

HUMAN SETTLEMENT DEVELOPMENT: THE CENTRAL ROLE OF CITIES IN OUR ENVIRONMENT'S FUTURE—CONSTRAINTS AND POSSIBILITIES

Saskia Sassen

University of Chicago and Centennial Visiting Professor, London School of Economics, USA

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Summary

Humankind increasingly relates to the various stocks and flows of environmental capital through cities and vast urban agglomerations. Given technical developments, the urban hinterland today is global. This represents a radical transformation in the relation between humans and the rest of the planet. It is at the center of the environmental future. Further, rural populations increasingly have become consumers of products produced in the industrial economy. The rural condition has evolved into a new system of social relations that diverges profoundly from older economic cultures which worked with biodiversity. These developments all signal that the urban condition is a major factor in any environmental future.

Cities and urban regions are a type of socioecological system marked by a whole new set of interrelations between, on the one hand, constructed features and material practices and, on the other, various ecological systems. In the current stage, the systemic characteristics of this interrelation are mostly in the form of environmental damage. A growing number of researchers and activists are calling for the need to use and build upon those features of cities that can make cities into a socio-ecological system with positive outcomes. Specific features of cities with such positive potential are economies of scale, density and the associated potential for greater efficiency in resource use and lower priced options, and dense networks of communication that can serve as facilitators to institute new practices.

The urban and rural condition and their interaction are in good part shaped by systems of social relations that support the current, environmentally damaging configuration. We now have enough evidence to know that beyond adoption of good practices, such as waste recycling, it will take a change in these systems of social relations themselves to achieve greater environmental sensitivity and efficiency. A crucial issue raised by all the above is the question of the scales at which damage is produced and intervention or change should occur. These may in turn differ from the sites where the responsibility for the damage and the sites for demanding accountability lies. The city is, in this regard, an enormously complex multi-scalar system where many of the environmental dynamics that concern us come together and where different policy levels, from the supra to the sub-national, get implemented. Further, specific cross-border networks of mostly global cities, also constitute a key component of the global scale at which these dynamics occur and hence can be thought of as a network of sites for demanding accountability of global economic actors.

Because cities bring together our economic, political, cultural, ideological, and technical systems and practices, the treatment of the subject demands multiple forms of knowledge. Dealing with the question of the environment in the context of cities and rural-urban interactions requires an extraordinary mix of disciplines. Further, because we are dealing with an enormous variety of political and economic systems, levels of wealth and power, cultural understandings and ideological convictions, it is necessary to include analyses that represent many of these differences. It is not a question simply of scientific knowledge and shared theoretical understandings.

This complexity and variety assume even more weight when we consider that the question of urban sustainability requires engaging the legal systems and profit logics that underlie and enable many of the environmentally damaging aspects of our societies. This in turn requires addressing some of the major dynamics of the current era: globalization and the ascendancy of markets. The question of urban sustainability cannot be reduced to modest interventions that leave these major systems unaddressed. And the actual features of these systems vary across countries and across the North–South divide. In brief, non-scientific elements are a crucial part of any discussion of urban and rural sustainability. Questions of policy and pro-active engagement possibilities are a critical dimension of treatments of urban sustainability, whether they involve asking people to support garbage recycling or demanding accountability from major global corporations known to have environmentally damaging production processes.

There are, then, many different ways of organizing a volume on urban sustainability, each one with its own shortcomings. We opted for including a large number of very specific studies by researchers from many different parts of the world and diverse disciplinary backgrounds. We kept general overviews to a minimum because they inevitably need to neutralize the variety and specificity evident across the world. The volume includes eighty case studies by authors from 50 countries. It enables a juxtaposition of differences and similarities in the problems identified and the solutions enacted in many different parts of the world. We have put enormous weight on the specific instantiations of general dynamics. This introductory chapter and the overview articles aim at scaling the issues upwards and constructing a conceptual architecture

where the details of the case studies can be situated and can contribute to illuminate more general trends.

1. Introduction

The massive processes of urbanization under way today are inevitably at the center of the environmental future. Yet they have largely not been at the center of environmental research. It is through cities and vast urban agglomerations that humankind is increasingly present in the world and through which it mediates its relation to the various stocks and flows of environmental capital. The urban hinterland, once a mostly confined geographic zone, is today a global hinterland. This represents a radical transformation in the relation between humans and the rest of the planet.

Having a large number of cities with multimillion populations is a new condition in our history, as is the urbanization of over half the people in the world. Urban agglomerations are today the engines of consumption of the world's environment: they occupy only 2% of the world's land surface, but use over 75% of the world's resources. Humans now consume nearly half of the world's total photosynthetic capacity, and cities are the major factor in this. Cities in the North require an average of 4 to 5 hectares of ecologically productive land per inhabitant. Further, much economic activity that takes place outside cities is geared towards cities. With the expansion of the global economy we have raised our capability to annex growing portions of the world to support a limited number of industries and places. Cities also have a pronounced effect on traditional rural economies and their long-standing cultural adaptation to biological diversity. Rural populations increasingly become consumers of products produced in the industrial economy, one much less sensitive to biological diversity. The rural condition has evolved into a new system of social relations, one that does not work with biodiversity. These developments all signal that the urban condition is a major factor in any environmental future.

Through this enormously distinctive presence that is urbanization, we are changing a growing range of ecological systems from the climate to species diversity and ocean purity and we are creating new environmental conditions of heat islands, desertification, and water pollution. We have entered a new phase in human ecological history. For the first time humankind is the major ecological factor on the planet, in a way it was not in the past. Massive urbanization over the last few decades has created a set of global ecological conditions never seen before. But is it urbanization per se or the particular types of urban systems and industrial processes we have instituted? That is to say, are these global ecological conditions the result of urban agglomeration and density or are they the result of the urban systems for transport, waste disposal, heating and cooling, food provision, and the industrial process through which we extract, grow, make, package, distribute, and dispose of all the foods and services we use?

We can begin by conceptualizing the urban condition as a socio-ecological system in that it creates a whole new set of interrelations between, on the one hand, its constructed features and material practices and, on the other, various ecological systems. In the current stage, the systemic characteristics of this inter-relation are mostly in the form of environmental damage. A growing number of researchers today are calling for the need

to use and build upon those features of cities that can make cities into a socio-ecological system with positive outcomes. Specific features of cities with such positive potential are economies of scale, density and the associated potential for greater efficiency in resource use and lower priced options, and dense networks of communication that can serve as facilitators to institute new practices. More theoretically, one can say that in so far as cities are constituted through various processes that produce space, time, place and nature, cities also contain the transformative possibilities embedded in these same processes.

Because they are at the center of the environmental future, urbanization and the city also must be understood and used as potentially containing the solutions to many of these problems. As has been much documented, cities have long been sites for innovation and for developing and instituting complex physical and organizational systems. It is within the complexity of the city that we must find the solutions to much environmental damage and the formulas for reconfiguring the socio-ecological system that is urbanization. Cities contain the networks and information loops that may facilitate communicating, informing, and persuading households, governments, and firms to support and participate in environmentally sensitive programs and in radically transformative institution building.

Urban systems also entail systems of social relations that support the current configuration. Beyond adoption of practices such as waste recycling, it will take a change in this system of social relations itself to achieve greater environmental sensitivity and efficiency. For instance, a crucial issue is the massive investment around the world promoting large projects that damage the environment. Deforestation and construction of large dams are perhaps among the best known cases. The scale and the increasingly global and private character of these investments suggest that citizens, governments, NGOs, all lack the power to alter these investments patterns. But, as discussed later in this chapter, there are possibilities for acting on these deeply damaging economic operations. The geography of economic globalization is strategic rather than all-encompassing and this is especially so when it comes to the managing, coordinating, servicing and financing of global economic operations. The fact that it is strategic is significant for a discussion about the possibilities of regulating and governing the global economy. There are sites in this strategic geography where the density of economic transactions and top-level management functions come together and represent a strategic geography of decision-making. We can see this also as a strategic geography for demanding accountability about environmental damage. It is precisely because the global economic system is characterized by enormous concentration of power in a limited number of large multinational corporations and global financial markets that makes for concentrated (rather than widely dispersed) sites for accountability and for changing investment criteria. This leaves out a whole range of less central and powerful economic actors responsible for much environmental damage, but are more likely to be controllable through national level regulatory interventions.

A crucial issue raised by all the above is the question of the scales at which damage is produced and intervention or change should occur. These may in turn differ from the levels and sites for responsibility and accountability. The city is, in this regard, an enormously complex entity. Cities are multi-scalar systems where many of the

environmental dynamics that concern us are constituted and in turn constitute what we call the city, and where different policy levels, from the supra- to the sub-national, get implemented. Further, specific networks of mostly global cities, also constitute a key component of the global scale and hence can be thought of as a network of sites for accountability of global economic actors.

These are among the various issues examined in this chapter and developed in detail through the contributions in this Theme. Because cities bring together our economic, political, cultural, ideological, and technical systems and practices, the treatment of the subject demands multiple forms of knowledge. Dealing with the question of the environment in the context of cities and rural-urban interactions requires an extraordinary mix of disciplines. Further, because we are dealing with an enormous variety of political and economic systems, levels of wealth and power, cultural understandings and ideological convictions, it is necessary to bring in analyses that represent many of these differences. It is not a question simply of scientific knowledge and shared theoretical understandings.

This complexity and variety assume even more weight when we consider that the question of urban sustainability requires engaging the legal systems and profit logics that underlie and enable many of the environmentally damaging aspects of our societies. The question of urban sustainability cannot be reduced to modest interventions that leave these major systems untouched. And the actual features of these systems vary across countries and across the North-South divide. While in some of the other environmental themes examined in various volumes it is indeed possible to confine the treatment of the subject to scientific knowledge, this is not the case when dealing with human settlements. Non-scientific elements are a crucial part of the picture: questions of power, of poverty and inequality, ideology and cultural preferences, are all part of the question and the answer. Thus, we have addressed some of the major dynamics of the current era: globalization and the ascendance of markets. Questions of policy and proactive engagement possibilities are a critical dimension of treatments of urban sustainability, whether they involve asking people to support garbage recycling or demanding accountability from major global corporations known to have environmentally damaging production processes.

We opted for including a large number of very specific studies by researchers from many different parts of the world and diverse disciplinary backgrounds. We kept general overviews to a minimum because they inevitably need to neutralize the variety and specificity evident across the world. We have eighty case studies by authors from 50 countries. We have put enormous weight on the specific instantiations of general dynamics. This introductory chapter and the overview articles that will follow aim at scaling the issues upwards and constructing a conceptual architecture where the details of the case studies can be situated and contribute to illuminate more general trends.

There are shortcomings to this approach. We can only hope that the specificity and variety of contributors produces a multiplier effect through the juxtaposition of differences and similarities in the problems identified and the solutions enacted in many different parts of the world. The network of researchers and activists represented by

these 80 authors is itself a resource for change. And the enormous diversity of political views represents an engagement with lived experience.

The next section in this chapter briefly discusses some of the changes in the relation between urbanists and environmentalists. The third section reviews key components of our empirical knowledge about current and anticipated environmental damage linked to cities. The fourth section examines the evidence we have about cities as containing the capabilities for solving key elements of our environmentally damaging practices and ways of organizing the economy. Focusing on cities as a key site for instituting solutions introduces the question of the multiple scales that are present in cities, a subject we return to in the final section. The fifth section discusses issues raised by economic analyses concerned with environmental conditions and examines to what extent environmentally sound initiatives can use market systems, which at this point and certainly in the near future, continue to dominate and articulate economic activity. The sixth section examines key features of economic power, particularly in its global capabilities, that are crucial instruments in both the destruction of the environment and for demanding environmental accountability. A central effort in this section is to show that rather than focusing exclusively on the hypermobility of capital we also need to understand the embeddedness of global economic power in concrete locations which we can then also think of as sites for demanding accountability. Global economic actors need to become part of our efforts to instituting major transformations worldwide. The final section examines scaling as an analytic and policy strategy to address the issues of concern in this chapter.

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Biographical Sketch

Saskia Sassen is the Ralph Lewis Professor of Sociology at the University of Chicago, and Centennial Visiting Professor at the London School of Economics. Her most recent books are *Guests and Aliens* (New York: New Press 1999) and *Globalization and its Discontents* (New York: New Press 1998). *The Global City* is coming out in a new updated edition in 2001. Her edited book *Cities and Their Cross-border Networks* will appear in 2001 with Routledge. Her books have been translated into ten languages. She is co-director of the Economy Section of the Global Chicago Project and is the chair of the newly formed Information Technology, International Cooperation and Global Security Committee of the SSRC.

She is currently completing a five-year research project “Governance and Accountability in the Global Economy.”

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