

**RESOLUTION NO. 48 ON WAYS OF INFLUENCING HUMAN BEHAVIOUR
WITH A VIEW TO IMPROVING ROAD SAFETY**

[CM(86)16]

The Council of Ministers of Transport, meeting in Paris on 20th and 21st November 1986,

HAVING REGARD to the Report on Ways of Influencing Human Behaviour with a view to Improving Road Safety [document CM(86)15];

CONSIDERING that, despite the progress that has been recorded in recent years, Governments must sustain their efforts to make further progress towards improving road safety;

CONVINCED that road safety policies can not have any substantial lasting effects except as part of overall preventive strategies based on the simultaneous improvement of the behaviour of road users, the design and maintenance of vehicles and the quality of infrastructures and on the modernisation of emergency services for road casualties;

NOTING, however, that human factors are the source of the vast majority of road accidents and accordingly that particular priority in the future needs to be given to influencing the human factors causing road accidents;

INVITES MEMBER COUNTRIES:

1. To improve their systems for collecting and processing accident data, to conduct more detailed studies, surveys and research so as to have a reliable basis for assessing the extent to which human factors are involved in road accidents and, on this basis, to devise suitable preventive and dissuasive measures and penalties as means of influencing the behaviour of road users.
2. To ascertain more clearly in this way the importance of the main human causes of accidents such as excessive speed, drinking and driving, dangerous manoeuvres and non-compliance with traffic lights and road signs.
3. To implement, in their entirety, its previous Recommendations as regards speed limits, penalties for drinking and driving, the use of seat belts and the wearing of protective helmets, so as to establish a set of compulsory requirements that are clear, coherent and, if possible, harmonised at international level.

4. To maintain an adequate level of traffic supervision in order to secure proper compliance with road traffic regulations by making sure that there are always enough members of the traffic surveillance services on the roads, including during off-peak periods and on secondary roads.
5. To arrange, as far as possible, for the surveillance services to be equipped with automatic equipment for recording offences, particularly those of exceeding the speed limit or going through a red light, as well as reliable apparatus for ascertaining whether drivers have been drinking.
6. To ensure that the appropriate penalty is imposed as soon as possible once the offence has been established and that flexible procedures for penalising offenders are introduced so as to relieve the courts of the burden of having to deal with a vast number of minor offences.
7. To make wide use of the possibilities offered under national law to apply the more dissuasive types of penalty in cases directly involving the safety of others, such as the suspension or withdrawal of the driving licence, the temporary withholding of the vehicle registration document or the temporary immobilisation of the vehicle.
8. To give extensive publicity to operations designed to monitor and penalise dangerous behaviour and to serve as a deterrent.
9. To improve the systems of road safety education so as to provide ongoing road safety training from the earliest years and continuing after the driving licence is obtained.
10. To encourage meaningful instruction in schools on basic road safety rules and behaviour, including a minimum of practical training.
11. To improve the quality of instruction in driving schools and the standard of driving instructors and examiners.
12. To study the possibility of introducing graduated systems of driving instruction – particularly for progression to the more powerful types of motorcycle – and for making arrangements for administrative and training institute follow-up for the learner or novice driver.
13. To support schemes aimed at providing refresher courses and further training for drivers, particularly those who have been found guilty of a series of offences.
14. To mount information campaigns for road users on the major risks and main causes of accident and promote the wide circulation of information, particularly to local authorities, road safety organisations, educational establishments, the medical profession and insurance companies; further, to take steps to ensure that the entry into force of new regulations is systematically backed up by a widespread information campaign aimed at road users.
15. To encourage contributions of all kinds from private road safety organisations so as to increase the effectiveness of the action taken by the authorities and, where appropriate, to help them increase the number of safety measures undertaken within their own sphere of competence.

INSTRUCTS the Committee of Deputies to keep track of developments in this particularly important area concerning the role of human behaviour in road accidents and to report back, in due course, in the light of the experience acquired in the various Member countries.

REPORT ON WAYS OF INFLUENCING HUMAN BEHAVIOUR WITH A VIEW TO IMPROVING ROAD SAFETY

[CM(86)15]

SUMMARIES OF CHAPTERS

Chapter I. The problem in General Terms and an Analysis of the Main Causes of Accidents

Road safety measures fall into three main categories: improving road user behaviour (by means of education, information, regulation, monitoring and supervision, and penalties), improving vehicle safety, and developing safer road infrastructures. All contribute in their own way to reducing accidents and casualties. The extent to which they do so depends on the key factors in accident causation. Chapter I gives an overview of the means available to determine the main characteristics of road accidents in each country and describes the factors to be taken into account when remedial measures are being planned.

Analysis of national accident statistics allows the main problem areas to be investigated: where and when accidents occur, whom they involve, what the circumstances are. But international comparisons are complicated by differences in the type of record, definitions of injured and killed, and in complementary data – vehicle mileage for example. Within a given country, accident rates provide more insight than aggregate totals, particularly injury accidents per kilometre of travel or per head of the population. Time trends may also allow the effects of specific measures, such as seat-belt legislation, to be evaluated. But such data cannot at present be assembled on an exactly equivalent basis across all ECMT countries, and it is necessary to construct an outline picture from what is available for individual countries. A common feature that persistently emerges is the problem of vulnerable road users – pedestrians and cyclists.

A United Kingdom study in the 1970's and early 80s provided useful insight into the **main factors contributing to accidents**. The results showed human factors contributed to about 95% of accidents, road factors to about 20-30%, and vehicle factors to 5-10%. Results for France, Germany and Switzerland have a number of common characteristics in this respect. Contributory factors such as these should be interpreted with caution however. There are many interactions: for example, human behaviour is itself much influenced by the road layout and environment.

Moreover, measures aimed at improvement must take account of how susceptible a particular factor may be to influence and change. In general, changes in road layout – “safety engineering” – have a more immediate and quantifiable effect on accidents than attempts to change behaviour by publicity. Similarly, training can never equip a driver for every circumstance he may encounter, nor provide him with the skill to escape a difficult situation; it may be easier to engineer the road so that the situation cannot occur. Equally, past achievements in national terms limit future gains: if seat-belt wearing rates are already high in a country, further measures will provide diminishing returns. The potential long-term gains from changes in behaviour may be considerable, however.

One of the main problems ascertained from the statistics of most countries is **driving under the influence of alcohol**. Alcohol is closely bound up with consumer habits in almost every society, and the extent to which measures aimed at reducing drink-related accidents are likely to be successful will depend on how effectively they take account of that. Enforcement of the law in practice can reinforce acceptable patterns of behaviour but is unlikely to be sufficient in itself to create such patterns. Two approaches may be adopted: to discourage from driving any person under the influence of alcohol, and to prevent or discourage drivers from drinking beforehand. The efficiency of the enforcement policies can also be enhanced by increasing the perceived risk of being caught by means of publicity campaigns, by changing the type of monitoring and by modernising the policing and judicial systems by administrative means and by the use of technology: breath analysis with reliable electronic devices instead of blood tests, for example.

Chapter II. Traffic Safety Education

The greatest road safety problems in Europe are to be found amongst children, young people and young car-drivers. Traffic safety education is one of many steps that must be taken to improve road safety amongst these groups.

Chapter II demonstrates the need for measures to deal with the road safety problems faced by young people. Experience gathered from many countries shows that traffic safety education can be an effective approach. Such measures, however, can only be effective if they are focused on the most important problems in road safety.

An ambitious education programme should be developed at central or local level for the purpose of motivating parents, pre-school staff and schoolteachers to do road safety work with children and young people.

Driver training must be reformed to improve the attitude and behaviour of young motorcyclists and car drivers with regard to important road safety questions.

A certain amount of traffic safety education is provided today both in the home and the school. Educational materials with programme proposals are already available. The area most in need of improvement is the information and education provided to parents and teachers by the various authorities and organisations. Such measures must to a much greater extent be directed towards **motivating those who are responsible for educating** children and young people.

Chapter II details **two models for the education** of children and young people in road safety matters.

The first model, previously presented at the conference organised jointly by the ECMT and the Council of Europe on road safety education for children and teenagers, is concerned with improving child behaviour in traffic through training.

The second model shows how an integrated traffic safety education programme can affect the design of the traffic environment, the regulation of traffic and children's field of movement as well as improving their behaviour and their use of protective gear.

There is a need for improved **driver training** both as regards influencing attitudes and influencing driver behaviour.

The attitudes of prospective motorcyclists and car drivers can be changed to the better if all of them are required to undergo training in order to get a licence. Required goals for training programmes are an improved attitude towards drinking and driving, observing speed limits and respecting unprotected road-users.

The behaviour of new drivers in traffic must be improved. Training must be **more safety-orientated**, which for many countries means some practice in driving at night and on icy surfaces.

One measure that may improve road safety amongst new drivers is to impose certain restrictions on them for a limited period. This is being tested in many countries.

There is a strong case for **informing drivers** who have newly acquired their licences **about vital road safety matters**. They should be kept informed continuously between the ages of 18 and 24 by the authorities and organisations concerned.

Several countries have some form of **additional** voluntary or even regulated **training** for new drivers, which can be a way of improving road safety still further for this age group.

Chapter III. Informing the Public

Increasing public awareness by means of information campaigns is an essential aspect of road safety policy in all countries. **The forms of organisation** and methods of implementing these campaigns are, however, adapted to the specific needs of each country. It would seem to be recognised everywhere that it is necessary to have a central organisation with country-wide responsibility for the long-term strategies for increasing public awareness, whereas the actual information activities tend to be decentralised. Responsibility must also be assumed for financing these activities and, in this connection, it is important to ensure that steps are taken to integrate private and commercial interests.

Public information in connection with road safety is in most cases addressed to users of means of transport. Brochures and posters addressed to specific target groups are the main media used. It would seem necessary to improve the overall use of scientific knowledge for the purposes of public information.

The data sent in by the various countries shows a certain degree of consistency from the standpoint of the **campaign topics**: seat-belts, visibility, drinking and driving are in many countries the main points on which public information activities are focused. However, it is apparently often very difficult to assess the results of such campaigns, so it would seem highly desirable to develop international exchanges in this connection.

Chapter IV. Monitoring and Penalties

The maintenance of a reasonable level of traffic monitoring and supervision is essential to road safety.

The traffic monitoring services, aside from their law enforcement task, have a major **preventive role** to play.

The effectiveness of the monitoring services depends on **their available resources** and the way they are organised, which varies from country to country depending on its administrative structures.

Penalties (fines, imprisonment, suspension or withdrawal of the person's driving licence, etc.) are effective only if they are **imposed soon** after the actual offence. They must also be proportional to the seriousness of the offence.

Accordingly, several countries are using **new techniques** such as removing the need for less serious offences to go before the courts, creating a central computer file of offenders or introducing a points-based driving licence.

Chapter V. The Rule of Non-Government Entities

In many countries the main road safety measures too often depend on action by governments alone or, especially in countries organised on a federal basis, on action by local authorities, in other words on the public authorities in any case. It is becoming quite clear, however, that in most cases the central government has every interest in increasing the **overall efficiency** of the community's road safety measures by enlisting the help of all the private entities which **serve as relay units and provide backup** to ensure that the public is better informed in connection with road safety.

Such entities are primarily the mass media, vehicle manufacturers and importers, insurance companies, user associations, the medical profession, enterprises, and joint advisory bodies.

These entities can provide **valuable support** in improving the behaviour of road users, more particularly as regards information and publicity, safety education, the collection of data, and research.

By and large, it can be said that the part played by all these private or semi-public entities could be appreciably increased in many European countries provided that governments are prepared to help towards this end.

In a number of countries, moreover, the trend does seem to have been moving along these lines for a number of years. In any event, efforts to improve behaviour must clearly be made **as close as possible to the users themselves** and so through all of these organisations which are often both psychologically and geographically closer to the actual public.

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INTRODUCTION

From the outset, the ECMT, in its work on promoting road safety, has studied numerous aspects of road-user behaviour in all its various forms. Thus, within the framework of the Conference, the Ministers of Transport have already adopted a good number of Resolutions aimed at helping Member countries in the complex task of persuading road-users to behave more responsibly. In the course of this work, particular stress has been laid on the training of children and young people; which is considered of vital importance in this field.

As analysis of the various causes of road accidents clearly demonstrates the preponderant role played by the human factor. This aspect thus constitutes a fundamental component of danger on the roads and has become even more important in relative terms due to the significant progress achieved in recent years in the other relevant spheres of action which are – traditionally – the improvement of the road network (including traffic management) and of the active and passive safety of vehicles.

It is true that behaviour patterns can be influenced indirectly, as for example by physical changes to roads or their environment. However, although this approach can achieve highly favourable results, it would seem sufficient in only a very few instances. It is therefore vital to improve directly the behaviour of the road user himself; whatever measures are undertaken in other fields.

This being so, the Road Safety Committee thought it advisable to prepare a comprehensive report covering the various aspects of the human factor in road accidents. Given the importance of the topic, it wanted, in this way, to give the ECMT the opportunity of making a contribution to Road Safety Year, as 1986 was designated by the European Communities.

This report was drafted on the basis of contributions made by various delegations.

Chapter I, prepared by the United Kingdom Delegation, gives a general description of the subject before continuing with an analysis of the main causes of accidents. It also deals with the particularly worrying problem of drinking and driving, information on which was provided by the Netherlands Delegation.

Chapter II, prepared by the Swedish Delegation, covers the vast field of traffic safety education.

Chapter III, entitled “Informing the public”, was drafted by the German Delegation.

Chapter IV, dealing with monitoring and penalties, is based on a contribution by the Belgian Delegation.

Lastly, Chapter V, analysing the role of non-government entities, was prepared by the French Delegation.

A small Drafting Group was given the task of coordinating and harmonising the presentation of the different contributions which were, in most cases, based on information gathered by the various member countries.

Lastly, a summary of the main conclusions from a practical standpoint is set out in the form of a draft Resolution submitted for the approval of the Council of Ministers.

CHAPTER I

THE PROBLEM IN GENERAL TERMS AND AN ANALYSIS OF THE MAIN CAUSES OF ACCIDENTS

1. Possible methods of improving road safety

There are many aspects to improving road safety. They fall into three main categories.

- Improving road user behaviour: through education, information, regulations, controls and sanctions.
- Improving vehicle safety: through design, maintenance and testing requirements.
- Developing safer road infrastructures: in particular by taking safety considerations into account when designing, modernising and maintaining road networks.

These approaches all contribute in their different ways to reducing accidents and casualties.

2. Statistical analysis of road accidents

2.1 *Classification of accidents*

An analysis of national statistics on road traffic accidents enables us to examine the main problems and ascertain who is involved (the type and age of road user), **where** (urban or rural area, road layout), **when** (day or night), under what circumstances. The extent to which factors involved in accidents can be identified from national statistics varies from country to country. There are differences in the accident recording systems, the definitions of “injured” and “killed”, and the availability of complementary data – vehicle mileage data for example. Detailed disaggregation is therefore not possible across all member countries taken together.

However, the general situation regarding road accidents in ECMT member countries can be summed up as follows:

- While there are fewer accidents outside built-up areas, they are on average more dangerous than accidents that occur inside built-up areas.
- Main roads, and in particular motorways, are much safer, per kilometre travelled, than minor ones.
- Accidents occurring at night are much more serious.
- The categories of user most at risk are essentially pedestrians, cyclists and moped and motorcycle riders.
- Young novice drivers are over-represented in road accident statistics.

Broad statistics can give only a rough guide as to the problems. The risk of accident may be quantified by relating numbers of occurrences to some indicator of exposure to risk: vehicle distance travelled, length of network, population, built-up area or not. As an example, deaths per head of population for different countries and classes of road user are given in Table 1. This table also demonstrates the extent to which vulnerable road users emerge as a problem in each national context. Table 2 gives some examples of casualties per kilometre travelled for several ECMT countries. So although the raw accident totals indicate the national scale of the problem, it is the rates which indicate the real seriousness of the situation.

2.2 *Trends*

Both casualty numbers and rates change with time according to the various trends in travel patterns and accident risk. The monitoring of trends can allow the effects of specific measures to be determined. For example:

- The introduction of legislation on drinking and driving.
- Seat-belt wearing in cars.
- Crash helmet wearing for drivers of motorised two-wheelers.

Long-term trends in vehicle usage also change the pattern of accidents – for example, the increasing popularity of cycling and motorcycling in some countries in recent years has led to increased numbers of casualties, but not rates per kilometre.

2.3 *Main causes of accidents*

By way of example, the relative contribution of road deficiencies, vehicle defect and human failings were estimated in a major United Kingdom study by the Transport and Road Research Laboratory in the early 1970's. The general findings are still relevant, although a more recent study in 1978-81 has indicated some differences in detail.

The main contributory factors in accidents in these studies are summarised in Table 3a. Swiss, French and German accident statistics allow factors to be separated into the same categories, and equivalent figures are shown in Tables 3a and 3b. For the United Kingdom the total human factors contributed to 84% of all accidents, road factors connected with the road and its environment to 13% and vehicle factors to 3%. The Swiss figures show a similar pattern, with 96, 3, and 1%, respectively. The individual human errors are grouped in descending order of frequency in the table. The manner of executing the driving task heads the list, the majority of the errors being deficiencies in actions and only a very small per cent of the total being ascribed to deliberate aggressiveness and irresponsible behaviour. The next most important group relates to perceptual errors, and the physical state of the driver comes third. There is far less evidence of how to deal with the first two than with the third. Moreover, it is much more difficult to influence human behaviour in general than to correct deficiencies in roads or vehicles. Furthermore, the interactions between these different factors are important. An example of such interaction is given, for the United Kingdom, in Table 4.

The human factor thus remains by far the most important element in road accidents, and more particularly:

- Speed inappropriate to traffic conditions.
- Failing to give way to other road users having priority.
- Improperly overtaking or following too close.

- A variety of perceptual errors or misjudgement.
- Drinking and driving.
- Lack of road craft or skills.

Both road deficiencies and vehicle defects identified as contributory factors are less numerous proportionately; notably there were fewer deficiencies related to road design, or inadequate signs, lighting and markings; and fewer brake defects associated with accident occurrence.

Such analysis is not possible across all countries taken together. But it seems reasonable to suppose that there will be some features in common. Table 4b shows a similar type of analysis for accidents in France and Germany.

But without further qualification, the figures for contributory factors can mislead. It is too easy to conclude that all efforts should be applied to influencing human behaviour directly, without taking into account the detailed circumstances, the multiplicity of factors which lead to accident occurrence, and the chances of success of measures applied.

3. Difficulties relating to remedial measures

3.1 *The search for ways of influencing behaviour*

When considering remedial measures to reduce accidents it must be borne in mind that the most effective remedy is not necessarily related directly to the main “cause of the accident and may even lie in different categories of road, vehicle or road user. This is particularly true of accidents in which the road user fails to correctly analyse all the factors in the road environment; in many accidents the primary cause may be said to be the driver’s lack of skill or ability, but engineering remedies to improve the road or to make it safer are often cheaper, easier to effect and have a proven track record. Training the driver to the necessary degree of skill for all circumstances is extremely difficult. Further, even in circumstances in which human error or the physical state of the driver has been judged to be the sole contributor, it may be possible to influence human behaviour more readily by engineering means than by education or enforcement of legislation.

This is not to say that attempts to influence human behaviour within a given infrastructure should not be pursued. Although it is the most difficult area to effect safety measures, when achieved the result can be most dramatic. The extent to which accident statistics are susceptible to measures aimed at modifying behaviour in this way will vary according to country. If seat-belt wearing rates are low, effective measures to increase the wearing rate are likely to reduce deaths and serious injuries considerably; but if the rate is already very high, there will be little scope for further reductions in deaths and serious injuries from such measures.

The scope for reducing casualty rates thus depends to a large extent on what has already been done.

3.2 *Drinking and driving: a particularly worrying problem*

Drinking and driving is a particularly worrying problem in all member countries, and is thus a matter of general concern which the ECMT has already taken up on a number of occasions¹.

1. More particularly, see Resolution No.41 on drink as a factor in road accidents [CM(80)12].

Driving under the influence of alcohol is closely related with social patterns of alcohol consumption.

In terms of policies, two broad approaches can be taken:

- To discourage anyone from driving under the influence of alcohol.
- To prevent or discourage a driver from drinking excessively before taking the road.

Examples of the first are: to provide alternative transport – low price public transport, or special taxi arrangements for example; and to encourage the fitting of “alcohol ignition interlock” systems. Examples of the second are: legislation controlling permissible blood alcohol levels; public information campaigns anti-drink drive instruction in education programmes in schools, colleges and driving schools; and, the encouragement of more stringent contracts for vehicle insurance.

There can be scope for improving the efficiency of implementation of existing policies. Patterns of police enforcement of existing legislation can be adjusted to increase the actual risk of being caught. The perceived risk can be further enhanced by suitable publicity in conjunction with periodic changes in enforcement patterns. It may also be possible to reduce recidivism amongst offenders by means of follow-up schemes of education and information.

Blood analysis of alcohol levels is complex, expensive, and time consuming; its replacement, as legal evidence, by breath analysis using reliable electric equipment is much quicker and may considerably improve existing enforcement. Australia, Canada, Spain, Northern Ireland, and USA have used this type of equipment for some years; in the United Kingdom legislation was introduced in 1983 and in Austria in 1986; France has had enabling legislation for some time. Legislation is planned in the Netherlands for 1987.

Information about the risk to pedestrians who have been drinking may also help reinforce general publicity of the dangers of mixing alcohol and road use.

3.3 *Medicines and drugs*

A further problem related in many ways to drinking and driving is that of drug taking – for both medicines and narcotic drugs. The extent of the connection of drugs (sometimes taken in conjunction with alcohol) and road accidents is largely unknown at present, and research is needed to quantify the problem and to establish what levels of consumption and combinations of drugs significantly increase accident risk. This would provide some basis for legislative action or advice to road users.

4. **Conclusions**

In sum, an analysis of the various accident factors demonstrates that human factors are highly preponderant, even though a good number of accidents result from a complex of causes. However, uniform or unilateral measures do not always lead to decisive solutions to the problems encountered. As far as possible, therefore, there is a need to:

- Define global strategies covering education, the technical improvement of the road environment, information, regulations, controls and sanctions.
- Aim the measures selected at the relevant targets, i.e. the different categories of user.
- Take better account of regional and local accident realities in order to formulate more effective prevention programmes.

Table 1. Percentage breakdown of numbers killed by road-user category

	Pedestrians %	On bicycles %	On mopeds %	On motorcycles	In cars		Others' + Unrecorded %	Total Killed %	
					Drivers	Passengers			
1984 A AUSTRIA	19.60	5.20	10.50	8.80	34.10	16.90	4.90	100	1 758
1984 B BELGIUM	17.60	10.80	5.80	7.10	37.90	16.90	4.00	100	1 893
1984 CH SWITZERLAND	19.60	6.70	9.00	14.90	31.10	15.50	3.20	100	1 097
1984 D GERMANY	22.20	9.60	3.40	11.80	33.10	17.20	2.70	100	10 199
1984 DK DENMARK	19.20	14.70	8.00	6.90	32.00	17.60	1.50	100	665
1984 E SPAIN	21.20	2.10	6.80	4.40	29.50	25.90	10.00	100	6 275
1984 F FRANCE	15.30	4.00	7.50	7.10	39.10	22.60	4.40	100	12 562
1984 UK UNITED KINGDOM	33.40	6.20	1.10	15.50	22.20	16.90	4.80	100	5 788
1984 GR GREECE	25.20	1.60	9.90	11.50	16.10	15.80	19.90	100	1 908
1983 I ITALY	18.10	7.50	10.70	11.40	27.80	17.30	7.40	100	8 223
1984 IRL IRELAND	33.50	8.60		12.70	23.40	16.80	4.90	100	465
1984 L LUXEMBOURG	18.60	4.30	1.40	5.70	50.00	20.00	0.00	100	70
1984 N NORWAY	25.80	4.70	2.90	7.40	31.00	21.10	7.10	100	407
1984 NL NETHERLANDS	13.10	22.30	7.90	6.00	31.70	16.20	2.70	100	1 615
1984 P PORTUGAL									
1984 S SWEDEN	19.00	13.90	4.00	9.40	32.20	19.20	2.40	100	801
1984 SF FINLAND	27.40	15.90	5.20	3.50	26.10	16.80	5.20	100	541
1983 TR TURKEY	38.10	1.80		2.50	7.60	11.90	38.10	100	7021
1984 YU YUGOSLAVIA	31.50	7.90	2.90	3.20	20.10	18.50	15.90	100	4 501
18 ECMT countries	23.30	6.40	5.50	8.40	28.10	18.50	9.80	100	65 789¹
1983 USA UNITED STATES	16.00	1.90		9.60	34.60	17.90	20.00	100	42 500
1984 CDN CANADA	14.40	3.00		10.20	45.60	24.30	2.50	100	4 120
1984 AUS AUSTRALIA	19.20	3.20		13.80	36.70	26.80	0.30	100	2 822
1984 JAP JAPAN	27.80	10.20		25.10	36.60		0.30	100	12 041
4 Associated countries	18.40	3.70	-12.90			-51.00	14.10	100	61 483

Figures not converted to standard definition (death within 30 days).

1. Others: in commercial vehicles, buses and coaches, home riders, etc.
2. Death within 30 days.

Source: Taken from "Statistical Report on Road Accidents in 1984" ECMT.

Table 2. Examples of casualties per 100 000 000 km travelled for several ECMT countries
NB. Definitions of casualty differ between countries

	Federal Republic of Germany (1982)				
	Fatal	Serious	Slight	Total	
Built up areas	4.06	73.63	210.07	287.76	
Non built up areas	3.15	25.90	44.63	73.67	
Bundesautobahen	0.93	6.75	19.53	27.22	
	France (1984)				
	Physical accidents	Fatalities	Number		Casualties
			Seriously injured	Slightly injured	
Urban milieu Towns with over 5 000 inhabitants	111	3.0	27.6	122	149
Open country + towns with -5 000 inhabitants	31	5.1	22.0	34	62
• Major roads					
• Other roads	30	3.0	18.0	29	50
• AU roads	30	3.6	19.0	30	53
Motorways	10	1.0	3.5	13	17
	Sweden (1982)				
	Fatal	Serious	Slight	Total	
Built up areas	1.5	17	41	60	
Non built up areas	1.5	7	12	21	
	United Kingdom (1982)				
	Fatal	Serious	Slight	Total	
Built up areas					
Major roads	2.5	35	136	174	
Other roads (except motorways)	1.7	35	120	156	
All roads (except motorways)	2.1	35	127	164	
Non built up areas					
Major roads	2.5	21	46	69	
Other roads (except motorways)	1.8	24	50	76	
All roads (except motorways)	2.2	22	48	72	
Motorways	0.70		5.5	1 723	

Table 3a. **Factors contributing to accidents:
Great Britain 1978-81 and 1970-74 studies; Switzerland 1978-81**

	Great Britain		Switzerland
	1978-81	1970-74	1978-81
A. Human factors			
Manner of execution			
<i>a) Deficiency in actions</i>			
Too fast	16.6	9.6	16.37
Failed to look	2.1	5.4	
Wrong path or position	2.5	4.7	1.69
Improperly overtaking, following too close	5.4	4.7	10.35
Faulty signalling or use of lights	1.0	2.5	4.85
Failed to give way	12.1	--	17.77
	39.8	26.9	51.03
<i>b) Deficiency in behaviour</i>			
Aggressive, or frustrated	0.7	2.0	
Perceptual errors			
Distraction, inattention	7.7	10.9	21.07
Looked failed to see	6.4	8.3	0.18
Misjudgement of speed, distance	4.0	5.2	--
View obscured	1.5	--	--
	19.6	24.4	21.25
Physical state of driver			
Alcohol	6.8	10.0	5.83
Fatigue	2.6	1.4	0.99
Drugs	0	1.2	0.12
Illness, emotional distress	1.8	1.0	0.08
Dazzled	1.0	--	--
Glasses not worn	0.1	--	
Other			0.42
	12.2	132	7.02
Lack of skill			
Inexperience	2.5	4.6	2.40
Lads of road craft	5.8	3.5	--
	8.3	9.8	2.40
Other	0.9	--	10.63
Pedestrian action	2.3	--	3.09
Total human factors	83.8	76.7	95.84

Table 3a. (contd.) Factors contributing to accidents:
Great Britain 1978-81 and 1970-74 studies; Switzerland 1978-81

	Great Britain		Switzerland
	1978-81	1970-74	1978-81
B. Road environment factors			
Adverse road design Unsuitable layout -- junction design, curvature poor visibility due to layout	3.8	6.7	0.22
Adverse environment Slippery road Lack of maintenance Weather conditions	5.9	6.0	0.21
Inadequate furniture or markings Road signs, markings Road lighting	0.4	3.3	0.01
Obstructions Road works Parked vehicle, animal, other	3.1	2.8	0.02 2.66
Total road environment factors	13.3	18.8	3.13
C. Vehicle factors			
Defects			
Tyres	1.3	1.4	0.34
Brakes	0.4	1.4	0.30
Other defects due to poor maintenance	1.3	1.4	0.24
Unsuitable Design		0.2	
Other			0.18
Total vehicle factors	3.0	4.4	1.06

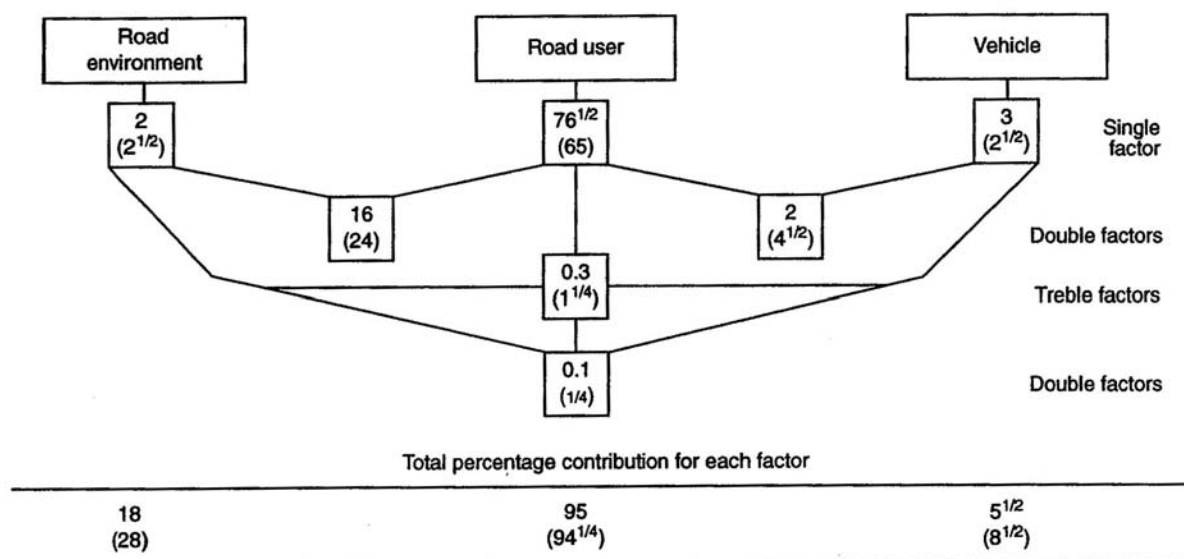
Table 3b. Factors contributing to accidents
France (Réagir Surveys)

	1984	
A. Human factors		
1. Factors related to the user 's condition and fitness	280	4.05
Physical problems		
<i>Including: Illness</i>	31	0.45
Effects of taking medicines	42	0.61
Faintness	120	1.74
Handicap	19	0.28
Poor eyesight	49	0.71
Fatigue	465	6.73
Alcohol	762	11.03
Fitness to drive	398	5.76
<i>Including: Unfamiliar vehicle</i>	159	2.30
Recent driving experience	175	2.53
Limited driving experience	55	0.80
2. Factors related to user behaviour		
Offences	343	4.96
<i>Including: Failure to give way</i>	85	1.23
Failure to stop at STOP sign	40	0.58
Crossing a continuous line	30	0.43
Non-compliance with traffic signals	39	0.56
Driving the wrong way up a one-way street	9	0.13
Obstructive parking	22	0.32
Dangerous conduct	394	5.70
<i>Including: Aggression</i>	10	0.14
Dangerous overtaking	94	1.36
Travelling too close to vehicle in front	32	0.46
Poor evaluation of situation	112	1.62
Inappropriate behaviour in an emergency	336	4.86
<i>Including: Vehicle out of control</i>	198	2.86
Failure to make emergency manoeuvre	76	1.10
Wrong avoiding action	65	0.94
B. Factors related to the road environment		
State of carriageway	95	1.37
Alignment design	489	7.08
Problem with vertical road signs	188	2.72
Problem with horizontal road signs	240	3.47
Problem with traffic signals	24	0.35
Problem with lighting	132	1.91
Roadworks	20	0.29
Problem related to weather conditions	414	5.99
<i>Including: Slipperiness of carriageway</i>	273	3.95
Poor visibility	172	2.49
C. Vehicle-related factors		
Fault		
Tyres	247	3.57
Brakes	44	0.64
Lack of maintenance	49	0.71
Lights	83	1.20
		99.98

Table 3b. (contd.) Factors contributing to accidents
Federal Republic of Germany

	1982	1970
Factors contributing to accidents with personal injuries		
Accident causes with respect to drivers	83.4	77.8
Under the influence of alcohol	7.5	8.6
Too fast	18.2	18.6
Following too close and sudden braking of vehicle in front	5.6	5.9
Overtaking and passing	4.3	6.6
Priority	12.4	11.4
Turning left or right, U-turn, reversing, entering the traffic stream, accelerating circulation, acceleration	11.7	9.4
False behaviour with respect to pedestrians	4.3	4.4
Technical deficiencies, lack of maintenance	1.3	1.6
Accident causes with respect to pedestrians	7.5	12.2
Road conditions	6.0	6.5
Weather conditions	0.8	1.2
Obstructions and other accident causes	1.0	0.7
Accident Causes Total	100.00	100.00

Table 4. Interactions between contributory factors in the United Kingdom
Percentage contributions¹



- The figures without brackets referred to the study 1978/1981.
The figures within brackets to the study 1970/1974.

CHAPTER II

TRAFFIC SAFETY EDUCATION

1. Introduction

1.1 *Definition of the term traffic safety education*

Traffic safety education has always been regarded as a way of influencing the behaviour of road users. Traditional education programmes have mainly been directed at children, young people and prospective holders of driving licences.

More recently, traffic safety education has acquired a wider perspective and it is now viewed as an integrated whole.

Traffic safety education used to be limited to the training of children and young people. Nowadays it is also seen as a way of indirectly influencing traffic conditions and teaching children and young people to protect themselves, both as active road-users and as car passengers. Consequently, education programmes can have a bearing on many different road safety problems and measures affecting children, young people and new drivers.

Traffic safety education should be both theoretical and practical. Practical training is a very important form of road safety education. In its broadest sense, traffic safety education also includes information measures (dealt with in the following chapter) and further education measures (retraining and refresher courses) following basic training.

1.2 *Resolutions and recommendations of the ECMT and OECD studies*

The joint ECMT and Council of Europe Conference in Strasbourg, in 1980, on “Road safety for children and teenagers”, adopted a number of recommendations to member countries. They concerned:

1. The general situation for children and young people.
2. How schools can help to improve the situation.
3. How those outside the school can help to improve the situation.

The present chapter is based on these recommendations.

In Brussels in 1978, the ECMT formulated Resolution 37 on Driver Training. The following recommendations were made concerning the training of prospective drivers:

1. That greater safety should be the primary purpose of the instruction given to learner drivers.

2. That driver instruction be reviewed accordingly.
3. That theoretical and practical instruction should concentrate, first, on how to avoid risks and, second, on how to overcome them if they arise.
4. That the practical instruction given to learners ensures that they can cope with busy roads, driving at night and driving in poor visibility.
5. That the driving test be designed to cater for the above road safety considerations.
6. That existing methods of instruction be improved as well as the driver's basic skills and ability to estimate risks.
7. That new methods of instruction embracing modern teaching procedures and equipment be tested and developed.

Important studies on the topic dealt with in this chapter have been carried out under the OECD Road Research Programme, particularly in its 1976 and 1981 reports on driver instruction.

The section on driver training in the present report is based on these recommendations and studies and points to a number of other questions which might help in the development of training programmes.

2. Description of the problem

2.1 General

To be of any use, traffic safety education must effectively meet the particular needs of those road-users at which it is aimed. To do this, and given that young people are involved, it must take account of the dominant roles played by the various age groups in traffic and the risk factors very closely linked with these age groups.

In general, children and young people are exposed to considerable accident risks in motor traffic. The risk of being killed and injured on the roads increases continuously from a child's earliest age as a passive little road-user up until the time he or she becomes an active new driver. Specific road safety problems however, vary between the different age groups.

The age groups concerned have different and multiple roles as road users. In most cases each group has 2-3 dominant road-user roles as regards exposure to risk and accident risks.

Age Group	Dominant road-user roles					
	Pedestrian	Cyclist	Moped rider	Motorcyclist	Car driver	Car passenger
0-4	x	-	-	-	-	x
5-9	x	x	-	-	-	x
10-14	-	x	-	-	-	x
15-17	-	-	x	x	-	x
18-20	-	-	-	x	x	x

The older children get the more active they become as vehicle-users. The accident risk grows in pace. Children make their debut as cyclists at different ages. Young people tend to start riding mopeds and motorcycles and driving cars as soon as they are of legal age. All age groups are represented more or less equally as car passengers.

2.2 Children aged 0-14

Road safety work in many countries has focused on the safety of children. As a result of these efforts the number of road victims among children has declined continuously in many countries, especially over the past ten years despite a considerable increase in the number of cars. Over a 30-year period in Sweden, for instance, the volume of cars has increased threefold while the number of accidents involving children has been reduced threefold. That figure, however, relates only to unprotected children.

The main cause of the decline in the number of child road victims is of course the gradual improvement in the traffic environment.

The greatest safety problems for children and young people are still those that arise when they are out on the roads unprotected. The chief cause of these accidents is the mingling of children and cars in traffic. The quantity of cars and their speed are of prime importance in this connection.

Another road safety problem is cycling accidents not involving motor traffic. In most cases they involve children falling off their bicycles and hurting their heads. Such accidents occur as early as the age of four.

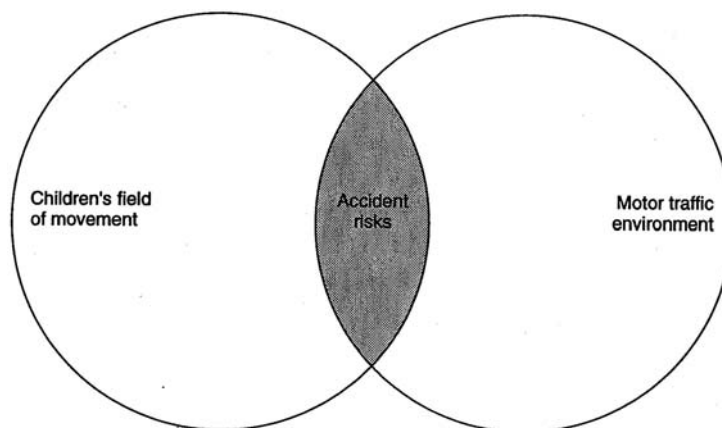
So the three main problem areas for the 0-14 age group are:

- i) Pedestrians and child cyclists being run into by cars.
- ii) Children falling off bicycles when no traffic is involved and sustaining head injuries.
- iii) Injuries to child passengers in cars.

The following model shows the decisive safety factors for children and young people in their roles as unprotected road-users.

Traffic safety problems of unprotected children

Model 1



The risk of accident arises when the children's field of movement is extended to the motor traffic environment. As children grow older their exposure to traffic intensifies and the accident risk along with it, i.e. the left-hand circle increasingly overlaps the right-hand circle.

2.3 *Young people aged 15-17*

Young road users in the 15-17 age group are often moped riders or motorcyclists. Unlike children they ride motor vehicles which expose them to a very high risk of accident and injury, and they constitute one of the groups of road-users at highest risk.

The basic problem for moped riders and motorcyclists is the instability of their machines. They are two-wheeled vehicles, which mean problems with balance and a high degree of lateral mobility. And riders are unprotected in the event of a collision. Another problem is that such vehicles are not as easy to detect as others.

A major difference between motorcycle and moped riders is that in most countries the latter lack formal training. The two categories do however share one problem – the risk of colliding with cars. Another problem they have in common is that they are often injured when they come off their machines. The extent of their injuries is often determined by whether they wear crash-helmets and protective clothing.

One of the best ways to solve the road safety problems of moped riders is to separate them from car traffic. Such a solution can not be applied to motorcyclists, however, which means that for the foreseeable future they will be exposed to substantially greater risks of accident than other road users.

The road safety problems for the 15-17 age group can be summarised as follows:

- i) Moped riders and motorcyclists are injured when they collide with cars.
- ii) They are poorly protected when accidents occur.

2.4 *Young motorists aged 18-24*

Car drivers aged 18-19 are one large risk group in traffic in most countries. The risk of accident for this group can, in some countries, be 7-10 times as high as for older drivers. Young people aged 20-24 are also a high-risk group.

Surveys in Sweden and experience in other countries suggest that driver training of 18-19 year olds is effective in that it improves the knowledge and proficiency of new licence-holders, and also to some extent their attitudes. Their behaviour in traffic, on the other hand, can not be considered satisfactory as drivers in this group are often involved in road accidents.

Swedish studies also show that the attitudes of men aged 20-24 to questions of central importance for road safety are significantly worse than those of 18-19 year olds and older drivers. In contrast to the younger group, though, the 20-24 year olds have acquired a lot of good experience and greater skills as drivers. However, they still tend to over-estimate their driving ability.

A major problem, then, is the attitude of young drivers to important road safety issues. Drivers aged 18-24, especially men, have a worse attitude than other groups to such things as drinking and driving, speed limits, the use of seat-belts, and unprotected road users. Driver training in its present form can not easily come to grips with this problem.

The problems of the 18-24 age group can be summarised as follows:

Road safety problem	Age group	
	18-19	20-24
Accident risks	Very high	High
Attitudes	Unrealistic	Very unrealistic

3. Traffic safety education in the home, pre-school and school

3.1 *Present situation in Europe*

In most countries, the responsibility for ensuring that traffic safety education exists nationwide and is available at school rests with the central government. Regional and local authorities are also responsible for safety education.

In most countries, traffic safety education at school is considered compulsory. Usually it is the teachers who are responsible for it. Police often take part.

The traffic safety education given at school often consists of instruction on road signs and regulations. Traffic environment studies or analyses are few and far between, and without them, one can hardly expect children and teenagers to understand how traffic may affect them. There is seldom any traffic safety education out on the roads.

The amount of time devoted to safety education at school is difficult to estimate but is thought to be very little.

3.2 *Resources*

There are a large number of resources than can be utilised in the education field. The following are the main ones:

- Parents.
- Teachers.
- Friends.
- Other adults.
- Authorities.
- Voluntary organisations.
- Mass media.

Indeed, one of the main sources of education for children is their parents. They have for many years daily contact with their children. Therefore they must be able to teach the children the risks in traffic and how to cope with them. The parents can also train the children so they behave correctly in traffic. However parental influence over the children declines as the children grow. Also other problems than traffic safety occur for instance when the children are teenagers.

Properly used, this parental resource can provide an extensive amount of traffic safety education. However, efforts must be made to make parents more interested and motivated to supply such education. Greater awareness among parents of the traffic risks involved would probably increase their motivation.

In pre-schools and schools, teachers have an important task to perform in the traffic safety field. As with the parents, it is important to interest and motivate them to work with traffic questions at school.

In many countries, children and young people are taught safety on the roads by older friends. It can be assumed that friends wield a strong influence on one another and have a powerful effect on one another's attitudes. Therefore it is important to focus on the attitudes of youth groups towards road safety matters.

Other adults can influence children and young people more directly by talking to them about their behaviour in various traffic situations. By setting a good example on the roads, adults can influence the young in a positive way.

Locally, there are many authorities able to affect the safety of children in various ways. Their participation in safety education programmes is of great value. The schools can use these authorities as a resource in their safety activities.

Many countries have voluntary organisations that play an active part in traffic safety education, at both central and local level. They can provide a valuable complement to the efforts of parents and the school. However, their contribution can only be a limited one as their activities are not usually conducted on a nationwide basis and they cannot of course reach all children and young people.

These outside parties should by all means be allowed to take part in the safety work but in that case the initiative should come from the school.

The mass media, especially TV, influence the knowledge, attitudes and behaviour of children and young people. They can have both a positive and a negative effect on road safety for the young. The media can be used too, to influence those responsible for traffic safety education, be they parents or teachers.

The advantage of information in the media is that it can reach whole target groups. However, the thing to remember about this channel of information is that the message must be simple if it is to make an impact.

3.3 Strategy

It seems clear that traffic safety education can best make an impact and thereby have a real influence on road safety by concentrating on a small number of important fields.

The basic points required for an effective traffic safety education programme can be summarised as follows:

- i) Start from the children's own needs and experience of their local environment.
- ii) Start from their dominant roles as road users.
- iii) Attack the most important road safety problems.
- iv) Use a simple and effective message.
- v) Motivate teachers and parents.
- vi) Give priority to measures affecting large target groups.
- vii) Concentrate and programme the introduction of measures.

The needs of children and young people for traffic safety education vary, depending partly on prevailing traffic conditions and partly on their role as road user. The need for safety education is probably greatest in the following instances:

- i) When children and young people extend their field of movement.
- ii) When they change from one traffic environment to another.
- iii) When this environment changes character.
- iv) When they take on a new road-user role.
- v) When they resume an old road-user role.

Thus, whenever there is a change in the traffic environment or road-user role of children and young people, a road safety effort is warranted.

3.4 *Objectives and means of achieving them*

The general objective of traffic safety education is of course to reduce the number of dead and injured children and young people.

To achieve this objective, there is a need, in particular:

- To keep children and cars apart as far as possible so as to minimise the risks associated with motor traffic.
- To increase the use of protective gear by children and young people (equipment to restrain children in cars, use of crash helmets by users of two-wheelers).

Furthermore, children and young people must have an understanding of how traffic works if they are to be able to deal with it. The best way to achieve this is to get them to investigate their own traffic environment. Therefore, the goals of parents' and schools' safety education should be:

- To develop children's insight into the road safety problems created by motor traffic.
- To develop children's awareness of how their own behaviour affects their safety.
- To develop children's willingness to take responsibility for their own safety on the roads.

3.5 *Direction of traffic safety education*

Traffic safety education in the home, pre-school and school can either confine itself to traditional forms or adopt the integrated view increasingly used in many countries.

More exactly, the objective of education for children and young people should be to instil lasting habits of safe behaviour. To achieve this, it should be incorporated in a coherent programme of instruction about vehicles, road environment, traffic regulations and information.

Furthermore, traffic safety education should be given continuously from tender childhood till the obtaining of a driving licence, and even beyond.

It is also important that instruction be practical quite as much as theoretical since several studies have shown that traffic safety education of a theoretical nature for children has only a limited effect on their behaviour and on road safety. What is more, care must be taken to see that theoretical instruction is based on analyses of concrete situations.

It would also seem essential to provide children with the right educational material so that they set a clearer understanding of road safety requirements.

4. Driver training and preparation for the driving test

4.1 Present situation in Europe

Young people aged 18-20 make up one of the most important target groups for road safety work in all countries. The education given is of vital importance for road safety, in both the short and long term.

An important analysis carried out by OECD Road Research indicates that driver training should in general be more safety-orientated. Training methods should be developed that improve a driver's ability to avoid risks or cope with them should they arise. This demands an analysis of "risk-evading behaviour". The study also suggests that training should be designed to strengthen the motivation to acquire a safety-first style of driving. The driver who has just passed his test must be made to realise that even if he did so with flying colours this is no guarantee of life-long safe driving.

The information gathered indicates that most countries feel that driver training should be improved with regard to drinking and driving, observing speed limits and consideration for unprotected road users. As regards driving instruction and the granting of licences, the following points may be mentioned:

i) Nature and forms of instruction

In six out of the ten countries for which detailed information is available, learner drivers are required to attend driving school.

In three out of the ten, non-qualified people like parents are not allowed to instruct learner drivers.

In Northern Europe, it is generally considered that night driving and driving on icy surfaces should be an important part of driver training.

In the Federal Republic of Germany, learner drivers must attend courses in driving theory, follow special theoretical and practical instruction and instruction on driving at night (minimum 90 minutes), on motorways (minimum 135 minutes) and on country roads (minimum 225 minutes).

ii) Minimum age for acquiring a licence

In all ECMT member countries, the minimum age for acquiring a licence to drive cars is eighteen except in the United Kingdom and Ireland where it is seventeen.

In 1984, France introduced an experimental system of early driver training whereby sixteen year olds are allowed to drive if supervised by a qualified adult, the age for acquiring a licence remaining, however, at eighteen.

iii) Length of the practical driving test

The practical part of the driving test lasts, depending on the country, between 20 and 60 minutes.

iv) Special systems for new drivers

In 1986, the Federal Republic of Germany introduced a new system of provisional licences for newly-qualified drivers:

- Provisional driving licence (two years).
- Compulsory post-test training for holder of such licences following offences or accidents.
- Motorcyclists are not allowed, during the two years following the passing of their test, to drive machines exceeding a certain horsepower (maximum 20 kW and minimum 7 kg/kW).

Several other countries impose administrative restrictions on new drivers:

Spain

- L-plate (one year).
- Maximum speed 90 km/h (one year).

Finland

- Maximum speed 80 km/h (removable plate) – one year.

France

- 90 km/h plate.

Greece

- N-plate.

Luxembourg

- Trainee driver for two years after obtaining the licence.
- L-plat.
- Maximum speed 75 km/h (90 km/h on motorways).

Norway

- Provisional driving licence (two years).
- Compulsory post-test training, phase 2, within two years.

Portugal

- 90 km/h plate.

Japan

- Plate with beginner symbol.

These restrictions have been introduced to increase road safety for new drivers.

v) *Further training and remedial training*

In nearly all countries, drivers may, if they wish, follow further training courses, often provided by driving schools or specialised bodies.

The Federal Republic of Germany and Switzerland also provide further training for people convicted of drunken driving.

4.2 *Measures*

In most countries, influencing attitudes and improving behaviour are a part of driver training. Their impact, however, should be greater. To this end, a more individual approach is required in driver training programmes. It is generally felt that this is best achieved by driving schools. If theoretical training were made compulsory, the large number of drivers now receiving private instruction would also be able to acquire better attitudes to important road safety questions.

The following measures are envisaged in several countries:

- i) Greater focus on safety in driver training.
- ii) Compulsory instruction in driving at night as well as on icy roads as part of training programmes.
- iii) Temporary restrictions on new drivers.
- iv) Greater influencing of attitudes in training.
- v) Compulsory theoretical instruction.
- vi) Higher standards for driving instructors.
- vii) Improved training for future motorcyclists.
- viii) Frequent supply of information to all new drivers during the first few years after they have passed the driving test in order to reinforce this group's attitudes and behaviour.
- ix) Promotion of various types of further training for this group.

5. **Conclusions**

With regard to traffic safety education, it would seem desirable:

- To adopt a system of training starting in early childhood and continuing till some years after the driving licence has been obtained.
- To improve the content and method of teaching road safety in schools and to develop, in this respect, the essential role played by parents and teachers.
- To improve the instruction given in driving schools so as to promote the learning of safe behaviour patterns.
- To introduce systems for the follow-up and further training of new drivers.

CHAPTER III

INFORMING THE PUBLIC

1. Organisation of public information activities

In all countries, activities aimed at increasing public awareness by means of information campaigns are an essential part of the work to promote road safety. However, the forms of organisation developed to bring the information to the public differ widely. Such differences range from the assignment of this function to the competent Ministries themselves to the establishment and financing of independent agencies. The same diversity is found in the more or less independent status of the agencies and in the funding methods, since the funds may be provided wholly by the public sector or to a considerable extent by the private sector. It seems however that in most cases the competent Ministries have a more or less direct influence on the independent agencies and their public information activities. In some countries, these activities are carried out simultaneously by a number of different agencies. Institutions under public law are working in parallel with private associations whose spheres of action overlap.

The bodies concerned with road safety information for the public in the various ECMT member countries are set out briefly in the Annex.

The different organisational structures set up for public information activities in the various countries show that there is no single optimal form since the structures in place are adapted to specific conditions in each country.

In order to ensure the required efficiency of the activities in this connection, however, the following are desirable:

- a) **Action by at least one central agency** with country-wide responsibility for planning and coordinating individual activities.
- b) **Close co-operation with the various competent public authorities;** Public information activities must be incorporated into the long-term objectives of traffic safety policy. In the medium-term it must be ensured that the work forms a coherent whole.
- c) **Public funds** must be made available: in the medium and long-term this will ensure effective educational work.
- d) **Non-governmental organisations and institutions** must be associated with public information measures as far as possible. This will enable them to co-operate on a responsible basis and participate in financing campaigns. In addition, they play an important role in stepping up the dissemination of information.

2. Strategies and methods for informing the public

The strategies, as carried out by the above-mentioned institutions, vary considerably.

Brochures and booklets are the most common medium used to communicate information. In addition, the regular dissemination of information to the press and the organisation of information campaigns form part of the standard repertoire of road safety information activities. It appears that specific target groups are addressed more often than all road users in general.

More complex approaches, such as coordinated and harmonized utilisation of different media by different initiators at different levels within the framework of specific programmes, tend to be an exception. The same applies to the distribution of scientific findings in the form of documentation or evaluations.

Information directed exclusively towards the press forms the exception rather than the rule. With regard to co-operation with the press, two strategies are possible, namely dissemination of information to the media as a whole or to specific channels of communication.

Only Austria and the Netherlands report that they do not wish to address specific media. In contrast, the Federal Republic of Germany, Denmark, Switzerland and the United Kingdom avoid the general dissemination of information and favour the method of specifically addressing individual media. The main media target groups selected are television, radio, and daily newspapers. Magazines and consumer publications also play a certain role here.

School magazines are used only in the Federal Republic of Germany, Denmark and Spain. In the Federal Republic of Germany, company and works magazines are addressed specifically.

In addition to the method of addressing the media directly, all countries report holding seminars and symposiums.

These events are often held in collaboration with representatives of road safety organisations. A large number of events are also held in co-operation with various trades, professions and associations. Seminars and symposiums organised exclusively for the press are held in the Federal Republic of Germany, France, Spain, Sweden and the United Kingdom.

Road safety days, organised at national, regional or local level, are reported from Belgium, France, Spain and Switzerland.

If one summarises the factors collated in this section, it emerges that specific measures in the field of public information work connected with road safety are organised in all countries. There is a considerable degree of similarity in the choice of themes dealt with and methods used for getting these themes across to the public, methods which, nevertheless, take account of the features peculiar to each country. In some countries, local communities are free to choose which methods to use, with the national authorities or associations responsible for road safety playing a coordinating role only.

3. Main themes of information campaigns

Road safety in general is rarely the subject of information campaigns since, as a rule, almost all countries use specific themes for their campaigns, some of the more common ones being the wearing of seat-belts, drinking and driving, speed, children, pedestrians, drivers of two-wheeled vehicles, lighting and visibility of vehicles, etc.

A few examples of information campaigns conducted in the various Member countries in recent years and the relevant themes are:

Federal Republic of Germany

The main themes adopted are:

- First aid.
- Wearing of safety belts.
- Children in traffic.
- Young drivers.
- Drinking and driving.

The campaigns are not designed solely to obtain changes in behaviour but also to influence attitudes. They can be considered successful in that they have made the measures taken more readily acceptable to the public.

Austria

- See and be seen (1985).
- Safety of pedestrians, with particular reference to the behaviour of drivers and pedestrians where pedestrian crossings are concerned (1985).
- “Dear safety belt, dear crash helmet” operations (1986).
- Safety on the way to school (1986).

Belgium

The main themes in recent years have been:

- Alcohol.
- Children.
- Safety belts.
- Speed.
- Two-wheelers.

The means used for the campaigns included, in particular, roadside posters, television and radio.

Denmark

The Danish Road Traffic Council carries out two large-scale national information campaigns each year. In recent years the themes of the campaigns have been as follows:

- Single accidents.
- Tyres.
- Drinking and driving.
- Motorcycles.
- Cyclists.
- Pedestrians.
- See and be seen.

- Child safety.
- Turning left.
- Seat-belts.
- Youth in traffic.
- Speed limits in built-up areas.
- Heavy vehicles.

All the campaigns are considered to have had a positive effect, but no thorough investigations of the results of the campaigns have been made.

Aside from these large campaigns, the Council carries out four to six minor ones each year.

Spain

Four major campaigns are carried out each year, the main themes being the problem of drinking and driving (diminishing slightly), seat-belts, (the rate of use has risen from 50 to 80%) and speed (a problem which seems to be getting worse despite the efforts made in a number of respects including monitoring).

Other themes dealt with recently include: two-wheelers, pedestrians (very successful), weekend and holiday driving, travelling through small towns, vehicle maintenance, etc.

Special mention should be made of the campaigns which are carried out every year for the particular attention of Portuguese and Moroccan workers travelling through Spain (campaigns providing information and particulars concerning rest areas and assistance, etc.).

Finland

Among the main themes of campaigns organised in recent years have been:

- Drinking and driving.
- See and be seen (more particularly as regards the visibility of cyclists and pedestrians).

A new approach has been to carry out regional campaigns which are organised with the support and participation of central government authorities and the national road safety organisations.

France

Information campaigns carried out at national level in recent years covered the following themes in particular:

- Drinking and driving.
- Compliance with speed limits in towns.
- Stopping at red lights.
- Wearing of seat-belts.

It should also be noted that these campaigns are given wide publicity at local level. Local authorities, in the framework of decentralised road safety programmes (REAGIR, “objectif moins 10 %”), are increasingly conducting independent information campaigns geared to local accident characteristics, using regional television, local radio and regional and local newspapers.

Television is by far the main medium for large-scale information campaigns.

Luxembourg

The main themes of information campaigns:

- Ecological driving = safe driving (1982).
- “Keep your distance!” (1983).
- Aqua-planing (1984).
- Young drivers (1985).
- Watch out for children (1986).

Also developed in 1986 were the five themes selected by the European Communities for Road Safety Year in Europe.

The Netherlands

In autumn 1984, a campaign was organised on the wearing of seat-belts, the aim being firstly to increase the rate of seat-belt wearing and, secondly, to ascertain the various possibilities for influencing this rate.

The campaign was organised nationally, but in one specially selected region (Friesland) it was backed up by regional radio broadcasts and newspaper articles. There were also crash demonstrations. During the campaign the police monitored the wearing of seat-belts. The effect of the campaign was assessed by counting the number of people wearing seat-belts and by questionnaires.

Nationally (excluding Friesland) the campaign resulted in an increase of 3 to 5% in the number of seat-belts worn. In Friesland, the rate of increase lay between 25 and 30%.

Two important conclusions can be drawn from the results:

- i) Regional campaigns can be more efficient than national ones since they can more easily be combined with other measures (multi-factor approach).
- ii) Campaigns without additional measures (i.e. single factor approach) appear to have minor effects, whereas combination with other measures (e.g. enforcement, surveillance, demonstrations, etc.) appears to be considerably more effective (integrated multi-factor approach).

By and large, four national campaigns are organised each year and the main themes dealt with are:

- Drinking and driving.
- Safety belts.
- 30 km/h zones.
- Bicycles.
- Visibility.
- Lighting.
- Side reflectors.
- The elderly in traffic.

United Kingdom

In 1985 the United Kingdom changed from a policy of individual campaigns aimed at, for example, the problem of drinking and driving at Christmas time, to a “rolling” programme on road safety publicity. This was based on a comprehensive statistical analysis of accidents by road user type, time of year, and vehicle manoeuvre. The programme is continuous, emphasizing themes common to many accident types - for example, “see and be seen” but with peaks in intensity of publicity aimed at particular road user groups: cyclists in summer, drinking and driving at Christmas and in late spring and summer and so on. Whilst the publicity material, posters etc., is researched on samples of the target user groups before and during use, it is difficult to establish direct links with casualty reduction, and the cumulative longer term effects that are seen as a potential advantage of the programme may not be easy to test. The programme is currently being developed in conjunction with specific efforts to increase public consciousness of road safety issues via community groups and the news media.

Sweden

The main information activities in recent years have covered the use of child restraint systems/safety belts in the rear seats of cars and also the high accident risks for users of motorised two-wheelers and bicycles.

The campaigns have been at national, regional and local levels, often with co-operation among the public authorities, independent organisations and enterprises. All kinds of media have been used. Free driving lessons on a voluntary basis have also been organised for motorcyclists.

An assessment of the results show that, over the three-year period under consideration, the use of child restraint systems/safety belts in the rear seats increased by 20 to 40% for children and 10 to 25% for adults. Some 8 to 10% of motorcyclists took part in the retraining courses each year.

The aim of the national campaigns over the past three years has been to improve the climate in road traffic by getting all road users to consider themselves to be partners, to avoid stress and agitation and to act courteously. This safety message was essentially disseminated by means of posters, films, leaflets, slides, and so on and by the following slogans:

- Politeness = safety (1983).
- Hurry = danger (1984).
- Courteousness has priority (1985).

Considerable differences are found in the degree of effectiveness of the various information campaigns, and the desired changes in behaviour have not always been achieved. It is difficult to give precise reasons. However, such campaigns are an essential part of the road safety efforts because they are means of publicising knowledge and modifying attitudes, so they are an advantage in the long run from the standpoint of road safety. It would however be desirable to make more thorough analyses of the effectiveness of all the elements involved and the results actually achieved.

A comparative review of the themes dealt with shows that the main themes selected by the various countries are quite similar: seat-belts and crash helmets, see and be seen, speed not adjusted to circumstances, alcohol. In view of this similarity, it is surprising that only on rare occasions are activities and aims taken up at international level. Only one positive example is to be found in this connection: the prize-winning 1971 poster by the Dutchman C. Van Rij has also been used in other ECMT countries such as Belgium, Germany, Spain and Switzerland.

In a number of countries road safety publicity is tending to be organised on a regional or even local basis, a particular example being the Netherlands where a national seat-belt campaign was backed up by intensive action in a particular region. There were tangible results which enabled the Netherlands to conclude that:

- Regional campaigns can be more effective than national ones.
- The combination of campaigns with other measures can again considerably increase the effectiveness.

Another trend is also to be welcomed, namely the move towards a better understanding of international road safety problems where transfrontier traffic is concerned, since there is an increasing number of information campaigns on safety matters relevant to holidaymakers and travellers in transit, examples being the campaigns in Spain for the benefit of Portuguese and North African nationals, or similar activities in Germany and Austria for travellers from South-East Europe. An increasing number of countries provide information for tourists in their mother tongue by means of brochures on the rules of behaviour to ensure safety on the roads, the Scandinavian countries and the United Kingdom are well known examples.

4. Conclusions

In conclusion, increasing public awareness by means of information campaigns is an essential aspect of road safety policy in all countries. The forms of organisation and methods of implementing these campaigns are, however, adapted to the specific needs of each country. It would seem to be recognised everywhere that it is necessary to have a central organisation with country-wide responsibility for the long-term strategies for increasing public awareness, whereas the actual information activities tend to be decentralised.

The effectiveness of information campaigns can be significantly increased by using additional measures which are then planned as an integral part of a multi-factor approach (enforcement, surveillance, regional and local activities, demonstrations, etc.).

With a view to improving the activities aimed at informing the public of road safety problems, it would seem desirable:

- To undertake international exchanges of experience on the campaigns and activities conducted, with particular reference to the media used.
- To strengthen co-operation and the exchange of information with regard to the assessment of effectiveness.
- To establish national objectives while also promoting regional and local variants.
- To provide information for tourists, in their own languages, on national or regional matters of importance from the standpoint of road safety.
- To make available adequate resources for the long-term planning of activities in connection with public information.

CHAPTER IV

MONITORING AND PENALTIES

1. Monitoring and supervision

In addition to the endeavours made in all countries by the public authorities and many private organisations in connection with the various ways of influencing the behaviour of road users, safety on the roads calls for a degree of traffic monitoring and supervision.

This monitoring and supervision is primarily to ensure that the regulatory measures adopted by governments are actually enforced. There is little point in drawing up new legislation if one does not have adequate means of supervising the application to ensure that it is complied with to a reasonable extent, otherwise the regulations can have only a very slight influence on road safety.

Such monitoring and supervision should also make it possible to identify drivers whose behaviour is dangerous or irresponsible and therefore liable to cause accidents.

Depending on the political and administrative structures of the various countries, the organisation of road traffic monitoring and supervision may fall to the central government, regional governments, or even the local authorities.

The effectiveness of the monitoring services largely depends on the personnel and equipment available – especially apparatus for the automatic detection of offences – which, in turn, largely depends on the budgetary resources that can be obtained.

As a general rule, the action of the services concerned does not solely involve enforcement and the penalisation of offences but also serves an educational or preventive purpose.

It should be pointed out that the authorities responsible for general road safety policy do not usually have direct authority over the services responsible for traffic monitoring and supervision and for the most part they have no say in the financing of these services either.

Accordingly, those responsible for road safety are usually not authorised to play a direct role in the organisation and operation of police forces. Since the latter have responsibilities in areas other than traffic in most cases, the decision as to priorities is often difficult and does not necessarily always meet the wishes of the road safety authorities.

Furthermore, owing to the financial difficulties which are largely attributable to the economic crisis, some governments have found it necessary to cut down the resources available for monitoring and

supervision, in particular the number of traffic police and the technical equipment used to detect certain offences.

Notwithstanding the difficulties, the road safety authorities must do all they can to maintain the means of monitoring and supervision at an adequate and reasonable level so as to be able to make an efficient contribution towards the improvement of road safety while also making their efforts more cost effective. In this regard, it is useful to develop qualitative and selective tests, concentrating on serious infringements (alcohol, speeding, etc.) or on certain periods (week-ends, nights, etc.).

2. Penalties

All countries penalise persons infringing road traffic rules by various means: fines, imprisonment, suspension or annulment of driving licence, immobilisation or impounding of vehicle, etc. In some countries the fines are proportional to income. Prison sentences are occasionally replaced by punishments which serve the general interest or by public works. Suspension of the driving licence is by and large considered to be the measure that has the greatest influence on drivers.

Owing to the considerable differences between the penal systems in the various countries, no valid international comparison can be made of the penalties laid down for traffic offences.

The object of penalties is to get the offender to comply with traffic regulations and, accordingly, modify his behaviour. In order to achieve this end it is necessary for the penalty to be imposed as soon as possible after the offence because if a long time elapses it is very unlikely that the penalty will still have an influence on the offender's future behaviour.

In many countries, however, it is found that the extremely large and ever-increasing volume of road traffic offences is overloading the courts, so many cases are only dealt with after a considerable delay and often cannot even be examined within the period specified by law.

Such a system is clearly inefficient and cannot reasonably be expected to prompt changes in behaviour. On the contrary, it gives virtual impunity to many road users and encourages others to pay little attention to the regulations.

This situation also often discourages the police, traffic wardens, etc. whose job it is to spot offences, so some of them may relax their efforts in the medium term.

Accordingly, the psychological effect here is doubly harmful.

Some countries are applying or examining new techniques to offset the above drawbacks, for example:

- Removing the need for less serious offences to go before the courts, e.g., by replacing fines by administrative penalties. This method provides for penalties that are imposed quickly and are therefore more effective in terms of road safety and also relieves the courts of a large number of minor cases.
- The same result can be achieved by providing for direct and immediate payment of fines to the authorities responsible for traffic supervision.
- Creating a central computer file on offences so that habitual offenders can be identified and appropriate measures be taken.

- Introducing the “points-based” driving licence whereby, for example, on the basis of a central register, the licences of drivers who commit a number of offences can be systematically suspended.

Moreover, the penalty must clearly be proportional to the seriousness of the offence and possible consequences, so a number of countries have provided for a scale of penalties for the various infringements of the highway code whereby the danger caused is the main consideration when deciding how high the penalty is to be.

In addition to the penalties, it has also been found effective to introduce re-educational measures such as the retraining of drivers who continue to commit offences, since information and discussion on the causes and consequences of incorrect behaviour often helps to reduce the rate of recidivism. In this connection, it is advisable to differentiate between drink-related driving offences and other infringements. On the basis of experience already acquired, it has been established that such re-educational measures for correcting future behaviour achieve tangible results, especially where the problem is one of drinking and driving.

Lastly, very wide publicity should be given to monitoring and law enforcement operations so as to ensure that they remain dissuasive.

3. Conclusions

The above very broad outline of monitoring and penalties in the European countries is consistent with the conclusions drawn by various international studies in this sphere. There are in fact three “golden rules” which it would seem are to be applied to all the countries under consideration:

- The frequency of the monitoring procedures is a decisive factor in achieving a dissuasive effect.
- The certainty that an offender will be penalised (a penalty must not be simply imposed but must also be effectively applied).
- The swiftness with which the punishment is carried out which convinces the public that a quickly applied penalty is a vital factor in the operation of the supervisory and law enforcement machinery.

Lastly, stress should be laid on:

- The value of re-educational measures such as the retraining of drivers who are habitual offenders, since this serves to back up the effect of the penalties and, more particularly, leads to better behaviour in the future.
- The publicity to be given by the administrative and legal authorities to the supervisory and law enforcement operations so as to give greater effect to the dissuasiveness of monitoring and penalties.

CHAPTER V

THE ROLE OF NON-GOVERNMENT ENTITIES

It should be pointed out that most road safety policies pursued in the 1970s in western countries involved a great deal of action by the authorities, primarily at national or federal level. Owing to the serious situation caused by the continuous increase in the number of road accidents, government action mainly took the form of simple and consistent regulations (general speed limits, compulsory wearing of seat-belts and helmets, measures to control drunken driving, etc.) which would promptly produce clear-cut results and be backed up by more or less severe enforcement and penalty provisions.

At the same time, the educational programmes (instruction in road safety in schools, improved facilities for learning to drive and higher driving licence standards) and information programmes (public campaigns on road traffic risks and safety regulations) were intended to bring about radical changes in user behaviour in the long term, while research made it possible to identify more clearly the main causes of accidents attributable to human factors and work out action strategies for the authorities.

However, once again the capacity to take action remained generally in the hands of the central and, to a lesser extent, local government authorities, while the non-government sector acted mostly only at the behest or on behalf of the government: this applied to education, which is very largely provided or controlled by the authorities; to information, which is mainly sent out by the authorities through major radio and television campaigns; and obviously to the organisation of enforcement and penalty systems that are the prerogative of the authorities.

But from time to time it seems that the scope of the central government's responsibilities in road accident control is not sufficient to bring home the importance of road safety goals to the public. The authorities must be able to count on all the natural relay units for preventive action in order to obtain the public's full support for road safety objectives. A number of entities with back-up potential, whose ability to communicate and stimulate is important and sometimes decisive, can be used to win over public opinion and influence behaviour. Some of these entities, whose action varies in both quantitative and qualitative terms, have long existed. Others provide as many possibilities or resources that are very largely unexploited and have scarcely started to mark their concern with road safety. The following may be listed as the main entities:

- The mass media.
- The manufacturers.
- Insurance companies.
- User associations.
- The medical profession.
- Enterprises.

The question arises as to how far these efforts converge and how far these entities are capable of pooling forces in order to extend and supplement action by the authorities and, as partners of the users, express and promote concern with road safety as a social matter.

There is thus a need to examine the general role played by non-government entities in the road safety system, the contribution made by the six specific categories listed above and the experiments on setting up mixed semi-public, semi-private bodies to work in an advisory capacity with national (or federal) road safety departments, and that in line with the following plan¹:

- 1) General role of non-government entities.
- 2) Contribution by the mass media.
- 3) Contribution by manufacturers and importers.
- 4) Contribution by the car insurance sector.
- 5) Contribution by user and road safety associations.
- 6) Contribution by the medical profession.
- 7) Contribution by enterprises.
- 8) Experiments with mixed advisory bodies.

1. General role of non-government entities

In most countries, non-government entities have a long-standing role in the road safety system. This situation is based on historical fact, for generally speaking – apart from some notable exceptions such as Scandinavia and the United States – the authorities did not make their own mark on road safety management until after the Second World War and sometimes not until the 1960s. On this point it need simply be recalled that general speed limitations, compulsory wearing of seat-belts and action against drunken driving² are steps that were mainly taken in the 1970s. However, long before driving accidents became a real social problem, the increase in car traffic led to the creation of bodies intended to promote and facilitate the use of the car, i.e. automobile and touring clubs, and – when traffic started causing a growing number of accidents – private bodies such as road safety organisations. Until twenty or thirty years ago, it was therefore logical for most safety activities to be carried out by private bodies that had, sometimes since the start of the century, been involved with promoting the use of the car.

However, this assessment should be qualified depending on the types of bodies. It was easy for those traditionally in charge of protecting car drivers' interests to assume – not without some ambiguity as we shall see subsequently – certain responsibilities for road safety, sometimes even before the central government did so, whereas action by other bodies such as insurance firms, consumer associations or enterprises is a much more recent development. For instance, in France, a real intention to take responsibility for road safety has emerged only very recently, mainly since 1982, in some sectors of activity (insurance companies, accident victim associations, enterprises, etc.).

This mostly long-standing role played by non-government entities is considered nonetheless relatively limited on the whole in a good number of countries. It seems, however, to have a very big impact in the Federal Republic of Germany, Finland, Sweden, Switzerland and the United Kingdom, showing clear evidence of a north-south split in this domain. However, the general trend is towards its increase in most countries. It is to be noted that this role has developed greatly in France in the last three years. In any case, no country has referred to its decline.

All the countries say they welcome this role and hope it will be developed further, as if they feel that the authorities playing the policeman has done as much, or almost as much, as could be expected, and that private organisations, natural partners and relays, are a vital instrument for extending and improving government action.

This view has been asserted very strongly in France since 1982 and led in April 1985 to insurance companies, training bodies, those engaged in the manufacture, repair and inspection of cars, accident victim and safety associations, doctors and the mass media being invited to a round table meeting on new initiatives to promote road safety.

In this wider role to be played by non-government entities, it generally seems that the accent is on information and publicity and on road safety education (teaching of road safety in schools, basic training for young drivers, refresher and advanced courses for experienced drivers). For the time being this will in fact be seen as the main contribution by the private sector, as the other activities are considered to be more the prerogative of the authorities. However, some countries believe that no restrictions should be imposed from the outset.

2. Contribution by the mass media

The aim is not to study the activity of institutional means of communication (television, radio, general or specialised press) as vital relays in central or local government campaigns to reduce accidents, as this activity is simply a medium for the communication programme prepared by the authorities. The idea is rather to look into the spontaneous interest by the mass media in road accidents and the action taken independently by them to inform the public and bring home the problem, as a voluntary contribution towards making the roads safer.

It seems useful to try to assess the importance attached by the various countries to road accidents and road safety, in terms of the volume of information on cars and driving as compared with the total volume of information. Australia, Belgium, Denmark, Portugal, Spain and Switzerland consider that this importance is relatively high compared with the total volume of information, although it is stressed that the approach to accidents and safety is often more emotional than scientific. In Finland, France, Germany, Sweden, and the United Kingdom, it is considered relatively limited on both counts, as information on cars and driving has more to do with the smoothness of the traffic flow and driver and passenger comfort, or even the performance of new types of cars, than with safety aspects. Perhaps this should be seen as a danger sign that the public is beginning to consider driving accidents as normal, unavoidable events that are accepted as a penalty to be paid for technical progress. This statement requires qualification, however, and the recent, and laudable, increase in information given on actual road safety – particularly in 1986, European Road Safety Year – is to be welcomed.

On the whole, it does not seem that there are any significant quantitative differences between the media – television, radio or the press – although the information on road safety covered by the latter is generally more detailed than in radio or television broadcasts.

As regards television, the role of private stations, which exist only in certain countries, is considered important only in Australia and the United Kingdom. The main onus in bringing home the problem is therefore on the public television network. The effort is made rather at regional or local level in Australia and Belgium, more at national level in Finland and Portugal, and either at national or regional level in the other countries. It takes a variety of forms that coexist in most of the countries: specific information on accidents, advice on safety, interviews with specialists and special broadcasts such as panel meetings are the most common. Except in the United Kingdom, detailed accident reports or surveys among users seem to be few and far between.

The contribution of radio is made rather by public stations in six countries, or by either public or private stations in the other five States. The contribution is made especially by national stations in Finland, Portugal, Sweden and Switzerland, rather by regional or local stations in Australia and Germany

(Lander), and by national, regional or local stations in Belgium, Denmark, Spain, France and the United Kingdom. The types of broadcasts are roughly the same as those on television.

The contribution to road safety by the general press is made by the national, regional or local press in most countries. It is made more by the regional press in Australia, Germany and Switzerland, where decentralisation is obviously extensive due to federal structures. The form used is not a distinguishing factor, although the most common is the ad hoc report on a serious accident and brief advice on safety. Apparently, only the Swedish and British press give detailed accounts of accidents with in-depth supporting analyses. It should be noted that the latter trend is now being seen in France in the local press with the development of the “Réagir” programme for thorough multi-disciplinary investigations into serious accidents.

The amount of space devoted to road safety in the automobile press is regarded as limited or relatively limited in almost all the countries. It is considered extensive only in Australia and Switzerland. This is an important point: the automobile press is generally more concerned with the pleasure of driving or speed than with road safety, and is used more to express views by the manufacturers of powerful cars or fast motorcycles than by road safety bodies.

3. Contribution by manufacturers and importers

Of the eleven reference countries, only five have a real car industry, as the other five have no national manufacturers. However that may be, and except of course in the area of vehicle design, the effort by manufacturers and importers to promote road safety seems on the whole limited. It mainly appears to take the form of advice on safety, particularly in Australia. Denmark refers to their action in voluntary technical check-ups on vehicles.

On the other hand, the negative impact produced by certain car advertisements highlighting top speeds or aggressive behaviour by drivers is criticised by the majority of countries, except Australia where importers seem to play the game and avoid advertisements that are obviously inconsistent with road safety. The situation concerning this point is particularly disturbing in Spain and France. The reaction of the authorities differs with the country: Belgium, Denmark, Switzerland and the United Kingdom have no regulatory or contractual machinery to limit this type of advertisement. Australia intends to adopt such machinery following an enquiry by the House of Representatives which criticised these practices in 1983. In Spain the Government has some right to supervise television advertisements. In Germany, a gentleman's agreement has been reached on the subject. Only France has signed a draft agreement (1983) with the manufacturers and importers who are committed to taking a moderate line. The irregularities in its observance since 1983 have resulted in several warnings from the authorities, and developments are now being closely monitored.

4. Contribution by the car insurance sector

For the time being, the contribution of insurance companies in most countries (except Sweden) seems to be limited to collecting and processing accident statistics (essential for claim management and the calculation of premiums) and the dissemination of safety messages. Their safety role is therefore still extremely modest, particularly in driver training and car inspection activity, and their job is still essentially considered as an obligation to provide risk coverage. There is great scope here for road safety action within a partnership system associated with a general reappraisal of the car insurance function. However, reference should be made to the case of Switzerland, where a financial contribution fixed as a percentage of insurance premiums is legally allocated to safety operations managed by the Swiss Road Accident Prevention Fund. Also to be noted is the very positive role played in Switzerland by the “Bureau de prevention des accidents” (BPA), a federal foundation governed by private law which

carries out a variety of what is considered extremely important action and, under an original kind of arrangement, can call on voluntary road safety staff responsible for taking steps locally to obtain practical improvements at all levels. More generally, the insurance field's most significant contribution seems to be its participation in some countries in a road safety association.

In all countries the risk rating is based more or less on the individual's driving record, mostly with the use of a "bonus-penalty" system whereby high-risk drivers pay more and those with a clean record sheet pay less. This graduated system is determined by the government in Belgium and in France, by a professional body or the insurance companies themselves but subject to government supervision in Spain, Germany and Switzerland, and quite freely by the insurance companies in Denmark, Sweden and the United Kingdom.

Whether based on liability for fault or on a "no fault" system, the type of car insurance does not seem to affect the scope of preventive action.

5. Contribution by user and road safety associations

Most countries have a road safety body, generally in the form of an association governed by private law and often financed to a large extent by the insurance companies. These associations frequently contribute to the provision of information (advice to users) and education (road safety teaching in schools, refresher and advanced driving lessons, defensive driving courses, training and refresher courses for driving instructors), and sometimes put proposals to the authorities, whether they belong to an official advisory council (like "Via Secura", the Belgian road safety organisation) or whether they act independently. In some countries there are associations specifically responsible for preventing accidents among the agricultural population (e.g. "Prévention Rurale" in France, or "Kuratorium für Verkehrssicherheit" in Austria).

In the accident prevention field, the role of automobile clubs, motorcycle associations and other road-user groups is also to provide information on training. In Portugal this function has completely disappeared and has now been taken over by the national road safety organisation. In Australia, the association known as the "Australian Motorcycle Council" has shouldered responsibility for safety problems. In 1983, the leading French motorcyclist club opened constructive talks on safety with the authorities and accepted a contractual objective of reducing the number of accidents by 20% in two years. Such groups also play a very active role in Switzerland.

Associations for accident victims or their families do not exist in Denmark, Spain, Portugal or Switzerland. Where they do exist, they seem to play a minor role for the time being. Reference should be made to an original development in Sweden where young people disabled through accidents speak in schools about what has happened to them personally, to the extensive development in recent years in France of associations for accident victims or their families (particularly of the "League against violence on the roads"), to which the tragic accident at Beaune on 31st July 1983 (53 fatalities including 46 children) has contributed, and to the co-operation by the authorities with these associations.

On the whole action by parents' associations to promote road safety does not seem to be greatly developed and is limited to local contacts with the municipal authorities or schools.

The same applies to consumer associations which still play a very modest role, sometimes by making recommendations on the safety of vehicles and their equipment. This is a far cry from the influence once achieved in the United States by the Ralph Nader movement.

The environmentalists also play a very marginal role, but the situation might soon change depending on the importance attached to atmospheric pollution caused by exhaust emissions, particularly in connection with speed limitations (France, Germany, Switzerland and the United Kingdom).

All in all, the involvement of user groups seems to remain surprisingly limited in accident prevention, perhaps because of the patchiness of their efforts in some cases and their disparity in others. The “Réagir” (react) programme developed in France since 1982 has enabled these organisations to take a more active part in joint action on road safety, a trend which is greatly encouraged by the authorities.

6. Contribution by the medical profession

Apart from the traditional action by the public health sector which is more concerned with the provision of emergency assistance, traumatology and re-education, the contribution to the road safety system by private doctors should obviously be an important factor in accident prevention.

But the survey shows that there are very few countries where this contribution has a wide impact. Quite the contrary, most of them consider it to be very or relatively limited. Of the eleven countries in question, it seems that Australia is the only country where the involvement of doctors in preventive action is both long established and on a wide scale. It should be remembered that doctors in this country were largely responsible for the definition of a number of safety regulations, and particularly for the compulsory wearing of seat-belts in 1971 in the State of Victoria. It should also be noted that the medical profession is very active in road safety questions in Sweden, as in the other Nordic countries.

Where it exists, the contribution by private doctors to the road safety effort seems to be made more by doctors' professional associations, while few if any direct contacts between doctors and their patients concern road safety.

When it does exist, the contribution by doctors mainly takes the form of advice, recommendations or warnings about the risk of driving under the influence of drink, certain medicines or drugs, or opinions on the incompatibility between certain handicaps or illnesses and driving. Some countries note the contribution by the medical profession to in-depth surveys on road accidents, although the forms taken by this contribution are not stated. In many countries, particularly in Australia, doctors have played an important role in influencing the authorities and persuading them to develop safety rules.

In the case of the medical press, almost all the answers show that quite limited or very limited importance is attached to road accident and safety questions.

7. Contribution by enterprises

Most countries consider that action on road safety by employers (whatever their status here -- government departments, public enterprises, or private firms) is on the whole limited. Once again it seems that Australia sets a very positive example, particularly in the transport, mining and construction sectors.

Accident prevention activity by firms is mostly limited to information and publicity campaigns on road safety questions and sometimes includes basic, refresher and advanced courses for drivers. Some countries refer to the role played occasionally by enterprises in sponsoring road safety information campaigns for the public.

Some enterprises, more particularly in the chemicals and oil sectors, have conducted exemplary accident prevention activities for their employees and even for the general public in some cases.

8. Experiments with mixed advisory committees

A systematic review of participation in the road safety system by various categories of professional or private associations or bodies leads to the question of possibly combining these dispersed efforts within a single entity acting as an advisory committee in dealings with the authorities. In this respect it is useful to review the experiments by some countries which have advisory councils or committees whose members include representatives of the authorities and from all sections of the private sector in any way concerned with the prevention of road accidents.

A body of this type known as the Australian Road Safety Council existed in Australia from 1947 to 1970. It consisted of the representatives of the States, Territories and local government and also included different kinds of specialists. Subsequently, from 1970 to 1975, this experiment was resumed with a group known as the Expert Group on Road Safety (EGORS) which also included various kinds of specialists whose job was to advise the Federal Ministry of Transport on road safety. Since 1947, there has been an Australian Transport Advisory Council (ATAC) which consists of the representatives of the States, Territories and local government as well as various practitioners and economic agents concerned with road safety. This advisory council has set up special committees to discuss various road safety questions.

In Belgium, the National Road Safety Council was set up by a Royal Order of 11th May 1965. Its role is to conduct any surveys or research capable of improving the road safety system, establish ongoing communication between the government departments concerned with road safety and the private sector, and express its views on all draft bills and orders concerning road safety. Its powers are in principle very wide since its mandate is to take all the necessary steps to ensure that anything likely to improve road safety is brought to the knowledge of those concerned, in particular road users, using all appropriate information, educational and advisory techniques. This body, which comes under the Minister of Communications and is chaired by him, consists of 73 members who represent nine government departments, automobile and touring clubs, "Via Secura" (Belgian road safety department), the Red Cross, the Foundation for Road Safety Studies, car experts, insurance firms, etc. Its contribution over the past 20 years in improving road safety in Belgium is considered important.

A similar body has existed in Denmark since 1966. It consists of representatives of the political parties in Parliament, government departments and a number of private organisations, expresses views and recommendations on road safety policy and proposes changes to existing legislation. Here again its role is seen as extremely positive.

Spain has set up a National Road Safety Committee, which is chaired by the Ministry of the Interior and includes representatives from the other ministries concerned with road safety and from a number of public or private bodies involved in accident prevention. This national task force has set up a standing committee and groups of experts responsible for monitoring specific questions. Its permanent secretariat is provided by the Ministry of the Interior's Traffic Directorate. This task force works out national road safety plans which are then submitted to the government for approval. Its reorganisation is now being studied.

In 1983 Portugal decided to set up under the Ministry of Transport and Communications Traffic Directorate an advisory committee chaired by the Director General of Traffic. Apart from the representatives of several other government departments, its members include delegates from certain

private bodies (automobile clubs, road safety groups) as well as the representatives of the Lisbon and Porto town councils. This advisory committee has not yet taken office.

A Federal Road Safety Council known as the “Deutsche Verkehrssicherheitsrat” (DVR) exists in Germany. This council consists of representatives of the Federal Government, the Länder and various professions or private organisations concerned with road safety (manufacturers, insurance firms, accident prevention associations, etc.).

In the United Kingdom, the Royal Society for the Prevention of Accidents (ROSPA), created in the early twenties, has several specialised committees which act in both the public and private spheres, and plays an important role in informing the public and educating users.

In Sweden an advisory council was set up in 1985 and has representatives from nine authorities and private organisations. It is chaired by the Director-General of the Swedish Road Safety Office. The Council's main task is to co-ordinate the traffic safety work done by its members and to submit to the Government a long-term plan for such work.

In Finland, a multi-disciplinary advisory body has been in existence since 1973.

The question of setting up a body of this type has been frequently raised in recent years in France. Such an initiative was requested not long ago by some members of parliament who in 1984 formed a multi-party group on road safety. The desirability of setting up such a body is now being studied.

9. Conclusions

In conclusion, it should be pointed out that, since the efforts made by Governments have gone as far as they can in some respects, preventive activities should in future be conducted more by the private sector concerned with road accidents, especially through user groups and private associations for the prevention of accidents which can play a decisive role in this connection. It is moreover encouraging to note that there seems to be a growing awareness in this respect and that there has been an appreciable increase in such involvement in recent years.

NOTES

1. References are to the following eleven countries: Australia, Belgium, Denmark, Finland, France, the Federal Republic of Germany, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
2. With the exception of the Scandinavian countries.
3. In this connection, reference may be made to the ECMT report on “Measures to Improve Emergency Assistance in Road Traffic” [see CM(83)17 revised and CM(83)20].

ANNEX

BODIES RESPONSIBLE FOR PROVIDING THE PUBLIC WITH ROAD SAFETY INFORMATION

Federal Republic of Germany

Bundesministerium für Verkehr
(Federal Ministry of Transport)

Public information work and its organisation comes under the Federal Ministry of Transport, more particularly as regards relations with the press and the preparation of brochures. Programmes and activities relevant to road safety education and information for specific target groups, together with advertising campaigns are organised by the *Deutsche Verkehrssicherheitsrat (DVR)* (German Road Safety Council), a central coordinating body. Two-thirds of its finances come from public funds.

The Bundesanstalt für Strassenwesen (BAST) (Federal Highway Research Institute), a scientific institution of the Federal Ministry of Transport is responsible for preparing and evaluating research and for keeping researchers informed.

Austria

Bundesministerium für öffentliche Wirtschaft und Verkehr
(Federal Ministry for the Public Economy and Transport), plus the public institutions:

- Federal Ministry of the Interior.
- The Central Austrian Statistical Office.
- Accident Insurance Company.
- Austrian Broadcasting Company.

In sectors subordinate to the Ministry, by the:

- Police and Gendarmerie.

Through entirely independent organisations such as:

- The Road Safety Board.
- Automobile clubs such as (AMTC and ARBI).

Belgium

Ministère des Communications.
Conseil Supérieur de la Sécurité Routière.

The following ministries are represented in the “Conseil”:

- Ministry of Communications.
- Ministry of Public Works.
- Ministry of Finance.
- Ministry of Justice.
- Ministry of Health.
- Ministry of the Interior.
- Ministry of Education.
- Ministry of Defence.
- Ministry of the Economy and Energy.

plus representatives from a further 41 organisations.

Denmark

Radet for større Faerdselssikkerhed (Danish Road Safety Council).

- Independent, self-governed organisation.
- Under the control of the Ministry of Justice.
- Looked upon as a semi-public institution.
- Composed of 30 representatives from ministries, authorities and organisations.
- Fifty per cent of its finances come from public funds (the remaining 50% coming from private institutions, films and membership fees from the children's traffic club).

Spain

- Directorate General for Traffic.
Organisation assigned to the Ministry of the Interior.
- *National Commission for Road Safety*
Interministerial organisation in which 15 ministries and various social groups are represented, e.g. automobile clubs, the Red Cross, vehicle manufacturers, etc.

Finland

Liikenneturva
 (Central Organisation for Traffic Safety in Finland).

- Association of public law under the control of the Ministry of Communications Responsible for information and road safety education.
- Financed by the insurance companies according to the provisions of a law.

France

Comité interministériel de la Sécurité Routière, chaired by the Prime Minister and including all Ministries concerned with the prevention of road accidents:

Ministère de l'Équipement, du Logement, de l'Aménagement du Territoire et des Transports (Safety and Road Traffic Directorate).

Other Ministries: (Health, Education, Interior, etc.) on a much more ad hoc basis.

Various associations, such as: *Prévention Routière*, *Prévention rurale* (agricultural mutual insurances).

Centre de Documentation et d'Information de l'Assurance, automobile clubs, Association pour la Sécurité sur les Autoroutes, Secours Routier Français, etc.

Luxemburg

- Ministry of Transport.
- The State Traffic Commission.
- Ministry of Education.
- Police and Gendarmerie.
- The Road Safety Association.
- The Association of Insurance Companies.
- The Automobile Club.

The Netherlands

Veilig Verkeer Nederland (Safe Traffic, Netherlands).

Works in close cooperation with the Ministry of Transport which provides 70% of the budget for “Veilig Verkeer Nederland”.

United Kingdom

Department of Transport in cooperation with different organisations such as:

- Automobile Association.
- Royal Automobile Club.
- Royal Society for the Prevention of Accidents (official road safety organisation, supported by the Government and by local sponsors, non-profit-making).

Sweden

- National föreningen för Trafikstükerhetens Framjande (NTF) (National Society for Road Safety).

Responsible for organising campaigns, road safety education, road safety literature and materials, and a children's traffic club.

Financed by the government, insurance companies, membership fees and the sale of road safety materials.

- The Swedish Road Safety Office.

Comes under the jurisdiction of the Ministry of Transport. Responsible for giving information on new traffic regulations.

Switzerland

- Schweizerische Beratungsstelle für Unfallverhütung (bfu) (Swiss Advisory Board for Accident Prevention).

Private law foundation.

Task: the promotion of accident prevention in all areas outside the work environment.

Finances: structural contribution from the Swiss Fund for the Prevention of Road Traffic Accidents plus some financing from non-industrial accident insurance premiums.

- Schweizerische Konferenz für Sicherheit im Strassenverkehr (SKS) (Swiss Conference for Safety in Road Traffic).

Legal status: association.

Tasks: the activities of this Conference concern essentially the preparation, implementation and organisation of the road safety education campaigns conducted annually on a national scale.

Members: representatives of the authorities at the confederate, canton and commune levels, of private associations and institutions, of insurance companies and individual firms.

- *Swiss Fund for the Prevention of Road Accidents*: public law body whose task is to co-ordinate and promote measures aimed at preventing road accidents.

- Road-users Associations.