



Orf 467
Transportation Systems Analysis and Planning

Fall 2017/18

Choose **one** to write about

either Energy, Street Smart or autonomous Taxis

Due via Blackboard on Monday Sept 19 before 5pm

For many years, urban planners, environmentalist and many academics have tried to curtail the onslaught of the automobile in American life. This has included [Wilfred Owen with his *Metropolitan Planning Problem*](#) in the middle 50s, and in the early 70s : [Richard Hebert's *Highways to Nowhere*](#), [Ronald Buel's *Dead End*](#), and [Helen Leavitt's *SuperHighway – SuperHoax*](#), to name a very few, and the latest is Sam Schwartz's [Street Smart: The Rise of Cities and the Fall of Cars](#). (which I have asked you to read and Sam will be giving a seminar on the topic in class on Monday, Sept. 26. All, to no avail (although Sam feels there is beginning to be movement. The personal automobile remains the dominant form of personal transportation throughout the world. The love affair continues. However, three issues, one old (oil), one evolving (millennials and smart streets) and one new (aTaxis), may substantially alter the automobile's future form.

The Last Drop (Energy)

Irrespective of

- the 1973 oil crisis
- pump prices jumping above the \$3 per gallon level beginning in 2005 in Katrina's wake,
- West Texas sweet crude's (WTI) rise to a high of \$147/barrel in 2009 and back over \$110/barrel in 2011 to a current level of around \$108/barrel, (Current crude oil prices: ~\$45/barrel <http://www.wtrg.com/daily/crudeoilprice.html>. Also: [current gasoline and fuel updates](#).)
- Al Gore's popularization of global warming, and
- the discovery of essentially an infinite inexpensive supply of natural gas through fracking,

we remain addicted to the oil industry's internal combustion engine. Even the economic meltdown post 2008, the restructuring of the US auto industry and a growing public consciousness of carbon footprints has done little to squelch the addiction. Sales of [gasoline powered vehicles are on the rise](#) while those of all electric vehicles have been [disappointing](#) but are [increasing from a very small base](#).

With gas prices down and little political appetite to increase gas taxes ([Christie says he won't get 'weak in knees' supporting gas tax — but no deal in sight](#)) is there any hope (or is there really any desire) to ever break the addiction?

Following the Katrina price gouge, I wrote an [op-ed](#) calling for a grass roots movement aimed at breaking the addiction. While it fell on deaf ears, please use it as the basis to write either a similar (or contrary) 3 or so page (moderate margin, 12 point font) opinion on the future of oil and the energy source for personal mobility. Due via Blackboard on Monday Sept 19 before 5pm so that we can discuss your perspective during Precept on Monday evening.

As additional references, see [Tax Data](#), a table comparing various taxes by state and Tom Friedman's ["Real Men Tax Gas"](#)

or: Street Smart

Sam Schwartz's [Street Smart: The Rise of Cities and the Fall of Cars](#) reveals a barely noticed revolution in how city-dwellers travel, that began around 2003 and continues today. Total driving miles started to decline over a full decade plus for the first time since the car overtook the horse and buggy well over a hundred years ago. Schwartz claims that the drop is largely due to the different habits of the millennial generation which is driving less, owning fewer cars, bike, walk and take transit more than any prior generation coming of age since the dawn of the 20th century. In 3 pages or so, substantively critique (support or refute or???) Schwartz's assessment of implication of his book. Due via Blackboard on Monday Sept 19 before 5pm

or: autonomousTaxis (aTaxis)

If you've paid any attention to any of the emails that I sent to you over the summer, you must realize that I have basically gone "all-in" with what I call Smart Driving Cars. The [KPMG Report](#) is a very good summary. [Chunka Mui's Series in Forbes](#) caught people's attention. [Todd Litman](#) has made some predictions in his book [Diverless](#) and you've been bombarded by my newsletter <http://www.smartdrivingcar.com>, and there's what I got the 2014/5 class to do a [first look at a state-wide autonomousTaxi](#) system for New Jersey and last year Shirley Zhu's [thesis](#) and [follow-on paper](#). This year Orf467 is going to take a look at a Nation-wide aTaxi system (see [Kyle Marocchini's recent paper](#)). There has been an [op-ed on this topic](#), an [interview](#) and an [ITE Journal article](#) where I've suggested that this technology may in fact be real and may lead to a substantial change in how we all get around. From what you've read so far, what is your take on this topic? Write either a similar (or a contrary) 3 or so page opinion on the future of driverless (as opposed to just Self-driving or Safe-driving) vehicles with perspectives on cars, buses and trucks. Due via Blackboard on Monday Sept 18 before 5pm