Autolaw 3.0

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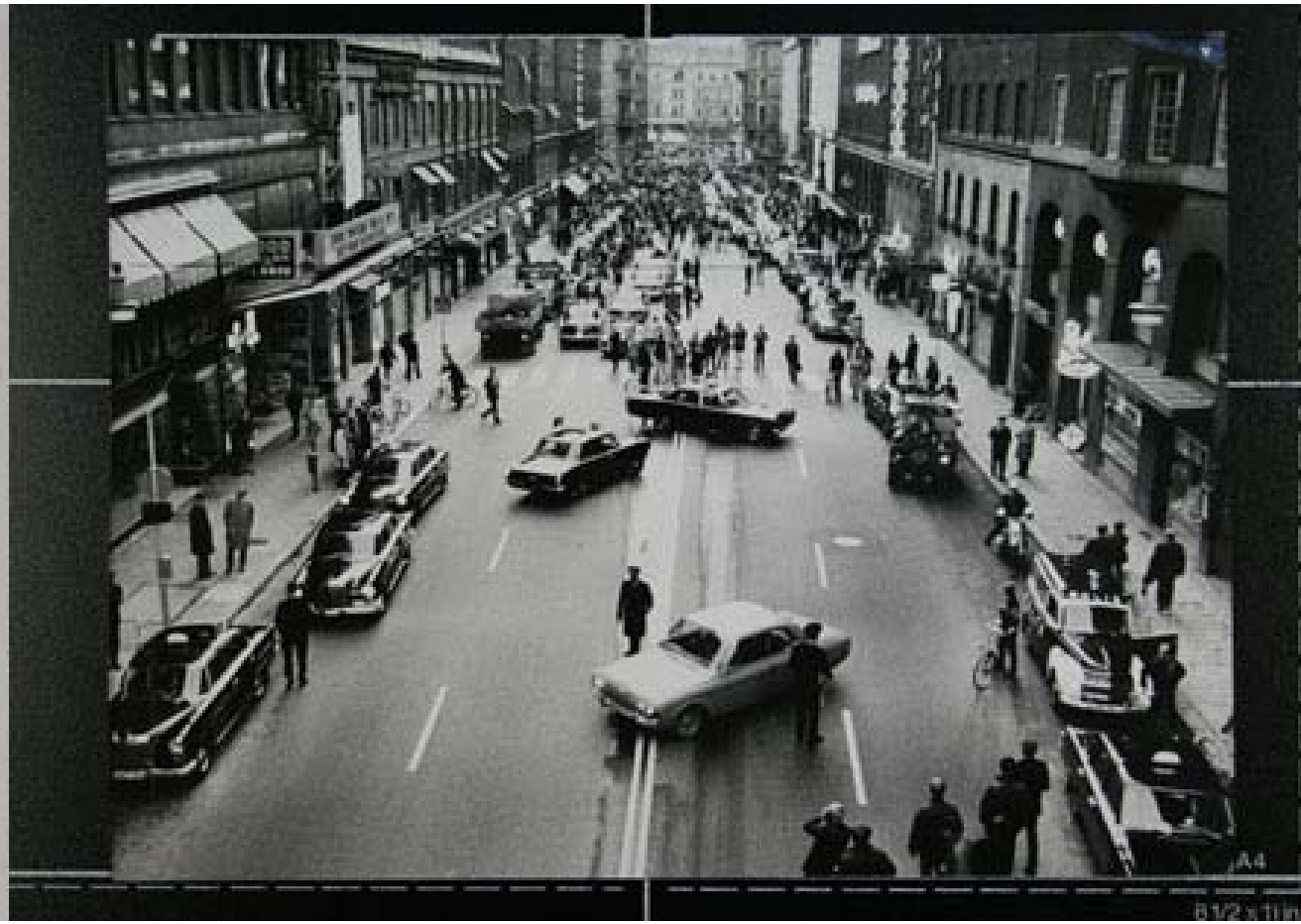
Preview of my preview

- Law is messy but important
- Automated vehicles are probably legal
- Automakers will probably bear a greater share of crash costs
- Data will definitely lead to both problems and solutions

This won’t be pretty



Law *is* infrastructure

- Increase certainty
- Influence behavior
- Manage relationships

Managing relationships

	Road user	Automaker	Insurer	Government
Road user	Rules of road Tort law	Warranties Tort law Privacy	Vehicle policy	Gas tax Rules of road Privacy
Automaker		Indemnification Intellec. prop.	Subrogation	FMVSS Privacy
Insurer			Reinsurance	Insur. law
Government				MAP-21

Managing *government* relationships

- State governments largely regulate drivers
- US government largely regulates vehicles
- But what if the vehicle *is* the driver?

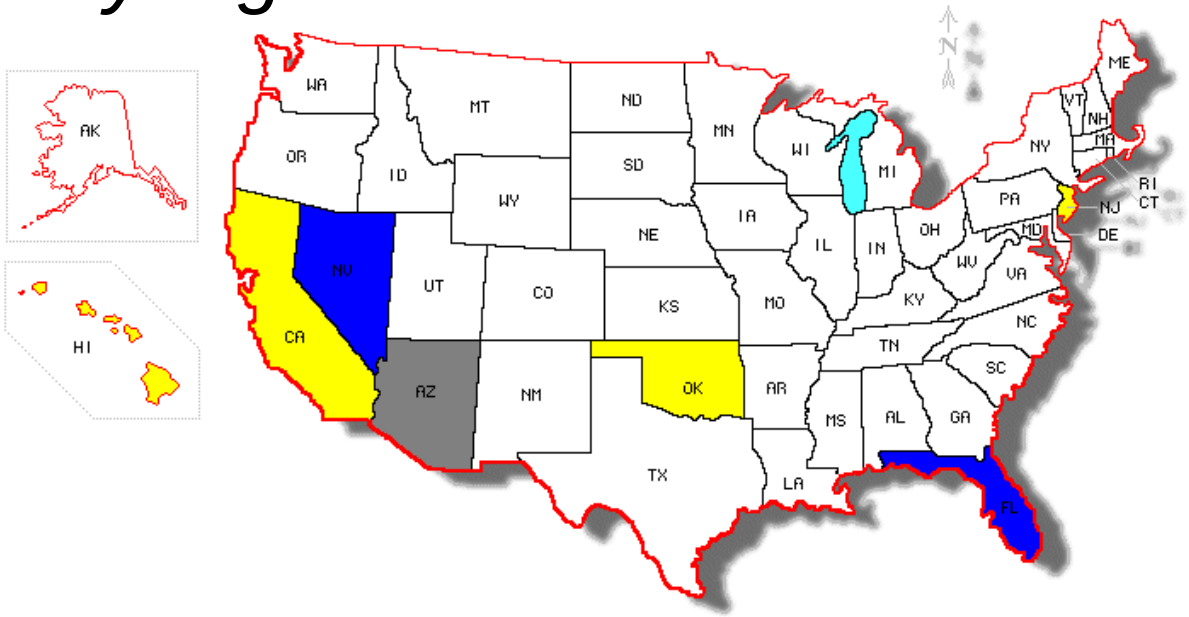
	Infrastructure	**Vehicle**	**Driver**
US Government	Design standards Radio spectrum Highway trust fund	FMVSS Preemption	Road traffic treaty Interstate trucking Highway trust fund
State Governments	Construction Operation	Registration Insurance Tort law	Licensing Vehicle codes Tort law

Rough hierarchy of relevant law

US constitution	• Supremacy Clause / Commerce Clause
US statutes and treaties	• 1949 Convention on Road Traffic (Geneva)
US rules/regulations	• Federal Motor Vehicle Safety Standards
State constitutions	
State statutes	• State vehicle codes (rules of the road)
State rules/regulations	• Nevada DMV's autonomous driving regulation
Common law	• Background rules for tort law
Private norms/standards	• ISO / SAE / ANSI

Specific automated vehicle laws

- Nevada and Florida are the only states to *expressly regulate* “autonomous vehicles”



- This does NOT mean that automated vehicles are illegal elsewhere

Presumption of legality

Complications, but not prohibitions

- How might NHTSA act preemptively and reactively to these technologies?
- How might a court interpret the Geneva Convention's requirement that every vehicle have a driver able to control it?
- How might courts and agencies apply existing state vehicle law?

Application of existing law

- In *every* state, the precise application of existing law is unclear, because that law assumes that humans drive vehicles using real-time human judgment
- California Vehicle Code
  - 21700. **The driver** of a motor vehicle shall not follow another vehicle more closely than is **reasonable and prudent**….
  - 22350. **No person shall drive** a vehicle upon a highway at a speed greater than is **reasonable or prudent**….
  - 23103…. **A person who drives** a vehicle upon a highway in **willful or wanton disregard for the safety** of persons or property is guilty of reckless driving.

What is “reasonable and prudent”?

- As good as:
  - A perfect human driver?
  - An average human driver?
  - A computer *plus* a human?
- Measured through:
  - Field testing?
  - Simulation?
  - After a crash?
- One key: Standards at the international, national, state, and industry levels

Legality versus liability

- I may be *civilly liable* for injuries that I cause, even if I am acting lawfully

Automotive liability

Lawsuits

Products liability

Civil liability

Negligence

Tort law

Strict liability

Design defects

(Warranty claims)

(Disclosure claims)

(Class actions)

Liability is NOT binary

Owner?

Dealer?

Operator?

Victim?

Manufacturer?

Supplier?

Data provider?

Designer?

Employer?

Facility operator?

Service provider?

Automakers will face liability…

- Automated vehicles ~~won't~~ can't be perfect: Design decisions and omissions will cause, exacerbate, and fail to prevent injuries
- If these choices are unreasonable, companies will be liable for the resulting injuries
- Even if these choices are reasonable, companies may suffer reputational losses

…and the costs are uncertain

- In theory, companies can charge more for their products and services to cover these expected liability and reputational losses
- The problem (for companies) is that predicting these costs is difficult
- The problem (for society) is that this uncertainty means consumers may pay too much or wait too long

Managing this uncertainty

- How can regulators, automakers, and insurers better understand the *technical, legal, and reputational risks*?
- What lessons can be learned from airbags and electronic stability control litigation?
- What are the legal aspects of remote software updates and virtual recalls?

Data as problem and solution

- What data might be produced or required?
  - *Assume the "collection" of any and all data*
- Who will own and manage those data?
- How will those data be used by
  - Governments?
  - Companies?
  - Litigants?
- How will those data be abused?

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