Autonomous Vehicle Displays and Pedestrian Safety

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Testing Autonomous Systems

Pedestrian Detection

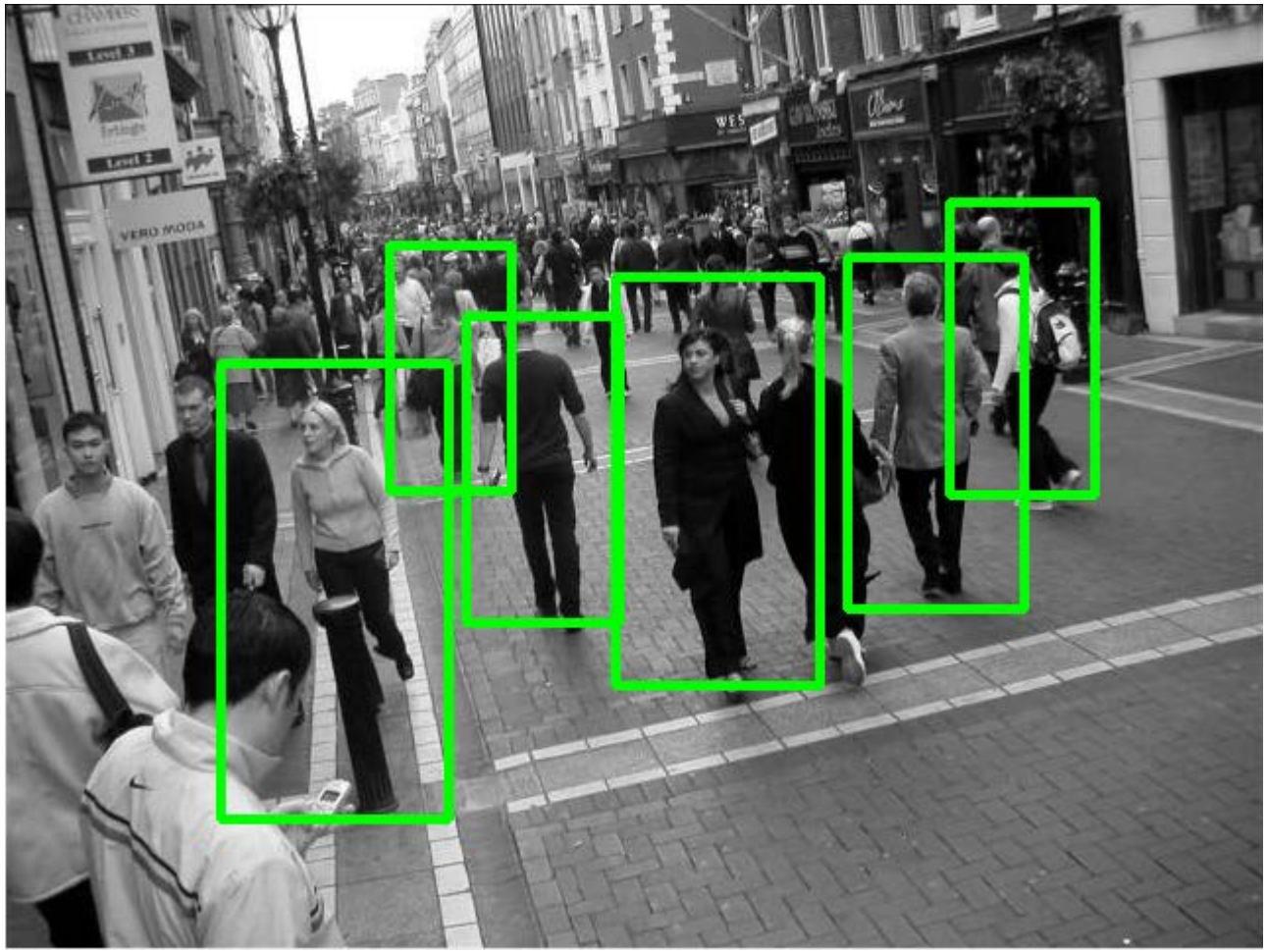
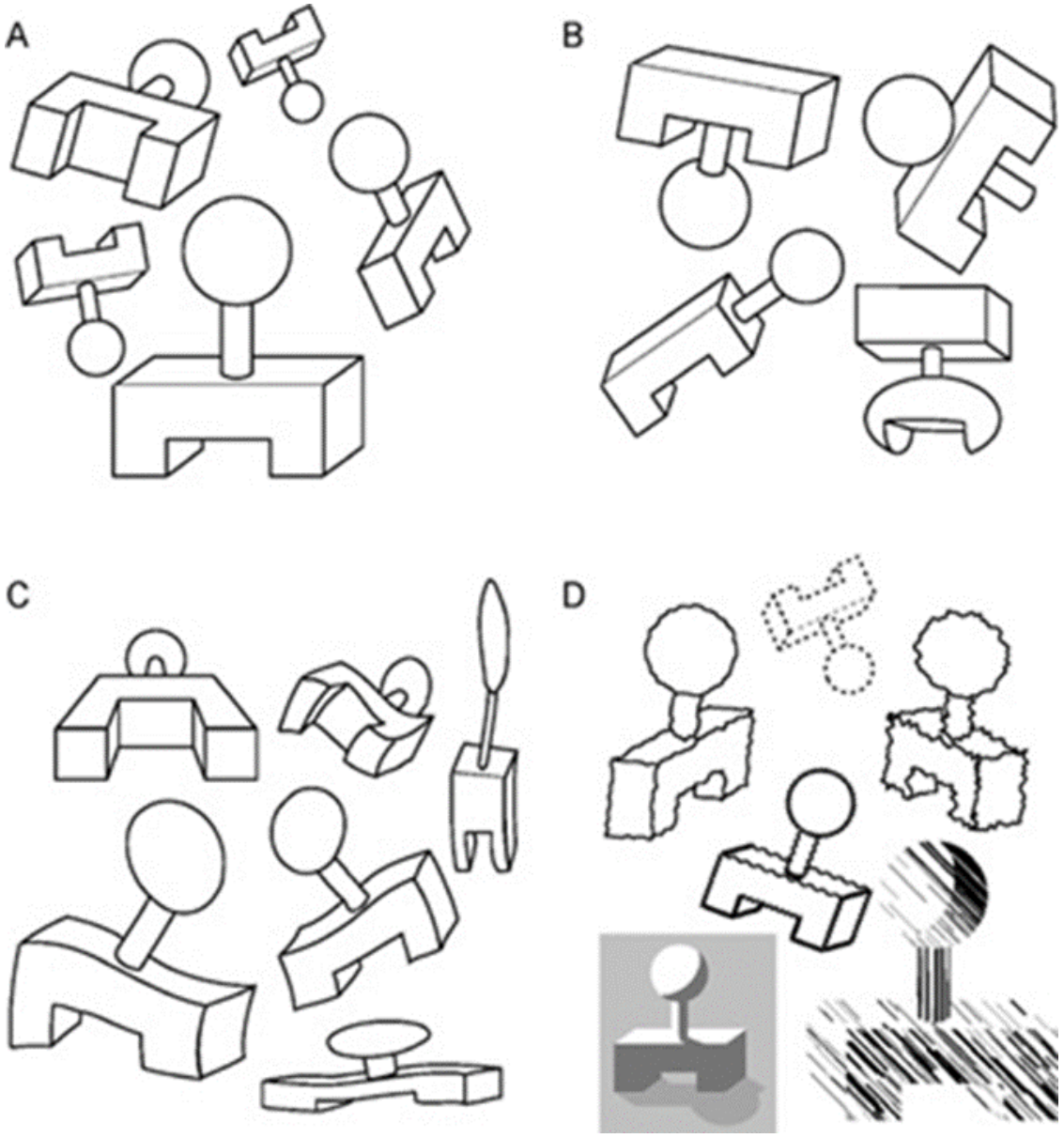


Photo: The Next Platform


A
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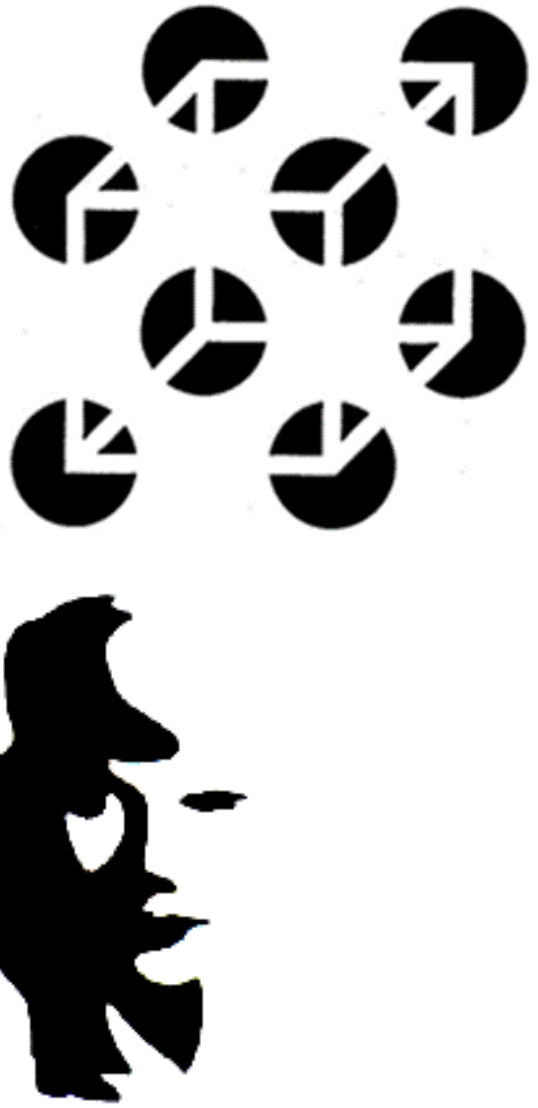
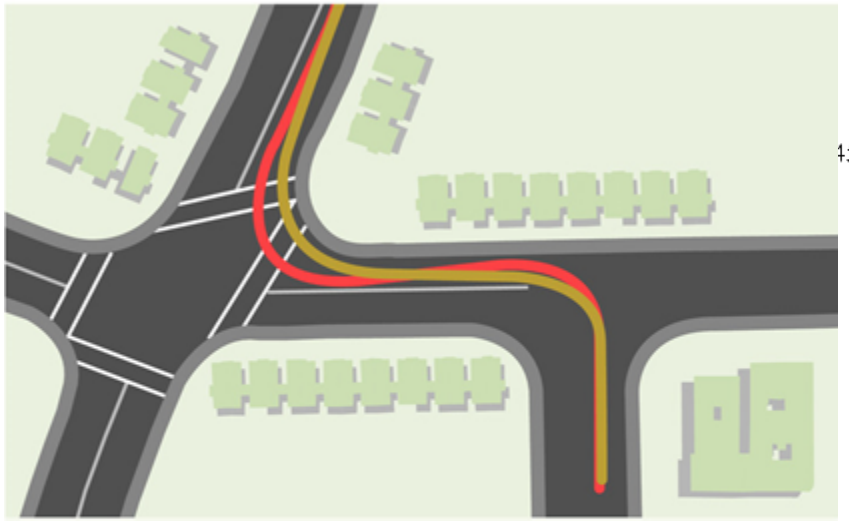


PARK AVENUE

A Tighter Turn

Google is teaching its self-driving cars to behave more like human drivers



BEFORE: In early 2014, Google's car drove wide around corners in part for safety as the system was still learning to spot pedestrians near curbs and predict what they might do.

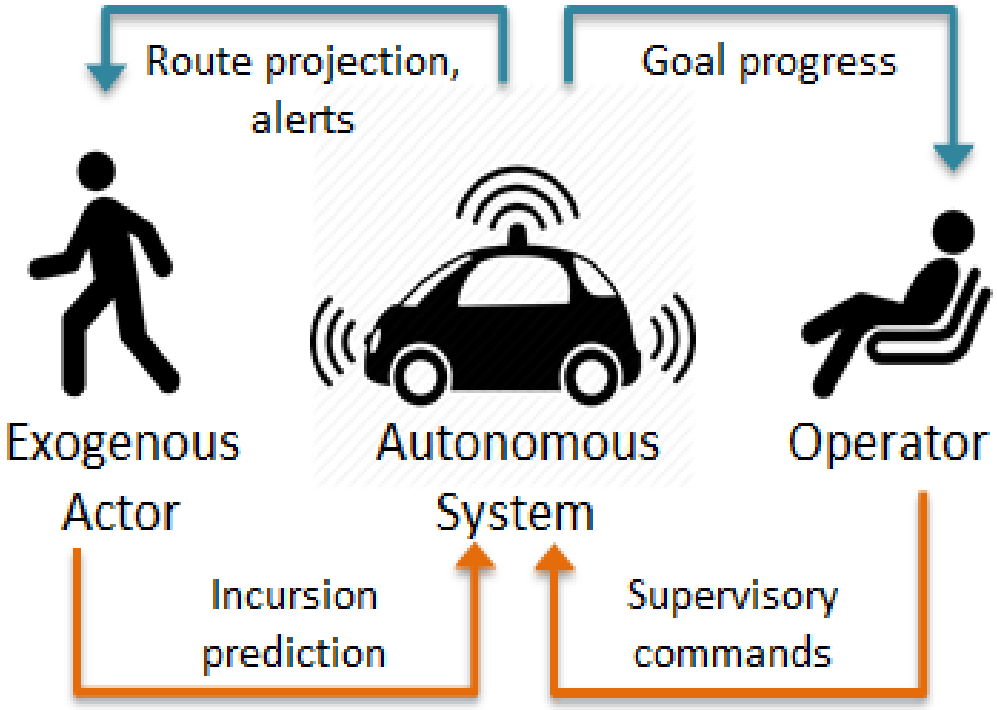
NOW: The vehicles hug the curb more closely, mimicking how humans cut corners. This feels more natural for passengers and better signals to other drivers the car's intention.

Source: the company

THE WALL STREET JOURNAL.

of the selected plan of action on an electronic sign mounted on the vehicle. In another example, the notification is provided by displaying text indicative of the selected plan of action on an electronic sign mounted on the vehicle. In another example, the notification includes playing an audible instruction message indicative of the selected plan through a speaker of the vehicle.

Design for Reciprocal Intent Communications



EXPERIMENT

Vehicle Displays

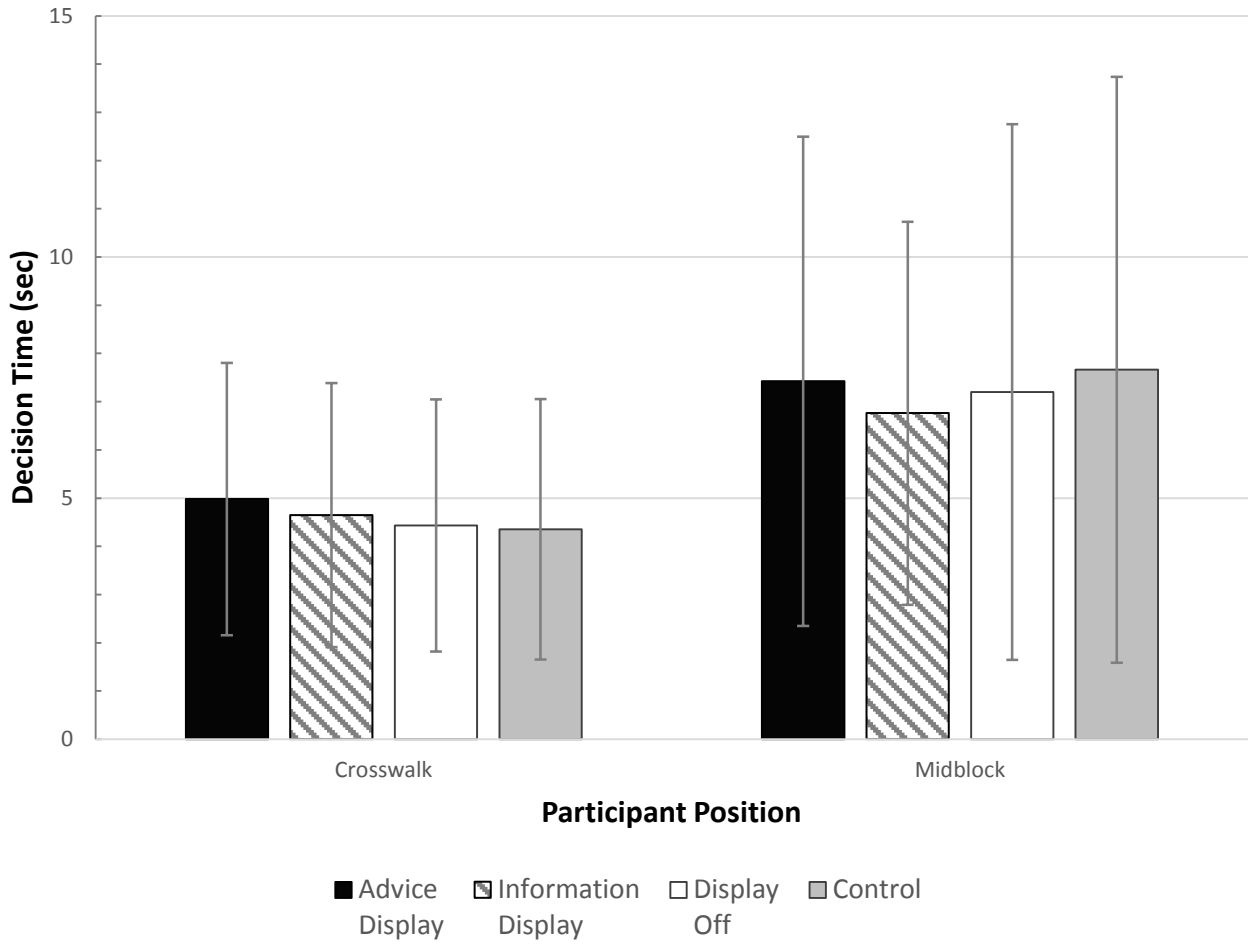
Advice Display

Information Display

- 4 types:
  - Advice
  - Information
  - No display (Not pictured)
  - Control (Not pictured)

RESULTS

Result: Decision Time



Subjective Assessment

"Did you use [the display] to make your crossing decision?"

12% reported using
76% reported seeing

"What was the primary piece of information you used to make your decision to cross?"

4% display
56% vehicle distance
46% vehicle speed
24% traffic density

46% of participants state using a display makes the crossing decision easier.

PEDESTRIAN SAFETY

Whether your kids are walking to school, the park or a friend's house, here are a few simple tips to make sure they get there safely.

The Hard Facts

Unintentional pedestrian injuries are the fifth leading cause of injury-related death in the United States for children ages 5 to 19. Teenagers are now at greatest risk. Teens have a death rate twice that of younger children and account for half of all child pedestrian deaths.

Top Tips

1. Teach kids at an early age to look left, right and left again before crossing the street. Then remind them to continue looking until safely across.

2. Teach kids to put phones, headphones and devices down when crossing the street. It is particularly important to reinforce this message with teenagers.

Image: Safe Kids Worldwide

STEADY
START CROSSING
WATCH FOR
TURNING CARS
FLASHING
DON'T START
FINISH CROSSING
IF IN CROSSWALK
STEADY
DON'T CROSS
WAIT ON CURB
TO CROSS
PUSH BUTTON
DC

Will Overly Polite Self-Driving Cars Brake for Jerks?

By Philip E. Ross
Posted 26 Oct 2016 | 20:00 GMT

Photo: iStockphoto

Image: IEEE Spectrum

Questions?

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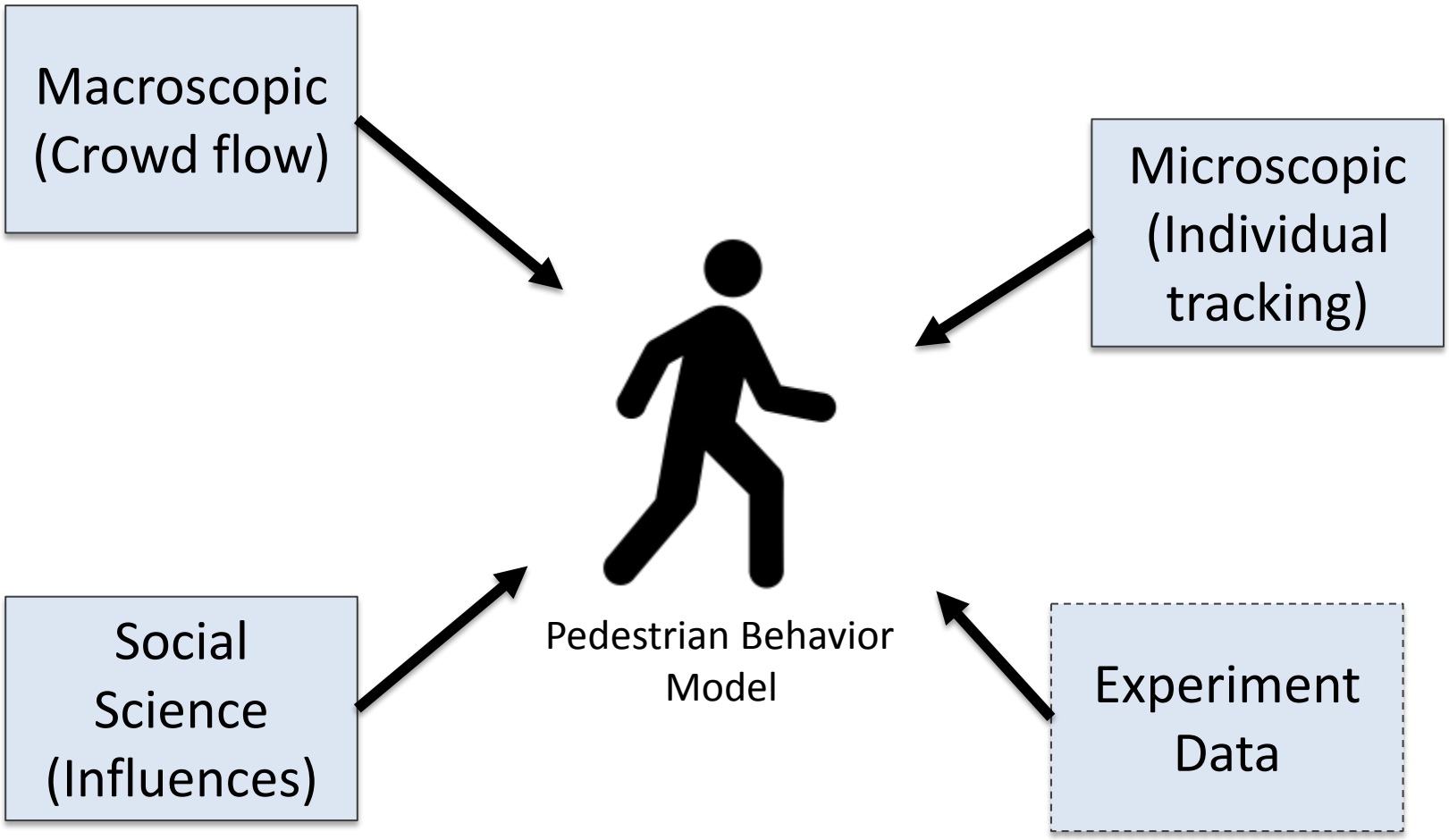
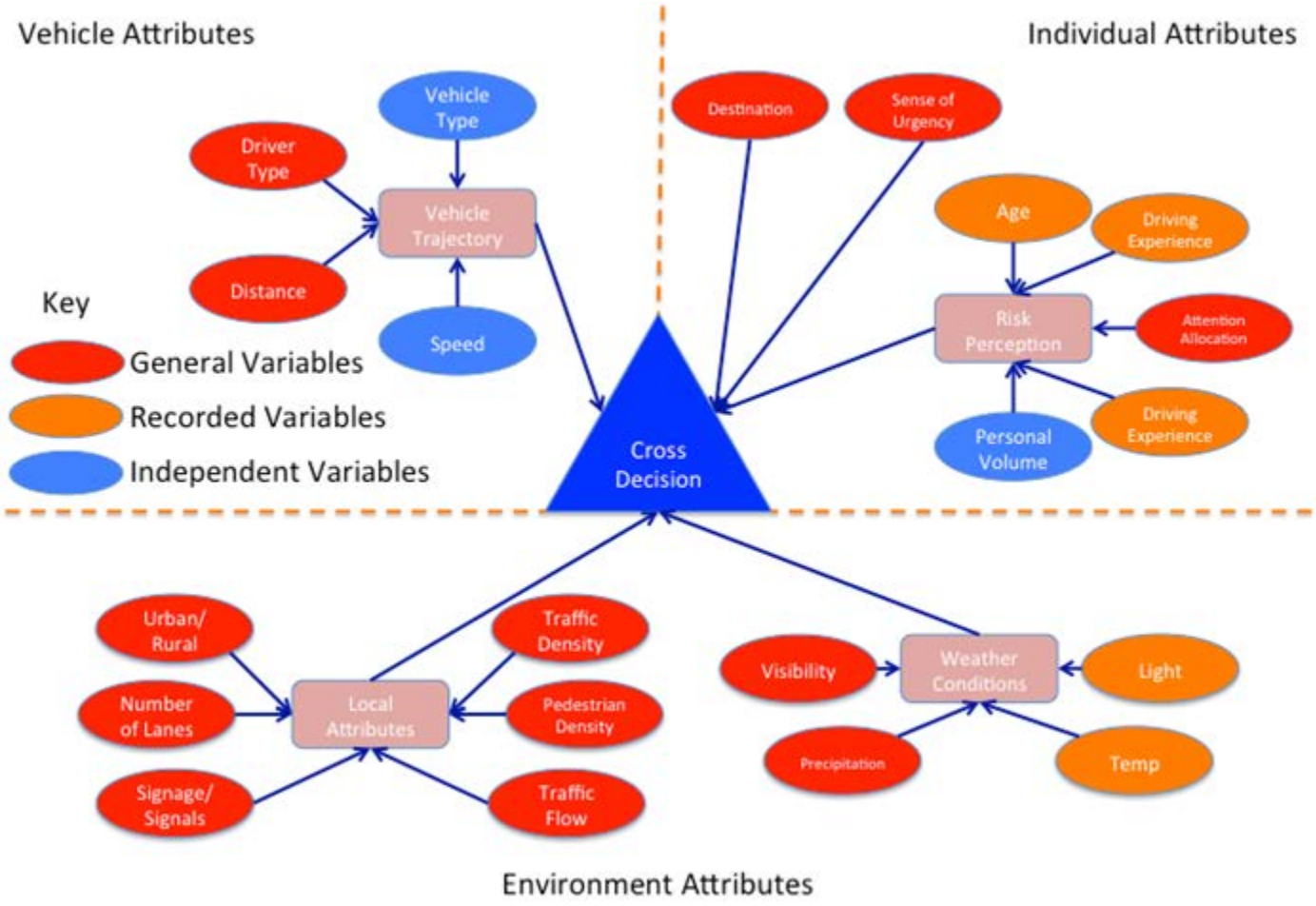
Current Pedestrian Models



Influence Model