

America is on the verge of a transportation revolution -- and doesn't know it.



That revolution will not involve high-speed rail,



Or light rail, or any other form of collective transportation. Transportation that doesn't go where you want to go when you want to go there is functionally obsolete.



To understand why, look back see what our transportation systems looked like 100 and 200 years ago. In 1810, almost no one had ever traveled faster than a horse could run and lived to tell about it. The average American probably traveled no more than about 2,000 miles a year, mostly on foot or horsepower.



The next century saw a series of amazing transportation revolutions, including the steamboat



The canal



the steam-powered railway



The safety bicycle



And the streetcar.



Yet in 1910, most Americans still lived in rural areas and probably traveled little more than in 1810. Intercity passenger trains were mainly for the wealthy and streetcars were mainly for white-collar families in urban areas. Most Americans were ruralites and most urbanites were blue-collar families.



Personal mobility was democratized only with the development of inexpensive autos made on a moving assembly line.



Henry Ford cut the prices of cars in half and doubled worker pay, making it possible for the workers themselves to buy the cars they made.

U.S. Incomes & GDP



This had enormous benefits, including a huge increase in incomes as people could reach more jobs and markets.



Housing became affordable to the working class for the first time

U.S. Homeownership Rates



Leading to a 50 percent increase in homeownership rates.



Automobiles also made low-cost consumer goods accessible to most Americans



Including a huge array of foods once available only to the rich.



Autos also expanded emergency services



And social and recreational opportunities



Only personal mobility is able to affordably provide these benefits. Yet there are some people who think we drive too much.



Secretary of Transportation Ray LaHood says his goal is to "coerce people out of their cars." Instead of mobility, his goal is "livability." This is a typical political term that sounds wonderful yet is totally devoid of meaning.



We know that, under "livability," efficiency doesn't count, as LaHood recently rescinded rules put in place by his predecessor to insure that rail transit projects were cost efficient.



Under LaHood's livability, property rights don't count. Under Oregon's livability plan, rural property owners are not allowed to built a house on their own land unless they own 80 acres and they earn at least \$40,000 to \$80,000 (depending on soil productivity) per year farming that land.



Meanwhile, Oregon planners have upzoned urban neighborhoods of single-family homes for apartments with zoning so strict that, if your house burns down, you are required to replace it with an apartment.



From the experience of cities in Oregon California, and elsewhere that have adopted livability policies, we know that livability means unaffordable housing. This house costs \$150,000 in an urban area that does not have livability policies. Adding such policies sends the price to \$300,000 to \$1.2 million.



We also know that livability means more congestion, as planners hope that such congestion will encourage people to ride their expensive transit systems.



We also know that paying for livability means higher taxes and/or reduces budgets for essential services. Portland, Denver, and other cities have cut their fire, police, and school budgets in order to subsidize rail transit and developers who build supposedly livable housing.



We know that, under livable policies, transportation will be far more expensive. Transit, for example,

Costs & Subsidies Per Passenger Mile



Costs three to four times as much as driving when all subsidies are taken into account.



Livability does not mean energy efficiency, as transit uses as much energy, per passenger mile, as driving.



Moreover, cars are getting more energy efficient every year.



By 2025, the average car on the road will be more energy efficient than the most efficient transit systems in America.



Livability advocates say they want to provide housing choice;



Yet their plans explicitly aim to reduce the number of people living in single-family homes, which is the preferred choice of most Americans.



They say they want to provide transport choices,



yet their plans specifically aim to reduce per capita driving, the choice of travel preferred by most Americans as well as most Europeans (this is a highway in France)


Livability advocates say they want high-speed rail, yet -- like passenger trains a century ago -- this form of travel is only for the rich. For example, I recently needed to travel from New York to Washington, and the fare for Amtrak's Acela was \$155



While the fare for Megabus was \$15.50 -- and the bus had WiFi while Amtrak has NoFi.

French Travel



What they don't realize is that, while the TGV may be attractive to tourists, it is hardly used by the French, who average less than 400 miles a year on high-speed rail. The average resident of France travels by bus more than high-speed rail, by air three times as much, and by car almost 20 times as much.

Japanese Travel



The average Japanese travels by air more than high-speed rail, by low-speed rail nearly three times as much, and by car 10 times as much.

VISION for HIGH-SPEED RAIL in AMERICA



The other problem with high-speed rail is that, like light rail, once you get started, you can't stop no matter how much a failure it proves to be. Here is Obama's proposed high-speed rail map from February, 2009, with high-speed routes in red.



Here is Obama's high-speed rail map a year later, with close to 50 percent more routes. One route goes from Minneapolis to Duluth. Is it a coincidence that the chair of the House Transportation Committee represents Duluth?



Livability policies will create a two-class society, in which the wealthy still live in single-family homes and have personal mobility while everyone else will live in apartments and be able to go only where transit systems go.



But I am here to tell you that the decades-old battle between roads and rail transit is obsolete, thanks to the next transportation revolution.



That revolution is driverless cars.



The idea of driverless cars was actually conceived more than 70 years ago by a self-styled futurist named Norman Bel Geddes.



Bel Geddes designed the Futurama exhibit at the 1939 New York World's Fair. This exhibit was sponsored by General Motors, but it all came from Bel Geddes, who first asked Shell and then Goodyear to sponsor it.



It was the most popular exhibit of the fair, as it allowed Americans to see the future: a huge miniature landscape showing the world of . . . wait for it . . . 1960!



This was a world of cities and edge cites



Connected together by gleaming highways



Over which cars and trucks traveled unimpeded by congestion.



21 years later in 1960, we were building the Interstate Highway System and many people thought we had fulfilled Bel Geddes' prophecy.



But what you don't see looking at the grainy photos of Futurama is that each of the cars and trucks on Bel Geddes' future highways were driverless. Bel Geddes believed that, by 1960, people would be able to travel coast to coast in driverless cars at 100 mph.

Benefits 1. 3x-4x road capacities 2. Increased speeds 3. Safety 4. Greener than HSR

Bel Geddes knew that driverless cars would produce enormous benefits, including a tripling or possibly quadrupling of highway capacities, an end to congestion, increased speeds, greater safety, energy savings, and reduced pollution.



Laserbeams, radar, and other technologies were not yet available, yet Bel Geddes was certain that some sort of devices could be put into the roads that could be sensed by the cars.



This is exactly what an experimental University of California program did on a new San Diego freeway in 1997. The cost of installing these magnets would be less than \$10,000 a lane-mile.



Small magnetic sensors in each of the cars made it possible to run many cars -- they used eight -- at 65 mph just one car length part. That would at least quadruple highway capacities. Ironically, the Department of Transportation celebrated this successful test by canceling the program.



Since then, the only government program working toward automated cars in the U.S. has been by the Defense Advanced Research Program Administration, which challenged researchers to develop a driverless car. This was Stanford's winning entry in the 2005 DARPA Grand Challenge.



In 2007, DARPA asked researchers to develop a car that could negotiate in an urban environment. Stanford's entry took second place.



The winner of that challenge was the entry from Carnegie-Mellon.

"This is not science fiction. Government regulation, liability laws and other issues pose a bigger impediment to driverless cars than any technical hurdles." Larry Burns, GM VP Research

The Research head of GM, which co-sponsored the Carnegie-Mellon entry, noted that the main obstacles to driverless cars were not technical, but institutional and bureaucratic and says that GM expects to have driverless cars on the road by 2018.



HONDA Advanced Driver Assist System (ADAS)

Automakers are already adopting new technologies that will be part of those driverless cars, namely adaptive cruise control, obstacle sensors and collision avoidance, and sensors that read the lane stripes and steer within those stripes.



This Fiat can detect pedestrians and automatically stop when someone steps in front of the car. All of these technologies had been tested by 1997, and today you can buy cars with all of these features.



From there, it is little more than a software upgrade to have a completely driverless car.



The European Union is testing a way of phasing in driverless cars by creating a system in which one vehicle driven by a professional driver leads a platoon of cars in driverless mode.



Any car with wireless hardware can enter the platoon,



allowing the driver to go to sleep, read a book, or whatever.



At any point, a car can signal that it is leaving the platoon



and the other cars will regroup behind the lead vehicle. This is one way in which we might transition to completely driverless vehicles.



Still, there is a chicken-and-egg problem. I am not going to buy a driverless car unless there are highways to drive it on, and the states are not going to provide driverless roads unless there are cars to drive on them.



Other industries face the chicken-and-egg problem all the time. The ports on the side of your computer are very different from the ports on a ten-year-old computer. How do you get people to transition to new ports and how do you get manufacturers to make peripherals that use those new ports? The industry solves this with standards committees. My book recommends that auto manufacturers and state highway departments sit down together to create standards for driverless roads.



The Obama administration wants the U.S. to have the world's finest example of a 1930s-era transportation system.


America needs to aim higher if we are to remain competitive in the world economy. We need a 21st century transportation system. That means we need to stop spending money on cost-ineffective rail projects and promote user-fee funded mobility.



All of these ideas and more are discussed in detail in Gridlock.

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come to the antiplanner

RSS

bout the Antiplanner

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alendar

December 2006						
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Welcome to the Antiplanner

posted in Mission, Why Planning Fails | 🥖 Edit |

They say someone starts a new blog every second, so let me present one of the first 80,000 blogs of 2007. The

Antiplanner is the public face of my new mission: to promote the repeal of all federal and state planning laws and the closure of all state and local planning offices.

While people often blame social problems on politicians or lawyers, I have concluded that many of our problems are due to planners and the elected officials who support them. In a nutshell, planners do two things: they create shortages of things that people want and surpluses of things that people don't want.

Of course, everybody plans. We plan our work day, our vacations, our education and careers. But these plans tend to be short term, flexible, and affect mainly ourselves and our families. To distinguish this from the planning I criticize, I prefer to call such activities organizing: we organize our time and resources as efficiently as we can based on what we know. If

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Welcome to the Antiplanner

GO

My daily blog also frequently comments on Portland and rail transit. Go to http://ti.org/antiplanner or just Google "antiplanner" and I'll be the first thing on the list.





For even more information, I invite you to Orlando this June 10-12

Preserving the American Dream Conference **Defending Mobility** and Homeownership June 10-12, 2010 Orlando, Florida

where the American Dream Coalition will hold its annual meeting on the future of American mobility and homeownership.

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