The Trustworthy Automated Driving Company

Bryant Walker Smith

Associate Professor
University of South Carolina School of Law
and (by courtesy) School of Engineering

Affiliate Scholar
Center for Internet and Society at Stanford Law School

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In your opinion, who is the "driver" of an automated vehicle?

My view:

Companies drive automated vehicles.

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dream sequence

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Focus less on technologies...

...and more on the companies behind them.

~~"Does the public trust this technology?"~~

"Is the company behind this technology worthy of our trust?"

~~"Does the public trust this technology?"~~

We are fickle

Words are not actions

Marketing is coming

A lot changes before 100%

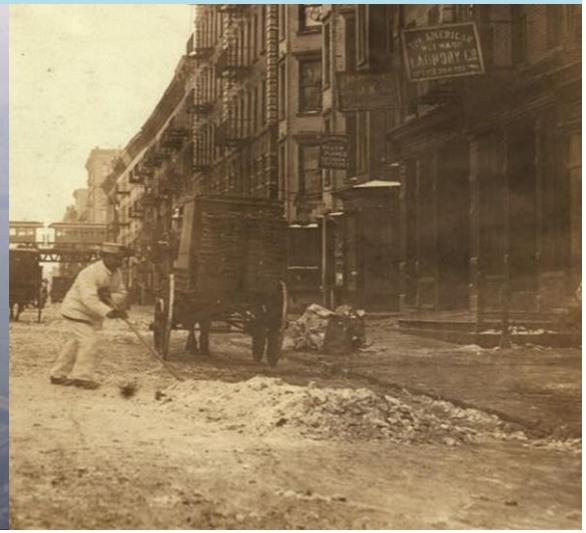
~~"Should the public trust this technology?"~~

Future technologies don't yet exist

They will be diverse

Most won't be <u>super</u> dangerous....

$$\Sigma_{\text{new problems}} < \Sigma_{\text{old problems}} ?$$



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"Is the company behind this technology worthy of our trust?"

Companies act through their human and machine agents

Technologies are only as safe as the companies behind them

Safety is a marriage, not a wedding

Companies can do right even after their technologies fail

Why safety regulation needs trustworthiness

Emerging technologies are complex, stochasticky and dynamic

Developers have expertise, information, and access to make lifecycle safety cases

Developers need space for technical innovation

Regulators need space for regulatory innovation

Regulators won't have all the answers—but they can ask better questions

How safe is safe enough?

Retrospective: After a failure

Prospective: Before a deployment

Retrospective

At least as safe as a human in the maneuver **and**

At least as safe as a comparative system **and**

Safer than the last system to fail

How safe is safe enough?

Retrospective: After a failure

Prospective: Before a deployment

Prospective

This is tricky! My answer:

Reasonable confidence that the developer is **worthy of our trust**

A trustworthy company:

Shares its safety philosophy:

-This is what we're doing

-This is why we think it's reasonably safe

-This is why you can believe us

Makes a promise to the public:

-We market only what we believe to be safe

-We will be candid about our limits and failures

-When we fail, we will make it right

Keeps that promise:

-We appropriately manage public expectations

-We supervise our entire product lifecycle

-We mitigate harms promptly, fully, and publicly

Key: Look for early breaches of trust!

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Breaches of public trust

Making hyperbolic claims

Misrepresenting evidence

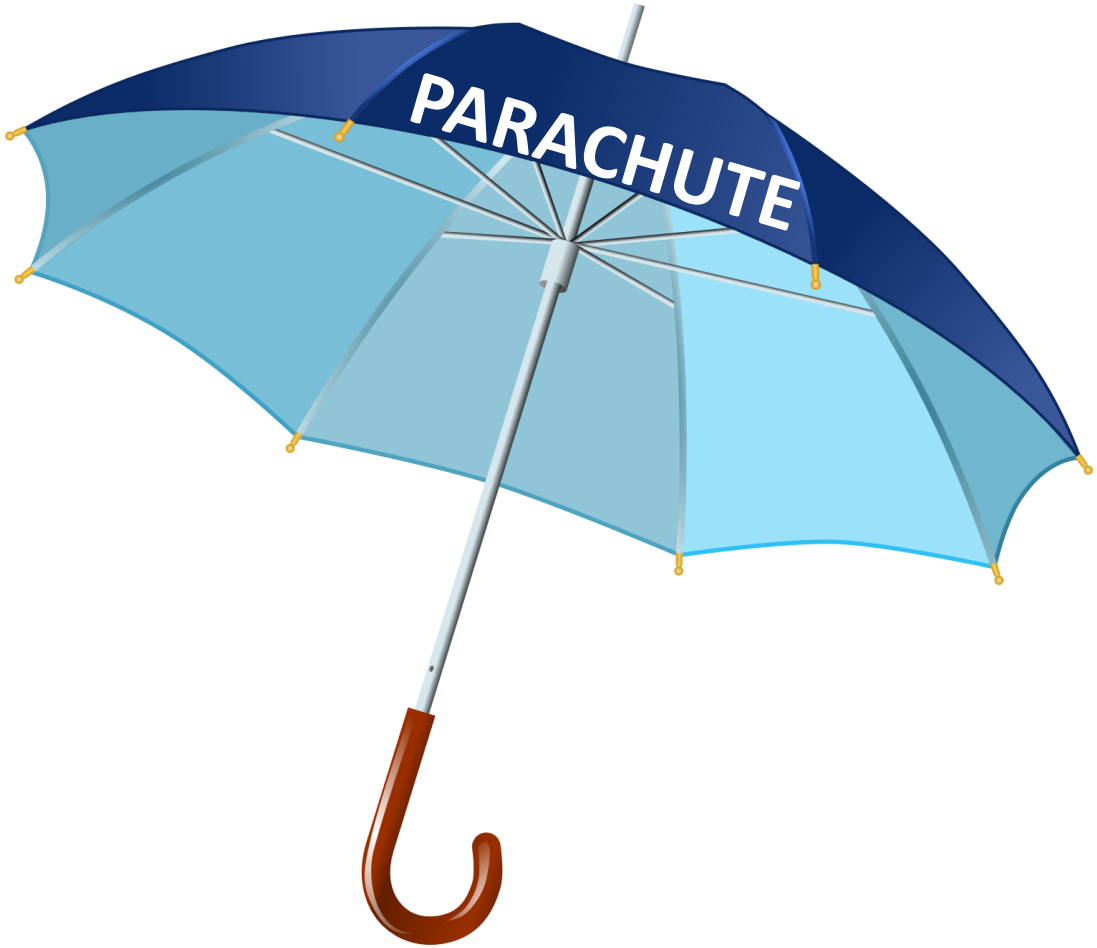
Failing to update technologies

Exploiting the litigation process

Forcing confidential settlements

If we can't trust you when you call your system "**full self driving**"...

...why should we trust you when you call your system **safe**?



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Regulation through and for trustworthiness

Regulate the company rather than the technology

Expect a company to vouch for its technologies through a public safety case

Focus on processes and systems

Identify assumptions and logical progressions

Ask questions and challenge answers

Target breaches of public trust

AUTOMATED OPERATION OF VEHICLES ACT

NATIONAL CONFERENCE OF COMMISSIONERS

ON UNIFORM STATE LAWS

"Automated driving provider"

Self-identifies to the US state government

Represents that the automated vehicle is capable of complying with the vehicle code

Acts as the legal driver from the start of automated operation until a human driver intentionally terminates that operation

Law Commission
Reforming the law

Scottish Law Commission
promoting law reform

Automated Vehicles: joint report

Title: Pathway to Driverless Cars: Insurance for Automated Vehicles
IA No: DfT00366

RPC Reference No: RPC16-3522(1)

Lead department or agency: Centre for Connected and Autonomous Vehicles

Other departments or agencies: DfT, BEIS

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