

BG, n°49, December 4, 1890, 417, Public works report regarding the year 1889/1890, by Amâncio de Alpoim de Cerqueira Borges Cabral, July 1, 1890.

BG, n°52, December 26, 1890, 434, Information regarding the construction of the new Barra dock project, December 22, 1890.

BG, supplement to n°2, January 12, 1891, 11-13, Report from the committee regarding the inner harbor improvement, appointed by the Government of Macao local ordinance n°157, December 31, 1890.

BG, n°35, September 1, 1892, 287, Instruction from the Minister of the Overseas regarding the inner harbor improvement, July 19, 1892.

BG, n°44, November 3, 1892, 379-385, Report on the reform of the Overseas Public Works Department, August 29, 1892.

BG, n°1, January 7, 1893, 2, Two letters from the President of the City Senate to the Governor of Macao and vice-versa, regarding the new Ilha Verde dam and avenue, on December 29, 1892 and December 30, 1892.

BG, n°11, March 18, 1893, 121, Information from Harbor Captain Albano Alves Branco regarding the dredging of the Hong Kong and Canton steamboat piers, March 13, 1893.

BG, supplement to n°39, September 30, 1893, 445-462, Macao Province budget for the year 1893/1894.

BG, n°47, November 25, 1893, 529-530, Information regarding a fire in the S. Domingos market on November 15.

BG, n°49, December 9, 1893, 545, National ordinance of October 19, 1893, appointing Augusto César de Abreu Nunes as Macao Public Works Director.

BG, supplement to n°19, May 15, 1894, 221-222, Government of Macao local ordinance n°113, regarding the bubonic plague epidemic in the region, May 13, 1894.

BG, n°22, June 2, 1894, 264-265, Government of Macao local ordinances n°117 and n°118, respectively regarding the bubonic plague epidemic in the region, and the responsibilities of the City Senate in terms of roads, gardens and drainage system, June 1, 1894.

BG, n°23, June 9, 1894, 280, Government of Macao local ordinance n°125, regarding the Horta de Volong resumption plan, **June 6, 1894 (transcribed in Volume 3 - Annexes)**.

BG, n°35, September 1, 1894, 413-414, Government of Macao local ordinance n°174, regarding the Horta de Volong resumption plan, August 31, 1894.

BG, supplement to n°35, September 6, 1894, 419, Government of Macao local ordinance n°180, regarding the bubonic plague epidemic in the region, September 4, 1894.

BG, n°42, October 20, 1894, 505, Public notice by the Procurator for Chinese Affairs, regarding the new social housing district of Sakong, October 18, 1894.

BG, n°2, January 12, 1895, 15-16, Government of Macao local ordinance n°2, regarding the new social housing district of Sakong, January 12, 1895.

BG, n°17, April 27, 1895, 141, Public notice by the Macao City Senate, regarding the construction of the new S. Domingos market, April 24, 1895.

BG, n°32, August 10, 1895, 339, Government of Macao local ordinances n°112 and n°113, regarding respectively the Tap-seac resumption plan, and road work in Sakong, August 9, 1895.

BG, supplement to n°39, October 1, 1895, 401-434, Report on the bubonic plague epidemic in Macao, by Public Health Director José Gomes da Silva, sent to the Governor of Macao in attachment to his letter of August 3, 1895.

BG, n°4, January 25, 1896, 34, Announcement by the Treasury Department, regarding the lease on a plot in the new Horta de Volong, January 22, 1896.

BG, n°6, February 8, 1896, 52, Government of Macao local ordinances n°12 and n°13, regarding respectively the S. Paulo district and the Sakong resumption plans, February 8, 1896.

BG, n°26, June 27, 1896, 260, Minutes of the City Senate meeting on June 8, 1896.

BG, supplement to n°39, October 1, 1896, 461-485, Macao Province budget for the year 1896/1897.

BG, n°1, January 2, 1897, 2, Government of Macao local ordinance n°2, regarding the Ilha Verde farmland reclamation project, January 2, 1897.

BG, supplement to n°6, February 12, 1897, 71-140, Population census of February 14, 1896.

BG, n°20, May 15, 1897, 275, Inauguration ceremony for the new Governor of Macao, Eduardo Augusto Rodrigues Galhardo, May 12, 1897.

BG, n°22, May 29, 1897, 295, Government of Macao local ordinance n°69, regarding the inner harbor dredging work, May 22, 1897.

BG, n°23, June 5, 1897, 301, Government of Macao local ordinance n°84, appointing a committee for the inner harbor improvement, June 4, 1897.

BG, n°46, November 13, 1897, 544, Meeting minutes of the transfer of the new Volong district from the responsibility of the Public Works Department to the City Senate, November 3, 1897.

BG, n°9, February 26, 1898, 80, Announcement by the Treasury Department, regarding the lease on a plot in the new Horta de Volong, February 23, 1898.

BG, n°10, March 5, 1898, 91, Announcement by the Treasury Department, regarding the lease on two plots in the new Sakong district, February 28, 1898.

BG, supplement to n°35, September 1, 1898, 335-350, Macao Province budget for the year 1898/1899.

BG, n°53, December 31, 1898, 481, National ordinance of **November 14, 1898 (transcribed in Volume 3 - Annexes)**, regarding improvement and infrastructure works in the overseas provinces.

BG, n°26, June 30, 1900, 309, Government of Macao local ordinance n°72, regarding the S. Lázaro district resumption plan, **June 26, 1900 (transcribed in Volume 3 - Annexes)**.

BG, n°38, September 22, 1900, 595, Government of Macao local ordinance n°113, regarding the transfer of the responsibilities in terms of roads, gardens and drainage system, from the City Senate back to the Public Works Department, September 22, 1900.

BG, n°39, September 29, 1900, 601-603, Government of Macao local ordinance n°124, regarding the Pátio do Figo resumption plan, September 27, 1900.

BG, n°45, November 10, 1900, 727, Announcement by the Public Works Department, regarding the S. Lázaro district resumption plan, November 8, 1900.

BG, n°3, January 19, 1901, 20-22, Overseas Provinces general budget for the year 1900/1901.

BG, n°8, February 23, 1901, 44, Government of Macao local ordinance n°13, regarding the S. Lázaro district resumption plan, February 23, 1901.

BG, n°9, March 2, 1901, 48, Announcement by the Treasury Department, regarding the lease on a plot in the new Tap-seac district, March 1, 1901.

BG, n°20, May 18, 1901, 108, Public notice by the District Administrator, regarding the construction of the new S. Domingos market, May 14, 1901.

BG, n°21, May 25, 1901, 112, Announcement by the Public Works Department, regarding the S. Lázaro district resumption plan, May 24, 1901.

BG, n°23, June 8, 1901, 121-122, Government of Macao local ordinance n°31, regarding the construction of the new S. Domingos market, **June 8, 1901 (transcribed in Volume 3 - Annexes)**.

BG, n°30, July 27, 1901, 172, Government of Macao local ordinance n°54, regarding the Mong-ha district resumption plan, July 24, 1901.

BG, n°37, September 14, 1901, 212, Announcement by the Treasury Department, regarding the S. Lázaro district resumption plan, September 14, 1901.

BG, supplement to n°43, October 31, 1901, 255-271, Macao Province budget for the year 1901/1902.

BG, n°47, November 23, 1901, 294, Government of Macao local ordinance n°96, regarding the S. Lázaro district resumption plan, November 15, 1901.

BG, n°1, January 4, 1902, 6-7, Two public notices by the Macao City Senate, regarding the construction of the new S. Domingos market, December 27, 1901.

BG, n°2, January 11, 1902, 11-12, National ordinance by the Minister of the Overseas of June 18, 1901, regarding the commission of public works in the overseas provinces.

BG, n°34, August 23, 1902, 272, Government of Macao local ordinance n°96, regarding the Mong-ha district resumption plan, August 19, 1902.

BG, n°35, August 30, 1902, 292, Announcement by the Treasury Department, regarding the lease on a plot in the Flora district, August 6, 1902.

BG, n°35, August 30, 1902, 292, Announcement by the Treasury Department, regarding the S. Lázaro district resumption plan, August 22, 1902.

BG, n°39, September 27, 1902, 324, Announcement by the Treasury Department, regarding the lease on a plot in Tap-seac, September 11, 1902.

BG, supplement to n°50, December 15, 1902, 425, Notice from the Minister of the Overseas exonerating Governor José Maria de Sousa Horta e Costa and appointing Arnaldo de Novais Guedes Rebelo to the same position, September 29, 1902.

BG, n°26, June 25, 1904, 197, Government of Macao local ordinance n°110, regarding the construction of the new S. Domingos municipal market, June 22, 1904.

BG, n°4, January 28, 1905, 29, Government of Macao local ordinance n°15, appointing the Macao improvements and sanitation committee, January 28, 1905.

BG, n°13, March 27, 1909, 152, Government of Macao local ordinance n°39, regarding the city general improvement plan, March 17, 1909.

BG, n°39, September 24, 1910, 325, Government of Macao local ordinance n°199, regarding the demolition of twelve buildings, “for the opening of the Chinese Bazaar New Avenue’s first section,” September 22, 1910.

BG, n°10, March 8, 1919, 102-104, Government of Macao local ordinance n°41, establishing the Committee for the Improvement of the Macao Harbors regulation, March 8, 1919.

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DG, n°6, January 7, 1837, 22, National ordinance (*decreto*) of December 31, 1836 establishing the Portuguese Administrative Code.

DG, n°67, March 19, 1842, 108-149, National ordinance of March 18, 1842 establishing the Portuguese Administrative Code.

DG, n°104, May 5, 1843, 109, National ordinance of May 2, 1843, authorizing the Governors of the Overseas Provinces to undertake urgent measures without previous consent from metropolitan government.

DG, n°233, October 2, 1844, 304-306, National ordinance of September 20, 1844, separating the Macao province from the State of India and establishing the Government of Macao, Timor and Solor with head in the city of Macao.

DG, n°206, September 1, 1852, 383-384, National ordinance of August 30, 1852, establishing the Ministry of Public Works, Commerce and Industry.

DG, n°206, September 1, 1852, 385-386, National ordinance of August 30, 1852, regarding the construction of the "Northern railway", connecting the city of Porto to the underway frontier line and onward to Lisbon.

DG, n°206, September 1, 1852, 386-389, National ordinance of August 30, 1852, establishing the nationalization of the Special Fund of Amortization (*Fundo Especial de Amortização*), whose product would henceforth serve to fund the construction of the Northern railway.

DG, n°196, August 20, 1856, 332-333, National ordinance of August 14, 1856, regulating the cases where, according to the Additional Act to the Constitution, the Overseas Governors may establish legal measures without previous authorization from metropolitan government.

DG, n°225, September 24, 1857, 414-415, National ordinance of September 17, 1857, "declaring of public interest, and thus regulating the necessary expropriation procedures for the construction of roads, railways, or any other works decreed by the Legislative Power."

DG, n°166, July 26, 1862, 232-234, National ordinance of July 23, 1862, organizing the public health service in the Overseas.

DG, n°248, November 3, 1862, 324-331, National ordinance of October 28, 1862, establishing the public health service in the Overseas' general regulation.

DG, n°125, June 7, 1864, 223-226, National ordinance of June 6, 1864, regulating municipal roads.

DG, n°10, January 13, 1865, 1041-1049, National ordinance of December 31, 1864, "regulating the construction, conservation and police of 1st, 2nd and 3rd class roads, and of the streets that are part of them inside the kingdom's cities, towns and other settlements."

DG, n°257, November 11, 1869, 679-690, National ordinance of December 2, 1869, organizing "the overseas provinces' public health department" ("*serviço de saúde das províncias ultramarinas*").

DG, n°280, December 9, 1869, 609-616, National ordinance of December 1, 1869, organizing public administration in the Overseas.

DG, n°284, December 14, 1869, 693-696, National ordinance of **December 3, 1869**, organizing "the Overseas public works department" ("*serviço das obras públicas no Ultramar*") (**Preliminary report transcribed in Volume 3 - Annexes**).

DG, n°114, May 22, 1872, 56, National ordinance of May 11, 1872, "authorizing the government to decree the necessary expropriations for the opening or improvement of streets, squares, gardens and adjacent buildings, fortresses and American railways [trams]."

DG, n°110, May 16, 1878, 53-62, National ordinance of May 2, 1878, regarding primary education reform.

DG, n°184, August 14, 1888, 284-285, National ordinance of August 9, 1888, regarding the expropriation “of all rural and urban plots comprised in the areas needed by the Lisbon municipality to build the Avenida da Liberdade park and adjacent streets, and to open the avenue from Picoas to Campo Grande and adjacent streets.”

DG, n°276, December 5, 1892, 897-908, National ordinance of December 1, 1892, regarding the general organization of the Mines and Public Works Departments and of their respective technical staff.

DG, n°256, November 15, 1898, 810, National ordinance of **November 14, 1898**, regarding the establishment of general improvement plans in the overseas provinces (**transcribed in Volume 3 - Annexes**).

DG, n°201, September 9, 1901, 513-514, National ordinance of September 2, 1901, regarding the administrative organization of the Lisbon Municipality and the obligation, for the Municipal Public Works Department, of establishing the capital’s general improvement plan.

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Timeline
