

Stephen Graham, Simon Marvin. *Telecommunications and the City: Electronic Spaces, Urban Places.* London and New York: Routledge, 1996. xvii + 434 pp. \$220.00, cloth, ISBN 978-0-415-11902-3.



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Since the invention of the telegraph, the development of telecommunications has spawned a vast literature of both utopian speculation and grounded empirical observation. While dreamers, critics, and commentators have often dealt with the interaction of urban and telecommunications development, communication and information technologies have rarely been central to either urban studies as a scholarly field or city planning as a professional practice.

This volume is a bold attempt to "shift telecommunications from the margins to the center of urban studies and policy" (p. 75) by ordering and synthesizing that vast literature. The book is divided into ten chapters, each exploring an aspect of the relations between cities and telecommunications networks. The text is enlivened by numerous illustrations, imaginative use of statistical graphics, and extracts from provocative texts.

The Introduction in Chapter One sets the context by displaying the parallel development of cities in the West and their communication infrastructures. Chapter Two, "Telecommunications as a Paradigm Challenge for Urban Studies and Poli-

cy," argues that the transformation of space and time since the advent of electronic communication requires a shift in the conception of cities as spatially-defined systems, and calls for new approaches to the conceptualization of space, time, and cities. Chapter Three, "Approaching Telecommunications and the City," illustrates approaches to city-telecommunications relations. In this chapter, the authors critically evaluate four dominant approaches to city-telecommunications relations and build their theoretical framework. Chapter Four, "Urban Economies," reviews the economic transformations at the global and urban level. The authors argue that the real-time flow of finance, capital, and services around the world, enabled by telecommunications networks, supports the integration of financial and capital markets. Cities, in this image, are information-switching centers of the global economy. Chapter Five, "The Social and Cultural Life of the City," explores the relations between telecommunications and the social and cultural life of cities. It covers the issues of commodification of information, social polarization, and increased social surveillance, and reminds urban policy-makers about the tendencies

towards polarized social and cultural landscapes of cities supported by telecommunications. Chapter Six, "Urban Environments," discusses the relations between the urban environmental crisis and telecommunications while questioning the environmentally benign image of telecommunications. Chapter Seven, "Urban Infrastructure and Transportation," reviews the increased use of telecommunication technologies in infrastructure networks, and its implications for economic, environmental, and social structures of cities. The authors analyze the convergence between urban infrastructure and telecommunications. New telecommunications technologies improve the speed, responsiveness, and control of enormous infrastructure networks. They suggest optimistically that new policy approaches to infrastructure provision may help the development of socially equitable, economically efficient, and environmentally sustainable cities. Chapter Eight, "Urban Physical Form," is structured around debates about telecommunications and spatial restructuring, the centralizing and decentralizing effects of telecommunications. Chapter Nine, "Urban Planning, Policy and Governance," explores the implications of telecommunications for urban policy-makers and outlines telecommunication policy areas for urban development and planning. The final chapter provides an overall assessment.

Searching for a "new, more sophisticated and more integrated approach to understanding city-telecommunications relations" (p. 112), the authors analyze four dominant approaches to city-telecommunications relations: technological determinism, futurism and utopianism, dystopianism and political economy, and the social construction of technology (SCOT). They justify the surprising linkage of dystopian and political economy approaches by arguing that both view city-telecommunications relations as part of a general and deeply flawed social pattern. Graham and Marvin reject the first two approaches arguing that they fail to grasp the complex social, political, and cultural processes through which technolo-

gies are developed and applied. They focus their analysis in a "blend of the political economy and SCOT perspectives" (p. 257). They start their analysis with urban economies. They review the shift away from Fordism towards more flexible forms of industrial organization, the concentration of corporate networks in cities that dominate the global economy, and the increasing dominance of transnational corporations. Within the globalization process, supported by innovations in telecommunications technologies, they see urban economies as the "information-switching centers of the global economy." They do not accept the "dissolution of cities" thesis, although a process of moving back offices of producer and consumer services from some larger cities is underway. For Graham and Marvin, this process represents merely a restructuring of headquarter and control functions in the global command centers while decentralizing routine service functions, and leading to new processes of urbanization in other cities.

Graham and Marvin are highly critical of the "dematerialization scenario" that ignores the centralizing effects of telecommunications and simply assumes that "telecommunications would dissolve the very 'glue' that holds cities together" (p. 254). Telecommunications, they argue, generate changes rather than simply displacing the physical city. They point to complex and contradictory relations between cities and telecommunications that go beyond the "simple deterministic rhetoric of the utopians." The same issue comes to the scene in examining the impact of telecommunications on urban form. Graham and Marvin first review the role of the telephone in the development of the city. They start with the mid-1800s, the "pre-telephone and electricity era," in which communication was dependent on physical movement. They continue with the development of networked technologies such as gas, electricity, transit systems, and the telephone, and examine how these innovations overcame the physical limits of the walking city. After this brief historical account

of the role of networks on the physical form of cities, they consider whether telecommunications—which make the real-time flow of capital, information, and services possible and "dramatically alter the significance of distance in the organization of space" (p. 317)—will result in the "dissolution of the city" or an "urban renaissance." They accept both the decentralizing and centralizing roles of telecommunications but carefully avoid giving a definitive answer about the rebirth or the death of the contemporary city. For them, "the city is being redefined and redrawn in both physical and electronic space" (p. 336).

Graham and Marvin state that the nature of local governments has shifted from bureaucratic structures to "market-based," "business-style," "cost-conscious" structures under the globalization process and argue that this new forms of local governments need to control and manage information flows. Utopianism and technological determinism are once again criticized in that they "work to undermine the very concept that local telecommunications initiatives will develop, or have any impact at all on the ways in which telecommunications develop in cities" (p. 112). They define four main policy areas for urban development and planning by giving examples from the United States, United Kingdom, Japan, and France: "national policy programs for urban telematic development; teleports and competitive economic policies; inter-urban networking initiatives; and experiments with electronic public spaces" (p. 345).

Throughout the book, Graham and Marvin vigorously argue that the impacts of telecommunications on cities depend on contingent political, social, and institutional processes and vary between different places, groups, and organizations. They avoid making all-encompassing generalizations which they think would be hazardous. For them, telecommunications "offer no hope on their own and must not be seen as some technical fix" (p. 374), and urban policy approaches to telecom-

munications must be considered within the wider context of social, institutional and political changes.

Telecommunications and the City is an important and successful attempt to help increase the level of understanding city-telecommunications relations for urban planners and policy-makers. Urban historians will also be interested in this volume though it does not speak directly to them. Graham and Marvin largely ignore the literature on telegraph, telephone, radio, and television, and the effects of these innovations on city locations and hierarchies. Nevertheless, their conceptual framework will be helpful to students of each of the long series of "communication revolutions" in the last 150 years.

The authors' effort to cover many aspects of city-telecommunications relations, I suspect, makes them more vulnerable to a criticism about the lack of a clear approach to analyze the impacts of telecommunications on cities. In this context, an extended case study analyzing the impacts of telecommunications within the built up theoretical framework would have been helpful in guiding further researches. Another point is that the authors' "international perspective" (p. 10) fails to cover developing countries, although these countries are likely to be affected to a great extent by the decentralizing effects of telecommunications. On a literary front, the book sometimes suffers from being needlessly repetitive. However, it is an excellent synthesis, and a very helpful source book which can be used as a textbook for students and teachers of planning, and as a reference book for further research with its rich bibliography and elaborately prepared "guide to further reading." Graham and Marvin open the "windows" for a better understanding of this neglected field within urban planning and policy.

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mation about them and the Center for Urban Technology may be obtained from the following URL: <http://www.ncl.ac.uk:80/~ncut/>.

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