Testimony of Randal O'Toole
Cato Institute
Before the House Transportation and Infrastructure Committee
Hearing on Amtrak Operations: 41 Years of Taxpayer Subsidies
September 20, 2012

My name is Randal O'Toole, and in addition to being a senior fellow with the Cato Institute, I sometimes call myself Cato's "rail nut." I have a lifelong love for and fascination with passenger trains, and have traveled well over 100,000 miles on Amtrak as well as on passenger trains throughout Canada and in Europe, Asia, Australia, and New Zealand: I have a web site dedicated to historic passenger trains; I helped restore the nation's second-most-powerful operating passenger steam locomotive; and I once owned five historic rail passenger cars.

The High-Cost Solution

All else being equal, I would personally prefer passenger trains over any other form of intercity travel. But all else is not equal. Under Amtrak management, passenger trains have become the high-cost solution to any intercity transportation problem. In 1970, before Amtrak took over most of the nation's passenger trains, average rail fares were one-third less than average airfares—about 18 cents (in today's pennies) vs. 27 cents per passenger mile. Over the last four decades, inflation-adjusted airline fares have fallen by 50 percent, while inflation-adjusted rail fares have grown by 70 percent, so that, today, per-passenger-mile rail fares are 130 percent greater than airfares—about 31 cents vs. 14 cents per passenger mile (figure one).

This is just counting passenger fares. In addition to fares, Amtrak subsidies are nearly as great as the fares themselves. Starting from virtually zero in 1970, federal and state subsidies to Amtrak today are nearly 29 cents per passenger mile. Airlines and highways receive subsidies as well, but these amount to only about 1 to 3 cents per passenger mile (figure two). This means that the total cost of rail travel is nearly four times as great, per passenger mile, as the total cost of airline travel—about 60 cents vs. 16 cents per passenger mile.

Bus travel is even less expensive than air travel. The "new model" of bus service pioneered by Megabus involves minimal dedicated infrastructure, non-stop service between many city pairs, and fares set by a form of yield management. I estimate that the average fares collected by Megabus, Bolt Bus, and others using this model are about 8 cents a passenger mile, or about 60 percent of airline fares and one-fourth of Amtrak fares. Subsidies to bus service average about a penny per passenger mile, or a little more than one-thirtieth of federal and state subsidies to Amtrak.

Amtrak advocates argue that much of the subsidy to Amtrak is for capital improvements and shouldn't be counted against annual revenues. But this is only an accounting label. In fact, most of Amtrak's so-called capital improvements are really maintenance. Just as replacing the tires or battery in your car is a form of maintenance, replacing worn-out locomotives, railcars, bridges, or other infrastructure is really just maintenance. Expenses are truly capital improvements only if they genuinely improve service and potentially attract new riders. In any case, even true capital costs must eventually be repaid by revenues.

Advocates of passenger train subsidies also argue that these subsidies are needed to balance the scales for historic subsidies to airlines and highways. While such subsidies did take place, they were always small—on the order of 1/2 to 3 cents per passenger mile—relative to the large number of passenger miles carried by those modes. By comparison, after adjusting for inflation, Amtrak subsidies have averaged about 25 cents per passenger mile since at least 1973. If forty years of such large subsidies haven't turned around the rail passenger business, it is not going to happen. The real solution is to end subsidies to all modes of travel and let people decide which they prefer based on their own personal preferences and budgets.

Given its high costs, it is no wonder that Amtrak plays an insignificant role in the nation's transportation system. While Amtrak advocates point to recent gains in ridership as evidence that America needs passenger trains, the truth is that Amtrak

carries little more than one-tenth of one percent of the nation's passenger travel. Domestic airline routes alone carry close to 90 times as many passenger miles as Amtrak; scheduled intercity buses carry at least 2.5 times as many passenger miles as Amtrak; and the nation's highways carry almost 300 times as many passenger miles as Amtrak in intercity travel.

The average American travels just 21 miles per year on Amtrak, compared with more than 1,800 miles per year by domestic airline and close to 6,000 miles per year in intercity highway travel (figure three). While Amtrak's ridership has recently grown, so has America's population, and the 21 miles of per capita travel each year in 2011 is a decline from 24 miles in 1990 and 30 miles in 1970, the year before Amtrak took over most passenger trains.

Amtrak's Disappearing Energy Advantage

Advocates of passenger train subsidies argue that such subsidies are justified based on Amtrak's supposed environmental advantages over its competitors. But these advantages are both negligible and declining.

According to the Department of Energy, for example, in 1975 the airlines used 115 percent more energy to move one passenger mile as Amtrak did. But thanks to improvements in aircraft efficiency, today airlines use just 25 percent more energy than Amtrak (figure four). Moreover, the future energy efficiency of both airlines and automobiles is likely to grow much faster than passenger rail.

Where General Electric estimates that its latest locomotive uses just 3 to 5 percent less fuel than previous locomotives, Boeing estimates that its 787 Dreamliner uses 20 percent less energy than its predecessors. Based on recent trends, by 2030 the airlines will use less energy per passenger mile than Amtrak. Under the federal government's current fuel-economy standards, by 2030 the average car on the highway will also use less energy per passenger mile than Amtrak.

There are two reasons why Amtrak will not be able to increase its energy efficiency as fast as other modes of travel. First, for safety's sake, passenger rail cars that operate in the same corridors as freight trains must be very heavy. The Acela, for example, weighs more than 4,100 pounds per seat. The weights per seat of other Amtrak trains are comparable.

Second, where airlines fill about 85 percent of their seats, Amtrak trains operate barely more than half full. At 65 percent occupancy, the Acela does better than average, but this still means more than 6,400 pounds of weight per passenger. At just 50 percent occupancies, the average weight per passenger of many other Amtrak trains is even greater. It takes a lot of energy to move this much weight.

Amtrak's low occupancy rate is difficult to remedy. Most air routes are essentially non-stop, allowing the airlines to tune frequencies with demand. But Amtrak trains typically make numerous stops between endpoints, and while seats may be full during one part of the journey they can empty out in other parts. For example, Amtrak's Pacific Surfliner, which goes from San Luis Obispo and San Diego, may need five cars to meet the demand between Los Angeles and San Diego and only three cars between San Luis Obispo and Los Angeles; rather than remove two cars, the train carries five cars for the entire trip.

So far I've discussed only the energy used in operations. A full life-cycle analysis would also consider the energy required in construction, manufacturing, and disposal of worn out equipment. Studies from the University of California at Berkeley have found that, due to the infrastructure required by rail lines and the small number of passenger miles carried by the infrastructure (relative to highways and airports), the non-operational energy requirements of trains are much greater, per passenger mile, than for planes, buses, and cars. Since planes operations currently use only 25 percent more energy per passenger mile than Amtrak, a full life-cycle analysis would probably show them about equal.

In any case, if energy savings is the goal of funding Amtrak, Congress would do better to promote buses, which are far more energy-efficient than Amtrak. The best way to promote buses would be to end subsidies to Amtrak, a major competitor for buses in many routes.

The Solution: Privatization

Is Amtrak the high-cost form of transportation because passenger trains are inherently inefficient or because government operation of such trains is inefficient? The answer is likely some of both. Passenger trains are inefficient because they are both labor and infrastructure intensive, while government operation is inefficient because Amtrak's route structure and labor agreements are more the result of politics than market supply and demand.

Whichever the reason, it won't be cured by reforming Amtrak. Instead, the only solution is privatization. Private operators will be able to run trains in those corridors where they make sense, while avoiding routes that Amtrak follows for political reasons.

If Amtrak is so dependent on subsidies, will privatization mean an end to passenger trains? Not necessarily. The main markets for passenger transport that might be served by trains are business travelers over relatively short—100 to 400 miles, with a possibility for overnight trains in some longer corridors—and vacationers who will take "cruise trains" over longer distances. The Northeast Corridor is likely to continue as a business route.

As an example of cruise trains, when VIA—Canada's version of Amtrak—ended passenger service on the highly scenic route between Vancouver BC and Calgary Alberta, a private operator called Rocky Mountaineer began service on that route. The service is strictly for vacationers and is timed to maximize scenic viewing, not to get anywhere fast. The unsubsidized company now offers several routes, including one from Seattle, Washington. It seems likely that similar cruise trains could be successful over scenic routes in the West, such as Denver to Oakland and to Glacier, Yellowstone,

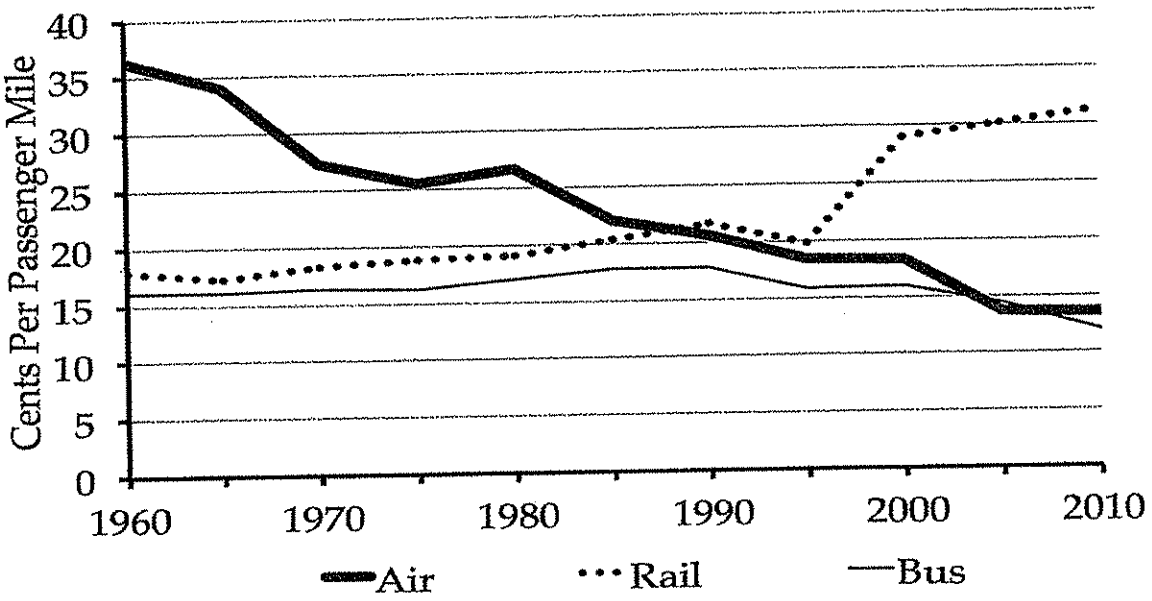
and Grand Canyon national parks, if they did not have to compete against a government-subsidized rail carrier.

In 1959, *Trains* magazine published an insightful, 36-page analysis by its editor, David P. Morgan, called "Who Shot the Passenger Train?" He concluded that most of the problems with passenger trains had to do with overregulation; subsidies to rail's competitors; unfair taxation of railroads when highways and airports were not taxed; and "reckless tactics" on the part of labor unions.

Morgan noted that all of these problems applied to rail freight as well as passenger, yet the railroads were for the most part able to make money on freight but not on passengers. Still, he argued that "simple justice" demanded that government correct the problems of overregulation, subsidies, and unfair taxation. Congress has deregulated railroads, but the other problems remain.

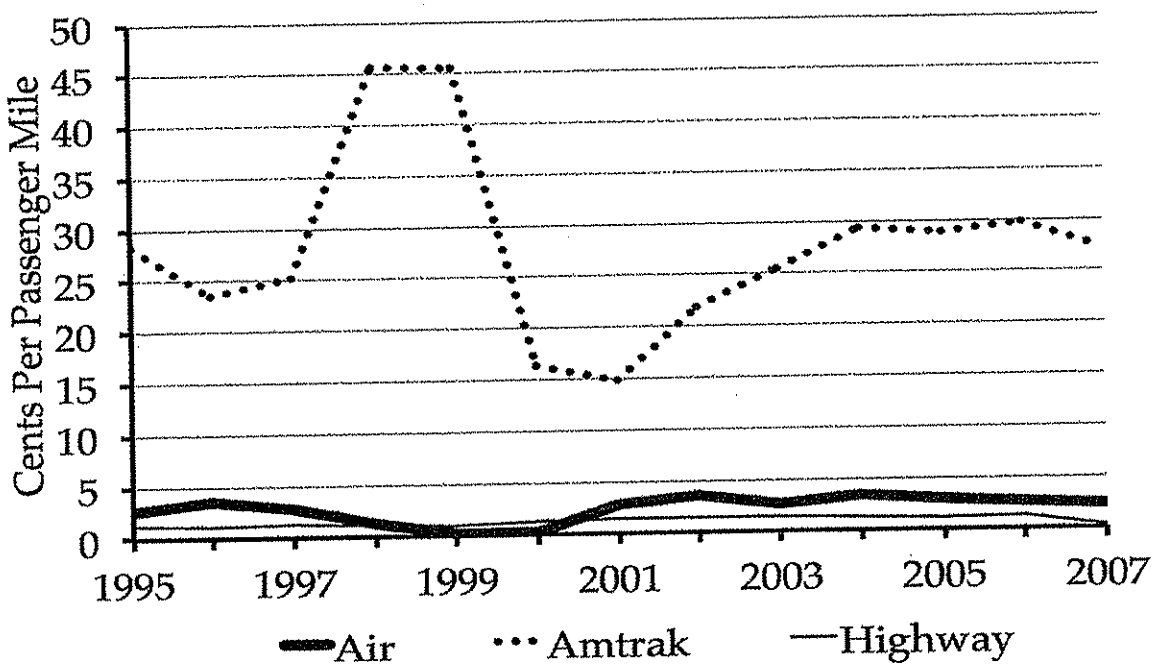
In that light, I would urge this committee to support privatization of Amtrak, and to do so in the context of a broader effort to end federal subsidies to and unfair taxation of all forms of transportation. I hope that this will create opportunities for more private passenger trains, but if it does not, I don't believe that other people should be asked to subsidize my personal hobby.

Figure One
Inflation-Adjusted Passenger Fares



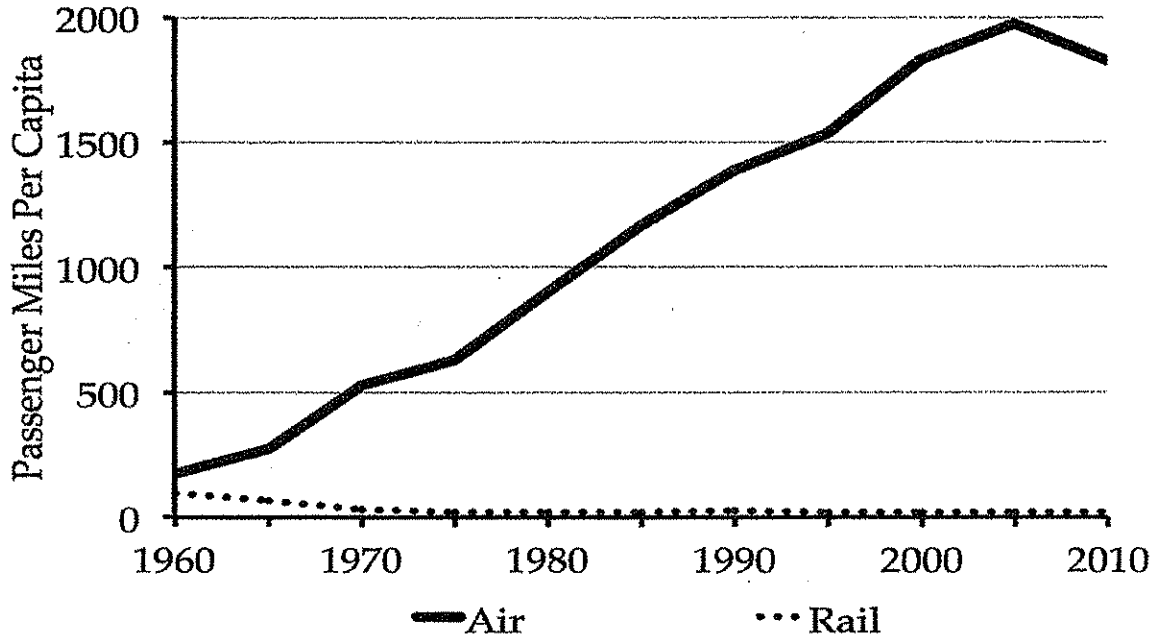
Source: *2010 National Transportation Statistics*, Bureau of Transportation Statistics, table 3-16.

Figure Two
Inflation-Adjusted Passenger Subsidies



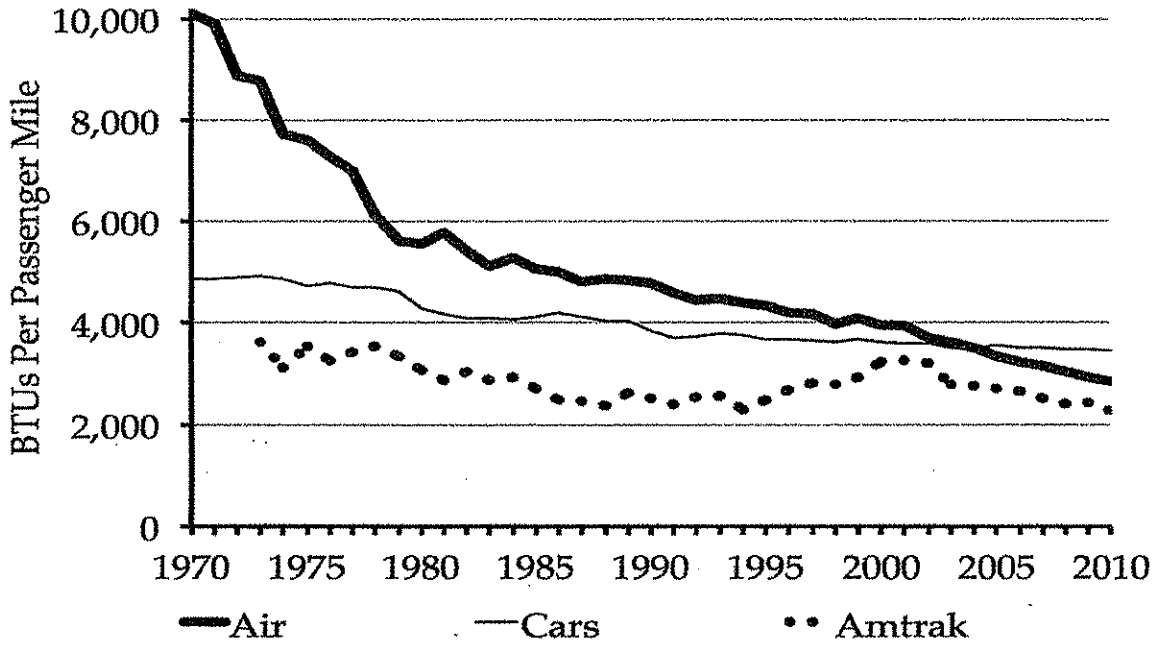
Source: Air and highway from *2012 National Transportation Statistics*, Bureau of Transportation Statistics, tables 1-40; 3-33; and 3-37; Amtrak numbers calculated from Amtrak annual reports.

Figure Three
Passenger Miles Per Capita



Source: Passenger miles from *2012 National Transportation Statistics*, Bureau of Transportation Statistics, table 1-40; populations from Census Bureau estimates.

Figure Four
Passenger Transport Energy Consumption



Source: *Transportation Energy Data Book*, Department of Energy, edition 31, tables 2-13 and 2-14.

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

Truth in Testimony Disclosure

Pursuant to clause 2(g)(5) of House Rule XI, in the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include: (1) a curriculum vitae; and (2) a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by an entity represented by the witness. Such statements, with appropriate redaction to protect the privacy of the witness, shall be made publicly available in electronic form not later than one day after the witness appears.

(1) Name: Randal O'Toole

(2) Other than yourself, name of entity you are representing: The Cato Institute

(3) Are you testifying on behalf of an entity other than a Government (federal, state, local) entity?

YES **If yes, please provide the information requested below and attach your curriculum vitae. ATTACHED**

(4) Please list the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by you or by the entity you are representing:

None.

Randal O'Toole

Signature

9/15/12
Date

Biography for Randal O'Toole

Randal O'Toole is a Cato Institute Senior Fellow specializing in land-use and transportation issues. He is the author of five books, including *The Best-Laid Plans*, which calls for repealing federal, state, and local planning laws and proposes reforms that can help solve social and environmental problems without heavy-handed government regulation.

His 2010 book, *Gridlock: Why We're Stuck in Traffic and What to Do About It*, analyzes the nation's transportation system, and shows how some forms of transportation have democratized mobility while others mainly benefitted a narrow elite. O'Toole's latest book is *American Nightmare: How Government Undermines The Dream of Homeownership*, which shows that state and local programs aimed at discouraging single-family housing have created far more problems than they solved.

O'Toole is the author of numerous Cato papers, including:

- "The Great Streetcar Conspiracy," June, 2012
- "Ending Congestion by Refinancing Highways," May, 2012
- "Intercity Buses: The Forgotten Mode," June, 2011
- "Fixing Transit: The Case for Privatization," November, 2010
- "Defining Success: The Case Against Rail Transit," March, 2010
- "The Citizens' Guide to Transportation Reauthorization," December, 2009
- "Proposals for the Next Transportation Reauthorization," September, 2009
- "High-Speed Rail Is Not 'Interstate 2.0,'" September, 2009
- "High-Speed Rail: The Wrong Road for America," October, 2008
- "Rails Won't Save America," October, 2008
- "The Future of Metropolitan Transportation Planning," May, 2008
- "Does Rail Transit Save Energy?" April, 2008

An Oregon native, O'Toole was educated in forestry at Oregon State University and in economics at the University of Oregon. He currently resides in the Central Oregon community of Camp Sherman.