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What is culture?

- A culture is a collection of behavioral patterns that are found in different communities. This includes value-added symbols that give the behaviour a certain purpose or meaning.
  
  Ref: Modified from the freedictionary.com

- There are in fact many different definitions: e.g. “development of human qualities that differentiates humans from animals, the development of the mind and of spiritual life.”
  
  Ref: Modified from the freedictionary.com

1) Culture, traffic culture and traffic safety culture are interrelated
What is Traffic Culture?

- Traffic culture can be regarded as a common understanding and as habitual actions connected to the reality of how drivers treat each other within the traffic environment in a certain country. The traffic culture and the driving habits are generally associated with how the authorities view traffic problems, what rules and regulations apply, the quality of driver education and the comprehensiveness of information that is forwarded to drivers in general. Also relevant is the effectiveness of enforcement and the way in which the road system is designed with respect to effectiveness and safety.

Ref: Modified from TØI Norway

What is traffic safety culture?

Definition:

- Traffic safety culture relates to those aspects of the traffic culture that are linked to accidents - a traffic safety culture may be understood as the norms that the drivers assign to safety in traffic.

Ref: Modified from SINTEF/NTNU Norway

Another definition:

- The totality of socially transmitted behavioral patterns, arts, beliefs, institutions, valuations, and all other products of human work and thought regarding traffic safety and the incidence of motor-vehicle–related crashes, injuries, and fatalities that guide social and individual behavior and are propagated through processes of individual learning.

Ref: University of Michigan Transportation Institute

2) Ethics of the 0-vision

- Although the fundamental ethics of safety management seemed to be built into the 0-vision when it was launched in 1997 (to save lives before property), it needed to be integrated more effectively into the road traffic system. The field of occupational safety has taken over its principles around the year 2000. The need may obviously have magnified over time. The purpose of the Tylösand declaration made in 2007 at the Tylösand conference in Schweden seems to fulfill this expanded need.
The Traffic Safety System

HUMAN
VEHICLE
ROAD & ENVIRONMENT

The Tylösand Declaration (1)

1. Everyone has the right to use roads and streets without threats to life or health.
2. Everyone has the right to safe and sustainable mobility: Safety and sustainability should complement each other.
3. Everyone has the right to use the road transport system without unintentionally imposing any threats to life or health on others.

The Tylösand Declaration (2)

4. Everyone has the right to information about safety problems and the level of safety of any component, product, action or service within the road transport system.
5. Everyone has the right to expect systematic and continuous improvement in safety: any stakeholder within the road transport system has the obligation to undertake corrective actions, following the detection of any safety hazard that can be reduced or removed.

3) How do governments of the world feel about the traffic safety problem?

• They expect many casualties before 2020 and still higher figures over the period 2020-2030.
• Clearly, they do not believe that the present course of actions in the developed nations will apply to the developing nations. The present course of action involves 0-vision principles, road rapping and road safety management, as well as expensive law enforcement.
The Traffic Safety Problem

4) Approaches to traffic culture

- The Danish traffic safety commission has tried to apply cultural-analysis approaches by integrating them into a campaign that is intended to support a more positive and safer culture. The overall project seems to have failed. What has not failed is the analysis itself. However, we believe that the analysis is too limited in scope.

We describe the approach in the following slides:

What characterises a poor traffic culture?

- Selfishness
  - To be in the right
  - Civil disobedience
- Irresponsible behaviour
  - Trying to do more than one thing at a time
  - Inner reflexes
- Lack of attention
- Aggressive behaviour
  - Silent anger
  - Anger expressed in facial expressions
  - Other drivers threatened with the car
- Inconsiderate behaviour
  - Acts of violence
What characterises a good traffic culture?

- Tranquility
- Respect
- Responsibility
- Defensive driving
- Consideration
- Paying attention to the traffic
- Patience
- Observant

5) The human as an information processor

- Short Term Memory
- Long Term Memory
- Organs of perception
- Effectors

Development of Decision Making (triangle diagram)

- Status quo & tolerate
- Control & regulate

The communication process (1)

- Sender
- Filter
- Receiver
- Message in words
- Prior experience
- Active
- Message without words
- Expectations
- Listening

Ref: Umferðarsáfræði 1994: Kjartan Póðardarson and Ásbjörn Ragnarsson
Ref: Siegfried Lehr og Bernd Fischer Selber denken macht fit: Grundlagen und Anleitung zum Gehirn-Jogging, Erlangen 1986
The communication process (2)

- There is no verbal communication, unless there is an accident, or the flow of the traffic comes to a halt and the drivers step out of their cars.
- Body language is used, but is limited to the view of drivers in the vicinity. Height difference between cars often hinders this process as well. Truck drivers may threaten you through fast and reckless driving or even by transporting hazardous materials. Communication is transmitted from one vehicle to another and must often still be absorbed and understood, much to the inconvenience of the driver and passengers.

Ref: Modified from Anette J. Jörgensen 2007

Traffic psychology /Information psychology

- Scientists have interpreted the communication problem in that one sees little of the next driver. The lack of communication is considered to be the reason why others are blamed for reckless driving. It is also the reason why frustration and anger may build up during driving. This reduces attention.

Ref: Anette J. Jörgensen Trafikkultur 2007

6) Model for safe traffic

- Support safe mobility
- Support correct use
- Shall be forgiving

- Safe traffic
- Safe journeys
- Safe vehicle
- Safe speed
- Safe road
- Safe street
- Safe user
- Knowledge
- Capability
- Willingness to use RTS correctly

Ref: Claes Tingvall and Anders Lie Schweden 2008

7) A few notes about learning (1)

- Classical learning, also referred to as classical conditioning. Paired stimuli. The stimulus influences the immediate or final learning effect. Influential peers may exert such an influence upon a teenager, so that he enjoys speeding, even if he feared it in the past.
- Motivation is an important part of learning and of using learned behaviour. It is the reason why people do what they do.
- Observational learning involves people learning by observing what others do and also entails the consequences that others experience, because of such behaviour.

Ref: University of Michigan Transportation Institute 2007
A few notes about learning (2)

- Operant learning involves a person engaging in some behaviour that is then paired with the experience of a specific outcome of that behaviour. If the outcome is positive, the behaviour is more likely to be repeated. In this case, the outcome is known as a positive reinforcer. An outcome can also be reinforcing, if it removes something that is unpleasant - in this case, we talk about a negative reinforcer.
- Attribution is learning that is more often like an educated guess, that is, often not reinforced and represents people’s efforts to make sense of their social world. A common mistake people make during this process is to assign a single cause, rather than multiple causes, to an event. Attributions will always be important in the social environment of the traffic.

Ref: University of Michigan Transportation Institute 2007

Henderson’s Law, in the late 1960s

\[ C_n = C_1 n^{(a)} \]