What it means for Real Estate: Autonomous Driving

In a previous blog I discussed the emerging revolution in transportation propulsion created by Electric Vehicles (EV); and also how cheaper, cleaner, better driving cars, fueled by solar roof electricity should clearly favor suburban development. Here I want to take up Autonomous Driving technology (AD), which I separate from the EV revolution. Certainly AD is easier to apply to EVs than traditional internal combustion cars, but EVs are not a prerequisite, and can certainly provide entertaining and economical driving without the addition of AD.

The widespread R&D occurring around AD makes two basic claims about its eventual success and adoption:

- Being “driven” saves the driver’s time, and so AD makes auto travel cheaper and more convenient.
- Lots of AD cars being driven together creates the possibility (in theory) of a controlled traffic flow which means faster, safer travel, and also an increased vehicle capacity from the existing system of roads.

The first claim is hard to argue with. But while it certainly should be true that IT Chauffeured driving reduces the stress and time costs of travel, think for a minute about the ramifications. Won’t households be willing to travel further distances and own (or employ) multiple robot cars, making more trips, to pick up packages, take the kids to school, drop off goods…. But all these robot car trips will surely increase VMT. And, with greater VMT comes the potential for greater traffic congestion – partially defeating the purpose of AD.

This takes us to the second claim, which is even more complicated and nuanced. If coordination can actually deliver improve road performance, we again come up against additional induced travel demand. Technically, the best prospects for coordinated driving exist on highways, but if I can take an AD car from downtown Manhattan directly to my MIT doorstep, at faster speed, on a coordinated highway, while I sip coffee and work, why take Amtrak, or Jet Blue? More generally, public transportation, which carries many more passengers per vehicle, could suffer serious losses in demand. Adding those passengers in individual AD cars back onto already crowded roads could totally offset the promised benefits of greater traffic flow through coordination.

To my thinking the locations where the introduction of AD will create the greatest potential benefit are on suburban highways and roads. This is for two reasons. First suburban roads and highways are less likely to already be congested, and also offer the best technical circumstances for coordination to actually work. Secondly, this potential expansion of capacity is more important to suburban households who travel more and spend far more personal time driving. The purported benefits of AD should simply have a bigger potential impact for these households. City streets on the other hand, are already overwhelmed with traffic, and coordinated driving on them is technically more difficult to implement. As a glimpse into these issues, follow the current discussion and debate occurring in NYC and San Francisco. In these cities, the introduction of a much smaller improvement in urban transportation technology, from Uber and Lyft, is beginning to create serious systemic traffic problems.
http://hoodline.com/2016/12/has-uber-lyft-created-more-traffic-congestion-in-your-neighborhood