Access to Destinations

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INVESTOR IN PEOPLE

Dedication

This book is dedicated to our children.

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CHAPTER 1

THE MACHINE FOR ACCESS

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In 1923, renowned architect Le Corbusier authored what is largely considered to be the best-selling architecture book of all time, *Vers Une Architecture* ("Towards a New Architecture"). Within the pages of his impassioned manifesto, he claimed that "A house is a machine for living." Architecture, he claimed, is able to improve people's lives. For Le Corbusier, Victorian cities were chaotic and dark prisons for many of their inhabitants; he was convinced that a rationally planned city could offer a healthy, humane alternative. Contemporary planning initiatives suggest the time is ripe to revisit this metaphor, albeit on a larger scale.

Much of land use-transportation planning today aims to reduce average vehicular delays, increase passenger throughput, and in general, keep traffic flowing smoothly and safety. The barometers used to measure such attributes include hours of delay, speed of traffic, number of cars in congestion. Such barometers have become accepted lore among populations from both the transportation industry and popular culture. Newspapers around the country wait eagerly for the well-known annual rankings from the Texas Transportation Institute to relay to their residents how well (or in a perverse sense of pride, how poorly) their city is performing.

Measures of congestion, however, have limited utility. They provide a snapshot of only a select dimension of a city's transportation system: the ability of residents to transport themselves under certain conditions (e.g., free flow travel times). Measures of mobility are merely concerned with the ability to move, but not with where one is going. In many respects, such measures fail to adequately capture other essential dimensions of a city's entire transportation environment—that is, how easy it is to get around. Transportation, concerned with the movement of matter (people and goods), is the machine for mobility.

Like a house is a machine for living, cities are the machine for accessibility. In a conference in 1993, Melvin Webber succinctly and eloquently outlined the motivation for and definition of 'accessibility' in a metropolitan context. He described the aim as a desire for greater

connectivity and to maximize opportunities for social and economic interactions. The *ideal* city, he claimed, is "one that *maximizes* access among its interdependent residents and establishments." This central notion has been widely shared. For example, it is entirely consistent with Lewis Mumford's claim that the problem of urban transportation could be solved by "bringing a larger number of institutions and facilities within walking distance of the home" [i]

We agree with such statements even though these ideas are not necessarily novel. Many urbanologists have evoked the notion of accessibility. It has received considerable study over the years from researchers in land use, transportation, regional science, urban economics, and geography. However, the concept is receiving a resurgence of sorts from several professions. In response, at least three issues motivate this work:

- Quality of life and related policy dialogues are increasingly sensitive to the role of congestion throughout many metropolitan areas. The measures guiding such discussions—the Texas Transportation Institute's Congestion Indices—provide an incomplete picture,

- In depth transportation, land use, and city planning surrounding such issues deserve a balanced, and objective criterion on which to base future solutions. There is confusion over use of the various terms in such discussions, (see, for example, Susan Handy's paper in this volume on the misinterpretation of mobility versus accessibility),

- The time is ripe to revisit many of the concepts put forth during the novel work of the 1970's to suggest how matters have changed and progress that is being made over a quarter century later.

The idea of centering a research agenda—and a series of papers—around the concept of access is one that we have considered for some time in informal dialogue. There are several issues involved and questions that each of us have batted around for some time. For example, what are the implications for the different measures of accessibility. How do we know which one is right for which job? Is there a problem with providing excessive amounts of access? How do we know when a policy or project we have implemented achieves the *optimal amount* of access in a *real* city; that which is worth what it costs? There are ongoing debates (and more importantly, things taken for granted that should be debated) that the accessibility hypothesis can inform. First, what is the role of accessibility in the economy at large? Second, which, if any, mode of transportation (auto, transit, or other) should be favored? Third, what is the optimal city structure? And last, how do we best answer these questions and implement the answers given the fractures in the transportation field?

The optimal choice of accessibility today may be tomorrow's white elephant. Perhaps it is the failure to recognize that the optimum amount of access is not infinite, or permanent, and that access is not the result of a single technology or process that has fueled the debate of auto

versus transit (low density versus high) as the appropriate vehicle for achieving access. The following section highlights additional matters.

ADDITIONAL CONSIDERATIONS

What creates accessibility, or why isn't economic and social activity ubiquitous? There are economies and externalities associated with the concentration of activity. These scale economies and spillovers allow greater choice ranging from consumer goods to entertainment to business specialization; how many small towns have a sushi bar, a symphony orchestra, or a stock market? One simply has to look at the differences in the range of opportunities between small towns and larger cities. Once you have economies of density (also called scale or agglomeration economies), it means there will be differences between places. If markets are working, in their attempts to be as well off as possible given the resources available (in the economist's jargon "maximizing utility under a budget constraint"), people will gravitate to those areas which offer them the greatest satisfaction. This is a very important point—small towns exist which have fewer services than larger towns, yet people move there, enjoy themselves, and die there. They have the amount of access they want.

Why should the private sector be concerned with accessibility? When individuals choose an activity, they must consider three elements: what they want to access, what everyone else wants to access, and what the people who run those places which are being accessed want. For instance: I want a bookstore nearby, my neighbors also want bookstores nearby, and somebody wants to sell books—great, we have ourselves a market. The owner, by locating his or her store and having extended operating hours, maximizes access to the most people. But if my neighbors didn't want books, I would be unable to support the bookstore myself. Or if nobody wanted to sell, we have the same problem. Or if the government set rules limiting store hours (for instance, "blue laws") or where bookstores could locate (zoning) we'd have less access.

Why must the public sector be concerned with accessibility? If all of the externalities from concentration were positive (e.g., increased market activity, access to specialized goods), then government should be in the business of encouraging higher density; if they were all negative (pollution, congestion, crime), government should discourage them. In the real world, there is a combination of the two, so there must be some attempt to optimize the level of density. That is the crucial issue; it is a central rationale for planning. But in the end it is a balancing act that reflects the varied preferences of people who want greater density and those who do not.

What constitutes the metric of accessibility, considering costs? In principle this is easy. Given relative costs it is the set of all goods and services (including social interaction) which the population could consume. Again in the parlance of the economist, it is the sum of aggregate consumer surplus. In practice, it is another story. Unlike most studies, accessibility analysis