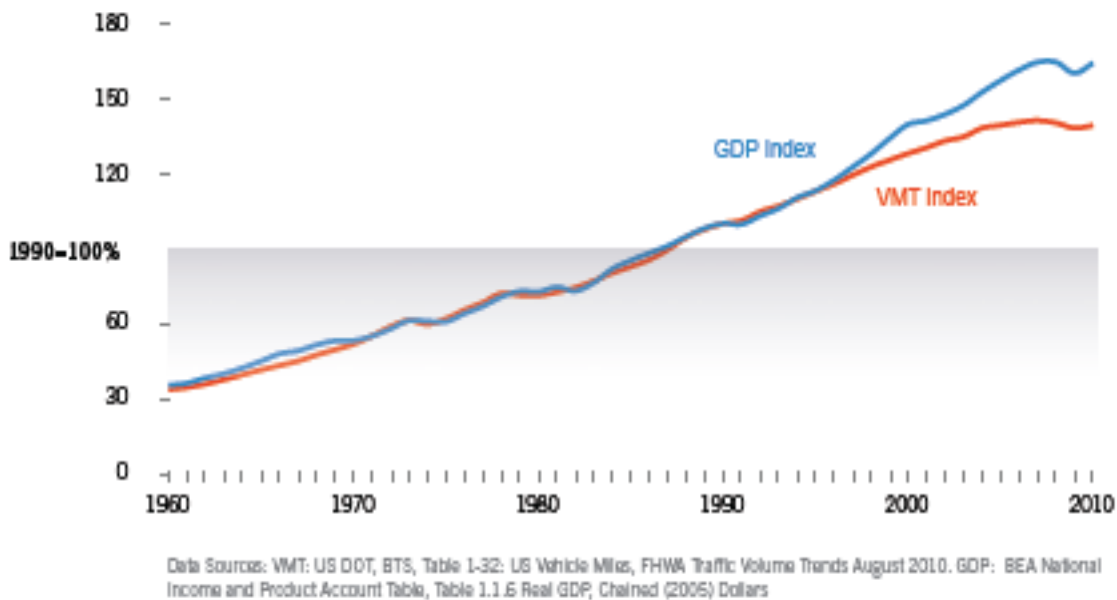


# The Role of “Alternative” Transportation Toward a New Vision of America

Christopher B. Leinberger

The surface transportation policy at the US federal level and nearly every state is very simple to understand; the dominant policy is to build and maintain roads for cars and trucks. There is also a very distant secondary policy for what is dismissively called “alternative” transportation; rail and bus transit, biking and walking. The Federal-funding split has been roughly 80% road-based and 20% “alternative.” Most state policies are nearly 100% road-based transportation.

The logic for this is that for the bulk of the post-World War II era, the most common measure of highway usage, vehicle miles travelled (“VMT”), correlated one-to-one with GDP growth, as shown in the graph below. While causality has never been proven, something academics hold out as the holy grail of social science, the correlation has been so compelling that there was no reason to question it. As we drove more the US got wealthier. Or the converse of this premise, as we grew the economy, we drove more. It did not matter which was the independent variable and which was the dependent, the correlation was strong enough to make it the basis of US transportation policy.



The not well-understood reality that backs up this government policy is that for the second half of the industrial age, the post-World War II period of time, the economy was in fact car-based. My estimate is that about 40% of all jobs, direct and induced, were related to mining the raw materials for, manufacturing, selling, fueling, maintaining, financing, insuring and providing the roads for cars and trucks. The American car-based industrial strategy was adopted by war-devastated Europe,

followed by Japan, Korea and more recently China and India. As Americans in the 1950s were driving to the advertising jingle, "See the USA in Your Chevrolet", they were making themselves wealthier.

The irony was that the US had the longest and best run passenger rail system in the world in 1945, even more ironically Los Angeles was at the top of the list worldwide. Bikes were an accepted form of short trip transportation. As any photograph of 1940s American urban life attests, people-packed sidewalks and jammed roads filled with bikes, trolleys and cars, before 1945 was an entirely different way of living than we have today in the vast majority of metropolitan America.

The transformation from a transit, biking and walking transportation policy toward a car and truck policy in the Post-World War II era is well known. With great rapidity the transportation options that dominated urban life for 10,000 years of city building (walking) and the previous 100 years (biking and transit) became officially designated as "alternative" transportation. Within 17 years, the longest passenger rail system in the world in Los Angeles was completely torn out. Bicycling was ghettoized as an elite sport. Walkers were viewed with suspicion...poor people sneaking into prosperous suburbs to steal your property and worse. If your neighbors saw you biking or walking, it was assumed you either had car trouble or had lost your economic standing; either way it was embarrassing.

Similar demotion of the primary historic ways of urban transportation took place in most economic recovering and developing countries at some point in their industrialization. By the 1960s, biking around most European cities had a negative social stigma that you had not yet recovered from the poverty that followed the war. The Chinese had been renowned for the millions of bicycles that dominated their urban streets in the late 20<sup>th</sup> century. By the early 21<sup>st</sup> century, most Chinese cities banned bikes on roadways, giving over urban right-of-ways to only cars and trucks. The November 1999 cover of the *Economist* demonstrated foresight about China's urban future, though actually rather easy to predict with so many past precedents, showing a freeway passing over the Great Wall.



Yet starting in the 1980s, Europe rediscovered the urban, environmental and health benefits of biking and walking. Copenhagen and Amsterdam now lead the world in their bike mode split, in spite of their harsh and dark winters, as they have recognized that a multi-modal approach to urban surface transportation is extremely economically productive, among many other benefits. Europeans have rediscovered that historic transportation options can be successfully blended with the oft-times convenience of cars and trucks. How can Americans push the fast forward button to reach the conclusion that a balanced portfolio approach to transportation is as important for our metropolitan areas as it is for your personal investments?

It starts with understanding that *transportation drives development*. Urban historians understand this premise starting from the layout of newly established

Roman cities, followed by virtually all subsequent urban development through the Middle Ages, Renaissance and Enlightenment. The transportation system a society selected dictated the resulting urban form. Horse-powered transportation for the well to do and walking for the rest predominated during the first 10,000 years of city building resulted in the building of walkable urban places<sup>i</sup>. Even the introduction of commuter rail in the mid-19<sup>th</sup> century merely created dense walkable stations in the new “Uptowns” and suburban towns they helped create.

It was only with the truly revolutionary invention of the car and its eventual mass production, making cars available to the middle and working classes, that the form of cities fundamentally changed in a way never experienced before. The emergence of drivable suburban development, something never seen in urban history, became not just a new option but the *only* option for America and much of the rest of the industrializing world as well. The lessons and form of 10,000 years of city building were thrown out and forgotten. This was particularly the case for the US, which for 100 years was the largest car and truck market in the world, only losing the title to China a few years ago.

It was inevitable that industrial societies, using car and trucks as the foundation of their economic strategy, would initially marginalize “alternative” transportation. It had to happen as a part of the industrialization process and it is also what the market wants early in a country’s industrialization process. A working class family living in a Mumbai slum, dependent upon crowded and dirty transit as well as bikes and walking, will certainly dream of a car-dependent, low density lifestyle. This is just what the post-war experience was in the US so why should it be any different elsewhere? The question is what happens after a few generations of middle class existence has been enjoyed. This question is particularly pertinent for Americans, which until just recently had appeared to be so resistant to getting out of our cars and leaving low-density suburbia.

Europe certainly has shown how relatively recent (re-) industrialization allows society to evolve first to a drivable suburban world and then beyond to a more balanced transportation system offering a complex set of metropolitan land use and lifestyle options. However, Americans are much more provincial, protected and isolated by two large oceans. Lessons from Europe instantly get discounted and even gets you branded as effete (remember that one of the harshest criticisms of presidential candidate John Kerry was that he spoke French...fluently!). So the major question of the early 21<sup>st</sup> century is how will American public policy change to allow for more transportation, land use and lifestyle options than we now have in most metropolitan areas?

The answer is to layout a new vision of how to live an economically and socially rich life that multiple transportation options allow one to enjoy.

## Learn from the Most Recent Past Vision

This may sound difficult to do but it is really taking a page out of the brilliant marketing strategy of General Motors, the major promoter of the drivable suburban lifestyle in the first place. At the 1939-40 New York World's Fair, GM seduced the country and the world with a new way of living. GM's *Futurama* was the most visited exhibition of the most successful World's Fair ever. Over 10% of Americans visited *Futurama* and many times that number read about it in *Life*, *Look* and *The New Yorker*. They saw the low-density, car-driven, suburban dreamscape projected for the near future of 1960. This vision percolated during the war years and emerged as the unquestioned means of rebuilding the country when the GIs came home.

The domestic policy put in place in the 1940s and still in place today made drivable suburban development the only legal way of building, a financial systems that would only lend to the newly built suburbs and massive subsidies for low-density infrastructure, most importantly the roads. Domestic policy is meant to social engineer a desired outcome. The *Futurama* domestic policies lead to the very outcome that was promised. One could argue that the drivable suburban domestic policy was the largest social engineering project in American history. A way of life the market wanted and that made the economy boom...as the *Futurama* narrator said upon leaving the exhibition, "*all eyes to the future.*"

So the challenge today is to promote a new vision of how Americans can live, work and play that is equally compelling as the *Futurama* vision was to our grandparents and great-grandparents. It is a vision that includes meeting all of one's needs conveniently within walking, biking or transit distance. That walking and biking is safe and the default option for getting around. Cars are available for trips that are most convenient for cars; hauling large loads, visiting out of the way destinations, taking meandering road trips for pleasure, providing instant flexibility for business purposes. Yet no one would be chained to a car for every trip outside the home, as is the case today for most Americans.

This future vision perfectly aligns with the existing knowledge economy. As the graph above shows, the GDP/VMT correlation no longer holds since the mid-1990s as the country's economy was growing into the new knowledge economy. Cars and trucks are not needed to ship software from walkable urban or even home-based work places. The new vision is even more aligned to the probable next economy, the experience economy. Experiences that are demanded are generally wilderness-based or urban-based. The first major experience industry is tourism, currently the largest industry in the world economy. Pick up the Sunday Travel section of any newspaper and it is split between wilderness travel (my guess about 30%) but urban travel is the major destination. No one in history has gone on vacation to a strip mall or subdivision.

The other major step is to remember the role transportation plays in building our metropolitan areas, i.e., transportation drives development. Just as a subdivision proposed on a farm field would never be built if there was not a road built first to get customers there, policy makers need to understand that great walkable urbanism can not emerge without first building the rail and bus transit, bike lanes and walking infrastructure it requires. The best way to convey this is to point out that the goal of building transit, bike lanes and sidewalks is NOT to move people and goods. The *goal* is economic development; the *means* is moving people.

My research shows there is pent up demand for walkable urban development in the US that will take at least a generation to satisfy. This pent up demand is shown by revitalized walkable urban places that were pretty much slums 30 years ago, like Dupont Circle in DC, German Village in Columbus (OH), Virginia Highland in Atlanta and Capitol Hill in Seattle. These places are now the highest priced real estate in their metropolitan area on a dollar per square foot basis. This also points out the need for an aggressive affordable housing policy to allow a broader number of Americans to enjoy this way of living.

There are many other reasons for Americans to fall in love with the walkable urban future vision, including health, social, environmental, energy security, foreign policy and educational benefits. Yet the easiest way to convey this vision in the aftermath of the Great Recession, where the collapse of the drivable suburban fringe was the catalyst of the economic collapse, is a vision of economic prosperity. The American economy is bumping along at a two percent growth rate, far less than required to lower high unemployment. The reason for this poor economic performance is the country is not building the transit, bike and walking infrastructure that will drive the development of walkable urban places in our cities and suburbs. Building the drivable suburbs in the late 20<sup>th</sup> century was the foundation of the economy then. Building walkable urban places will be the economic foundation of the early 21<sup>st</sup> century. It is important to note that it appears that the majority of the demand for walkable urban development will be satisfied in the suburbs; so it is both the redevelopment of our central cities *and* the transformation of the suburbs.

This vision is bolstered by the underlying market demand for a *Seinfeld*, *Friends* and *Sex and the City* inspired option of how to live, work and play. This vision need not demean the now-dominant drivable suburban way that most Americans live today. The new vision just points out that we have overbuilt that approach and the market now wants different options.

### **Best Defense, No Be There**

The environmental benefits bear highlighting. The debate about how to address climate change has become stalled in the US. But even when it was acceptable in Washington to discuss reducing green house gas emissions, the entire debate was about technology, efficiency, alternative energy sources, carbon taxes, cap and trade, etc. These are all supply-side measures to increase the efficiency of providing and

using energy and thus reducing green house gas emissions. However, there is the possibility that even if these measures were implemented, the Jevons Paradox might take effect. Named for the 19<sup>th</sup> economist, \_\_\_ Jevons, he postulated that as energy efficiency increases, the net effect is that consumers and businesses will find more ways to use energy and emit GHGs. As we become more efficient, we just plug in a second refrigerator and more computers.

Unfortunately the climate change debate has nearly entirely ignored demand-side mitigation. Recent research by Center for Clean Air Policy, Center for Neighborhood Technology and Peter Calthorpe's most recent book, *Urbanism in the Age of Climate Change*, point out the benefits of the demand mitigation approach. The built environment (real estate and infrastructure) and the transportation systems we use to get around our buildings consume over 70% of all energy and about the same percentage of green house gas emissions. Households moving from a conventional low density, drivable sub-urban lifestyle (house fully exposed to weather, driving for nearly all household trips) to a walkable urban lifestyle (shared common walls and walking, biking and transit for most trips) can cause a major change. The household moving can drop their energy usage and GHG emissions by between 50-80%. Getting this reduction from the largest category of GHG emissions makes the demand mitigation approach the most effective solution by far.

The 1984 classic movie, *The Karate Kid*, has a scene that encapsulates this approach. In the movie Daniel, the transplanted high school student, asked his Karate mentor, Mr. Miyagi, how he would stop being beat up by the toughs at school. Mr. Miyagi's response was "best defense, no be there." The best way to reduce GHG emissions, live a lifestyle that by its very nature does not use as much energy nor emits as much GHGs.

This vision is contagious. Once exposed to great walkable urbanism, allowing the freedom of using transit, a bike but especially walking, to get to most daily needs leads to the demand for more of these places. Enjoying the journey as much as the destination. It is not for every one at all phases of their lives but it is where the pent up market demand is today and for the foreseeable future. We need to build out the second half of our transportation systems, making "alternative" transportation mainstream again, while rebuilding the existing roadway network. This will give the market what it wants so much, walkable urban places. As the narrator said upon leaving the *Futurama* exhibit, "*all eyes to the future.*".

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<sup>i</sup> Water-based urban transportation sometimes played a role when possible. And certainly the need for city walls confined urbanism for most of the past 10,000 years but even after the walls were dismantled in the 17<sup>th</sup> and 18<sup>th</sup> centuries, a walkable urban form predominated.