

## **City Friendly Transportation Planning: A Pathway to Sustainability**

### **Norman Garrick**

By Clare Murphy-Hagan '11

Norman Garrick, an associate professor of Civil Environmental Engineering at the University of Connecticut spoke at the 2011 Goodwin-Niering “Smart Growth?” conference. Professor Garrick’s talk addressed the role of transportation in the health and wealth of cities. He drew from his travel experiences in Zurich, Switzerland, his four-month stay in Jamaica, and his case studies on Cambridge, Massachusetts; Hartford, Connecticut; Columbus, Ohio; Detroit, Michigan; and Portland, Oregon. Professor Garrick, sought to address the question of how some cities have maintained their character, wealth and health, while others have crumbled and decayed. His solution to the fates of different cities and the need to revitalize debilitated cities lies in the transportation system of the city. In his talk Professor Garrick presents city friendly transportation as the pathway to sustainability.

Why is there a need to revitalize cities? The reason many cities are decaying and crumbling is do to suburban sprawl (the spreading outwards from cities to lower density suburbs.) Responsible for making sprawl possible was the invention of the automobile, with the introduction of the Model T in 1908. In the 19<sup>th</sup> century American cities were walking cities, where people worked and shopped close to where they lived. (America on the Move). The automobile provided the golden ticket to escape from the city. Its popularity grew quickly, increasing the demand for the new privatized mode of transportation. According to Garrick, from 1909-1927 the Ford Motor Company built more than 15 million Model T cars.

Figure 1 depicts the increase in vehicle miles driven. Despite a few bumps in the graph (due to the depression, World War Two, and the oil and energy crises) the number of vehicle

miles driven steeply increased over the past 100 years.

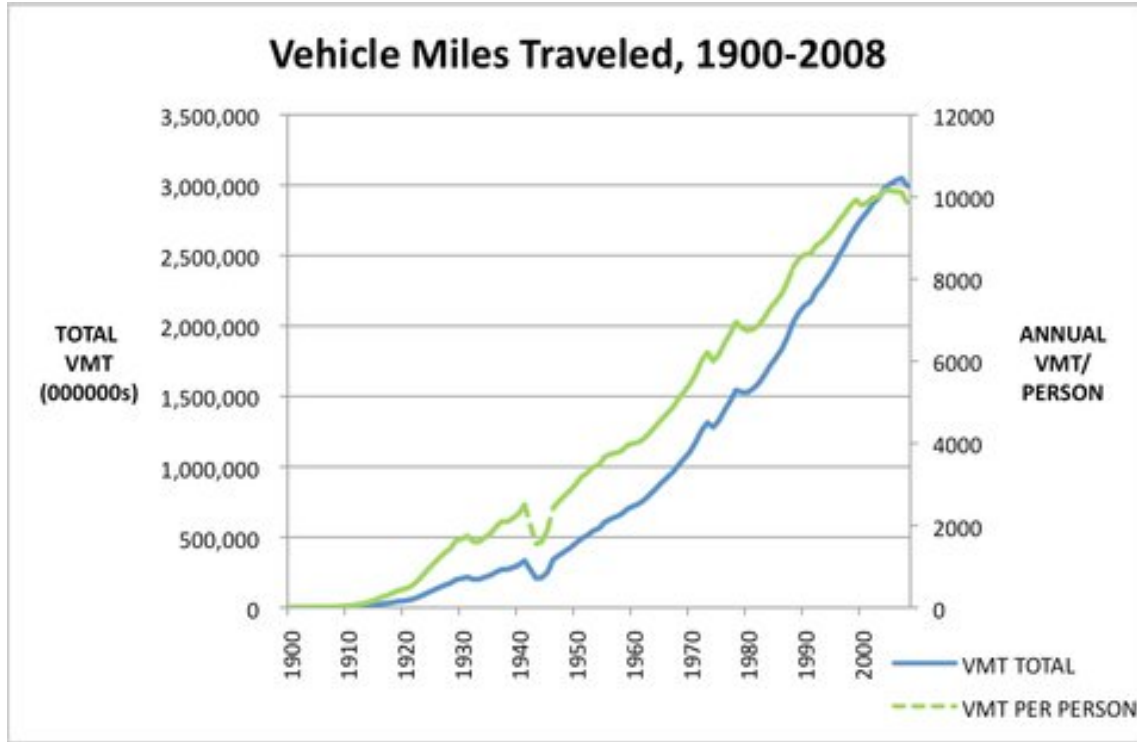


Figure 1: Graph of Automobile Usage. From: <http://earnestandjest.wordpress.com/2011/01/12/peak-oil-peak-travel-peak-food-and-why-innovation-will-not-save-us>

In 1964 the average American drove 6 miles per day, where as forty years later, in 2004, the average American drove at least 30 miles per day (Garrick). With the automobile people moved out of the cities to newly built suburbs, where they could enjoy a more private life—with cookie cutter houses and white picket fences—while commuting into the city for work. However, this lifestyle was only available for those who could afford privatized transportation (mostly white working and middle class.) Therefore, populations of lower economic standing (often people of color) remained in the cities, where their neighborhoods were often torn apart by the construction of highways and expressways. Meanwhile, the affluence had moved out to the suburbs. Thus businesses that depended on this economic class followed suite. This series of events was

termed “white flight.” A prime example of this was Wallace Buick, a car dealership, which in 1949 moved from downtown Portland, OR to the nearby suburb of Sandy Boulevard. Following the dealership’s lead, many shops sprung up along Sandy Boulevard creating the affluent Hollywood district. Moving the attractive shopping destinations out of downtown and into the exclusive suburbs lead to the economic decline of downtowns, as well as the gentrification of the suburbs (America on the Move). This phenomenon, happening all across America, left the cities as purely workplace destinations, which the white middle class “bread-providers” drove to and from each day.

How else did the automobile transform the city center? Garrick compared the current distribution of pharmacies in Washington D.C. to Hartford, CT. He found better accessibility in Washington D.C. There pharmacies were evenly distributed throughout the city and high walkability existed. In Hartford, a few pharmacies were clustered together making accessibility to them difficult for anyone living outside of their walk-able radius. Garrick posed the question of what happened to Hartford, since it too had once supported a non-automobile dependent society with a thriving city center. The answer once again stems back to the rise of the automobile. Garrick explained that from the 1930’s to 1960’s large parts of Hartford were destroyed. In 1965, Hartford was leveled and rebuilt to make way for cars, in particular parking spaces and highways. Moving away from gridded streets, the vision of a modernist city fed the fire. Backed by the federal housing authority, engineers quickly adapted a code to support this vision, resulting in suburban sprawl. Suburbs, such as West Hartford, sprung up with vibrant centers, like Blue Back Square, and the rebuilding of the city to accommodate the automobile resulted in a windswept Hartford, with highways disrupting its center.

To address how some cities have managed to maintain their character, wealth, and health, Garrick compared Hartford, a high auto use city, to Cambridge, MA, a low auto use city. He explained that in 1960 Hartford and Cambridge had the same per capita income and the same amount of cars. According to Garrick, studies have shown that the amount of parking increases in high driving cities. In 1957 Hartford had 15,000 parking spaces. By 2009 this number had tripled to 45,000 spaces and Hartford had transformed to the windswept, withering workplace it is today. However, this was not the case in Cambridge. In 1981, city planners imposed a parking cap in Cambridge, limiting the amount of parking that could be built in the city. In addition, a similar proposal to bisect Cambridge with highways had been proposed but not executed. This brings to light the question of how some cities get by with a quarter of the parking spaces per activity found in other cities. Garrick claims there is “no such thing as transportation demand. There is only derived demand. By limiting available parking spaces in the city, Cambridge cut down on auto use and people turned to alternative forms of transportation as well as public transportation.

Hartford has evolved (or more accurately regressed) due to its conventional path of transportation planning. Conventional transportation planning involves a positive feedback loop that results in a spiral of decay. The outcome is cities such as Detroit, Michigan and Columbus, Ohio, which lack life, attractiveness, and are largely concrete wastelands. In the conventional path, building occurs, which makes room for and attracts more people to the city. With more people coming to the city auto use increases and the need for more auto facilities increases. With more auto facilities being made available more traffic is possible, and thus auto travel increases again. Here, the feedback loop is apparent, since the increased auto use once again creates a demand for more auto facilities. However, with the increase of space made available for

parking, the space available for buildings and open spaces decreases. Therefore, the feedback loop leads to fewer buildings, which leads to fewer people. The result is an unhealthy city of parking lots surrounded by suburban sprawl.

Garrick emphasizes the need to move away from this conventional form of transportation planning and to follow what he dubs city friendly transportation planning. The first step in city friendly transportation planning is addressing the question: What is the vision for this city? Once the vision of how the city should develop is agreed upon, a system must be created that supports the vision. The system may include a parking cap, alternative transportation, and public transit. For example, Portland, OR, often considered the poster child for smart growth, has an extensive plan to support the city's vision. With indication that the population of Portland would increase by 600,000 between 2005 and 2030, city planners sat down to create a plan to accommodate growth within their vision. The plan directed growth into already urban areas and to maintain the urban growth boundary (Programs, Policies, and Regulations). In addition, the city boasts a light rail system and extremely accessible bus system spanning multiple counties. Portland, is extremely bicycle friendly and recently installed bike boxes at each intersection downtown, giving bikers precedence over cars.

In his four-month stay in Kingston, Jamaica Garrick observed how Kingston was failing at developing as a sustainable city. For three of these four months Garrick operated without the use of an automobile (as most Jamaicans do.) In fact only 20 percent of Jamaicans have cars ("The Fundamentals of Effective Transportation Planning"). Garrick observed that during those first three months he was part of a very different economy than the last month when he had a car. He shopped and ate locally, supporting small businesses and street vendors rather than driving to large super markets. However, despite that the minority of the Jamaican population drives cars,

the pattern in Jamaica has been to develop in such a way that supports cars. Recently a toll road linking the two largest cities in Jamaica was constructed. Signs along the road indicate that all forms of transportation other than automobiles are prohibited on this road. This is an unfortunate rule in a country where only one fifth of population travels by automobile. Thus the signs are ignored. As Garrick states, “If you tell people things that don’t make sense, they just ignore you” (Garrick).

Garrick’s research draws attention to the decay of some cities, and how studies of thriving cities can indicate a way to revitalize these cities. He hails Zurich, Switzerland’s streetcar system as one example of a pathway to sustainability. In addition, he emphasizes the need to control parking square footage in a city, since increases in parking feeds back to increasing auto traffic. Finally, he believes that cities must develop in a logical way that best fits the culture and the sustainable vision for the city. Lewis Mumford once said a “good transportation system minimizes unnecessary transportation” (Lewis Mumford). Therefore, traveling cannot be thought of as simply traveling, but rather people travel to do things. With this in mind while developing a city-friendly transportation system, cities previously lost to suburban sprawl can be revitalized and sustained.

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#### Additional Resources:

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