

Spatial Planning, Urban Form and Sustainable Transport, edited by Katie Williams, Ashgate Publishing Limited, 2005 [Review]

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Abstract:

The relationship between spatial urban form and transportation is a core research agenda in the domain of many academic disciplines including geography, planning, civil engineering, sociology, architecture, and urban design. While numerous publications have addressed the theoretical and empirical evidence of interactions between the built environment and transportation, they are scattered around because of its multi-disciplinary nature. *Spatial Planning, Urban Form and Sustainable Transport* is a collection of work by transportation professionals edited by Katie Williams, where the particular focus is to disassemble urban form to find how to best reduce automobile trips and develop sustainable transport.

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Article:

Spatial Planning, Urban Form and Sustainable Transport
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The relationship between spatial urban form and transportation is a core research agenda in the domain of many academic disciplines including geography, planning, civil engineering, sociology, architecture, and urban design. While numerous publications have addressed the theoretical and empirical evidence of interactions between the built environment and transportation, they are scattered around because of its multi-disciplinary nature. *Spatial Planning, Urban Form and Sustainable Transport* is a collection of work by transportation professionals edited by Katie Williams, where the particular focus is to disassemble urban form to find how to best reduce automobile trips and develop sustainable transport.

Williams divided her book into three sections. The first section looks at the impact that urban form has on transportation in combination with socioeconomic factors such as household types and lifestyles and is of interest for showing how transport planning must accommodate a range of populations. In Chapter 2, Schwanen and his colleagues discuss how different household types (single worker, two-worker family, retired, etc.) have different needs (urban leisure facilities and high-quality schools) and, therefore, have differing preferences in urban form. By reason of these differing needs by household types, there is not one urban form that works best for all. These findings lead them to conclude that different built environments should be targeted toward different household types. For example, high-rise buildings near public transport facilities may be better suited for modifying travel behavior for single workers and two-worker couples; whereas, compact suburban areas may be better suited for one-worker couples and retired households. Similarly, in the following chapter, lifestyle and urban form are shown to impact residential mobility and travel behavior. New lifestyles are emerging and these different lifestyle groups have different forms and patterns of mobility, which are increasingly unpredictable and create many challenges to urban planning. Diverting from the trip-based models, Chapter 4 by Tindemans et al. introduces the activity-based approach for understanding travel behavior. While this chapter did not exclude the influence of household structure on travel behavior, here specific focus is given to the activities at locations and at different times that shape people's travel patterns, with specific attention paid to "trip-chaining," the combining of several errands in one trip.

Chapter 5 concentrates on the leisure trips of older people. This topic is very important as the elderly population is growing in all developed countries, and life spans after retirement are getting longer and so must be included in sustainable transport planning. The authors conclude that small-scale urban design is important for sustainable transportation for elderly people. Chapter 6 has a useful discussion of knowledge gaps regarding land use and transportation interactions. The authors then investigate the importance of time in these relationships and found that people change their travel behavior over time and that these results vary by household type. The authors' main finding is that this temporal effect on travel behavior is very important and should be weighted more heavily in future spatial studies. Ultimately, all these chapters in Section 1 suggest that a future planning approach is more complicated than current approaches, and researchers should pay attention to individual lifestyles, neighborhood characteristics, as well as space-time activities along with more sophisticated data (e.g., individual travel diary data) and methodologies (e.g., multi-level modeling).

The essays in the second section examine the relationships between transport and different aspects of urban form, such as proximity to infrastructure and density. This section is particularly important and interesting because, while there are many forms of urban structure suggested for developing sustainable transportation, there is still little solid evidence. Chapter 7 examines the effects of proximity to transport infrastructure on economic development, a very old debate. Evidence from The Netherlands points out that the proximity to infrastructure has some effect on employment development, but this effect is not very strong and is less significant than proximity to existing employment areas. Different employment sectors would likely have different results for such a study. Chapter 8 examines whether a compact city is better for reducing fuel consumption. Evidence based on cities in Japan suggests that population density as well as

transport infrastructure (the number of railway stations in a city) are both important factors in relation to fuel consumption. A neighborhood's location relative to the city center and the availability of public transportation were important factors in keeping fuel consumption low, but residential and neighborhood zoning tended to increase consumption. Chapter 9 explores the exposure of air pollution to car drivers in relation to urban form and found that different types of roads lead to differing levels of pollutants.

The third section of the book explores sustainable transport policies and implementation. Chapter 10 takes on the interesting topic of resistance to sustainable planning by examining the differing beliefs about transportation planning of engineers, economists, and town planners. Each group has its own view of what the transport system should accomplish, and for whom, and while a particular group may adopt the language of sustainability this will be filtered through each institution's own beliefs. Chapter 11 examines the Western Australian government's new traffic management guidelines and shows how car-centric street layouts and engineering standards, combined with separated land uses, have resulted in unsustainable transport development.

The most obvious criticism of this book is that most chapters do not define sustainability, and many do not even relate to the idea of sustainability at all. The word seems to be used largely to indicate improvements or modifications to transport systems that are consistent with many of the goals of sustainability, but this book does not represent a clean break from earlier work that did not take sustainability into account. Williams' selected papers are based mostly on European and Australian cities (only a single chapter is based on an American city), but the topics should be of interest to researchers elsewhere. Although they are very diverse, these chapters work well together by providing a range of topics and applications in the inherently broad field of sustainability. By beginning the book with small-scale issues, such as household travel decisions, and ending with the discussion of large-scale regional planning, they span the wide range of problems and future research directions in this field. The role of information technology in urban form can also be studied, such as Internet connections on trains and buses, which could encourage commuters to use mass transit if it shortens their workday. The main contribution of this book is that there are many ways to study the problem of how to improve transport systems, and there are just as many potential solutions. However, it is not clear that many solutions will necessarily lead to more sustainable transport systems, and this topic requires additional work.

It is sometimes difficult to write a review of an edited book as there is always a certain lack of coherence and repetition, and readers must remember that this volume is not without that limitation. Nonetheless, Williams provides a collection of papers on urban form and transportation that can be a valuable resource for undergraduate and graduate students or practitioners who are looking for one single collection on a range of related topics.