

The enforcement chain: traffic law enforcement and road safety targets

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Contribution to the South Africa - Netherlands Road Safety Workshop,
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Abstract

The Dutch government has set quantitative targets for road safety. In order to reach these road safety targets in the short term, it is argued that large-scale police surveillance is essential. A review of the current state of affairs with regard to police surveillance in the Netherlands indicates that a nation-wide, structured approach should be realised. This approach could make the targets attainable, if an *enforcement chain* is organized. This chain consists of the following links: the subjective and actual likelihood of the traffic offender being caught, an appropriate level of punishment, the certainty of being punished and a rapid enforcement of the punishment.

It was further argued that enough knowledge was available and that it was a matter of translating this knowledge into a specific Dutch programme. SWOV sketched the outlines for a nation-wide programme of traffic law enforcement that is estimated to save 180 (15%) lives a year, and that could thus pay an important contribution to reach the Dutch road safety targets (SWOV, 1996).

In the long term the development of a sustainably safe traffic system is expected to lessen the need for strict traffic law enforcement.

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1. Introduction

The Dutch government has set the following quantitative targets for road safety:

- a 25 percent reduction in the number of road deaths and injuries by the year 2000 (compared with 1985 levels);
- a further reduction of 50 percent in the number of road deaths and 40 percent in the number of injuries by the year 2010 (compared with 1986 levels).

Various indicators suggest that road safety in the Netherlands is not showing enough significant signs of improvement. In the beginning of the nineties there was almost no reduction in the annual number of road deaths. Moreover, the fatality rate indicator, which had declined for decades, came to a standstill.

According to the SWOV Institute for Road Safety Research, extra road safety measures are needed in order to meet the aforesaid targets. In a report entitled 'Setting a new course', SWOV formulated a large number of recommendations for ways of bringing the government's targets within reach (SWOV, 1996). In doing so, SWOV endorses the guiding principle underlying the 1996 Multi-Year Programme on Road Safety 1996-2000 ('Planning for Action'), which is to try to implement an agreed two-pronged road safety policy. This policy consists of a) the 'spearhead strategy' (focussing on drink-driving, speeding, seatbelts and crash helmets, hazardous situations, heavy traffic, bicycles and mopeds) and b) consolidated efforts to develop a sustainably safe traffic system.

A sustainably safe traffic system is one in which the road infrastructure has been adapted to the limitations of human capacity through proper road design, in which vehicles are technically equipped to simplify driving and to give all possible protection to vulnerable human beings, and in which road users are properly educated, informed, and, where necessary, deterred from undesirable or dangerous behaviour (Koornstra et al., 1990).

The preventative approach, i.e. the creation of sustainably safe traffic systems, will eventually reduce the need for police surveillance of road behaviour. Unfortunately, this ideal situation will not be achieved in the next five to ten years. The existing road infrastructure still gives road users plenty of scope to commit offences, either deliberately or unintentionally. Traffic regulations are by no means regarded as self-evident by all road users in all situations, and public awareness of some of the major traffic rules is frankly lamentable. For this reason, police surveillance of traffic behaviour will continue to be one of the most important instruments for meeting the government's road safety targets, in conjunction with improvements in the road infrastructure, consciousness-raising and communications activities. It is even possible that within a period of five to ten years, traffic law enforcement may become even more effective than education, consciousness-raising initiatives or improvements in the road infrastructure as a means of bringing road user behaviour in line with the government's targets. Traffic law enforcement, and more specifically police surveillance, is one of the ways in which a government may clearly show the public its determination to improve road safety. Traffic surveillance is also regarded as helpful in yielding effective results in the short term. Traffic law enforcement should play a key role in reaching the government's road safety

targets for the years 2000 and 2010 in the Netherlands. How this may be achieved, is sketched in this paper.

2. Traffic law enforcement in the Netherlands in the beginning of the nineties

Police surveillance of traffic behaviour in the Netherlands in the beginning of the nineties cannot be described as a success story. In a conference in 1995 a number of problems were reported in implementing Selective Enforcement Surveillance projects in the Netherlands, notably:

- Traffic surveillance is given low priority by the police themselves, by the judiciary and by the government.
- Cooperation and coordination between the various parties is poor.
- There is a lack of resources.
- Know-how is insufficient.

A stocktaking exercise within the police force in 1995 also yielded a predominantly gloomy picture:

- The regional force estimated that since the reorganisation of the Dutch police (beginning of the nineties), the deployment of manpower on traffic surveillance had fallen by 30 percent.
- The reorganisation also resulted in a decline in the number of specialist traffic officers to around a third of their former strength.
- The goals for traffic work in the regional policy plans were formulated in such a way that they could not be used to give adequate 'directional guidance' to individual officers in the various departments and basic units.

A discussion paper published in 1995 by the Dutch Road Safety Council (Dutch Road Safety Council, 1995) outlines the problem as follows:

- Despite the increase in bookings for traffic offences, the public has not noticed a greater police presence as far as road safety is concerned.
- The decline in the number of traffic specialists in the police force has weakened the focus on road safety problems. Yet traffic surveillance is a skill which cannot properly be carried out without specialist know-how.
- Traffic surveillance, and road safety in particular, are rarely discussed in the tripartite consultations between the chief constable, mayors and the senior public prosecutor. The issue of road safety is usually subordinated to other issues, such as the need to combat crime.
- Due to their fragmented nature, local and regional initiatives have not had sufficient impact on the public.
- The public has a false impression of certain aspects of police work. Some road users believe that financial gain rather than safety is the motivating force behind police surveillance. This could compromise the credibility of police surveillance as a whole.

In addition to these problems, there had been no further decline in drink-driving (following a reduction by half during the 1980s), the wearing of seatbelts had again fallen slightly, and the speed limit on almost all types of road in the Netherlands was broken by many drivers. In short, police monitoring of traffic offences was carried out in an incidental, project-based way. This does not imply that some of these operations did not result in isolated successes. However, there was by then no structural nationwide

law enforcement to prevent serious traffic violations. Both the efficiency and effectiveness of such enforcement would benefit, if police checks of major traffic offences were to be tackled in a more nationwide, structured way, thereby guaranteeing regularity and continuity over longer periods. Priorities set by and for the police did not result in a large-scale nationwide approach to traffic law enforcement up until the mid-nineties. A parliamentary debate on road safety in 1995 showed that the majority of MPs did not in fact feel that enough was being done to tackle traffic offences. Also municipalities and provinces were not satisfied with the performance of the police and the public prosecution office in this field. Among other things, these signals led to a change in climate concerning law enforcement in the Netherlands.

3. Current knowledge concerning police surveillance

A great deal is known about traffic surveillance by the police. To avoid any misunderstandings, it is important to distinguish between three concepts.

These are:

- traffic management;
- police surveillance;
- traffic law enforcement.

'Police surveillance' is the actual work of monitoring traffic offences. The concept of 'traffic management' covers both monitoring of offences and general traffic surveillance. It also includes police activities relating to registration, the issuing of advice and education and information activities. 'Enforcement' covers the entire penal procedure designed to persuade road users to behave safely and to obey traffic laws and regulations: i.e. surveillance, the process of law and the imposition of penalties.

These three concepts are obviously closely interrelated. Police surveillance is both a link in the overall process of traffic law enforcement and at the same time part of the overall process of traffic management. Consequently, the effectiveness of police surveillance cannot be seen in isolation from developments within the police force itself, or from the way in which the police work together with other parties involved in the traffic law enforcement chain.

3.1. Current knowledge concerning the underlying principles of traffic surveillance

The overall preventative effects of police surveillance are generally greater, if the subjective risk of the offender being caught is higher, if the penalty is more severe, if the certainty of punishment is increased, and if the penalty is imposed more rapidly. Each of these elements constitutes a link in the **enforcement chain**. The most important link is the subjective likelihood of the offender being caught, in other words, the personal perception on the part of the road user of his or her chances of being caught while violating a traffic regulation. The level of punishment, the certainty of being punished and the speed with which the punishment is meted out will do little to prevent traffic infringements, if the perceived risk of being caught remains slight.

The key principle underlying effective police surveillance is to increase the perceived risk of detection, no matter what type of road behaviour is being targeted. This can be achieved in several ways:

- ensuring that police surveillance is combined with adequate publicity;
- highly visible police surveillance;
- a system of random checks;
- selective checks at times and locations where there is a good chance of catching offenders and where traffic offences are known to be a causal factor in accidents;
- checks which are difficult to avoid;
- continued surveillance.

It is important to obtain an effective mix of these strategies. If publicity is not followed up quickly by police surveillance in practice, the effect will be

counterproductive, as shown by the attempts to enforce alcohol laws in the Netherlands during the early 1970s. Public information campaigns lose their credibility if road users do not register increased police surveillance with their own eyes. Highly visible road checks which only apprehend a small number of offenders are mainly useful in alerting a wider public to increased vigilance, and should be supplemented by checks with a better chance of apprehending offenders. Finally, the police will need to continue these surveillance efforts for some years to come, if they are to bring about a permanent change of behaviour among road users. A degree of moderate ongoing surveillance will therefore be required, once the period of intensive surveillance has come to an end.

3.2. **Current knowledge concerning the effects of surveillance in time**

There is enough scientific evidence and practical experience concerning the effectiveness of traffic surveillance to justify an extensive deployment of the police and judicial authorities to improve road safety. This is not the place for a detailed overview of this evidence, but a wide range of significant examples are known and documented which have proved reasonably effective (e.g. Zaal, 1994).

It is a matter of translating the available knowledge into the Dutch context in such a way as to achieve a substantial increase in the subjective likelihood of being caught, backed up by a substantial increase in the actual chances of offenders being caught and prosecuted. Publicity campaigns would therefore primarily need to be aimed at obtaining public support for this 'large scale approach'. They should then be targeted at increasing public fears of being caught infringing traffic laws. The ultimate aim of the scheme is to persuade road users to obey traffic regulations - in particular those relating to drink-driving, speeding, and seatbelt and helmet use - thereby substantially reducing the number of road casualties. These efforts should probably need to be kept up for several years. The intervening period could then be used to develop a sustainably safe traffic system, which, once it was in place, could substantially reduce the need for police surveillance.

4. Traffic law enforcement and road safety targets

4.1. Conducting effective discussions

Traffic law enforcement is a complex issue. This complexity is due to the fact that police surveillance is indissolubly linked to developments within the police force itself (management, priorities, know-how, equipment) and to the way in which the police in the Netherlands are currently managed. More specifically, the complexity resides in:

- the cooperation and coordination required between different organisations (local authorities, the police, the public prosecution office, public information providers), in which there are other interests at stake besides road safety;
- the need to organise effective and efficient police surveillance for each type of traffic offence.

Furthermore, there is the difficulty of balancing the effectiveness of police surveillance and other potential improvements in the traffic infrastructure and education, a process which it is often difficult to rationally back up. Unfortunately, in practice, there is a tendency to shift responsibility onto others: the police claim that local and regional authorities should tackle the problem first, whereas these authorities believe that the police should be the first to act.

Yet, precisely because the issue is so complex, it is vital that discussions are structured as clearly as possible and also kept as specific and simple as possible. The only yardstick used should be the question whether the Dutch police and judiciary have, or are being given, sufficient opportunities to contribute to the meeting of road safety targets, compared to the contribution made by infrastructural measures and education campaigns.

In SWOV's opinion, the two most important questions for a meaningful discussion are as follows:

- What relatively short term measures can be taken to move closer to the road safety targets envisaged for the year 2000, and in what ways can traffic law enforcement assist this objective?
- What longer term measures are required to maintain and improve the quality of enforcement and in what quantity?

4.2. Short-term measures: 3 - 5 years

The question we must ask ourselves is how, in the short term, traffic law enforcement and police surveillance as a part of it, can help to achieve the road safety targets for the years 2000 and 2010. Clearly, the existing strategy of Selective Police Enforcement was not sufficient. It was too fragmented, offered too little guarantee of continuity, and was not broad enough in scope. Traffic surveillance by the police will only be conducive to reaching these targets, if a large-scale nation-wide approach to surveillance is maintained over a period of several years.

When making the necessary choices, it is important to uphold the effectiveness of police surveillance at all times. To begin with, it would seem to

be important to choose a limited number of spearhead sectors: e.g. *drink-driving, speed (including for mopeds) and seatbelt use*. A specifically targeted strategy should be devised for each type of traffic violation; this strategy must be intelligent and it must be developed and implemented on the basis of a proper understanding of the prevailing situation. It could be helpful to draw on the experience gained in other countries, such as Australia and Canada, but it must be understood that these experiences cannot simply be copied wholesale: they need to be customized.

The guiding principle underlying the Dutch approach could be to devise and implement a single strategy which is readily comprehensible to the public (extensive traffic checks throughout the country). This strategy could make use of existing knowledge (top-down management), while leaving enough scope for detailed interpretation by local and regional police forces (for example, within the overall guidelines, a local or regional police force could select their own times and locations for monitoring chosen types of traffic behaviour). *The strategy developed should be translated into qualitative and quantitative terms*. Publicity back-up and monitoring and evaluations of traffic law enforcement programmes should be an integral part of this strategy. Finally, the strategy chosen should leave enough room for adjustments based on the results obtained, in the light of the targets set. The traffic surveillance carried out by the Dutch police should be brought under the overall 'umbrella' of this nation-wide strategy.

Several ideas were developed for a model for a national approach to police surveillance, to be implemented at local and regional level:

1. In each police region, specific agreements may be made about what behavioural changes (within the priority areas of drink-driving, speed management and seatbelt use) will be targeted by police surveillance and public information during an agreed period. These agreements would fix a *specific minimum level of deployment* for each force. If these levels of deployment are found to be adequate in the light of the desired effects, the surveillance operations may be continued. If, however, deployment levels do not have the desired effect, additional agreements will have to be made.
2. To assist a more flexible deployment of manpower, *flying traffic police squads* may be formed in all police regions (and in the Dutch Motorway Police).
3. A national management unit may be set up to issue information about the surveillance operation. The aim of this unit will be to enlist public support for the strategy and to publicise it with a view to increasing road-users' subjective chances of being caught violating a traffic regulation.
4. Recommendations may be formulated on the best way of conducting traffic checks, based on the knowledge gained from research and practical experience.
5. The police themselves will retain some freedom to choose how they wish to carry out their surveillance work. They will therefore be able to select their own times and locations and to specify how many

officers to deploy, depending on their own perceptions of the prevailing situation. *Combined or integrated checks* should be given preference, but the police are free to depart from this principle if they wish to.

6. To assist the surveillance programme, an organisational structure (including road safety coordinators) may be set up to oversee all surveillance activities and to offer help in overcoming practical problems (holidays, sick leave, shortage of manpower).
7. A single central notification desk may be established in each police region to monitor and register all the police checks carried out. It may compile overviews of these checks which may then be resubmitted to local police forces. The centralised notification desk will also primarily provide coordination and technical assistance to ensure the smooth implementation of regional surveillance operations.
8. The results of at least one monthly traffic surveillance check will be recorded on an ongoing basis and sent to a single central notification desk. This notification desk will keep a record of all the police checks and all the effects measured during the checks. These results will be evaluated by one independent organisation, such as SWOV.
9. One organisation (e.g. the Dutch Road Safety Organisation VVN) will assume responsibility for providing all the publicity back-up and supervision for the police surveillance operation. Publicity for the operation will be channelled through the national media (television, national newspapers) and the regional media (regional newspapers and radio stations). For example, regional newspapers could publish monthly results of traffic checks in all cities in the region or province concerned.
10. At the end of each year, an evaluation may be carried out and its results discussed at the national *Traffic Law Enforcement Conference*. These results could be used to determine the broad strategy for the coming year.

SWOV estimated that a surveillance programme of this kind could achieve the following results in the period leading up to the year 2000:

- an increase in the percentage of drivers and front-seat passengers wearing seatbelts (inside and outside built-up areas) to 90 percent;
- a reduction by one-third in the number of road casualties due to drink-driving. This could be achieved by an intensive police operation of stopping and checking cars and applying a proven method (random breath testing);
- roughly a 5 percent reduction in road casualties, achieved by issuing fines following the photographing of license plates (using speed cameras) of speeding cars.

It was estimated (SWOV, 1996) that these programmes would reduce the number of road deaths by 180 (15% of the total number of fatalities) a year. Seen in the context of the government's road safety targets for the year 2000, it was clear that traffic law enforcement (police surveillance using automated enforcement devices, publicity as an integral component and

effective legal sanctions) could make a very real contribution to bringing these targets closer. Calculations estimate that around NLG 180 million is currently spent on monitoring and prosecuting road users for traffic offences (Muizelaar, Mathijssen & Wesemann, 1995). SWOV calculated that, in order to bring about a large-scale surveillance programme, this amount would need to be roughly quadrupled to around NLG 800 million per year. Of course this programme would increase the revenues from fines. SWOV hoped that this information was deemed sufficiently interesting and attractive to bring the work of enforcement and surveillance up to the required level.

4.3. Long-term measures: 2000-2010

The two-pronged policy on road safety assumes that in the long-term, the second prong - the creation of a sustainably safe traffic system - will be effective. This could mean that traffic law enforcement could be carried out less intensively than during the first few years of the scheme. Obviously this would only apply if this other approach were to prove successful, thereby making traffic law enforcement redundant. A prospect of this kind is more likely to persuade the police and judicial authorities to make the necessary efforts, than if the operation were to be open-ended. Another very important factor affecting the future of the operation is the question of how large a role Intelligent Transport Systems (ITS) are likely to play in the long term, particularly with regard to controlling speeding. At present, it is difficult to imagine that in the future, stopping cars to test for drink-driving and seatbelt use will no longer be necessary, but it is reasonable to assume that the scope of such checks could be reduced (when applying alcohol and seat belt interlocks).

Strategies to reduce speeding will probably follow one of the following three systems, each of which may be applied nationwide:

- a. variable speed restricting or adapting devices in passenger cars (so-called Intelligent Speed Adaptation devices);
- b. speed violation detectors in passenger cars;
- c. large-scale use of automated surveillance systems.

Each of these systems will have different implications for the role of the police in the system of speed control. Public debate concerning this type of technological control method still needs to be held. However, it would be most unwise simply to do nothing with regard to increasing surveillance or making infrastructural improvements, in the expectation that ITS applications will ultimately provide the answer. There are two reasons for this: firstly, we hardly have any idea as yet what contributions ITS applications are likely to make, and secondly, these applications will only be effective in the longer term (between 10 to 15 years at the earliest).

4. Conclusions and recommendations

In order to bring the government's road safety targets within reach in the short term (i.e. minus 25% by the year 2000 compared to 1985), large-scale traffic law enforcement including police surveillance is essential. There are no other known policy measures which could yield a similar large-scale effect in the short term. Both the quality and quantity of police surveillance need to be improved. Examples from other countries have shown how these improvements could be made. It is recommended that surveillance be concentrated on three areas: drink-driving, the wearing of seatbelts and persuading drivers to keep to the speed limits. Provisional estimates suggest that some 180 road deaths could be avoided in the year 2000 if traffic law enforcement and in particular traffic surveillance are substantially intensified. This intensification will need to be introduced on a gradual basis, and it is recommended that this should be done using methods that have yielded known results.

There will need to be a substantial increase in the perceived risk of being caught, backed up by a substantial increase in the actual chances of being caught and prosecuted: *the enforcement chain must be a closed chain*. The publicity surrounding these increased controls will also need to be intensified. It is anticipated that police surveillance will have to be maintained over a period of several years, and it must also be made a structural part of police work. Police surveillance should be coordinated by a centralised unit which should take decisions on, say, choice of topic, timing, campaign strategies and similar areas. The police forces remain responsible for implementation in a given context. It is recommended that a road safety calendar be (re)introduced.

After the year 2000-2005, police surveillance may be gradually relaxed, if a sustainably safe traffic system is gradually introduced. This development is more relevant to behaviour relating to speed than to drink-driving and seat-belt use.

Now, after some years, we observe a real and growing interest in traffic law enforcement in the police forces and in the Office of the Public Prosecutor: Recently, an almost nation-wide enforcement programme has been launched, using many elements as indicated in 4.2, and positive results are expected from this programme: a reduction in the number of road accident casualties and the attainment of the road safety targets.

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