Get Ahead of the Connected-Autonomous Vehicle Curve or Get Run-Over:

Thoughts on Equity, Environmental, and Governance Implications

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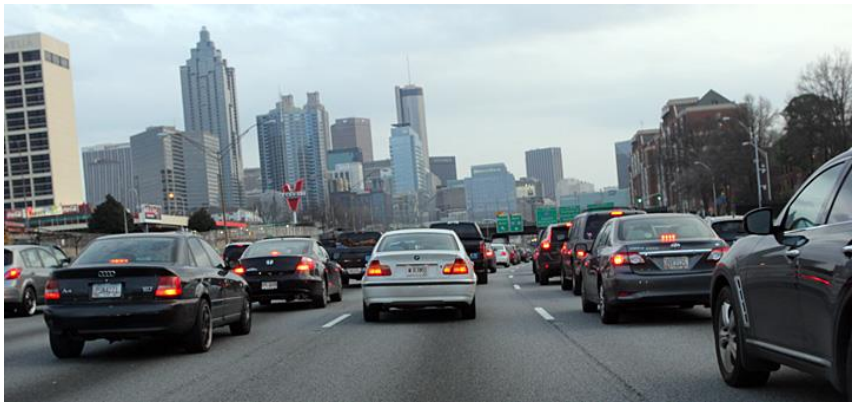
CLEANERS
DRY CLEANING * TAILORING * LAUNDRY
PICK-UP & DELIVER 243-0433
DAVE'S NEW YORK
CLEANERS
park
24 HRS

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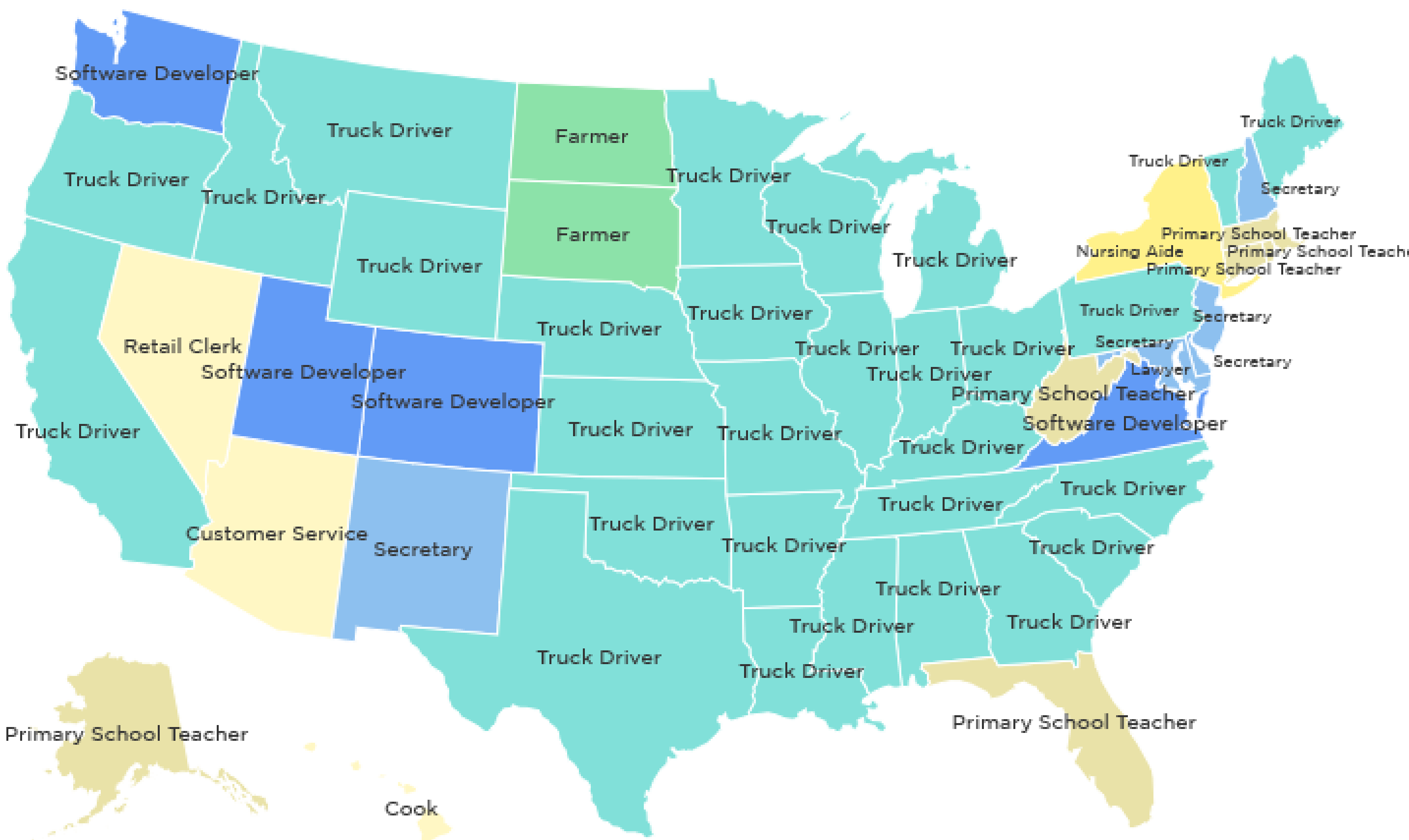
Most common job by state in 2014



Source: NPR

Equity Implications – *The Good*

- Fully autonomous vehicles hold *long-term* promise for shared-use or “pooled” transport.

- But it will take time for these potential benefits to accrue

Equity Implications – *Adversity*

- Near & mid-term price of autonomous vehicles is projected to be prohibitive.
- Low- and moderate-income families lack access to technology essential for ride sharing services.
- Potential automaker foot-dragging on development of Fully Autonomous Vehicles?
- Fundamental disruption to transportation sector.
- Fundamental disruption to rural communities.

Implications for Governance – *The Positive*

Suburban renaissance

- Commutes without the daily traffic headaches.

Potential to Reimagine or Redesign Public Infrastructure

- Rebalance the use of the right-of-way.

Local Regulatory Reset

- The demise of the parking ratio?

Diminished government outlays

- Seven percent of vehicle crash costs are paid for by public revenues (Desouza 2015)

Implications for Governance -- The Troubling

Diminished State & Local Revenues

- Policies at the federal and state levels for infrastructure funding must be revised to reflect the restructuring of the transportation system under automation.
- More efficient, computer-controlled, cars will mean lower gas tax revenues
- Increasing popularity of vehicle sharing services will depress new and used car sales (Brasuell 2016)
- Progressively declining state revenues from yearly vehicle registration fees (Desouza 2015)
- Steadily declining local revenues from speeding tickets, DUI fines, and towing fees

Suburban sprawl

- Advent of regular super-commutes – 75 miles, one way – in your own personal 'quiet car.'

Environmental Implications -- The Positive

Decreased Highway & City Road Congestion

- Even with potential increase in vehicle miles traveled . . . shared vehicle services will allow highly efficient vehicle travel.
- "Platooning" of not only cars, but trucks, will ease traffic congestion, save fuel and improve air quality (West 2016)
- "Traffic jams" associated with red lights will diminish and ultimately go away thanks to Vehicle-to-Vehicle and Vehicle-to-Signal communication (West 2016)

Redevelopment Opportunities for More Sustainable Cities: potential for increases in green spaces and affordable housing in urban city centers

- Potential to transform urban parking lots to green space, affordable housing, or in-town office & commercial (Geeting 2014; Economist 2015)
    - Note that parking sufficiency has been used to oppose urban multi-family affordable housing development.

Environmental Implications – *The Challenges*

Potential Urban Grid Congestion

- "Congestion's not going away," some experts caution.
- "True, Google cars can get five times more cars through intersections" than currently possible, "since they'll drive closer together." "How's that going to feel for pedestrians and cyclists?" (Geeting 2014)

Proliferation of "Super Commuters"

- Potential push to adjust greenbelts and urban growth controls in light of long haul commuting. (Riggs et al. 2016)

Some Historical Perspective on Transportation Innovation

An early 20th century revolution . . .

. . . that helped solve an urban health and environmental crisis.

MORTON STREET, CORNER OF BEDFORD, LOOKING TOWARD BLEECKER STREET, MARCH 17, 1893.

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