Our Traffic Safety Paradigm: What is stopping us?

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Traffic Safety

[Source: DOT HS 811 620]
Fatality Risk
(vehicles)

Occupant Fatality Rate (per 100,000 registered vehicles)

<table>
<thead>
<tr>
<th>Category</th>
<th>2001</th>
<th>2010</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Vehicle</td>
<td>15.8</td>
<td>9.2</td>
<td>-41.6</td>
</tr>
<tr>
<td>Light Truck</td>
<td>14.9</td>
<td>9.5</td>
<td>-36.1</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>65.2</td>
<td>54.8</td>
<td>-15.9</td>
</tr>
</tbody>
</table>

[Source: NHTSA DOT HS 811 639]
Progress

- 1969: FMVSS 208 enacted requiring front seat lap/shoulder belts in passenger vehicles
- 1974: 55 mph national maximum speed limit established by Congress in response to energy crisis
- 1978: First child passenger safety law enacted by Tennessee; all States and DC have laws by 1985
- 1980: MADD founded
- 1984: First seat belt use law enacted by New York; all States and DC, except New Hampshire, have laws by 1995.
  - Passive restraints rules to begin in the 1997 model year
- 1988: All 50 states and DC have Zero Tolerance Laws for drivers under 21 years old
- 1998: First nationwide Click It or Ticket campaign
- 2000: First national impaired driving media campaign
- 2003: All 50 States, DC, and Puerto Rico have .08 per se laws
- 2005: One State enacts a universal motorcycle helmet law (Louisiana)
Model

[Source: Eiksund, 2009]
Risk Behaviors

Figure 3
Speeding, Alcohol Involvement, and Unrestrained Drivers Involved in Fatal Crashes by Location, 2006

Note: Percent known land use.

DOT HS 810 812]
Paradigms

Engineering: "Smart" vehicles (automate speed)

Enforcement: Punish Behavior (change proposition)

EMS: Accommodate Behavior (reduce injury)

Engineering: Constrain Behavior (change affordance)
Premise

“It is difficult to expect that people will change their behavior easily when many forces in the social, cultural, and physical environment conspire against such change.”

[Source: Syme & Belfour, 1998]
Social Ecology

[Source: Based on CDC Model; Andrews, 1985]
Traffic Safety Culture

The shared **cognitions** generated by a **group** of people that motivate their individual **willingness and intentions** related to traffic safety.
"Cognitions"

- **Reasoned** (deliberation)
  - Attitudes
  - Injunctive Norm
  - Descriptive Norm
- **Reactive** (inclination)
  - Prototype (Risk) Image
  - Behavioral Willingness
- Behavioral Intention
- Risk Behavior

[Source: Gibson et al., 2008; Ohtomo & Hirose, 2007; Hukkelberg & Dykstra, 2009]
Attitude Origins

Perceptual Frame

Beliefs (Ideology)

Value System

Lens

Core

Values
Leverage Values

Buckle Up

Survive Crash

Still be around

Take Care of Family
Challenge Beliefs
Shift Frame

[Source: www.thefuntheory.com/speed-camera-lottery-0]