INTRODUCTION

In the Netherlands the Ministry of Transport, Public Works and Water Management has the overall responsibility for traffic safety. The aim is to constantly improve policy. In this context the Ministry initiated a study on the innovation of interventions regarding traffic safety behaviour. In 2002 Traffic Test, a consultant specialized in behavioural sciences, stated that safety perception is the key to the solution (Traffic Test, 2002). The message was: make road users feel less safe than they actually are by giving them direct and explicit negative feedback.

Policy makers were not happy with this approach and asked the Transport Research Centre of the Ministry (AVV) to look for more positive ways of dealing with wanted and unwanted road safety behaviour. AVV commissioned Tabula Rasa to find new ways for dealing with problems associated with road user behaviour. AVV translated the results for the road safety field and these are summarized in this paper.


In the draft National Transport and Traffic Plan (Ministerie Verkeer en Waterstaat, 2001), policy with regard to human factors is given a more prominent role than in the past. This called for strategic innovation. AVV was asked to find new ways of dealing with unwanted traffic safety behaviour. Consequently AVV commissioned Traffic Test to conduct the study which concluded that road users do not feel the need to behave safer (Traffic Test, 2002). Reasons are:

1. most road users experience little danger, and some danger is easily accepted or may even be exciting.
2. most traffic participants have a (injury) road accident only once in 20 to 25 years.
3. from several investigations it turns out that many road users believe that they perform well in traffic, anyway above average.
4. other investigations reveal that the cause of an accident is more often attributed to fate, unexpected incidents and mistakes of others road users than to own failures.
5. unsafe behaviour may be rewarding: by speeding you reach your destination in time, when driving in an aggressive way many other road users will get out of your way, when boasting about your speed or driving behaviour you may gain respect from certain groups (or at least you think you do).

From a road user perspective a logical question arises from these conclusions, namely 'Why then change your behaviour?'

Traffic Test concluded that it is imperative to focus on amplifying the feedback of hazardous situations. Road users’ ‘misguided’ perception of the safety of the situation should be
changed. In order to get road users to behave more carefully, emphasis should be put on creating the perception road usage is not as safe as what they think they are or that they actually are. This idea is very much in line with the traditional road safety perspective used for campaigns. They stress the danger in the streets, warning people that they will be monitored and, if necessary punishes if they are caught offending road traffic regulations and laws.

**LIMITATIONS OF THE USUAL APPROACH**

The usual campaigns use a rather negative approach for improving safe behaviour.

A negative approach has its limitations:

1. scary images lose power over time. One gets used to seeing severe accidents, blood, or screaming and may even become insensitive to these;
2. control and punishment lose their effect once omitted; in other words: you have to manage it continuously;
3. only **pessimists** give continuous negative images of traffic safety. Traffic safety tends to become a subject with a negative connotation: it is especially something for pessimists, complainers or even losers. The Minister does not want to be seen as a pessimist that continually nags about the negative effects of road traffic accidents;
4. public authorities that offer only warnings and punishments may easily get a negative image, and be seen as a nuisance. For example, in the Netherlands there are groups protesting against the many traffic fines (about ten millions a year). These groups claim that these fines as taunt car drivers and fill coffers of the treasury, but certainly do not promote traffic safety. In order to get rid of such negative image, the Dutch government launched the slogan that “mobility is fun”.

**A QUEST FOR ALTERNATIVES**

In the education system a more positive approach has come in fashion: rewarding proves to be a more effective and efficient way to get changes in knowledge and attitudes. From a behavioural point of view there is much in favour for a more positive approach of safety behaviour in traffic. Such an approach could also promote a better image for traffic safety issues.

The policymakers within the Ministry asked AVV to elaborate on these ideas. AVV commissioned Tabula Rasa, a consultant not directly involved or active in road traffic safety and therefore not expected to have a predisposed perspective on communication strategies. To fulfil his brief Tabula Rasa conducted the first three of the following four steps:

1. Analysis
2. Differentiation
3. Strategy
4. Implementation.
STEP 1: ANALYSIS

The first step involved an analysis of motives. This analysis took place on the basis of a literature search and interviews with experts and road users. First, the motives for unsafe behaviour were listed. Most will be known from literature or own experience:

- **Anonymity** makes it easier to break written or unwritten rules
- **Low risk perception** results in higher risk acceptance and in risk taking behaviour
- **Rewarding negative behaviour** encourages dangerous behaviour such as tailgating, cutting in, or not giving right of way
- **Pressure and stress** can be caused by traffic itself, and results in more careless behaviour
- **Social pressure** of others is often a negative factor with young drivers
- **Standards, norms and values** associated with status, power, control or a risky lifestyle may result in dangerous behaviour in many fields, including traffic
- **Traffic as a means of acting out** may be related to the need of working off frustrations or negative emotions. The vehicle is an easy and powerful instrument for this aim.
- **Compensation of task monotony** may result in behaviour that challenges the driver to keep alert, often resulting in speeding and other dangerous behaviours.
- **Rational calculation**: if I ignore the overtaking prohibition, I will gain time; if I speed up, I can be at work in time.
- **Ambiguous rules**: An example of a rule that is considered to be ambiguous by many road users is the rule that mopeds within the built area may no longer use the bicycle path in the Netherlands, but have to share roadway space with cars. The maximum speed of cars is 50 km/h on these roads, while mopeds may not exceed a speed of 30 km/h in urban areas. Consequently a large proportion of the mopeds speed up.
- **An ambiguous road infrastructure** is also a factor, i.e. roads that look like motorways, but have a speed limit of 80 or even 70 km/h.

Apart from these known negative motives the Tabula Rasa study highlighted the following types of motives for safe behaviour of road users:

- **Responsibility** is often linked to the presence of others, for instance children visible in the street, or passengers in the car.
- **Increased awareness** of own behaviour, for instance when a severe conflict or near accident happened.
- **Recognition of own problem behaviour** may be the result of discussion with others, but also of auto feedback, for instance when one fails to remember parts of a trip, or when one unintentionally takes a wrong route in a well known surroundings.
- **Agreement with (most) safety rules and measures**, and therefore a tendency to behave safely.
- **Standards, norms and values associated with respect for others**, and therefore cautious behaviour towards other road users.
- **Awareness of special circumstances** that increase difficulty of driving, like rain, fog, driving in the dark, driving during rush hour, etcetera.
Need of relaxation and feeling at ease that urges (many) people to drive easy and smooth.

Financial profits of safe driving: less fuel consumption, wear and tear.

There are motives that, depending on situations, may result either in safe or unsafe behaviour:

- **comfort and pleasure** may result in more safety, by simplifying complex tasks. On the other hand, it may result in risk compensation; feeling of comfort can easily provoke speeding.
- **Compliance**: it depends on the standards of the persons or groups you refer to.
- **Status** depends on one’s frame of reference. Some groups advocate smooth, quiet driving, other groups derive status from speeding and aggressive driving.
- **Autonomy** may result in safer behaviour if you are aware that autonomy is linked to responsibility; if autonomy only means that you decide as you like, then it may result in unsafe behaviour.
- **Competency** may show in competency to be safe, but also competency to drive like a race car driver.
- **Consistency** will depend on general personal characteristics: are you a risk-taker or a caretaker?

**STEP 2: DIFFERENTIATION OF MOTIVES**

It is important to distinguish between conscious and unconscious motives and between automatic and planned behaviour. This difference has consequences for the strategies and tactics that can be used to change road users’ behaviour.

- Important conscious motives are: autonomy, comfort and pleasure, responsibility, finances and status.
- Important unconscious motives are: consistency, compliance and competency.

Also on the level of behavioural performance a difference between the conscious level and unconscious level has to be made. At the conscious level we speak of planned behaviour, at the unconscious level we speak of automatic behaviour.

Generally, it is harder to change unconscious motives and automatic behaviour than it is to change conscious motives and planned behaviour.

**STEP 3: STRATEGY DEVELOPMENT**

With regard to changing behaviour, in literature six general strategies were found:

1. **Communication of normal behaviour**.

   With this strategy we can appeal to the motive of compliance. People unconsciously conform to general social or group standards. In traffic safety we often communicate about deviations from normal behaviour (road rage, speeding, accidents). This may give the impression that many people behave against traffic standards. By communicating normal behaviour this image can be rectified.

2. **Use of social networks**
This strategy appeals to the motives compliance and competency.

The strategy can be applied to target groups that can be reached through networks. For instance members of automobile associations, but also workers in transport companies, or members of a church. There may be an appeal from change agents who are convincing and can set the right example.

3. Feedback and self management.

This strategy appeals to the motives autonomy, comfort and competency.

Until now feedback is often negative (telling what you did wrong), linked to punishment and not always adequate (for instance there is a large time gap between being flashed and getting a fine, information about desired behaviour and the reason for such behaviour is often not offered).

Good feedback can result in better self management. Two elements are important: feedback on why certain behaviour should be demonstrated, and on how to perform the behaviour in an easy way (often rules of thumb). For instance for cyclists and pedestrians the simple rule: “if you cannot see the truck driver, the truck driver cannot see you”, may result in more defensive strategies when a truck is nearby.

4. Making a promise and consistency.

This relates to the motive consistency.

This strategy will influence the planned behaviour of people. It is most powerful when it is done on a voluntary basis, and when the promise is recorded. For instance, in Belgium and the Netherlands groups of youngsters agree who will drive the car when they go out (BOB campaign). The elected driver promises not to drink alcohol.

5. Priming.

This strategy links to all motives.

Priming offers the possibility to influence automatic behaviour. It is not necessary to make people aware of the need to change. Priming works by way of stimuli that trigger behaviour in an associative way. For instance: if drivers see a picture of a little child on the road, they automatically will drive more careful.

6. Rewarding road users.

This applies to the motives competency and compliance. Most of the time road users are punished for wrong behaviour. Rewarding can be done in two ways:

- reciprocity principle: you offer a person something, and in return, the person does something for you. A smile may incite a person to be courteous.

- Rewarding desired behaviour: various kinds of rewards may apply: it may be material (money for driving without any accident; a bouquet of flowers for drivers who stop at a zebra crossing); but it may also be symbolic (a button for drivers without accidents).

**STEP 4: IMPLEMENTATION**

Although some of the above strategies for positive behaviour are quite commonly used, most appear to be new in the field traffic safety policy development and campaigning. Therefore, implementation of strategies requires thorough deliberation:
- a ‘theoretical’ translation and elaboration of these new promising strategies to the traffic safety situations. Consideration must be given to what elements of the strategy can be applicable and feasible.
- a selection of road safety behaviour problems that may be eligible for such a strategy
- Identification of causal factors and targets regarding behavioural change and target groups in order to optimize the application of strategies. Special attention must be paid to the identification of the type of behaviour that has to be changed: what motives underlie such behaviour, and what are essential behavioural characteristics? What implications may those have on the effects and efficiency of a proposed strategy?
- identification of ways to fit such new strategies in existing policy. Can it be added to existing strategies, or does it have to replace them?
- identification of the networks, means and sources that may be used and have to be put together.
- identification of relevant procedures regarding funding and management. How much time will it take? In which order will actions have to be made? What organisation must take action and when?
- identification of potential pitfalls. As far as can be predicted these have to be listed, so that failure can be avoided as far as possible.

**AND NOW?**

It will take some time before the new ideas have sunken in. At the moment AVV is participating in the discussion. Clearly, not everything is new and there are some precedents. Since decennia the Dutch Road Safety Organisation (3VO) organises the Safe truckers Action, rewarding truckers that have been accident free for many years. Our national Road Safety Campaign has an umbrella slogan ‘a fair way to get home’. Currently much effort is put in the experimental Belonitor project (Belonitor is a Dutch combination of Reward & Monitor: credits are given for abiding speed and following distance rules). AVV is involved in this project; Leaseplan (a car lease company) administers the rewards. Furthermore, the insurance company AXA Ireland started a pilot under young car drivers offering a discount of up to 50% on the insurance bills when a car is fitted with TRAKSURE, a small box, totally hidden in the vehicle, using GPS technology and recording actual speed, comparing it with the speed limit.

The reference to positive motives seem only relevant for planned behaviour. As far as we can see automatic behaviour can only be influenced by -very intrusive- negative type feedback. So, influencing road safety behaviour will have to rely on negative messages feedback to a large extent. Of course, automatic behaviour can be made conscious. At that point, with convincing messages, positive messages can be used.

There is still a long way to go. A member of parliament deemed the Belonitor project absurd: one must not reward law abiders. ‘Abiding the law should be normal, no reward is needed. How on earth would you be able to pay for such rewards?’

Nevertheless, a positive approach on safe behaviour gains field, and it can be a challenge to invent new ways for strengthening good behaviour.

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REFERENCES


