

Urban Sprawl, Auto Dependency and Poverty

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Introduction

David Shipler mentions in *The Working Poor* that lack of access to an automobile is one of the factors that can make finding and holding a job difficult. A person in need of a job may not be able to afford a car, since car ownership is so expensive, but they may need a car because of urban sprawl and inadequate public transit networks. But just how serious is the burden of car ownership, and how exactly does underfunded public transit and urban sprawl contribute to the need to take on this burden?

Review of the Literature

Awareness of the nature of urban sprawl and its economic causes and impacts appears to have grown rapidly in the last few years. The issue has been well known for quite some time, but actual data have been difficult to come by. However, my sources seem to indicate a growing interest in a scientific approach to urban sprawl, including its sources, associated factors and possible solutions. There has been a growing realization that "urban sprawl" must be clearly defined and consistently identifiable. As explained by Ewing *et al.*:

Much as Justice Potter Stewart said of pornography, most people would be hard pressed to define urban sprawl, but they know it when they see it. Increasingly, however, that is not good enough. As more and more metropolitan areas debate the costs and consequences of poorly managed expansion, there is an increasing need to be clear about the terms of the discussion. Politicians and planners aiming to contain sprawl also must have an agreed-upon way to define and measure it in order to track their progress. Beyond that, it is important for policy makers to be able to demonstrate how, and to what degree, sprawl has real implications for real people. (3)

Ewing, Pendall and Chen identified four factors for measuring urban sprawl in the Smart Growth America study, including residential density, neighborhood mixing, strength of activity centers and street network accessibility. Kumares Sinha, a professor of civil engineering at Purdue University, identified the density of urban areas as the key variable in his work on sustainable urban public transit (338). Both of these sources show clear correlations between sprawl, pollution, private vehicle ownership, and traffic fatalities, as well as considerably lower use of alternative means of transportation, such as walking or public transit (Ewing *et al* 5).

The latter issue is of particular interest to us, since we are concerned about access to employment opportunity by those without access to cars. The Smart Growth America study notes a correlation between sprawl and use of public transportation by urban residents. Sinha acknowledges it as well, and goes on to try to explain why this connection exists, and what can be done to increase utilization of public transportation. Public transportation officials for Baltimore have openly acknowledged that, in spite of their efforts to expand public transportation services, they are unable to do very much if there are not large numbers of people making use of the services (DeGregario). In his efforts to gain a more scientific understanding of how this works, Sinha has determined that it is not the raw population of a city, but the number of people per unit area that will determine the cost-effectiveness and sustainability of public transportation. Urban sprawl decreases density, increases costs for public transit systems, increases automobile dependency and raises barriers to employment opportunities for those who cannot afford cars. He alleges that an additional one person per hectare in Boston could increase transit boardings by 19 per person per year and reduce auto ownership by six per 1,000 people, resulting in a reduction of energy consumption for transportation equal to 3.1 *billion* joules (338). To look at it another way: assuming 150 Calories per bar, that's almost 5,000 granola bars. Although those 5,000 granola bars are a vanishingly tiny percentage of the total amount of energy used annually in the United States, it appears that a fairly small change in population density could have decidedly non-trivial results,

at least on a human level (ever imagine eating 5,000 granola bars?).

Smart Growth America, the Abell Foundation and Sinha each suggest solutions, and this is where the real problems begin to emerge. Everyone agrees that the closing off of opportunities to citizens who cannot afford a car is a bad thing, but there is some serious disagreement as to the root of the problem, and about what should be done to solve it. The Abell Foundation and the Brookings Institute favor lowering the cost barriers to car ownership. Smart Growth America and Sinha suggest a cornucopia of public policy changes, including significant increases in taxes, fines and other costs in order to make driving less appealing and encourage increases in transit use and development of transit-oriented, mixed neighborhoods of higher density (Sinha 339).

As might be expected, the Smart Growth America study has drawn conservative criticism as a result (I did not find any second opinions on Sinha's paper) of its motives and suggestions. According to John Charles of the Cascade Policy Institute, a free-market think tank, the study unfairly assumes that driving, having a back yard and living far away from commercial areas is a bad thing. I suspect that the authors of the study would say that the study demonstrates quantitatively that they are bad things, but it is clear that opinions differ.

The point here is that the issue is very heavily politicized, and if solutions are to be found, a great deal of compromise will be necessary. It is difficult to say how much could even be done, given the American political climate. Most of the policy changes recommended in these studies, particularly Sinha's, involve greatly heightened regulation and, most highly charged of all, tax and fine hikes on motor vehicle use to reflect their actual societal costs and discourage use (Sinha 339). While these may indeed be what is necessary to make positive change, they are anathema to most Americans. In fact, the Abell Foundation's recommendation – that the costs of registration, insurance, and other requirements of ownership be lowered – is still a burden on taxpayers and the economy, but it assumes that car ownership is necessarily helpful and good and that public transit will necessarily fail, which makes it far more palatable to most Americans, few of whom are very interested in giving up their cars.

This is a complicated issue, and one in which the greatest obstacle to change may be a social and political climate that does not want to wonder if our dependency upon our automobiles for every aspect of our everyday lives may be doing more harm than good. Regardless of what the solution is and how it is found, it will no doubt require a great deal of compromise and soul-searching by the American public and policy makers alike.

Discussion

The costs of car ownership concern motorists greatly, so it isn't difficult to find information. AAA releases an annual brochure and report called "Your Driving Costs." Their 2004 brochure reports a composite national average cost of 56.1 cents per mile over 15,000 miles of driving in one year. This amounts to an annual cost of \$8,415, including fuel, maintenance, tires, insurance, license, registration and taxes, depreciation, and financing. Americans spend more of their income on their automobiles than they do on anything else except for shelter, at 18% and 19% of the average family's income, respectively ("Your Driving Costs"). A reliable car that has been paid for in full may cost \$4,000 annually (subtracting the average annual cost of financing), but the upfront cost of a car is still substantial, and few Americans can afford to purchase a car outright. This picture is complicated by the fact that few low-income families are able to afford a new car, which reduces the cost of financing, but these families are also likely to have poor credit, which has the opposite effect. The used cars that they buy are also likely to be less reliable than the average, which increases maintenance costs. Still, the evidence shows that owning a car is a huge financial burden. Why take it on?

The problem is an urban and suburban infrastructure designed to accommodate cars at the expense of non-automotive traffic and a lack of well-designed, well-funded public transit services. The automotive lifestyle and the type of growth and infrastructure it causes can be shown to raise transportation costs while limiting access to jobs, causing these costs to rise without there necessarily

being a correlating rise in the capability of poor Americans to pay them.

In the years after World War II, middle-class and wealthy Americans fled the inner cities to live in suburbs. From 1970 to 1990, the density of urban population decreased by 23%, while vehicle-miles of travel nearly doubled. After 1970, more Americans in a metropolitan area lived outside the inner city than lived within it. This is not a solely American phenomenon. Cities all over the world appear to be sprawling, with this kind of growth being driven solely by the power of the automobile (Sinha 334). In the United States, long familiarity with and implementation of automobile-friendly urban engineering somewhat mediate the negative impacts of automobile-dependency upon congestion (while possibly magnifying the less obvious negative social effects), but the rapid motorization of the developing world has resulted in serious congestion, pollution and safety issues, even though vehicle ownership still lags far behind that in the U.S. (Sinha 331).

Sinha further explains that cars and trucks have not only fueled new growth in urban areas, but that this expansion follows a new and distinct pattern:

Up until World War II, cities in the United States grew around an urban core, often in successive layers of high-density concentric rings. However, this pattern of urban growth changed dramatically in the 1950's. With all-weather roads and housing programs encouraging single-family dwelling units, this traditional growth pattern gave way to a "leapfrogging" phenomenon in most American urban areas, creating urban sprawls represented by uncoordinated ribbon developments along major highway corridors reaching deep into rural agricultural areas (333).

In essence, urban expansion has largely shifted from a model of rings, or layers, to a model of pseudo pods expanding along the life-giving veins that are the highways of America. In fact, this type of growth may be not just the natural direction of automobile-driven urban expansion, but a necessary adaptation of an auto-dependent society to avoid overwhelming congestion (growth seems to be a misleading term, since population densities have been steadily *declining* even as metropolitan areas get larger). A Smart Growth America study has shown that there is no correlation between congestion and sprawl – congestion does not decrease as cities spread ("Portland"). Sprawl certainly has provided great freedom of lifestyle to those Americans who can escape to the safe, quiet single-family home and white picket fence of the American dream, while exacting a greater economic toll on those left behind.

Retail establishments and big-box retailers sprang up to support this new residential growth, but their employee base of unskilled laborers was still largely based within the inner cities, making commutes increasingly longer and more expensive. As jobs and people left the cities, many urban transit networks found themselves going out of business. Many that survive were publicly acquired and heavily subsidized. As a result, owning a car has become a major factor in the ability to seek, acquire and hold a job.

For example, a recent report by Washington think tank the Brookings Institution states that 32 percent of Baltimore residents do not have cars. An Abell Foundation report says that this endangers the ability of these residents to get and keep a job, ("Baltimore City residents"). The Brookings Institution proposes lowering the barriers to car ownership in order to help more Baltimoreans become productive citizens. These barriers are quite high in Maryland, and especially in Baltimore City, making car access more difficult to achieve than it is on average. However, it is not clear whether car ownership is a pathway to or a symptom of success. The Brookings Institution believes that it is the former, but the truth is probably more complex. There is a strong advocacy movement for better public transit in Baltimore, and the state Transportation Budget has received a high level of funding for the next six years, but even department officials admit that there is a limit to what can be done cost-effectively without a large number of people using the system ("Baltimore City residents"). Enticing people to use public transportation is difficult, however. People often prefer to drive, both because of inadequate transit networks and because of the (accurate) perception of public transportation as transportation for the poor. The resulting lack of customers makes the cost-effective construction of adequate networks

impossible, making this a vicious cycle where public transportation is doomed to fail. This in turn contributes to the tragic need to own a car in order to work, and all of its consequences.

All of this is a sensible explanation for the current situation, but it begs the question of how all of these factors arose in the first place. The complicated economic and social issues surrounding the automobile's dominance of urban and suburban transportation seem, upon even a fairly simplistic investigation, to belie the automobile's status as the holy grail of personal transit. Why do cars have this position in society?

The scope of this question is far too broad to be addressed here. Since the answers to many of the questions that I hope to cause the reader to consider are far from uncontroversial, even among those that believe that urban sprawl and automobile-dependency are bad things, I am reluctant to claim that I can offer any solutions. It should be made clear that the point of this paper is not to claim that cars are bad or that cars should necessarily be removed from use to solve these problems. Automobiles are incredibly useful tools, and there are many things that they do very well. What this paper means to suggest is that cars have become the proverbial hammer with which every problem looks like a nail. The goal here is to remind people that hammers are very good at driving in nails, but that there are other tools better suited to handling different tasks. It may be possible to hammer in a screw, but a screwdriver will do the job much more efficiently.

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