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Sustainable health?

Health, environment and the politics of sustainability [1]

Abstract

The links, interrelations or interferences of environmental problems and health hazards have been the object of a growing body of literature cutting across disciplines. Different directions of research have expanded and deepened our understanding of the way health and sustainability are co-constructed, and of the role of technological innovation, public policy and citizen action in facilitating and promoting the emergence of strategies for sustainable development that consider health as one of its structuring axes.

Episodes of collective mobilization over environmental problems and their connections to health problems display the relevance of this issue. Three main themes can be identified at the roots of these episodes: the health impacts of waste management procedures; the need for a reorientation of public policies – including health policies – in order to incorporate environmental concerns as a main structuring axis; and the need for health to be explicitly incorporated into strategies and policies of sustainable development. The notion of «sustainable health» is proposed as a way of articulating this need.

Introduction

The links, interrelations or interferences of environmental problems and health hazards have been the object of a growing body of literature cutting across disciplines. We have contributed to this literature with a number of studies, including a preliminary analysis of the different ways in which the environment is constructed in the practice of cancer research and tumour pathology (Nunes, 1998), and, more recently, a detailed study of a conflict over the co-incineration of hazardous industrial waste, including an identification of the public health issues and arguments that emerged during the process (Matias, 2004 and 2004a; Nunes and Matias, 2003). An ongoing European

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Commission-funded research project (Analysing Public Accountability Procedures in Contemporary European Contexts) includes, as one of its case studies, the management of waste disposal and public responses to it, highlighting the centrality of health hazards to these responses. Participation in the EU-funded STAGE (Science, Technology and Governance in Europe) thematic network provided a setting for the comparative exploration of issues related to governance and public participation, based on a re-analysis of the struggle over co-incineration of hazardous industrial waste in Portugal and of other episodes of response to sanitary crises, such as the BSE crisis.

These different directions of work have allowed us to expand and deepen our understanding of the way health and sustainability can be seen as co-constructed, and of the role of technological innovation, public policy and citizen action in facilitating and promoting the emergence of strategies for sustainable development that consider health as one of its structuring axes.

Recent episodes of collective mobilization over environmental problems and their connections to health problems display the relevance of this issue. Three main themes can be identified at the roots of these episodes:

- The health impacts of waste management procedures;

- The need for a reorientation of public policies – including health policies – in order to incorporate environmental concerns as a main structuring axis;

- And, finally, the need for health to be explicitly incorporated into strategies and policies of sustainable development. The notion of «sustainable health» is proposed as a way of articulating this need.

Health impacts of waste management procedures

Health issues have often figured prominently among the justifications for engaging with environment-friendly technologies or for designing and implementing public policies aimed at sustainability. Let us leave aside, for the time being, a discussion of the contested definitions of "sustainability" and concentrate on how health appears in debates over sustainability and sustainable development. A closer look at the

way health issues are dealt with in these debates shows that policies and innovations in health care and public health are often conceived and carried out without a systematic effort at "mainstreaming" health as a constitutive dimension of sustainability in any of its definitions. In other words, health and sustainability are treated as separate though related issues. Health does not have the same central status as the sustainability of resources, the development of environment-friendly technologies, social cohesion and environmental protection in discourses and programs on sustainability and sustainable development.[2] It appears, rather, either as a general justification (among others) for strategic and policy choices or as a concern linked to outcomes or consequences of strategies and policies.

Waste management provides an exemplary instance of the problem. The model of growth and consumption common to contemporary urban settings generates enormous amounts of household, industrial, hazardous and hospital waste. How to reduce the production of waste and how to manage and dispose of the waste that is produced have become key questions for policymakers, experts and citizens committed to sustainability. Not surprisingly, the building, operation and monitoring of waste management equipments and facilities have become a crucial and contentious area of environmental policy and a point of intersection of public policy, technological innovation, environmental and citizen activism and public health concerns. Whole areas of research on the effect of exposure to waste management or disposal facilities on the environment and on human beings, such as the ongoing studies of endocrine disruptors (Krimsky, 2000), or the EUROHAZCON study of the effects of the exposure to hazardous waste disposal sites in six European countries (Dolk *et al.*, 1998), are often ignored, marginalized or dismissed as irrelevant for the planning and implementation of facilities for managing toxic waste. Health thus seems to have at best a secondary and subordinate status among the concerns of those who design health policies and programs for sustainable development, instead of being considered as a key aspect of any conception of a sustainable world and a sustainable society. Whereas these problems are often identified and contested at the local level, their effects at the regional and global scales challenge the feasibility of the global expansion of the models of development and consumption that prevail in the North.

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[2] An example of this is the absence of contributions focused on health issues in the otherwise excellent volume edited by Jamison and Rohracher (2002).

Citizens and their organizations and movements, often allied with public and academic institutions and with NGOs, have been active, in several parts of the world, in establishing links between environmental problems and health and in promoting public intervention to respond to these issues. Conflict often erupts with public institutions and with business over the definition and management of the health hazards associated with waste management facilities, namely the exposure to the emissions of incineration or to the environmental impacts of landfills. Citizens, social movements and their allies seek to incorporate updated information and knowledge on these health hazards in the very design and decision on the choice of waste management policies and technologies. Emerging forms of collective action have thus been crucial for bringing to the fore the absence of health as a key weakness in waste management policies (Santos, 2003).

The concept of «sustainable health»

Within the biomedical and health sciences, the relationships of health and environmental problems have been explicitly dealt with by specialties such as environmental pathology, environmental epidemiology and, more generally, several areas of public health. Biomedical research has also been engaged in identifying and understanding the workings of the "environmental factors" or "environmental aggressions" associated with specific kinds of pathologies, such as different types of cancer, respiratory diseases, skin diseases, pathologies of the gastric tract, allergies and disorders linked to reproduction (Proctor, 1995; Nunes, 1998; Steingraber, 1998; Krimsky, 2000). Another approach to environmental aspects of health and disease arose from a growing interest in emerging diseases, that is, communicable diseases that were either thought to have been eradicated during the 20th century epidemiological transition – such as various infectious diseases – or diseases which are now (re)surfacing, associated with new strains of pathogens, often having developed a resistance to antibiotics and capable of spreading rapidly through human hosts that use modern means of transportation, or new diseases associated with new pathogens (Levins *et al.*, 1994; Sabroza and Waltner-Toews, 2001; King, 2002; Nunes, 2003).[3] Environmental studies and social studies of health, medicine and the environment, in turn, have become

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[3] King (2002) explores the connections between the concept of emerging diseases, the global dynamics of the pharmaceutical industries and the recent redefinitions of global threats to national security in the USA.

increasingly interested in the range of pathologies subsumed under the label of environmental illness, exposure to toxic environments, workplace safety, food safety and the implications of all these to social and environmental justice (Thornton, 2000; Kroll-Smith and Floyd, 1997; Kroll-Smith *et al.*, 2000; Irwin, 2001).

We need more research on the ways health and sustainability are co-constructed, and on the role of technological innovation, public policy and citizen action in facilitating and promoting the emergence of strategies for sustainable development that consider health as one of its structuring axes. The global reach of threats generated in the North (environmental degradation) and in the South (pathogens spreading throughout the globe) requires a fresh look at the way responses to these threats are being articulated in local settings, and how they can become part of a process of learning, innovation and composition of new collective modes of responding to these problems.

Given this landscape of hazards, how are we to define health other than negatively, as an "absolute good" under threat from environmental hazards or pathogens? Just as "sustainability" allowed the environment to be conceived of as something other than a pristine "nature" under threat from human activity, health can be conceived of as something to be actively promoted and sustained, rather than the target of "remedial" or "preventive" interventions based on the identification of threats. This suggests a convergence between the concerns of those who seek "sustainability" beyond the prevailing modes of development and those who try to define health as a condition of eco-social systems. Some efforts have been made, to be sure, to suggest ways in which health can be "built in" as a constitutive concern to the design, development and implementation of technologies and policies steered by a commitment to sustainability (see, e.g., Gottlieb, 2001; Thornton, 2000; Hofrichter, 2000, McCally, 2002, Geiser, 2001: Chapter 5). Some authors have advanced the notion of "sustainable health care" as an indispensable component of a strategy for sustainability framed by concerns with social and environmental justice (Jameton and Pierce, 2002). But sustainable health requires more than appropriate and socially just health care provision. Further steps are required to bring together health and sustainability as mutually constitutive dimensions of public policy initiatives and of technological innovation.

Drawing inspiration form the literatures associated with Developmental Systems Theory, Ecosystem Health and Human Ecology and Health (Oyama, 2000a,b; Oyama *et al.*, 2001; Taylor, 1995, 2001; Rapport, 1998; Sabroza and Waltner-Toews, 2001), we propose a definition of health as the emerging outcome of intersecting ecological, social, technological and political processes, working at different scales, that provide a given eco-social assemblage with the capacity to successfully respond to threats to its integrity and to the life chances and well-being of the human beings that are part of that assemblage. These threats may have their origin in pathogens, in natural disasters and war, in deprivation and lack of minimal living standards or in the effects of human activity, mainly through the uses of certain technologies, the by-effects of economic activity and the environmental, social and individual impacts of modes of consumption and lifestyles. The range (in space and time) and the complexity of health thus defined require the development of new approaches to the design, implementation and assessment of environmental policies and environment-friendly technologies and of the way public health interventions and health care provision are guided by concerns with social and environmental justice and by precautionary action.

Reconstructing public policies, incorporating environmental concerns

Government and State agencies in charge of the regulation of the environment and of public health have tried to respond to emergent health problems through a more active engagement with citizens, sometimes through the promotion of participatory initiatives. The record of new developments in this field in several countries is still ambiguous. Despite experiments, in different parts of the world, in promoting more inclusiveness and broader participation of citizens in consultation and deliberation on health and environmental issues, the asymmetrical relations between "expert" and "lay" knowledges and between institutions and citizens, the waste of valuable experiences rejected as "irrelevant" or based on ignorance, the unequal capacity for agenda-setting in public debate and decision-making, all set limits to the success of these initiatives (Irwin, 1995, 2001; Irwin and Michael, 2003; Santos, Meneses and Nunes, 2004).

The approach we propose here is based on the identification of the diverse and often conflicting modes of co-constructing the knowledge and politics of the

health-environment nexus through the mutual involvement of a diversity of actors – institutional actors (government, parliament, State agencies, advisory committees), economic actors, researchers, experts, citizens and citizen movements and organizations and NGOs – in different settings. The difficulty of the task is compounded by the difficulty for all the actors involved to agree on what a health problem or an environmental problem is, and even more so on what the environmental conditions or factors influencing or configuring health and disease are, and how to make them amenable to knowledge and intervention. The identification of the diversity of forms of knowledge and experience, of political interventions by the State and public institutions, and of the repertoire of collective citizen action in fields related to the intersection of scientific, technological, health and environmental problems is a crucial entry point into the work of conceptualising and exploring empirically the conditions for sustainable health. Research may contribute to the work of constructing effective public policies, designing innovative technologies and promoting and supporting citizen action framed by concerns of social and environmental justice, namely through the analysis of the reconstruction of knowledge configurations appropriate to specific situations and problems and to "measured" responses to these (Irwin and Wynne, 1996; Fisher, 2000; Santos, 2004; Irwin and Michael, 2003; Callon *et al.*, 2001). But the social impact of research initiatives require that they co-developed with a pedagogy of complexity and a pedagogy of participation (Leff, 2003; Muñoz, 2004).

Both environmental and health problems associated with the "manufactured risks" of urban, industrial societies and health issues associated with the endemic character and the rapid capacity for spreading and mutating of pathogens responsible for communicable diseases are interwoven with the way public policies and citizen action are responding to the challenges of sustainability. They call for bringing health to the very core of any definition of sustainability and of sustainable development. And there is, of course, the problem of how technology and technological innovation, in a Janus-faced fashion, carry with them both threats and contributions to sustainability and how global/local configurations of public policy determine access to medical and environment-friendly technologies.

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