

BOOK REVIEW**Sustainable Transportation: Problems and Solutions**

By William R. Black
Guilford Press, 2010

An Introduction to Sustainable Transportation: Policy, Planning, and Implementation

By Preston L. Schiller, Eric C. Bruun, and Jeffrey R. Kenworthy
Earthscan, 2010

Reviewed by Andrea Broaddus

Sustainable transportation is an emerging field that lacks consensus in terms of its definition and scope. Two new textbooks, representing two schools of thought, illustrate this tension. William Black is squarely on the side of traditional, rational, data-driven problem solving, and Schiller, Bruun, and Kenworthy argue on the side of visionary and participatory planning. While each book frames issues differently, emphasizing different topics (for instance, Black devotes two chapters to safety, while Schiller et al. spend two on car culture), they propose a similar range of policy solutions and technical interventions. However, while Black sticks to a list of solutions that will seem familiar to many transportation planners, Schiller et al. propose more innovative and far-reaching measures.

Both books draw upon scholarly research and policy examples drawn from the U.S., Canada, and Europe, but Schiller et al. strive to be truly global, including in-depth cases from Australia, Korea, and Indonesia. This may be because their team spans the globe—Schiller lectures at the School of Urban and Regional Planning in Kingston Ontario, Bruun is an engineer teaching at the University of Pennsylvania, and Kenworthy is a professor at Curtin University in Perth, Australia. They also write for a wide-ranging audience; their book is intended for policy-makers, advocates, and engaged citizens as well as students and professionals. It includes personal stories from people who have made changes in their lives and communities.

The books utterly diverge on one key issue: equity. Black is a well-respected and prolific scholar in the Department of Geography at

Indiana University at Bloomington. He has authored a dozen books on the environmental and health impacts of our transportation system, including social impacts, and this book reflects his cogent, readable style. It is a comprehensive yet practical tome that could be utilized by students in non-transportation fields. Surprisingly, however, he dismisses social equity from the scope of sustainable transportation problems and solutions to be considered. While struggling to define sustainability in the first chapter of the book, Black considers half a dozen definitions in turn. He ultimately decides that if we achieved an economic and environmentally sustainable transportation system, it must follow that it would be equitable. He says, "A sustainable transportation system is one that provides transport and mobility with renewable fuels while minimizing emissions detrimental to the local and global environment, and preventing needless fatalities, injuries, and congestion. The absence of equity considerations is not accidental but rather a reflection of the fact that if the conditions in the definition are met the system will be equitable."

Therefore he defines a "pentad" of critical issues that make the existing system unsustainable: "finite and diminishing fuel reserves, excessive injuries and loss of life on the current highway system, local atmospheric problems resulting in problems for human health, global atmospheric problems leading to climate change, and excessive traffic congestion on the transport system." Five chapters are dedicated to each of these in turn, followed by fourteen chapters on a range of solutions in the areas of planning, policy, pricing, education, and technology; these include indicator-based planning, speed limits, and intelligent transportation systems, along with a call for public education to shift individual travel behavior.

By contrast, Schiller et. al.'s first chapter is titled, "A Highly Mobile Planet and its Challenges: Automobile Dependence, Equity and Inequity." They consider the types of inequities produced by transportation systems dominated by private vehicles: employment and other access disadvantages associated with the incapacity to own or use autos, the regressive burden of car ownership on lower income households, and the added travel time and cost burdens imposed by living in distant, more affordable areas. As to solutions, the authors assert that transportation planning should be re-oriented around a goal of urban sustainability: "...even if it were possible to achieve universal auto-ownership, the other environmental, social, and economic costs of auto dependence are so great that urban transportation systems cannot sustain endlessly expanding private mobility. Everything then points to the fundamental need for a radical rethink of the urban transportation issue and its basic tenets."

This stance is illustrative of the book's spirited tone of advocacy. Schiller, Bruun, and Kenworthy have taken a holistic approach to total

system reform, including chapters that propose that everything from freight transport to public involvement should be overhauled in a new sustainability-oriented paradigm. The rational approach of current practice is soundly critiqued. The authors propose replacing cost-benefit analysis with “time-area” analysis, modal silos with an integrated multi-modal approach, and four-step models with community visioning and scenario modeling processes.

In general, Schiller et al. emphasize connections, interrelationships, and the human element; the book is aspirational. It is ideal for progressive planners and policy reform advocates. Black’s book looks staid by comparison, simply because its solutions build incrementally upon the status quo. It is well suited for students whose main goal is to grasp current practice and get a job in today’s transportation industry; however, it fails to acknowledge that today’s industry is not prepared for tomorrow’s needs.

Further, it seems that distributional issues are at the forefront of sustainability—certainly our environment is doomed if the developing world takes the same motorization path as the U.S. to equalize standards of living. Suppose we managed to fulfill the conditions of Black’s definition of sustainability. Suppose we achieved a transportation system of emission-free vehicles powered by renewable energy sources that was intelligently managed to avoid congestion and prevent injuries, but there remained the same severe structural inequities of mobility and accessibility that we see today, where the wealthiest people enjoy much faster, more reliable, and more comfortable transportation than the poorest. Would this inequitable system be a sustainable transportation system? A truly sustainable transportation system must offer similar levels of mobility and accessibility to people without cars. As long as income-earning potential is directly linked to car ownership, the motorization trend is bound to continue.