

# On the Road with Randal O'Toole

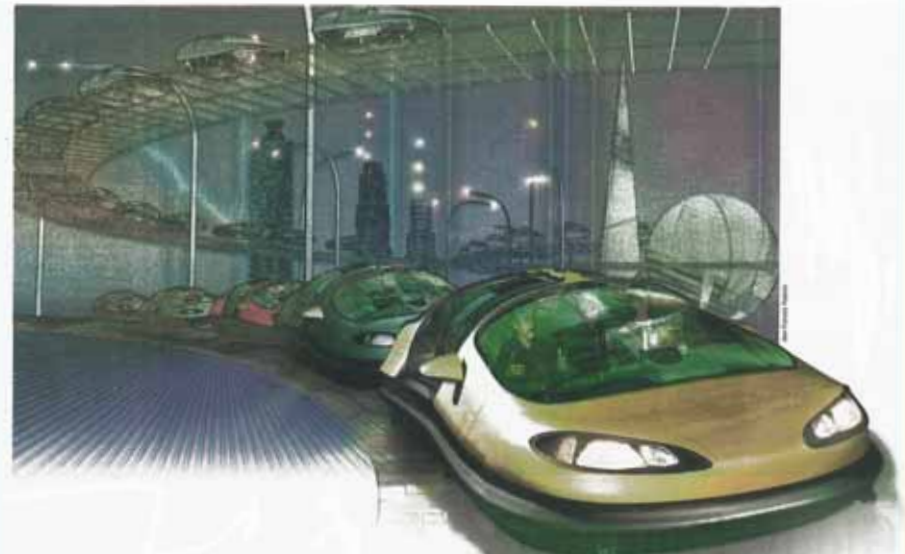
For someone writing about the often lamentable state of American transportation, Cato senior fellow Randal O'Toole spends a lot of time on the road. Between January and May, he spoke at more than 30 engagements from Anchorage to Orlando, presenting the case against high speed rail and smart growth policies and promoting the message of greater mobility found in his new book, *Gridlock: Why We're Stuck in Traffic and What to Do About It*.

"Congress, the administration, and others are making very important decisions about transportation that will influence how we travel, how we live, and how much we are taxed for many years to come," O'Toole said. "I want people to be aware of what is happening and help members of the public to have an influence on these decisions."

O'Toole spoke at Cato in January and at the National Conference of State Legislatures in April. His audiences ranged from populist to Ivy League. In January, he spoke at Powell's Books in Portland, Oregon, the largest independent bookstore in the world. He addressed a crowd of 250 people at the Racine Tea Party in Racine, Wisconsin, in March. A few weeks later, O'Toole took part in a special panel of the Janus Lecture series at Brown University, where he provided the libertarian perspective to counter co-panelist James Howard Kunstler, a leader in the anti-sprawl movement and author of *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*.

When he wasn't speaking in person to audiences across the country, O'Toole was talking to the media and writing for newspapers. In January and again in March, he was a featured guest on John Stossel's Fox Business program.

In March, O'Toole authored a full-page essay for the *Wall Street Journal*, "Taking the Driver Out of the Car." Addressing a topic familiar to those who have read *Gridlock*, O'Toole extolled the benefits of driverless cars. "Driverless cars and trucks will be safer,"



## Taking the Driver Out of the Car

Why robocars, and not high-speed rail, could revolutionize transportation in the next decade

By Randal O'Toole

**Y**ou grandfathers will reap across the entire continent in 24 hours or in a new kind of driverless car that is controlled by the push of a button. Futurist Herman Hul Godes promised in 1945. Mr. Hul Godes designed Futurama, the most popular exhibit at the 1939 New York World's Fair, which in many ways inspired the construction of the Interstate Highway System.

Driverless cars have as far removed the staff of science fiction. Seventy years after Mr. Hul Godes's promise, they are finally close to reality.

Consumers today can buy cars that steer themselves, accelerate and brake to maintain a safe driving distance from cars ahead and detect and avoid collisions with other cars on all sides. Making them completely driverless will involve little more than a software upgrade.

Yet the potential for advanced personal mobility is being ignored in debates over surface transportation. These debates come to a head every six years, when Congress debates not how to spend federal gas tax revenues. Congress has increasingly diverted the funds—\$40 billion a year by last count—from highways to transit.

The Obama administration and House Transportation Committee Chairman, James Oberstar (D., Minn.), want to go even further in the next reauthorization, now scheduled for 2011. The administration has focused on a new national high-speed rail system, as well as streetcars, light rail and other projects, to reduce driving and congestion.

Yet driverless cars could render the hand-erecting over roads versus rail needless. Driverless technologies were demonstrated in 1987 on a California freeway when eight cars without drivers successfully operated just one mile length apart at 65 miles per hour. In 2007, six cars registered the Defense Advanced Research Projects Agency Urban

Challenge, following all traffic rules in an urban environment with other vehicles. Volkswagen says enhanced global positioning systems can keep cars within two centimeters of their desired location on streets and highways. This summer, the company will demonstrate its technology by running a driverless Audi at racing speeds up the Telety Film Peak road.

At the 2007 event, General Motors vice president of research Lawrence Burns predicted that completely driverless cars would be on the market by 2018. He added that the primary obstacle was legal and bureaucratic, not technical. Because computer reaction times are faster, driverless cars can safely operate more closely together, potentially tripling highway throughput. This will virtually eliminate congestion and reduce the need for new road construction.

Toyota's recent recalls naturally lead to worries that computer glitches could cause serious accidents. Since each car will be independently controlled, a failure in one would simply lead others to avoid that car. Modern cars already have numerous built-in computers that do things, such as anti-lock braking, far more reliably than humans, even those who are not hunting or inebriated. Any serious problems could be quickly corrected through wireless software upgrades.

Driverless cars and trucks will be safer. They will also be greener, first by significantly reducing congestion, and eventually because vehicles will be lighter in weight due to reduced collision risks.

Perhaps most important, driverless vehicles will bring mobility to everyone, not just those able to pass a driver's test. While many people will still choose to own a car, in-

creased numbers may rely on car sharing. Outside of ultra-high-density areas such as Manhattan, driverless cars will render urban transit and intercity passenger trains even more obsolete than they are today.

The American automobile fleet turns over every 15 years, so if Mr. Burns's prediction that driverless cars will hit the market by 2018 comes true, we could have a completely driverless system by 2036. State highway officials could accelerate this timetable by working with auto manufacturers to set standards and a transition path. State and local highway agencies could install wireless communication systems at major intersections and highways—a much less costly undertaking than building new roads, much less high-speed rail.

President Obama's so-called high-speed rail plan mostly consists of moderate-speed trains running at top speeds of 90 to 120 miles per hour at speeds attained by many railroads in the 1930s. This will attract few people out of their cars. The proposals for train routes running at 300 to 230 miles per hour in California and Florida will cost at least 10 times as much to build as the 200-mph lines, but they are not likely to attract 10 times as many passengers.

As Burlington Northern Santa Fe CEO Matt Rose testified to Congress last April, building a national network of true high-speed rail lines would cost roughly \$1 trillion, more than twice as much as the inflation-adjusted cost of all other road and air lines, all the capital and billions of dollars of annual operating costs of high-speed rail will be borne by general taxpayers, most of whom will rarely ride the trains.

America's population distribution makes passenger trains

less effective than in Europe or Japan. Yet even abroad, the average residents of France and Japan ride high-speed trains less than 400 miles per year, making up just 4% to 6% of all passenger travel.

France and Japan have set apart roughly as much per capita subsidizing their high-speed trains as we spent building our interstate highways. Yet the average American travels 30 times as many miles on the interstates as the average French or Japanese travel on high-speed trains.

Austria's high-speed Arelia trains between Vienna and Washington cover most of their operating (but not capital) costs. To do so, fares are some 10 times greater than many relatively unutilized bus services that carry about three times as many passengers in the northeast corridor as the Arelia.

China's train are environmentally friendly may apply to freight trains, but not passenger. A 30-ton railcar can carry 100 tons of cargo, making freight trains highly energy-efficient. However, a 50-ton passenger car carries only about 15 tons (170 people), and more typically carries about 2 to 3 tons (20 to 30 people), resulting in average weights per passenger that are several times greater than for cars or buses.

In January, Secretary of Transportation Ray LaHood eliminated Federal Transit Administration requirements that federally funded streetcars and other rail transit be "cost effective" relative to buses. The FTA then funded costly streetcar projects in Dallas, Detroit, New Orleans and Tucson despite the fact that low-cost investments in traffic signal coordination, buses or many other projects would do far more to relieve congestion and improve mobility.

A return to rails would turn the clock back to a time when only the wealthy had access to easy mobility. The 19th-century railroad revolutionized several amazing transportation breakthroughs, including steamships, steam trains and electric streetcars. Yet in 1910 most Americans enjoyed little more personal mobility than they had 200 years ago. High fares for streetcars and passenger trains mainly limited such travel to the wealthy. Streetcars served only urban areas and were popular with the upper classes.

The revolution that finally brought mobility to the masses was Henry Ford's low-cost Model T, which most factories about 1,000 to sell over 10,000 miles per year. Cars contributed to a seven-fold increase in personal incomes.

Automobiles continue to maintain a huge cost advantage over passenger rail. Counting both individual and personal costs, Americans spend less than 25 cents a passenger mile on auto, nearly 50 cents a passenger mile on Amtrak, and more than 90 cents a passenger mile on urban transit. Its wonder 80% of all our passenger travel is by automobile.

The rail to spend hundreds of billions of dollars is obsolete to build the world's finest, 1930s-era transportation network would benefit the wealthy and those willing to live and work in expensive quarters near rail stations.

In contrast, the driverless scenario relies on new technology, not old, and will largely be self-funded by users rather than paid out of tax dollars.

Most important, driverless vehicles will bring mobility to almost everyone.

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he wrote. "They will also be greener, first by significantly reducing congestion, and eventually because vehicles will be lighter in weight due to reduced collision risks."

For O'Toole, mobility is central to the American way of life. It makes us happier and wealthier. But mobility is threatened by calls for greater government control

over how we travel and live, often in the name of saving the environment. "These policies will prove costly and ineffective at accomplishing environmental goals," O'Toole said. "But most people aren't even aware that they are being proposed or passed. I hope my tour will help publicize these problems."