Vehicle Automation
Promises and Perils

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Vehicular Automation

**Promises**
- Improved safety
- Relaxation
- Reduced traffic
- Improved sustainability

**Realities**
- (hopefully fewer) different crashes
- Motion sickness
- Boredom
- More traffic
- Greater energy use
- Crowding out transit, walking and cycling
The Automation Sandwich

CRUISE CONTROL

ACC

LANEKEEPING

HIGHWAY AUTOPILOT

ALL-ASPECT COLLISION AVOIDANCE

ALL-CONDITIONS AUTOMATED DRIVING

ANTILOCK BRAKING

ELECTRONIC STABILITY PROGRAM

FORWARD COLLISION AVOIDANCE

SYSTEM ASSUMES CONTROL
The Automation Sandwich

- Cruise Control
- ACC
- Lane Keeping
- Highway Autopilot
- Electronic Stability Program
- Forward Collision Avoidance
- Anti-Lock Braking
- All-Aspect Collision Avoidance
- All-Conditions Automated Driving

Driver Delegates Control

System Assumes Control
Promises

• Fewer, different crashes
• Reduced energy intensity
• Traffic management
• Convenience of not driving

http://core0.staticworld.net/images/article/2015/09/0523-self-driving-cars-clean.mp4.00_03_45_09.still001-100615928-large.jpg
Perils

• Sprawl
• Use of vehicles instead of walking and biking
• Disinvestment in transit
• Disinvestment in urbanization
The future I want to live in

https://i.vimeocdn.com/video/461231690_1280x720.jpg

http://ghgonline.org/images/ipcc5b.gif
Policy Issues

• Maintaining the trend towards urbanization

• Preventing a return to decentralization

• Promoting transit and pedestrian/bicycle infrastructure over individual cars