

Road Safety Perception in the policy process

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Introduction

In the Netherlands, since the '90s, road safety policy is focused on decreasing the number of accidents, seriously injured and fatalities. In policy targets the citizen's perception of road safety is not taken into account. In other safety sectors, however, perception is taken into account. In the so called Integral Safety Policy the Police Monitor plays an important role. In that survey citizens are asked what they think regarding many safety issues. Again and again it shows how road safety is at the top of their safety issues list.

In the Netherlands, as in most countries, there is no separate road safety perception monitor. The Dutch PROV survey¹ may offer some insights in the road safety perception, specifically the acceptability of certain safety measures, but this survey is not meant to sketch a comprehensive image of road safety perception. It is not an easy job to develop such a monitor and such surveys are rather costly. In this paper I present an immature proposal for taking the public's road safety perception into account. The aim is to provoke discussion and determine whether or not it is a useful idea.

The genesis of road safety perception

Perceived road safety relates to the perceived risk (= chance x severity) of being involved in a traffic accident in which one may suffer material or emotional damage or one gets injured or killed. Such perception is the result of human information processing. There are many theories on information processing. A simple model is described by Cees Wildervanck (Wildervanck, 1988). In Figure 2 his reasoning is summarised. Perception can be seen as a chain in a continuous cycle starting with perception, assessing the perceived information, making a decision what to do, taking action, perceiving the results etcetera.

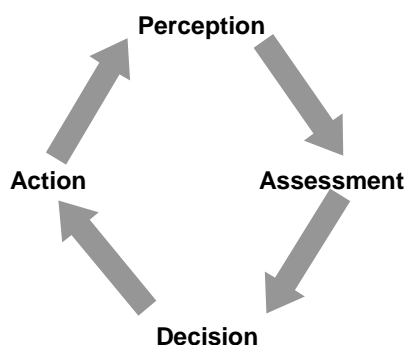


Figure 1 Human information processing cycle (Wildervanck, 1988)

¹ The PROV is a bi-annual survey on attitudes and stated behaviour regarding road safety.

Perception can be seen as the image an individual has of the shape of the result of an accident, the memories that it calls up, the thinking processes it starts, the impulses, feelings and intentions. Perception is a combination of rational and emotional significances.

Regarding perceived road safety three levels can be distinguished (Veling & Delpout, 1986):

- **Subjective risk:** the time and situation specific experience of road safety, that is the perception of road safety during road use.
- **Traffic menace:** over time generalised, but situation specific perception of road safety, that is how a specific situation is perceived over a longer period of time.
- **Traffic liveability:** over time and situations generalised perception of road safety, that is a general assessment of road safety experiences.

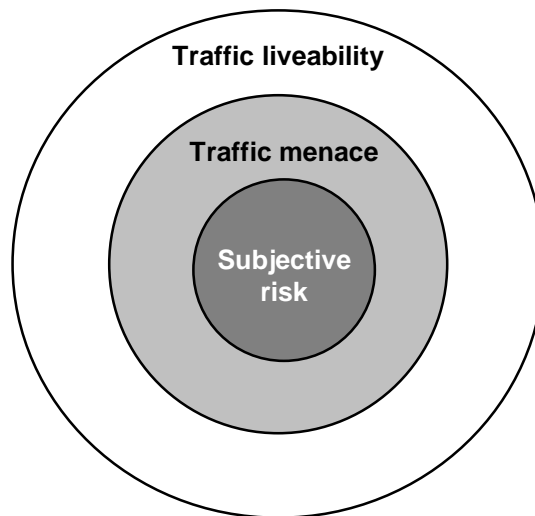


Figure 2 Levels in perceived road safety (Kessels, 2005)

A recent study by Joris Kessel argued that the relevance for policy making depends on the form of perception. For policy making purposes it is important to distinguish between the perception of risks in concrete traffic situations (subjective risk) and the more general perception of safety: the traffic menace and traffic liveability.

The perception of risks **in** traffic is important for road user behaviour: they act according to the circumstances. When one is in an obviously dangerous situation, one will walk or drive very cautiously. This perception is situation and time specific and highly unpredictable and unstable. Thus this form of perception is not very useful for policy development.

The more generalised forms of perception, both 'traffic menace' and 'traffic liveability' are not time specific and formed by an accumulation of experiences and indirect information, mainly from the media. Traffic liveability, not being situation specific, is a generic and relatively stable form of perception that can be taken up as an indicator for the quality of life.

The media influence (generic) safety perception, not only that of the common citizen, but equally that of the authorities. Because of this, this form of perception is very much policy relevant.

Perceived road safety risk

Risk relates to the chance that something unwanted happened. Kessels (2005) found that the assessment of risk appears to be influenced by biasing mechanisms. The most important ones are (see also figure 3):

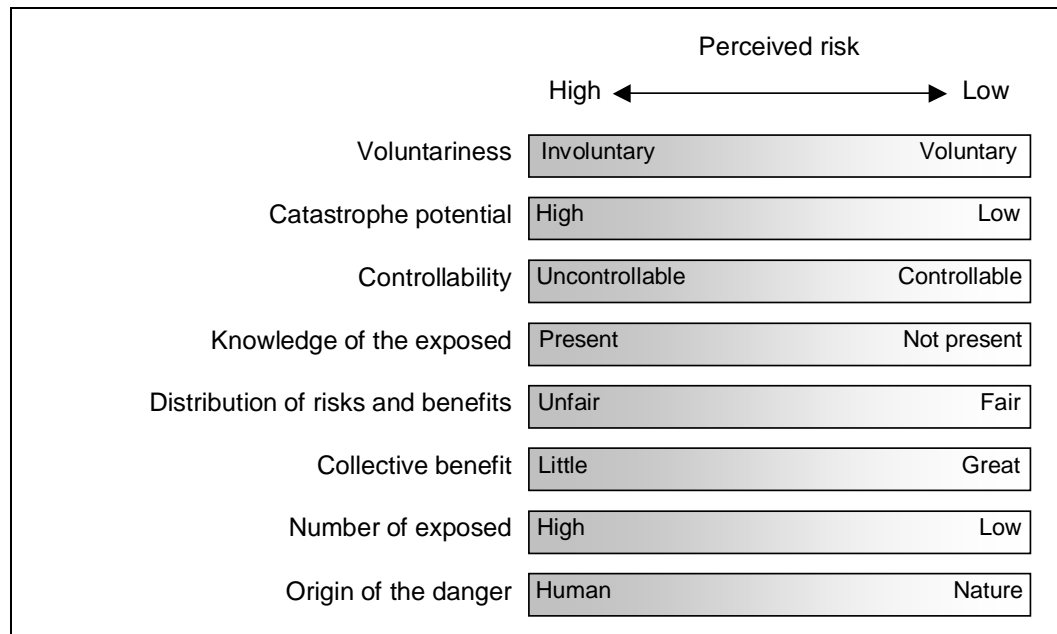


Figure 3 Qualities of perceived risk

Voluntariness

Involuntary taken risks are seen as more serious than voluntary risks. Accidents while doing risky sports like skiing, racing driving, bungee-jumping are more acceptable than accidents that happen while doing an activity that is ordered, like painting a house on a 5 meters high scaffolding.

Controllability

Risks that seem to be controllable are seen as less serious than risks that apparently cannot be controlled. Again a reason for fear of flying. For many driving a car is perceived as less risky than flying.

Knowledge of the exposed

People accept more risk when they know what the risks are than when they are unsure of eventual consequences of taking that risk. This is one of the causes of resistance against nuclear power. The other side is that the fate of common things is oblivion. Common accidents like falling while walking are seen as unimportant since one is supposed to be able to prevent oneself from falling. One just has to be careful and look ahead.

Road accidents are seen as something common, 'that's life', in traffic 'accidents happen'.

Distribution of risks and benefits

Risks that are not fairly distributed are seen as more serious (e.g. children's risks). Risks are seen in connection with foreseen benefits: he, who pockets the gains, must bear the charges. The gains and charges do not necessarily manifest themselves at the same time and place. One will accept more risk if the gains are directly visible and eventual charges will be distributed over time or will be delayed. For instance the somatic complaints one can get by high voltage cables.

Collective benefit

Risks with a low collective benefit (e.g. pointless threats) are seen as more serious than risks that are compensated by high collective yields. The pros and cons of one's activities can be of individual or collective nature. In general, risks look less serious when there is a large collective gain. This is the reason why the risks of heavy goods transport and nuclear power are acceptable.

Number of exposed

The number of people that are exposed to a certain risk matters. The more people exposed, the higher the perceived risk. A good example is the health risk of dioxine contaminated chickens.

Origin of the danger

Risks caused by natural phenomena are more easily accepted than man made risks. This is because of the impotence of doing something against nature risks. People perceive the risk of dying by cancer in a different way than getting killed by a faulty design of a building. Since traffic accidents are predominantly caused by human error, road safety scores relatively high on the risk scale.

Perception in policy processes

In current road safety policy, perception plays an important role. Rational, evidence based policy often loses from sudden urgent current affairs. This is a reality that policy makers have to deal with. Up till now most policy documents and strategic policy aims do not seem to allow for perception influences. When elaborating the strategies the implementation priorities get 'polluted' by 'public opinion' and 'popular beliefs'. Consequently administrators, consciously or sub-consciously, rely more on what the media report than what the written policy intends. Administrators are supposed to react to actualities even though this enrages the rationalists.

From perception theory we know that there are a number of mechanisms with respect to the perception of the gravity of a safety problem:

- the risk is not voluntary
- the risk may take the form of a disaster: many victims and much damage in one event
- the victims cannot really influence the occurrence of the event
- it is a new, up to now unknown phenomenon
- the distribution of risks is unfair (the damage must be paid for by someone that did not cause the event)
- it is a risk with a low collective benefit (a pointless activity is not to be tolerated).

The proposal

In policy making one can make use of this knowledge regarding the perception mechanisms for prioritizing issues and measures. In this section a sketch of a method for this is described. The idea is not yet tested in any way, and is *presented for discussion purposes only*.

For example, a method for prioritizing **issues** might be:

1. analyse accident data and distinguish relevant accident types
2. assign scores to the various accident type;
the scores can be calculated by summing the number of fatalities x 5, casualties x3 and damage only x 1²
3. score the accident type on the above mechanisms and add 25% for every mechanism that applies
4. sort the list on scores
5. check the resulting list in a dedicated perception study
6. in the policy document: make reference to the perception study.

Likewise, a method for prioritizing **policy measures** might be:

1. assess which types of accidents, how many accidents, and how many killed, seriously injured and material damage only will be saved by implementing the policy measure
2. assign scores to the measures
3. the scores can be calculated by summing the number of fatalities x 5, casualties x 3 and damage only x 1
4. score the policy measures on the above mechanisms and add 25%³ for every mechanism that applies
5. sort the list on scores
6. check the resulting list in a dedicated perception study
7. in the policy document: make reference to the perception study.

Discussion

As stated before, the ideas in this paper are just ideas to be discussed. As the Dutch football player Johan Crujff said: every advantage has its disadvantage. The aim is to initiate discussion. Based on the outcome one can determine whether the advantages of including perception in the policy process outweigh the disadvantages and whether we are on the right track.

To fuel the discussion: some arguments for including perception can be:

- a problem is only a problem when people say it is a problem
- improved credibility of authorities and policy makers

Arguments against may be:

- it makes things more difficult than necessary
- twaddle, stuff and nonsense reigns
- pedestrian accidents will disappear from the political agenda
- counterproductive in the long run
- including perception does not comply with a systems approach (like Sustainable Road Safety = prevention instead of solving problems)

² The weights are just an example; the perception (see ad 5) study can offer validation for the assigned weights.

³ See note 2!

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