Culture, society and communication

Traffic psychology 1
PCH/DP1

Matus Sucha

Presentation 6

1. Communication

- All measures that take their starting point in the field of psychology aim at **understanding** (and if **necessary changing) human behaviour**.

- Communication is necessary both to understand behaviour and to influence or change behaviour.

- One cannot **not** communicate.

- All behaviour (verbal and non verbal) is communicative in nature.

- Even someone who is silent is communicating and influencing the other(s).

- Communication also takes place when it is <u>not</u> deliberate, conscious and successful.

Ralf Risser and Paul Watzlawik (2000)

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1. Communication

Problems and conflicts do not mainly arise because of **„what" is said** but they rather arise because of **„how" it is said.**

The impression of how things are „said" in **traffic** often seems to be a **negative one** (important in connection with safety → vicious circle of aggression).

Communication in traffic:
* Anonymous
* Time pressure, short
* Not clear
* No possibility of metacommunication
* No feedback

1. Communication

Bad communication in traffic can be based on:

- **Deficits regarding knowledge or understanding of rules:** e.g. one believes to have a right of way
- **Do not understand feelings of others regarding one´s own behaviour:** e.g. too small hazard distance can induce stress and possibly impair control of behaviour
- **Do not understand needs of others:** e.g. do not know which kind of help pedestrians need to cross a street – because of high speeding, little time, lack of visual abilities etc.
- **Lack of understanding possible reaction of others:** false interpretation of possible reactions of other road users
- **Lack of attention**
- **Bad manners:** being reckless, do not worry about others, try to dominate over others

Ralf Risser (2013)

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1. Communication

Bad communication in traffic can be based on:

- Little practice

- Bad assessment of possibilities of others: e.g. risky overtaking, imagine that oncoming traffic is able to brake in time

- Remember: Even experts tend to be wrong

*Communication is not only relevant as a process between road users but also **an instrument for „us"** – e. g. for those who want to take **measures** to improve certain types of behaviour.*

Ralf Risser (2013)

2. Culture

Four levels of GADGET model (Hataka et al, 2002):

Goals for life and skills for living
–Importance of cars and driving on personal development
–Skills for self-control

Goals and context of driving
–Purpose, environment, social context, company

Mastering traffic situations
–Adapting to demands of present situation

Vehicle manoeuvring
–controlling speed, direction and position

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2. Culture

5th level - Traffic as a culture (Good brakes, good horn, good luck!)

This is how people drive, how people cross the street, how power relations are made manifest in those interactions, what sort of patterns emerge from traffic.

It`s the reason why horn in Rome does not mean the same thing as a horn in Stockholm, why flashing headlights at another driver is understood one way in the German autobahn and quite another way in Los Angeles.

Why pedestrians jaywalk in New York City and don`t in Copenhagen? In New Your City it`s a way to distinguish yourself from crowd, in Copenhagen an act against law. In NYC pedestrians look at cars, not at lights.

2. Culture

Traffic safety culture appears to be **an intuitive and powerful concept** with which to explain observed **differences in international, regional, and demographic crash risk**, as well as the propensity to commit high risk behaviors.

If it is possible to define and apply this concept within a relevant **social psychological theory of behavioral choice**, it may be possible to develop a **new paradigm for traffic safety interventions**.

Indeed, there are numerous examples of the **effectiveness of traffic safety** interventions predicated on the effect of culture on behavioral choice.

A culture-based approach is **complementary** to, **but fundamentally** different in form and philosophy from traditional traffic safety interventions including **engineering, enforcement, and education**.

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2. Culture

Traditional strategies for reducing traffic fatalities focus on risk behaviors and their consequences **by training safe behaviors (education**), **punishing risk behaviors (enforcement**), or **protecting drivers from the consequences of risk behaviors (road and vehicle design).**

But we are not doing very well.

Changes in driver behavior such **as increased seat belt use and reduced alcohol-impaired driving** meant significant improvement in 80`s. Thereafter, traffic safety begins to **deteriorate**, presumably because of a change in conditions **that discontinued prior trends for safe behaviors and increased dangerous behavior** (*see next slide – trends if we remove the effect of vehicle model and vehicle age*).
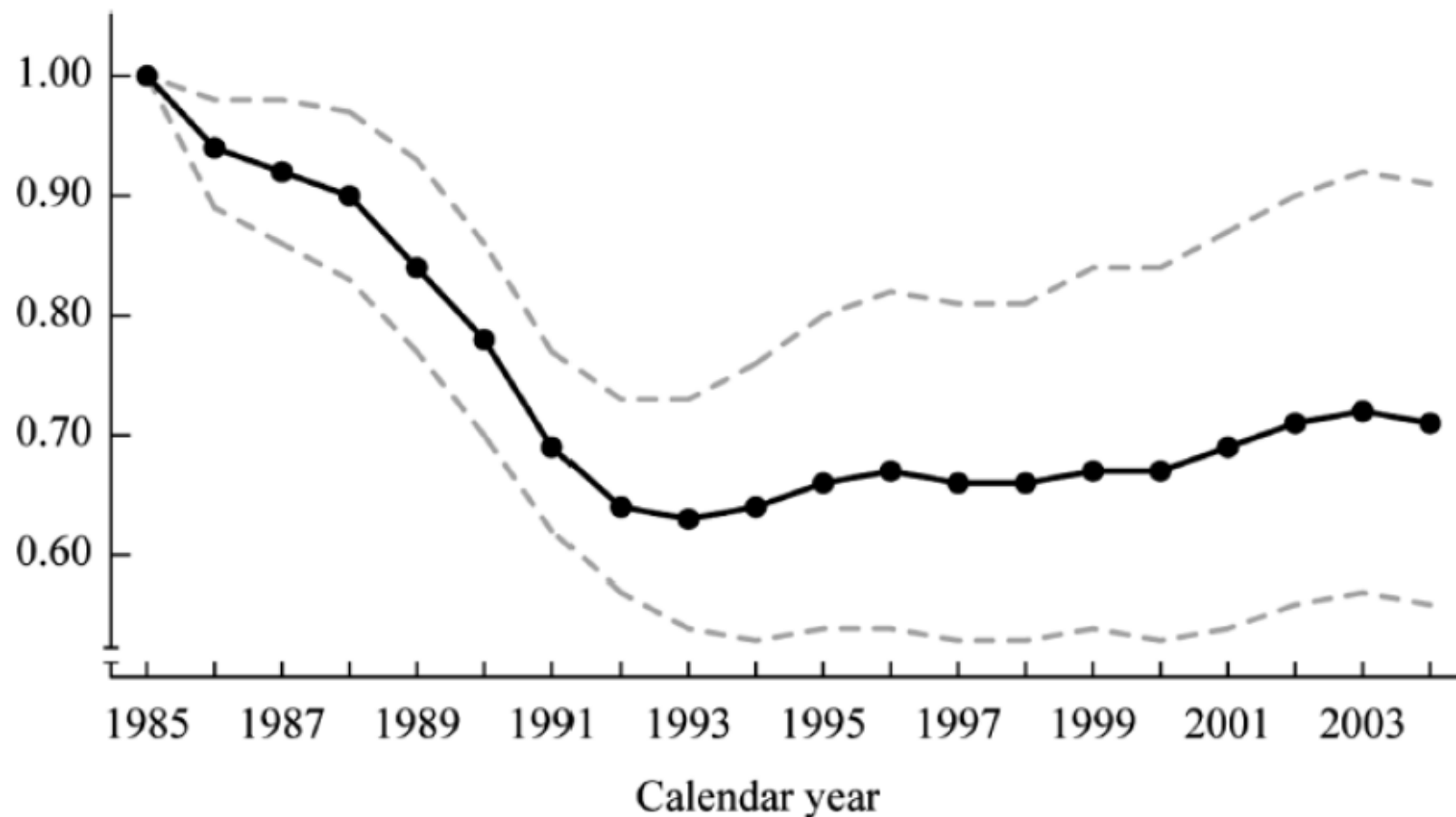
Figure 2. Driver fatality rate per million registered passenger vehicle with effect of vehicle design (model) and vehicle age removed.[8]

2. Culture

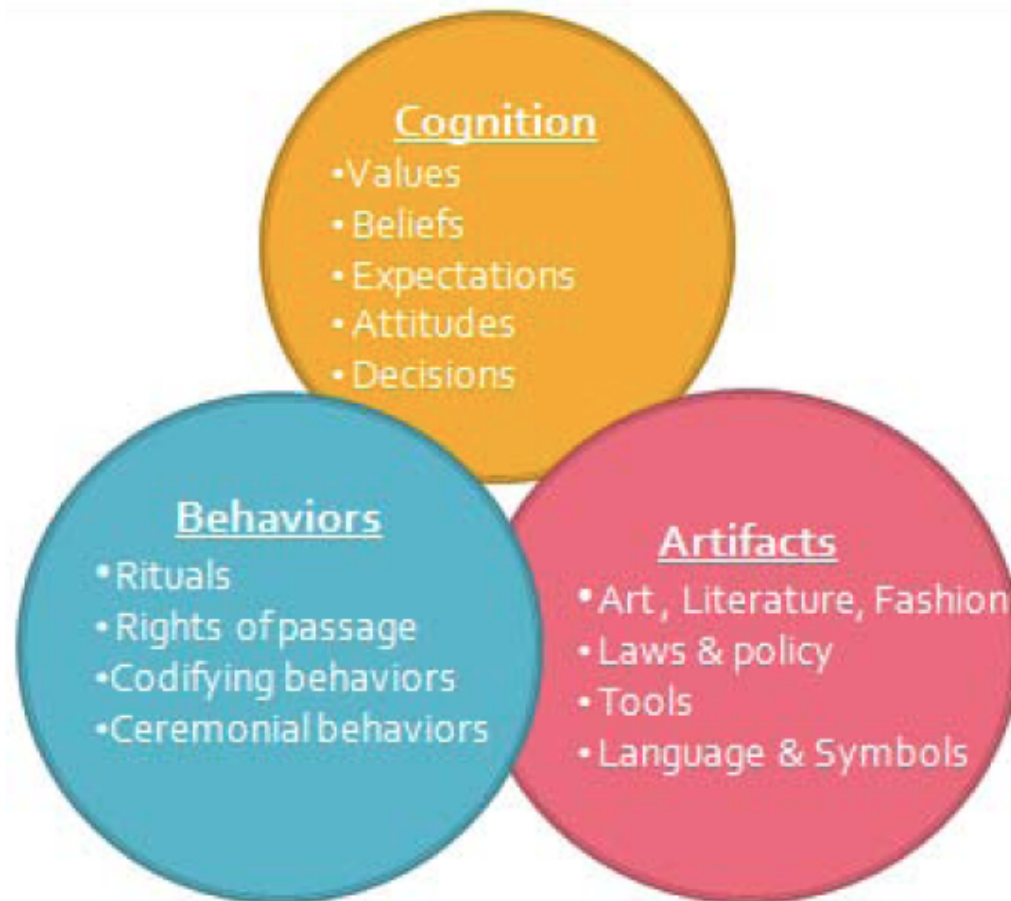*WHAT ARE THE ELEMENTS OF TRAFFIC SAFETY CULTURE?*

Cognition
- Values
- Beliefs
- Expectations
- Attitudes
- Decisions

Behaviors
- Rituals
- Rights of passage
- Codifying behaviors
- Ceremonial behaviors

Artifacts
- Art, Literature, Fashion
- Laws & policy
- Tools
- Language & Symbols

Figure 3. Simplified model of major facets that describe culture.

2. Culture

WHAT ARE THE ELEMENTS OF TRAFFIC SAFETY CULTURE?

Cognition is an important facet of culture that guides and motivates cultural-based behaviors. Aspects of cognition within a culture include:

(1) the virtues that are valued by the society;
(2) beliefs about what behaviors are normal within the society;
(3) expectations for violations of normative behaviors;
(4) attitudes about the behaviors themselves (outcomes); and
(5) the collective influence of theses cognitive factors on the decision-making process of the individual.

These cognitions **in turn dictate and motivate behaviors** that are deliberate reflections of the culture.
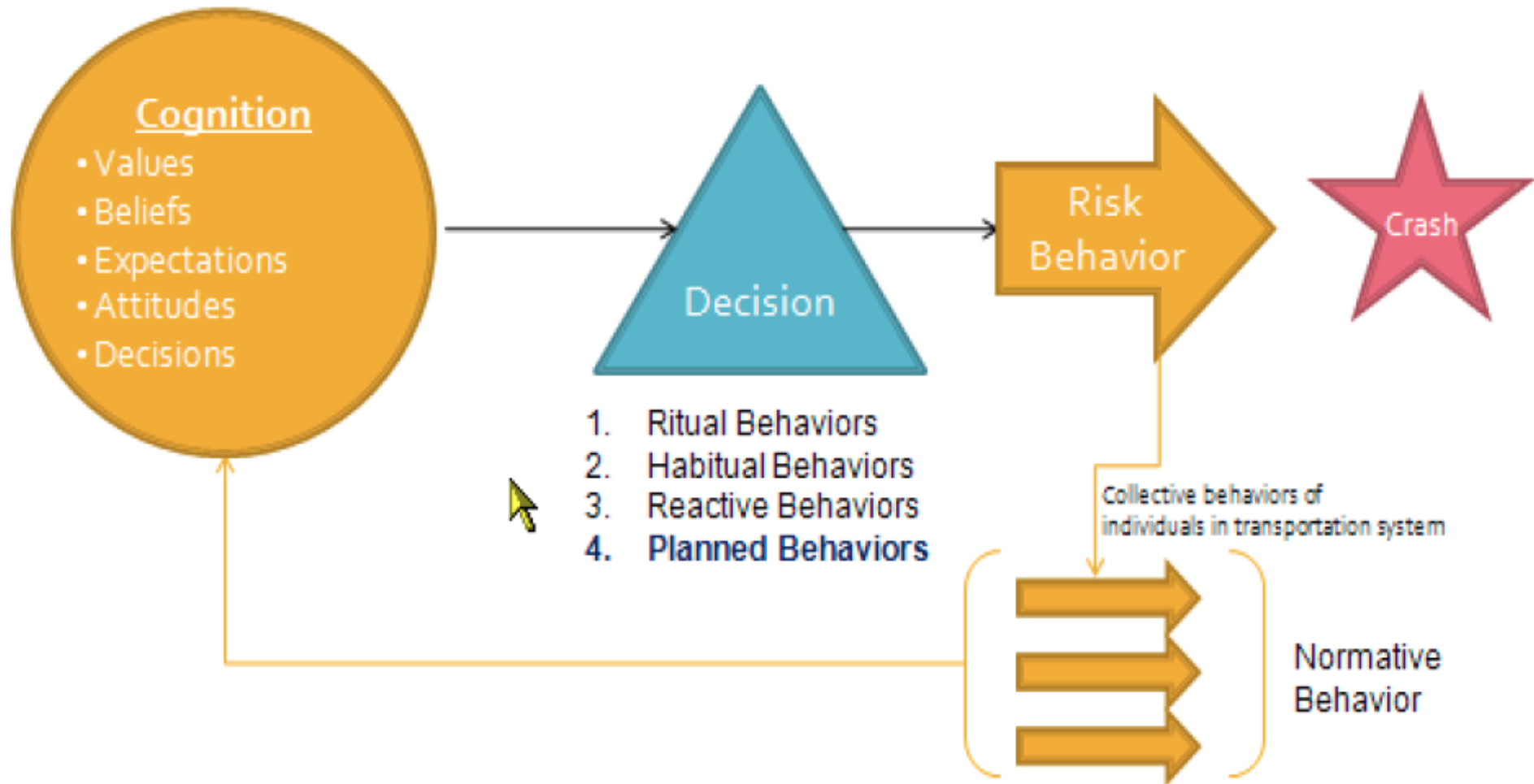
Figure 4. Proposed model for effect of cultural cognition on decision-making and risk behavior.

2. Culture

Behaviors themselves have a reciprocal effect on cognition. For example, let`s asserts that driving behavior is powerfully influenced by driving culture, defined as "the common practices, expectations, and informal rules that drivers learn by observation from others in their communities." Thus, just as **a change in culture may affect a change in normative behavior**, the perception of that shift in behavioral norm will itself change the cognition of those behaviors.

Finally, a culture includes **artifacts** that symbolize the cognitions of the culture and often enable the culture-directed behaviors. In the case of traffic safety, **artifacts include traffic laws and policies** that reflect the prevailing traffic safety culture.

2. Culture

Definition:

*Thus, from a **cognitive perspective**, traffic safety culture can be defined as the perceptions people have about **what behaviors are normal in their peer group** and their **expectations for how that group reactions to violations to these behavioral norms**.*

In terms for traffic safety, this definition applies to behaviors that either increase crash risk (e.g., speeding) or are protective (e.g., wearing seatbelts), as well as behaviors related to acceptance or rejection of traffic safety interventions.

2. Culture

WHAT ARE THE BOUNDARIES OF TRAFFIC SAFETY CULTURE?

First, culture <u>does not pervade all behavior</u>. Cultural cognition **only impacts behaviors that require deliberation and planning.**

Those behaviors that are *dictated by external doctrine (ritual), controlled subconsciously (habitual), or reactive to external events (reactive)* are not subject to a decision-making process influence by the cognitive elements of a culture.

Second, traffic safety culture emerges and operates **at different levels within society.** A broader definition of safety culture includes the values, beliefs, and perceptions of **organizations, communities and societies**, not just individuals. This is called - **"social ecological perspective"**

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According to this**, safety strategies** that rely on culture should include a **continuum** **of activities that address multiple levels:**

- "**Individual**" level factors include biological and personal history factors that increase the likelihood of contributing to an unsafe driving culture. **Some of these factors are age, education, income, or substance use.**

- The "**relationship" or "organizational"** level factors include those that increase risk because of **relationships with peers, co-workers, supervisors, and family members.** A person's closest social circle, e.g., peers and co-workers, influences their behavior and contributes to their range of experience.

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- "**Community**" level factors include settings, **such as schools, workplaces, and neighborhoods,** in which social relationships occur and seek to identify the characteristics of these settings that are associated with a poor safety culture.

- **"Societal"** level factors help create **a climate in which risk is encouraged or inhibited.** These factors include **social and cultural norms**. Other large societal factors include the **health, economic, educational and social policies** that help to maintain economic or social inequalities between groups in society that may contribute to risk.

- **Agencies** that propose and **enforce traffic safety policy** that can impact the driving population; **the culture of governments** that allocate resources to various traffic initiatives that may hinder or foster risk.
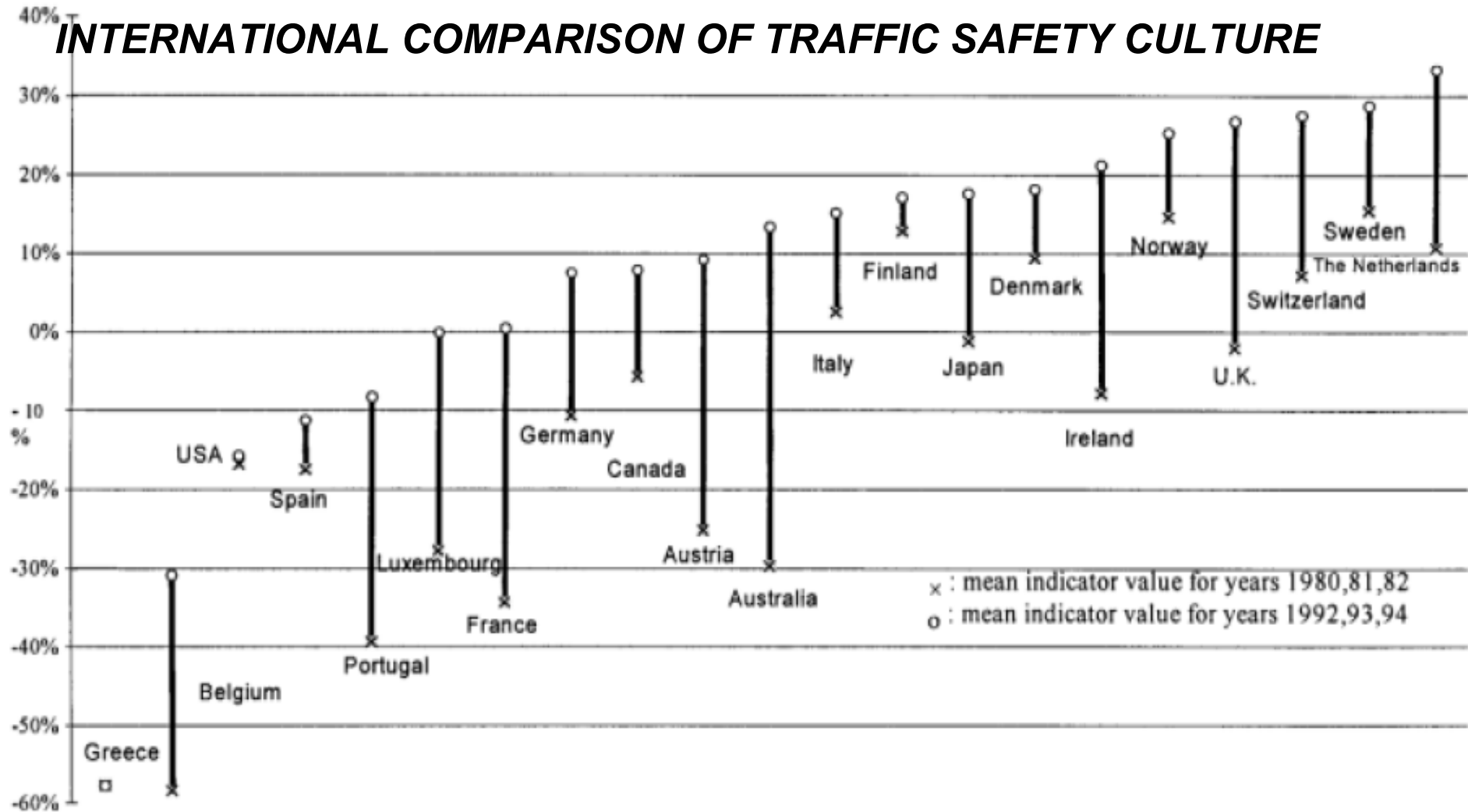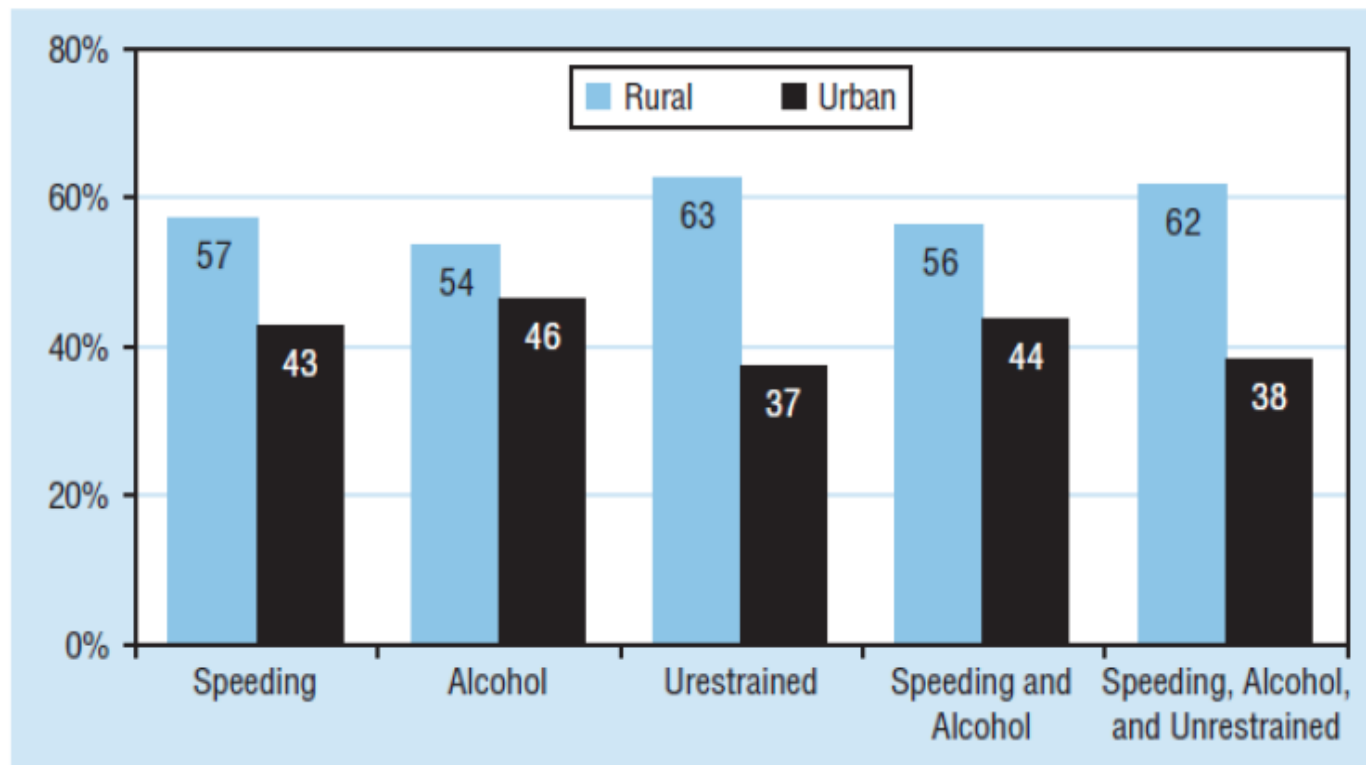
Figure 6. Inference of traffic safety culture for comparison countries.[27]

REGIONAL COMPARISON OF TRAFFIC SAFETY CULTURE

Note: Percent known land use.

Figure 8. Percentage of fatal crashes attributable to risk factors in rural and urban areas.[33]

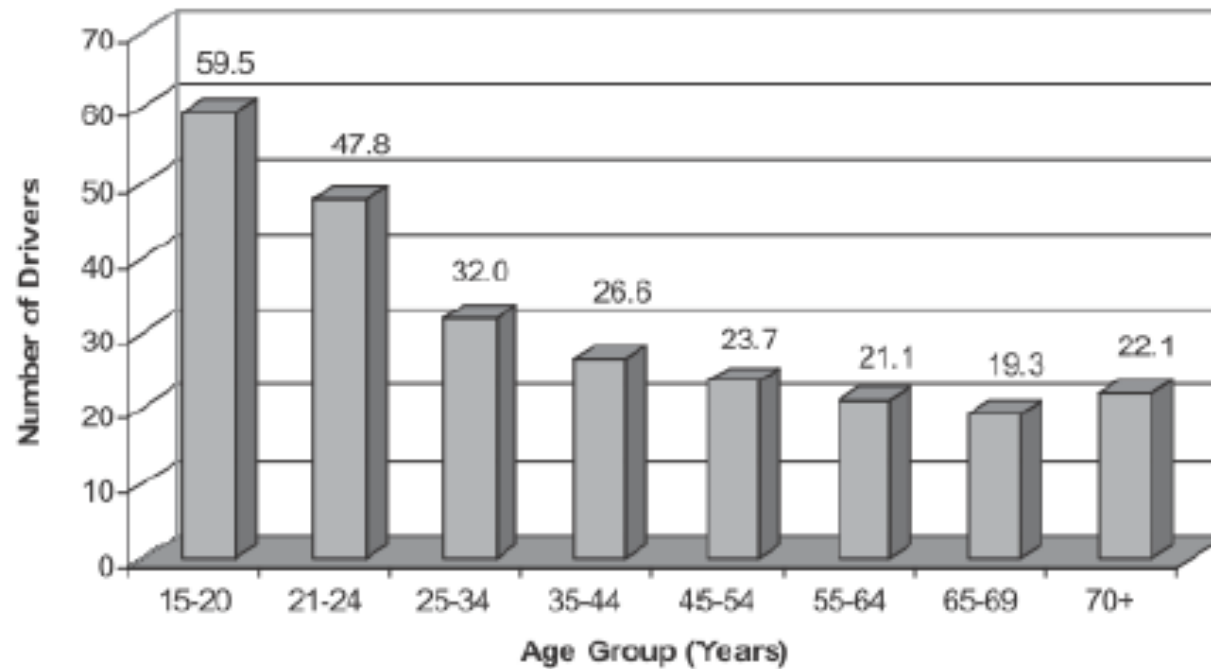# DEMOGRAPHIC COMPARISON OF TRAFFIC SAFETY CULTURE

Figure 9. Involvement rate in 2005 fatal crashes per 100,000 licenses drivers (a) for all age groups; and (b) ages 16 to 20 years.[39]

RISK FACTORS AND TRAFFIC SAFETY CULTURE

According to the National Highway Traffic Safety Administration (NHTSA), speeding is one of the **most prevalent risk factors contributing to approximately 30% of all fatal traffic crashes.**

The prevalence of speed as a risk factor is sometimes used as evidence that our society is characteristic of **a traffic safety culture that motivates and condones speeding**. *Specifically, it is presumed that U.S. traffic culture perceives* **speeding not as risky but as a behavioral norm**.

Positive attitudes about the benefits of speeding were predictive of high rates of speeding behavior. Specifically, drivers who violated speed limits deliberately had positive beliefs about the outcomes of speeding, such as a pleasurable driving experience and shorter trip durations. Both deliberate and unintentional speeders were strongly influenced by perceived social norms condoning speeding as common and part of the driving ethos. Indeed, the perceived social norm that speeding is ubiquitous was used by drivers to **rationalize** their own illegal driving behavior. As a **safety measure** we recommend tailoring culture-based interventions to the distinct beliefs and attitudes of speeders.

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Figure 2. *The relative crash risk whilst driving under the influence of alcohol and at different speeds (on Australian urban roads with a speed limit of 60 km/h). From this graph it can be concluded that driving too fast is at least as dangerous as driving under the influence of alcohol.*

SWOV, 2013

2. Culture

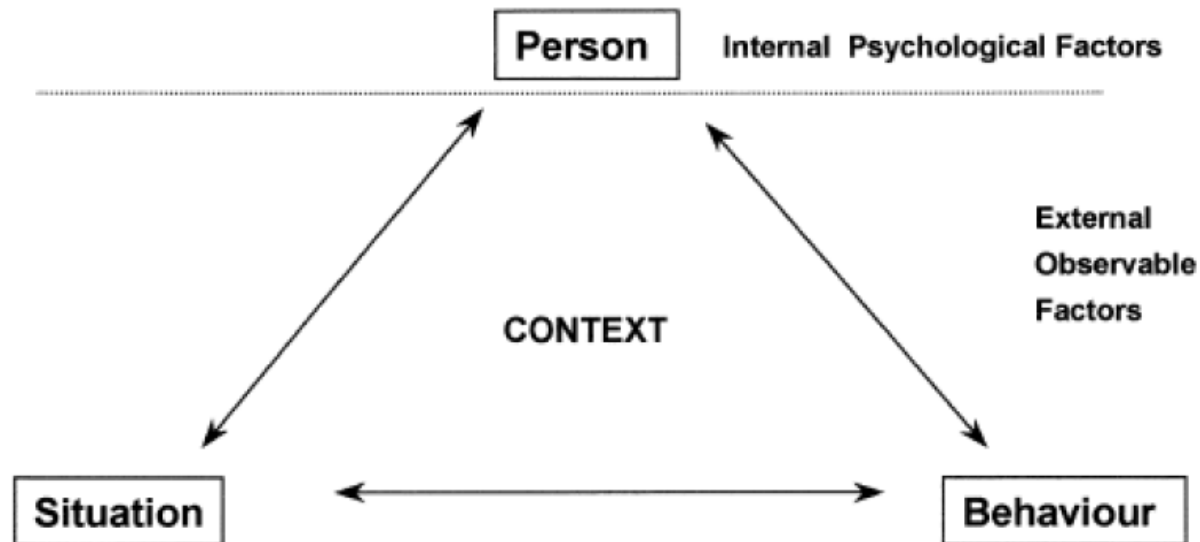**HOW DOES TRAFFIC SAFETY CULTURE INFLUENCE BEHAVIOR?**

Three theories of social influence that may provide a framework to guide the application of traffic safety culture to change high risk behaviors:

1. **Social Cognition Theory**
2. **Theory of Planned Behavior**
3. **The Social Norms Approach**

HOW DOES TRAFFIC SAFETY CULTURE INFLUENCE BEHAVIOR?

1. SOCIAL COGNITIVE THEORY
Social Cognitive Theory (SCT) portrays human behavior as the **result of the reciprocal interaction between the internal psychological factors of the person, and the external observation of the situation and behaviors**.

HOW DOES TRAFFIC SAFETY CULTURE INFLUENCE BEHAVIOR?
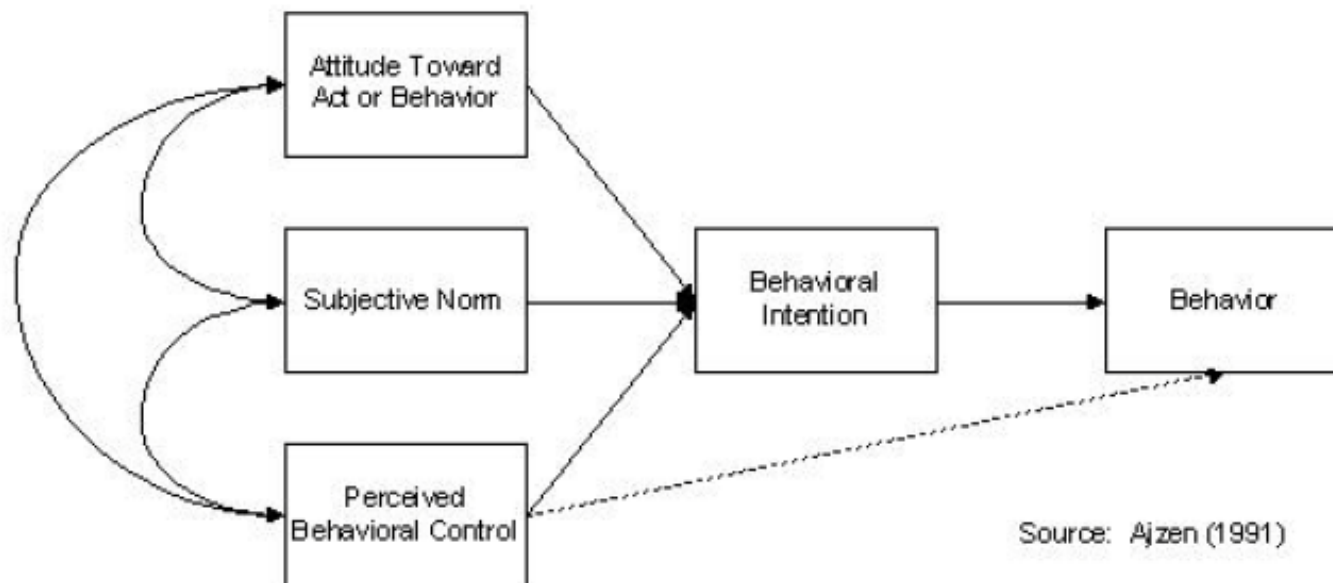
1. *SOCIAL COGNITIVE THEORY*

Two important psychological factors in this theory are perceived **self-efficacy and outcome expectations**. Self-efficacy is defined as "people's beliefs that they can exert control over their motivation and behavior and over their social environment."

According to Bandura, only when efficacy is high and outcome expectations are positive will people decide to perform certain behaviors.

HOW DOES TRAFFIC SAFETY CULTURE INFLUENCE BEHAVIOR?

2. *THEORY OF PLANNED BEHAVIOR*

This model states that **behavioral intentions** are based on **attitudes towards the behavior**, **subjective norms**, and **perceived behavioral control**. <u>Attitude</u> is based on <u>an evaluation of the consequences of a behavior</u> and <u>beliefs about the desirability</u> of these consequences.
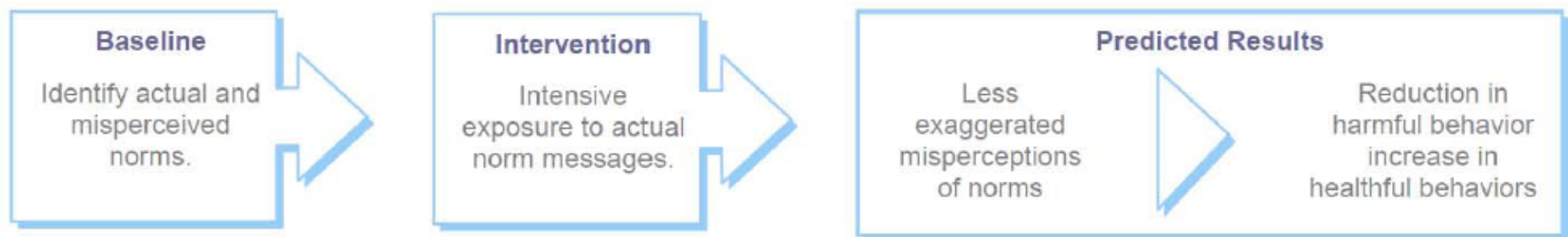

Source: Ajzen (1991)

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HOW DOES TRAFFIC SAFETY CULTURE INFLUENCE BEHAVIOR?

3. SOCIAL NORMATIVE METHOD

Specifically, the Social Normative Method incorporates the notion from Social Cognition Theory that **individuals perceive behaviors of others** in a situation as a **basis for deciding on their own behaviors** along with the **subjective norm** concept from the Theory of Planned Behavior, whereby expectations about **the reactions of (important) others toward a behavior influences intentions to act.**

Baseline	Intervention	Predicted Results	
Identify actual and misperceived norms.	Intensive exposure to actual norm messages.	Less exaggerated misperceptions of norms	Reduction in harmful behavior increase in healthful behaviors

Specific examples of interventions based on this method that were **successful**: increasing **seatbelt use and reducing drunk driving.**

Thank you for listening!

Based on:

Ward, N. J., Linkenbach, J., Keller, S. N., & Otto, J. (2010). White paper on traffic safety culture. *the series: White Papers for "Toward zero deaths: a national strategy for highway safety"–White Paper, (2).*

Presentation shown by Ralf Risser (2013) during Traffic psychology mentoring session of Traffic psychology Working Group, Wien.