Social Change and Sustainable Transport, by William R. Black and Peter Nijkamp (eds.), Indiana University Press, 2002

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Abstract:

The last decades of the twentieth century witnessed the transforming processes of metropolitan economic restructuring (e.g., flexible production, growth of information and telecommunication technologies) along with social changes that have been created by and, in turn, propel that restructuring. These forces have had considerable impacts on urban transportation systems. The twenty-first century will undoubtedly see a variety of new social and technological trends that will continue to influence the ways in which transport and communication systems are supplied and utilized. Although at the present time a wide range of speculation exists about future transport systems, two trends that are apparent are increasing vehicle size and fuel consumption, and the increasing ubiquity of technologies with the potential to significantly alter transport patterns. The former trends are worrisome for their implications for the ability of society to maintain increasing levels of energy consumption, manage pollution, and control traffic safety. Some automakers are even reclassifying their sedans as sports utility vehicles to avoid fuel mileage requirements, clearly suggesting that at least some of today's technological advancements in transportation are unsustainable.

Article:

William R. Black and Peter Nijkamp, eds. Bloomington: Indiana University Press, 2002. xi and 296 pp., diags., tables, and index. $69.95 cloth (ISBN: 0-253-34067-5).

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At the same time, new technologies (often lumped under the label of Information and Communication Technology, or ICT) may radically alter the nature of transport demands as well as potentially reshape leisure activities. These offer significant potential for reducing energy consumption and pollution, while allowing increased levels of economic activity formerly constrained by the cost of distance. In that context, Black and Nijkamp's *Social Change and Sustainable Transport* is timely and valuable reading and provides insights for assessing "whether our current transportation systems are sustainable beyond the next half century" (p. xi) as well as searching for ways toward achieving sustainability in existing transport systems.

This book is a collection of essays stemming from a conference, "Social Change and Sustainable Transport," held at the University of California, Berkeley, in 1999, underwritten by the National Science Foundation (NSF) and the European Science Foundation (ESF). Since NSF's view of sustainable transportation research has an appropriately multidisciplinary perspective, this book integrates papers presented at the conference by European and North American scholars and includes input from a wide range of disciplines: economics, engineering, geography, urban and transportation planning, sociology, political science, psychology, public policy, and others. The thirty-six chapters of the book are organized into eight sections, along with an opening chapter by the editors. This introduction examines the contemporary social trends affecting transportation and outlines a research agenda to address social changes and the need for sustainable transport systems. Black and Nijkamp identify five themes for future research areas—sustainability, social change, globalization, information technology (including intelligent transportation systems), and the role of institutions—in the development of sustainable transport within the changing societies of the next half-century.

The first part of the book includes seven chapters that provide an overview of these basic themes. Traditionally, transportation research has been dominated by engineers, but in chapter 1 Geenhuizen et al. discuss how engineering principles are insufficient for understanding the complexity of transport systems, and that it is essential to understand the driving forces that shape changes in transport and communication. Future transportation research should therefore integrate multiple disciplinary perspectives that span the social sciences and humanities. In three separate chapters (2, 3 and 5), the exploration of new technologies and its relationship to transportation and urban forms, a widely debated issue, are examined. Although arguments exist that technology will weaken the connection between urban forms and transportation patterns, as digital communication becomes a viable option for many forms of human interaction and thereby eliminate some physical movement (Naisbitt, 1995; Cairncross, 1997), these chapters strongly

assert that these challenging questions are yet to be proved because little is currently known about technological changes and their effects on urban spatial structure and travel patterns.

Wachs's discussions in chapter 2 are especially stimulating. Some conjecture exists that the growth of ICT over the long run may contribute to the development of sustainable transport options by changing workers' travel behavior. In particular, commuters may find themselves using ICT to work at home. This will have significant impacts on commuting costs, such as fuel expenditures, and will also reduce lost productivity by eliminating the time and stress of commuting. Just as importantly, telecommuting may relieve traffic congestion and air pollution, which will have external economic and environmental benefits (Yen 2000).

Part 2 includes five chapters on "Social Change and Sustainability of Transport." The first two chapters of this section discuss policy initiatives for sustainable transport, and the rest compare the transportation sustainability problem and policy responses between North American and European countries. Part 3 is well organized and addresses issues of automobile dependency and associated problems in society, which are a critical problem in the United States as well as a growing concern in Europe and other developing countries. In four different chapters this section provides a critical discussion of how automobiles are increasingly becoming a focus of human attention rather than being viewed merely as a means of conveyance (p. 105), followed by a discussion (chapter 15) that develops a theory for explaining this car dependency. This section clearly views automobile dependence as a social problem, and in its final chapter, Salomon et al. formulate three conceptual models of sustainable lifestyles based on household formation, housing choice, and travel behavior.

The concept of social equity is introduced in part 4. Equity here is addressed in terms of social-psychological aspects of the quality of life, gender and mobility, safety measures for elderly people, and the effect of residential location on leisure. However, this conference failed to attract attention from researchers who address racial equity issues in transport research, a major omission. Part 5 continues the emphasis on social trends by recognizing a number of important overlooked issues related to increased automobile ownership and travel demand in nearly every country of the world during the past half-century. Several chapters in this section examine how increases in travel demand have been shaped by factors other than urban structural change, including the continued growth of recreational and leisure travel and even the use of company cars. Similarly, part 6 examines the external costs of freight flows and new transport policies for seeking future sustainability in freight transportation. This is followed by a discussion of cultural perspectives on sustainable transport in part 7.

The final section of this collection identifies alternative solutions for the sustainable transport problem, such as the promotion of road pricing, e-commerce, and virtual accessibility. At the same time, this section recognizes the uncertainties involved with adopting sustainable technology. Some final closing remarks in the last chapter are controversial, as when Black and Nijkamp strongly express their opinion that "the automobile culture must end in the United States and Europe" (p. 295). Nonetheless, Black and Nijkamp are convincing in their argument that automobile dependency cannot be solved by either policy-oriented (European-style) or technology-based (U.S.-style) solutions.

It is sometimes difficult to review an edited collection based on a conference. There is always a certain lack of coherence as well as repetition. Notwithstanding, Black and Nijkamp's *Social Change and Sustainable Transport* provides a valuable resource and offers readers directions for future research that are essential in these areas. As the influences of ICT-related changes on society have been targeted as the highest priority for funding in NSF's 2005 budget, this book should be essential reading by interested researchers.

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