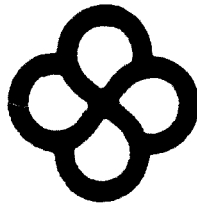
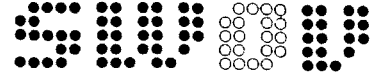


SARTRE:
Social Attitudes to *Road Traffic Risk* in *Europe*

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IDBRA



SARTRE: Social Attitudes to Road Traffic Risk in Europe

Towards a new policy-relevant understanding of Europe's drivers

Brussels, november 1994

P.E. Barjonet (INRETS), T. Benjamin (IDBRA), R.D. Huguenin (BPA), R.D. Wittink (SWOV)

Summary

Contents

This report describes the survey that has been carried out within the framework of the project on Social Attitudes to Road Traffic Risk in Europe (SARTRE). The report results from the request made by the European Union's Directorate General VII (DG VII), for the writing of a policy document on the SARTRE project and for the presentation of the project's main policy implications, at a meeting of the High Level Group in Brussels on 23 november 1994.

The following subjects will be dealt with:

- the SARTRE project participants (ch. 1);
- the objectives and background of the survey (ch. 2);
- the main results (ch. 3);
- conclusions and recommendations for each of the European Union's four Working Parties on road safety (ch. 4);
- the potential use of the survey as a monitoring instrument for the development and evaluation of road safety policy in EU and member countries (ch. 5).

Objectives

The SARTRE-survey consists of a questionnaire which provides us with data regarding psychological, social and cultural influences on road behaviour, and which complements the current international research regarding accident analyses and technological innovations. The survey learns us about developments in and differences between countries and helps us to identify potential road safety improvements on a national and international level.

The SARTRE-questionnaire can also be used as a monitoring instrument for evaluation purposes. The reported behaviour includes speed offences, alcohol consumption patterns before and not before driving, seat belt wearing on different types of roads, and several other components of driving.

Reported attitudes include positions towards seat belt wearing and towards qualities of a car, experiences with other road users, concern about road safety and other health issues, and involvement with road safety.

The documentation of attitudes and opinions regarding road safety measures includes limitations of speed and alcohol use and other types of measures as part of European harmonization.

Working method

Sixteen research institutes from fifteen European countries have undertaken a similar survey in their country. They asked car drivers questions about their behaviour regarding road safety, their feelings of personal involvement with road safety issues, and their opinions about road safety countermeasures.

The institutes raised funds in their country. Support came from DG VII of the European Union.

Results

The results of the questionnaire show that the *concern* of car drivers for road safety is more a concern for (the behaviour of) other people than for

their own behaviour. Furthermore, human factors are more often seen as cause of accidents than vehicle characteristics. The latter are in turn more often seen as a cause than are infrastructural characteristics.

Breaking *speed limits* is seen as very common. Drivers admit this and they think most others do it. Legislation is nevertheless considered as important and may influence the norm of what speed limits should be. Speeding behaviour is not experienced as risky behaviour. Especially on main roads outside built up areas, the European drivers have an understanding of safety standards that does not fit with the objective facts. Nevertheless, the market for safe cars is bigger than car advertisements show. Safety and safety related issues are seen as the most important car qualities by European drivers.

The outcome of the questionnaire further indicates that lowering of the legal *alcohol limit* triggers a process of internalization and identification with the norms introduced. It is therefore not necessary to set very high targets for people's attitude change before introducing legislation.

Likewise, using *seat belts* comes out to be strongly dependent on habituation, which is itself a consequence of legislation and police enforcement.

Finally, there is support for improvement of *driver training* and also for a tougher driving test. Support for safe behaviour grows when it is clear that this behaviour will be common. Installing social norms may be a very important objective of EU policy.

Recommendations

The results of the questionnaire have induced the following five recommendations:

1. *Countermeasures*

There is widespread support by car drivers - *even* by car drivers - for important road safety countermeasures, such as:

- a low uniform limit on alcohol consumption before driving;
- speed limitations;
- the obligation to use seat belts on the front and the rear seat unconditionally;
- vehicle check ups for safety reasons as well as to protect the environment;
- more consideration to pedestrians' and cyclists' needs when planning towns and roads.

2. *European harmonization*

Regulation of behaviour will start up a process of identification with the rules, even more when the regulation will be European, although cultural differences have to be taken into account.

3. *Social norms*

The acceptance of safe behaviour by drivers will grow when they experience this behaviour as common. Countermeasures, no matter if they have a legal basis or make use of other means, must be aimed at installing social norms, involving social influences.

4. Safety facilities

Safety is a basic need for car drivers, as is underlined e.g. in the car qualities that drivers judge as most important and also in the high amount of annoyance drivers experience from the behaviour of other road users. We can make road users partners for road safety when we show ourselves to be sensitive to their needs for responsible social behaviour, safe vehicles, a good standard of roads and facilities to avoid taking risks.

5. Education and campaigns

There is a lot of misunderstanding about safe behaviour on the road. Education and campaigns must be aimed at improvement of risk perception, social skills and control of traffic situations, and not only at explanation of legal rules.

1. The SARTRE project participants

In each of the fifteen European countries involved in the project (see Figure 1), a representative sample of 1000 car drivers answered the questionnaire with regard to Social Attitudes to Road Traffic Risk in Europe (SARTRE).

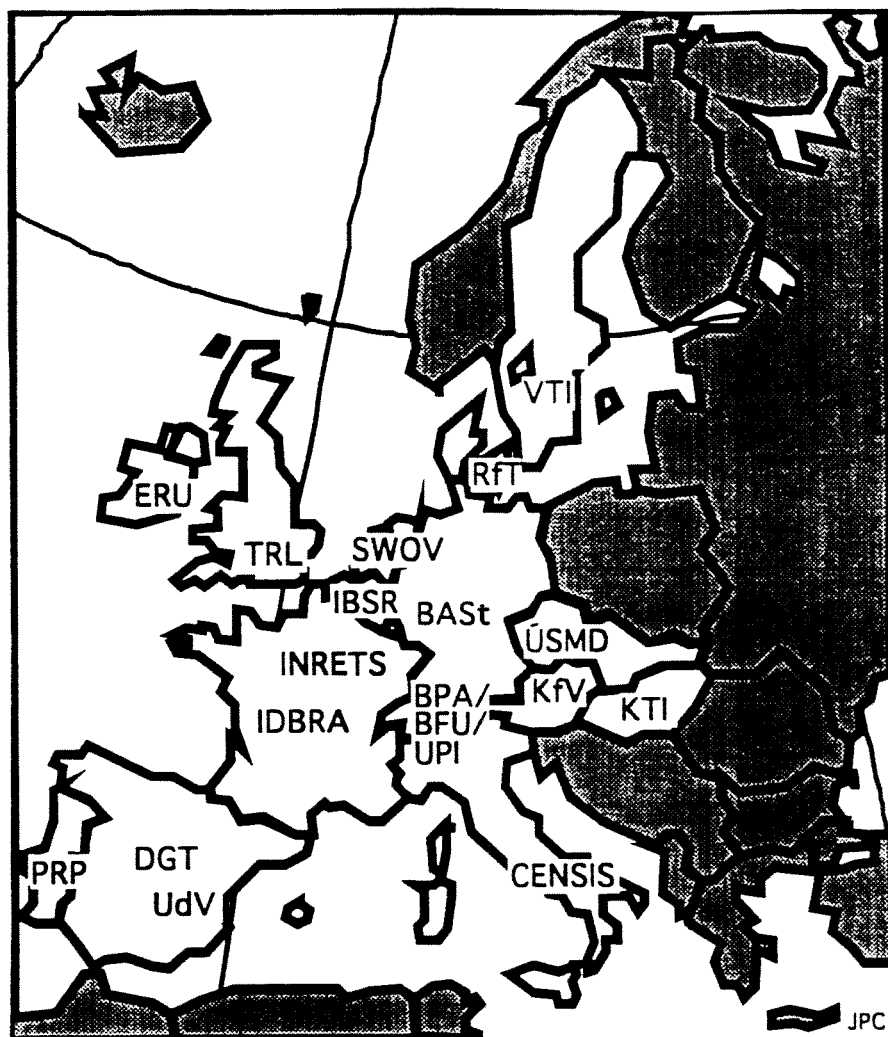


Figure 1. *The SARTRE project participants*

Current European research in the field of road risk management is overwhelmingly focused on vehicle and road infrastructure technology. Human factor research, taking into account human psychology and social and cultural influences, is an essentially distinct yet complementary field to that of technological research.

The SARTRE-project is the first research on a whole-continent scale to collect and analyse data on the determinants of road user behaviour. Moreover, the survey took place at a critical stage of change in European political and economic development. It provides a benchmark for comparing the evolution of attitudes, opinions and reported behaviour of European car drivers, to learn from differences between countries.

improvements of such policy on a national and international level. The survey was organized with meticulous attention to methodological and linguistic detail.

A consortium of sixteen institutes with INRETS (France) as project leader, obtained funds, mostly from governments, to undertake this survey:

Austria	KfV (Austrian Road Safety Board)
Belgium	ISBR (Belgian Institute for Road Safety)
Czechoslovakia	USMD (Research Institute for Road and Urban Transport)
Denmark	RfT (Danish Council for Road Safety Research)
France	INRETS (National Institute for Research on Transport and their Safety) IDBRA (International Drivers' Behaviour Research Association)
Germany	BASSt (Federal Highway Research Institute)
Hungary	KTI (Institute for Transport Sciences)
Italy	Censis (Socioeconomic Studies Center)
Ireland	ERU (Environmental Research Union)
Netherlands	SWOV (Institute for Road Safety Research)
Portugal	PRP (Road Safety Prevention of Portugal)
Spain	Ministry of Transport, General Traffic Directorate
Sweden	VTI (Swedish Road and Traffic Research Institute)
Switzerland	BPA/BFU (Swiss Council for Accident Prevention)
United Kingdom	TRL (Transport Research Laboratory)

Support from the European Union (DG VII) amounting to about 10% of the overall budget, enabled part of the financing of data control, of the creation of an international databank, of further analyses and of an overview of other international data (such as legislative provisions in each country).

2. Objectives and background of the survey

2.1. History

The foundation of this survey was laid in the seventies. In 1973 the first International Conference on Driver Behaviour, organized by IDBRA in Zurich, proposed the need for collecting data on variables with explanatory value in regard to accidents. Many specific recommendations for this data-research were then made.

In 1974 IDBRA's Scientific Committee recommended as a first step the undertaking of a survey of drivers' attitudes and opinions. In 1976-1977 ONSER (now INRETS) acted as project leader for this survey.

Participating countries were France, Germany, Japan, South Africa, Spain, Sweden, United Kingdom and Yugoslavia.

In 1988 TRRL (now TRL) launched a 'ten years later' update of British drivers' attitudes. IDBRA proposed renewed participation of all countries that had previously been involved and requested INRETS' project leadership. INRETS proposed that the survey be limited to Europe and accepted the key managerial role.

From 1990 to 1993, INRETS-IDBRA widened the number of countries willing and able to take part. The early stages of planning soon involved TRL and then SWOV and BAST. The principal investigator has been P.E. Barjonet and the principal technical executive J.-P. Cauzard, both from INRETS, whereas T. Benjamin, from IDBRA, acted as consultant to INRETS.

The survey was undertaken between the end of 1991 and the end of 1992 in ten EC-countries and five countries from outside EU - one northern Europe country and four countries from central Europe. In Germany two samples were collected: one from the former western part and one from the former eastern part.

After seven meetings in six countries, the Consortium published an edited First SARTRE Report in 1994. This report will soon be followed by a Second SARTRE Report with further analyses and conclusions.

The Forum of European Road Safety Research Institutes (FERSI) of which ten members are involved in SARTRE, requested DG VII to provide a supplementary budget in order to coordinate the production of a short document setting out the main implications in terms of their applicability to policy-making and to present these at a high level.

2.2. Principal objectives

In the European Union, road accident mortality per kilometer varies by a factor of seven when the best and the worst ranked countries are compared (Coleman, 1992). Initiatives have been taken to analyse the differences between the countries on the basis of accidents, and to develop countermeasures (the CARE programme).

The SARTRE-data will be able to be compared with accident rates of the populations under study. Analyses of the data may reveal, for the first time clearly, the existence of specific problems in this respect, shared

between two or more countries or regions within them.

The monitoring of attitudes, reported behaviour and the 'ripeness' of public opinion will help indicate the conditions and most propitious timing to introduce new measures.

The survey is also innovative in the sense that it includes lifestyles, lifestages and sociocultural variables. This inclusion should facilitate the effectiveness of countermeasures. Combined with the attitudes, cross-national comparisons in this respect may reveal differences in values throughout Europe. That makes it possible to specify European harmonization policy in a way that nuances and variations are tolerated and agreement with harmonization grows.

2.3. Major questions

Relevant questions to which the survey may provide answers are:

- how are attitudes, reported behaviour and opinions distributed regionally, socially and demographically?
- how do they come into being?
- which areas show consensus and which do not?
- what are the factors of receptivity towards the harmonization of accident countermeasures?
- what are the reasons for refusal of standardization of countermeasures?

2.4. Reports of results

For each variable that is investigated, the results in percentages per country are described in a separate report (Cauzard, 1992a). The results and the methodology of sampling and questioning, survey period and situation, the weighting to describe the European sample and the creation of the databank, have also been published separately (Cauzard, 1992b). The First SARTRE Report, a report on Principal Aspects (Barjonet et al., 1994), describes the results concerning the major themes and compares the answers country by country. The figures in this document are copied from the First and the Second SARTRE Report.

The Second SARTRE Report will present the results of further analyses.

3. Main results

3.1. Structure of the questionnaire

The questionnaire consisted of eight separate themes. The respondents were asked about:

1. their *concern* about road safety in relation to other social and health issues;
2. their *perception of risk*;
3. their attitudes, behaviour and opinions about *speed*;
4. their attitudes, behaviour and opinions about *drinking and driving*;
5. their attitudes, behaviour and opinions about *seat belts*;
6. other driving habits and attitudes about *road behaviour*;
7. their opinions about *measures* on a national and European level;
8. *socio-demographic position* and *lifestyle issues* of importance in defining target groups.

In this chapter we will present some policy-relevant outcomes for each of these themes (§ 3.2.). Further we present conclusions from a comparative analysis of the differences between the participating European countries (§ 3.3.).

3.2. The most policy-relevant outcomes

1. *Concern*

The concern for road safety is about the same as that for pollution and the state of crime and greater than that for traffic congestion and for standards of health: 45% of the car drivers feel very concerned about road safety. However, only 20% of the respondents are *personally* concerned with the risk of having an road accident or other risks in their life. Driving a car is considered by a majority of drivers as not very or not at all dangerous. Only 24% of the respondents worry a lot about having an accident while driving and 18% (very) often discuss the risk of road accidents with family or friends. Finally, 45% of the respondents have a very or fairly strong wish to make a personal effort to improve safety on the roads and 81% of them think that road accidents are *not* a matter of bad luck.

Conclusions:

A great majority of car drivers, therefore, think that road users can do a lot to prevent accidents, although most drivers do not feel themselves directly or personally threatened by such events. Their concern for road safety has more to do with (the behaviour of) other people than with their own behaviour. Education and information is needed to let car drivers understand the consequences of their behaviour and to explain socially responsible behaviour.

2. *Risk perception*

Questions were asked about risk perception of 18 factors that may influence accident occurrence: human factors and vehicle or infrastructural characteristics.

The factors of which around 50% or more said they are often (or very

The factors of which around 50% or more said they are often (or very often or always) a cause of accidents, were:

- drinking and driving 85%
- driving too fast 76%
- close following 72%
- driving when tired 67%
- bad weather conditions 66%
- bald tyres 65%
- poor brakes 63%
- not signalling 57%
- vehicle too fast 56%
- faulty lights 50%
- poorly maintained roads 47%
- defective steering 46%

References to the role of human factors showed the least differences between countries; the greatest dissimilarities concerned vehicle characteristics.

Conclusions:

It is clear that human factors are more often cited by drivers as causes of accidents than are vehicle characteristics, and these in their turn are still more often cited as causes than the characteristics of the infrastructure. Although infrastructural countermeasures may be more effective than car drivers think, their attitudes can be used as support for demanding more responsible behaviour from road users themselves.

3. Speed

82% of the questioned car drivers think that other drivers often or very often break speed limits. Asked when they themselves drive faster than the speed limit under conditions that allow them to set their own speed, only a minority says they break the limit often or very often. This depends on the type of road, the lowest frequency of self-reported offences taking place on residential roads.

Driving faster than the speed limit						
	Never	Rarely	Sometimes	Often	Very often	Always
Motorways	21	22	28	15	7	5
Main roads between towns	21	27	31	14	5	2
Country roads	33	33	23	7	2	1
Main roads in towns	41	32	18	6	1	1
In residential areas	56	29	10	3	1	1

The opinions of car drivers about what the speed limit should be in their country differ between countries, dependent first of all, it seems, upon the actual limit in the country concerned. On motorways the greatest support is for 120 km/h, on main roads between towns 100 km/h, in towns 50 km/h and on residential roads also 50 km/h.

It is remarkable that the support for a high or no limit on motorways does not necessarily correspond with a relatively high limit in towns and on residential roads. In Germany e.g. 130 km/h is favoured at most on motorways and 30 km/h in residential areas, apparently because Germany does not have an overall speed limit on motorways but it has taken a lot of traffic calming measures in residential areas.

While 28% of the drivers say they have been stopped by the police for speeding, the differences between countries are great, from 55% in Austria to 9% in Portugal.

Conclusions:

Breaking speed limits is seen as very common. Drivers admit this and they think most others do it. Legislation and infrastructural measures are important and may influence the social norm of what speed limits should be.

4. Drinking and driving

In general, European drivers perceive driving under the influence of alcohol as a risk factor more often than they do speeding, driving when tired or driving while not signalling one's intentions. There are some differences of opinion between drivers in the various countries, but these are difficult to explain; they may be influenced by a dissimilar consciousness of problems or by the effects of special campaigns.

Drivers from the various European countries have different attitudes to limits regarding the permitted blood-alcohol concentration (BAC) for drivers. These differences seem to a high degree to be dependent upon the legal limit in force. Figure 2 (below) shows that 75% of drivers in countries which already have a lower limit than 0.08 BAC, support a still lower BAC limit or a ban upon alcohol for drivers, compared with 58% of drivers in countries with the 0.08 BAC limit.

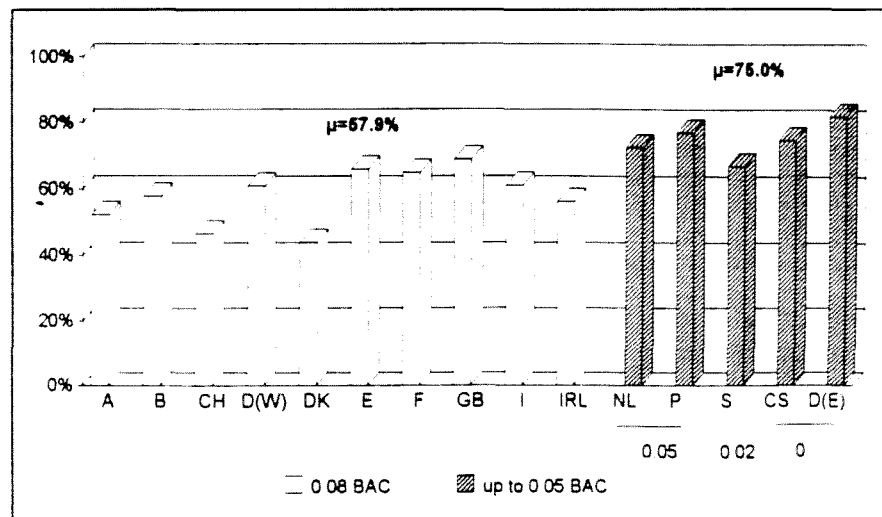


Figure 2. Drivers who support a lower BAC limit or a ban on alcohol for drivers (Source: SARTRE Report 1)

There are also cultural differences within Europe, which we cannot ignore in this respect. Whereas 13% of European drivers as a whole drink alcohol most days of the week, this proportion is 40% in Portugal and 25% in Italy. In Sweden, in contrast, only 1% report this behaviour, and in Ireland only 3%. The Portuguese and Italian drivers in general, however, drink fewer units of alcohol per drinking event; two or even less in the case of the latter. Irish drivers in general drink four-and-a-half units and the British four. Exceeding the legal limit is most often reported from Switzerland, Austria and Belgium. Thus, the proportion of self-reported offenders is greater in these countries than in those in southern Europe.

Conclusion:

The problems of alcohol consumption have high priority as a road safety concern amongst European drivers. A big majority favours a lower limit. Drivers in southern Europe more often consume alcohol, but in general fewer units than drivers in other countries.

5. Seat belts

Although a large majority of European drivers believe that seat belt wearing reduces the risk of severe injury, the actual usage level differ significantly across country borders. These differences are greatest on minor roads. This contrast between countries corresponds with the strictness of regulation.

The lower the wearing rates, the more drivers think seat belts are not necessary if you drive carefully. The higher the wearing rates, the more drivers feel less comfortable when they do not wear the belt.

Seat belts: wearing and attitudes			
	Use in town	Not necessary when careful	Less comfortable without belt
United Kingdom	90%	9%	73%
Germany west	79%	8%	74%
Sweden	74%	4%	80%
Netherlands	62%	15%	53%
Ireland	57%	11%	68%
Belgium	53%	23%	46%
Italy	15%	31%	28%
Portugal	6%	27%	32%
Spain	6%	30%	24%

Conclusion:

The survey confirms other research results (e.g. Jonah and Dawson, 1982) in the sense that using seat belts is strongly dependent upon habituation, which is a consequence of legislation and police enforcement. Strict prescriptions with regard to both the front and rear sets are, therefore, recommended, as well as strict police enforcement.

6. Other driving habits and attitudes

Drivers were asked about other offences, such as not giving way and close following. Only small percentages admit these kind of offences. But a great majority of drivers (77%) gets very annoyed by and while with other drivers.

Conclusions:

Car drivers are not inclined to admit annoyance directed at other road users. The fact, however, that being annoyed is common could mean that road users can learn a lot from the feelings of others. Countermeasures such as information campaigns and education should be directed to road users as partners in a social environment.

7. *Opinions about measures*

There is a strong and widespread support for important countermeasures. A European-wide vehicle check up for safety reasons is supported by 89%, and for protection of the environment by 85%, more consideration to pedestrians and cyclists when planning towns and roads is supported by 88%, a European-wide lower alcohol limit by 78% and European wide seat belt wearing in front and on rear seats by 75%.

It is obvious that the support for countermeasures grows when drivers are asked about them as part of European harmonization. Subjoined table shows some examples with regard to percentages of drivers favouring speed limits in a national and international context:

Drivers in favour of limits		
	In own country	European harmonization
120 km/h (or less) on motorways	50%	55%
50 km/h (or less) in towns	67%	76%
Less alcohol than at present	62%	78%

As has already been stated several times, opinions about countermeasures are related to actual legislation. Besides, there are some cultural components that have to be taken into account. For example, the alcohol consumption pattern in southern Europe (more frequently but in smaller amounts) corresponds with relatively greater resistance to stricter legislation. The antagonism to penalty point system is present especially in Belgium but also France, Switzerland and Hungary may have a 'cultural' component.

Conclusions:

There is widespread consensus about the need for several very important countermeasures although cultural differences have to be taken into account. The support grows when measures are taken in a European-wide context, and no matter whether a country is or is not a member of EU and is more or less harmonization-minded. This indicates that the support for safe behaviour grows when it is clear that this behaviour will be common. Installing and consolidating social norms must be a very important objective of EU policy. Harmonization of legislations may be part of this, but harmonization of enforcement, of infrastructural design and a social orientation of education and information are also important ingredients to reach this objective.

8. *Socio-demographic data and lifestyle*

People were asked about their age, about the size of their family, about their occupation, their place of residence, their education, their type of vehicle and other socio-demographic data and lifestyle issues. These are

important data for analysing the determinants of behaviour and for designing countermeasures for target groups. Subjoined table compares the size of family, the having of seat belts fitted in front and in rear of the car, and the opinions people have about the necessity or redundancy of seat belts when driving carefully.

Size of family, seat belts in car and opinions on seat belt wearing			
	Size of family	Seat belts in front and in rear	Seat belts not necessary if careful
Together	3.2	55%	18%
Ireland	4.5	33%	11%
Italy	3.4	32%	31%
Portugal	3.5	25%	27%
Spain	4.4	11%	30%

Conclusion:

In some of the countries with a relative great average size of family we find a high proportion of drivers without seat belts in front and in rear of the car, and also a high proportion of drivers who are not convinced that seat belts are very important. This must be of concern.

3.3. Differences between countries

One of the analyses that has been carried out with the aid of the EU's budget contribution, was an investigation of the most outstanding differences between countries (Goldenbeld 1994, also to be published in the Second SARTRE Report).

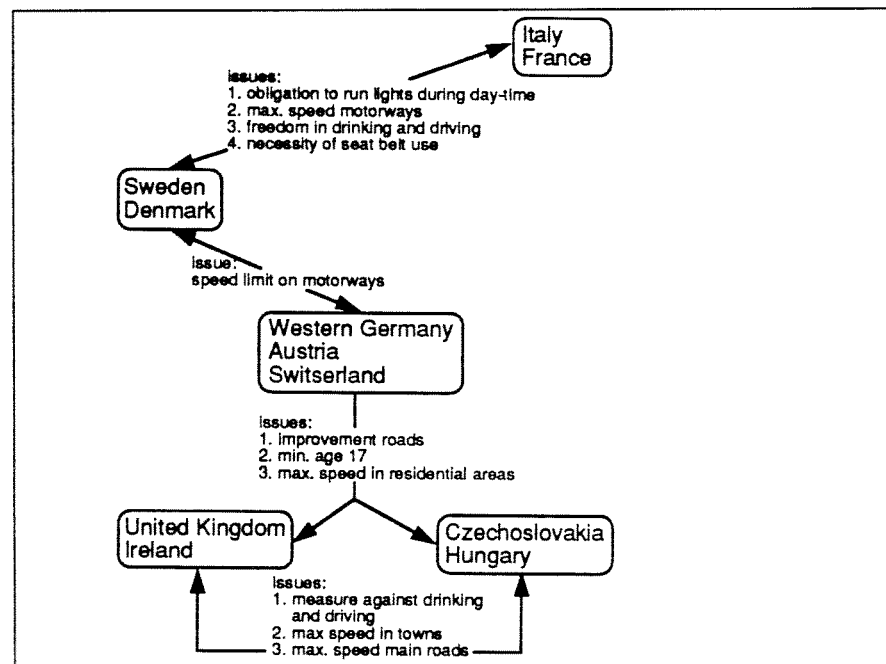


Figure 3. Network of international differences (Source: Goldenbeld 1994)

This study was carried out by taking two sets of variables from the questionnaire. One set contained variables with regard to speed, the other variables with regard to countermeasures. The last one resulted in a clustering of most of the countries (see Figure 3 above).

Another analysis, undertaken by the Swiss institute BPA and the Dutch institute SWOV (both members of the consortium), consisted in an investigation of differences and similarities between the Swiss linguistic regions, as well as between their neighbouring regions sharing the same languages.

It was already clear that the differences within countries in Europe were widest in Switzerland (Cauzard, to be published in the Second SARTRE-Report). The result of the Swiss investigation was that the similarities between the Swiss regions were greater than the similarities between the respective regions and their common-language neighbouring regions. But the differences between the Swiss regions correspond more or less with differences between languages (Goldenbeld et al., 1994, also to be published in the Second SARTRE Report). This confirms the importance of socio-cultural influences in Europe.

4. Conclusions and recommendations for EU Working Parties

The European Union has set up four Working Parties assigned to deal with road safety topics giving cause for concern. This chapter provides conclusions and recommendations for these Working Parties.

4.1. Drinking and driving

In chapter 3 we concluded that a big majority of European drivers favours a lower BAC limit and that drinking habits differ significantly between countries.

Fewer drivers in southern countries favour strict legislation. It seems that their daily, but relatively modest, consumption pattern makes them think that stricter legislation is not needed. But drivers from the southern EU member states agree with a proposed low, uniform European limit as much as do those from other countries. Nearly 80% of European drivers as a whole support such an uniform low limit. Other research indicates that learning from others about social norms (Aberg, 1993) and the perception of alternatives for drinking and driving (Turrisi and Jaccard, 1992) are important factors contra drinking and driving. The expertise from social marketing may be helpful to us in developing messages that successfully match the needs of target groups (OECD, 1993).

Although legislation will have a positive influence on behaviour and attitudes, enforcement is necessary. Strategies for this seem to differ very much between countries. In France 40% of drivers report having been breathalysed and in Portugal 25%, but only 1% in Italy and 4% in Ireland. In France, Portugal and Spain, the percentages of reported tests not over the limit were much lower than in Ireland and Italy. Thus, in the first group of countries enforcement seems to be undertaken more as a deterrent. These differences are more or less reflected in the perceived probability of being breathalysed on a typical journey. On such a journey 60% of Italian drivers and 50% of both British and Irish drivers think they will never be tested.

Conclusions:

1. A low uniform European BAC limit gets greater acceptance than stricter legislation on a national basis; this is especially true in southern countries.
2. Lowering of the legal limit sets in motion a process of internalization and of identification with the norms introduced. Social influences and alternative facilities must complement this. It is, therefore, not necessary to seek to attain very high limits of favourable attitudes before introducing legislation. A relatively small majority may turn into a big majority in favour of stricter legislation, once parliaments have approved this.
3. Enforcement practices diverge very much within Europe. Harmonization of enforcement methods and greater intensity are recommended.

4.2. Young drivers

The SARTRE survey has indicated several times the interdependence between opinions concerning measures and actual legislation. This is also clear with regard to the minimum age for obtaining a driving licence. 45% of drivers as a whole think this minimum age should be fixed at 17 years. And, to illustrate this point, in Great Britain, Ireland and Hungary - where the minimum now actually stands at 17 years - the proportion in favour is more than 80%.

A small majority of European drivers also favour a harmonized, tougher driving test. This is reflected in a big majority in Italy (83%) and in Great Britain (78%). A majority of 70% of drivers as a whole want an improvement of driver training in their own country, with most of the supporters of this being found in the southern countries together with Great Britain and Ireland.

Greater support for a tougher standard driving test is not always accompanied by a similar level of approval for improved driving training. A relatively high level of support for improved driving training is expressed in Ireland, France and Spain, but few drivers in those countries support a tougher test.

Conclusion:

There is support for both improved driving training and a tougher driving test.

4.3. Speed of cars

Three quarter of all drivers consider driving too fast as a cause of accidents. On motorways and main roads outside built-up areas, however, 30% of drivers report sometimes exceeding the limit, and another 25 say that they often or always do so.

A small majority of all drivers (56%) believes that the capacity of vehicles to travel too fast is a cause of accidents. In countries having a lower technical standard of road networks, more drivers have this opinion. The possibility of a restriction of vehicles' design speed, as part of a European harmonization programme, is favoured by 43%, with 48% being opposed to it. Support is principally found in Ireland, France, United Kingdom and Belgium. Most opposition comes from Hungary, Switzerland and Denmark.

More than one third of drivers enjoy driving fast, the percentage being highest in Denmark. 60% affirm that they do not enjoy this, with the largest number of drivers saying so being found in Ireland. Only 5% of all drivers report that they enjoy taking risks, although 8% say that they are sometimes involved in unofficial races with other drivers.

Support for speed devices on vehicles is mixed. With freedom for drivers to control such a device, 47% support such a system and 42% are still opposed to it. When autonomy to exceed the limit for only short periods is possible, support for such a device is 40%, with opposition declared by

48%. When it is made technically impossible for all cars to exceed a certain limit, 38% remain in favour, but 50% are against. Summarizing, the more freedom a speed device offers, the more support it gets. Looking at the international differences, most support for a free-to-use system comes from British and French drivers; and most opposition from those in Italy, Denmark, Portugal and Belgium. Nevertheless, Portuguese and Italian drivers are relatively more in favour of a strict system than European drivers viewed as a whole.

With regard to vehicle advertising, three other questions are still more relevant. A majority of 70% is ready to declare that a car is just a means of transport and the proportion to those holding this view attains 83% in France.

The table below shows the importance of different car attributes for drivers. It is very clear that safety and safety-related qualities, such as reliability, low running costs and non polluting characteristics, are much more important for drivers than those that may be in conflict with safety, such as performance.

Importance of qualities of a car (percentages of drivers saying)				
	Very	Fairly	Not much	Not at all
Safety related:				
Safety	90	9	0	0
Reliability	83	15	1	0
Low running cost	63	32	4	1
Non Polluting	62	32	5	1
Not safety related:				
Size/Practicality	45	44	9	1
Comfort	41	47	10	2
Performance	34	41	20	4
Appearance	17	41	29	12

We asked drivers if they agree or disagree with the statement: "Car manufacturers should not be allowed to stress the speed of cars in their advertisement." Outcome: 17% agree strongly, 20% agree, 22% disagree, 14% disagree strongly, 25% neither agree nor disagree.

Conclusions:

1. Speed is an important part of driving for a significant minority of European drivers. There is, however, a clear difference between this and the taking of risks. It is clear that speeding behaviour is not experienced as risky behaviour.
2. A significant minority is in favour of restricting vehicle speed, but the opposition is somewhat bigger. There are two opposed parties within the overall European driver population. In our policy-making we can make use of the group that opposes speeding.
3. The market for 'safe' cars is greater than the general image projected by advertisements would have us believe. Safety and safety related attributes are indeed perceived by drivers as being most important. This

asks for a marketing plan of policy makers aimed at the vehicle manufacturing sector.

4.4. The infrastructure

European drivers were asked if they were in favour or against governments devoting more effort to five different road safety measures:

1. improving driving training;
2. increasing enforcement;
3. organizing more campaigns;
4. increased vehicles' technical testing;
5. improving road standards.

The last mentioned option obtained the greatest degree of support: 50%. Differences were, however, wide: 88% of Portuguese drivers, 83% of Irish and 82% of Eastern German drivers favoured better road standards. It will not, therefore, come as a surprise that the drivers in these same countries more often consider poorly maintained roads as a cause of accidents.

Indeed, lower road standards induce lower speeds. But drivers from countries with such lower standards of roads do not call for lower speed limits.

The European Union's infrastructure Working Party focuses its attention on main roads outside built-up areas. Almost one third of drivers is in favour of a 100 km/h limit on such roads, and 11% want an even higher one. At the same time, 25% opt for 90 km/h, 22% for 80 km/h and 9% for less than that. It seems either that European drivers' understanding of the risks on these roads is poor, or that they want better road conditions that would make fast driving safe.

Conclusions:

1. Opinions concerning the standards of roads differ widely in Europe, confirming the actual differences between countries.
2. Attitudes towards speed limits differ in relation to actual limits in force.
3. Especially with respect to main roads outside built-up areas, drivers' understanding of safety standards does not match the objective facts of actual accident occurrence. Education and information is needed to provide better explanations and to teach defensive behaviour.

4.5. General conclusions

The results presented in chapter 3 and 4 indicate that there is a European wide concern for road safety and big support for countermeasures. Positive attitudes towards countermeasures that promote road safety are measured predominantly in countries with a more elaborated road safety policy. Notwithstanding sociocultural differences, countries can learn a lot from each other in this respect. Furthermore, it is striking that the support for countermeasures grows when they are or may be taken in the frame of European harmonization.

The most outstanding conclusion to be made is that *a European road safety policy has high potential to improve the social climate in Europe in favour of safe behaviour on the road.*

5. The SARTRE questionnaire as a monitoring instrument for evaluation purposes

5.1. Validity of data

Evaluation of the effect of countermeasures is a very important instrument for making adjustments of policy.

Decreases of accidents and injuries are, of course, the prime indications as regards the success of road safety policy; they are the only ones to which an economic value can be attached. But also other intermediate goals of policy, in particular changes in road user behaviour patterns and changes in the determinants of these patterns (especially exposure), must be monitored.

Accident data are collected in all EU-member countries, and these will be compared, by way of the CARE programme and other programmes. Behavioural data are also collected, but to a far lesser degree and in a unstructured and unharmonized manner. Self-reported behaviour can, however, be used as a proxy, although with prudence. Road users are not always aware of their own behaviour nor of its consequences, and they are inclined not to admit offences that are absolutely contradictory to social norms. Reported behaviour is, nevertheless, an indication of actual behaviour as well as of behavioural intentions. Its validity as a proxy for reality has been confirmed both in general terms (Mc Kenna et al., 1991) and specifically with regard to speed behaviour (West et al., 1992).

Attitudes and the perception of social norms are important determinants of behaviour. Although they do not present a complete picture of the motivations for certain behaviour, they do provide a significant part of our understandings of behaviour. Attitudes and opinions about countermeasures may be thought of as 'ripening' over time. Thus, they are important in order to determine the degree of acceptability of countermeasures.

The answers to the SARTRE-questionnaire consequently provide us with some important elements for the evaluation of EU road safety policy and for that of member states; they enable us to understand better developments of road safety.

In particular, for the first time it is now possible to picture in which countries (and amongst which population groups within them) a significant potential for improvement exists, and in which specific ways drivers remain unconvinced concerning the claims made for countermeasure effectiveness.

5.2. Relevant questions and some outcomes

In this section we present some questions from the questionnaire that bear relevance to evaluation purposes. We illustrate these questions with some comparative outcomes for the various countries.

5.2.1. With regard to reported behaviour

- "In general how often do you drive faster than the speed limit on the following types of road when traffic conditions allow you to set your own speed?"

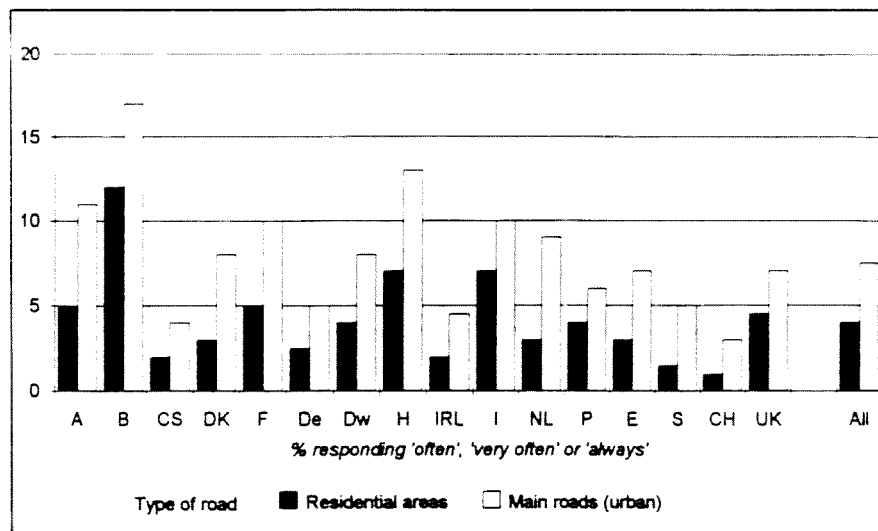


Figure 4. Frequency of self reported exceeding the speed limit on urban roads (Source: SARTRE Report 1)

- "Does the car that you drive most often have seat belts fitted?"
 - "When driving this car in the following situation, how often do you wear the seat belt in making a short journey in town / a short journey on main road between towns / a long journey on main road between towns / a long journey on motorway?"

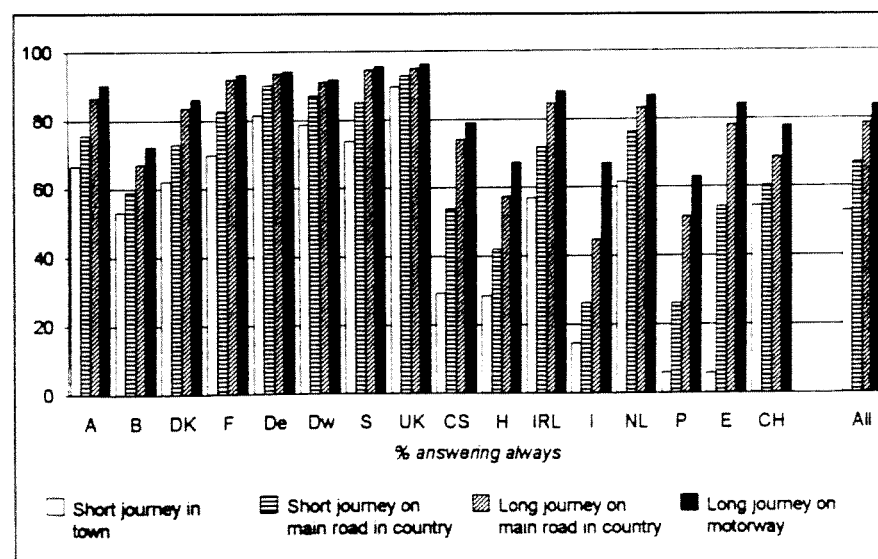


Figure 5. How often do you wear seat belts in the following situations? (Source: SARTRE Report 1)

- "In general how often do you drink alcohol in a week?"
- "In general, when you are drinking, how many units of alcohol do you typically drink?"
- "How often do you drive after drinking even a small amount of alcohol?"
- "Over the last month how often did you drive when you may have been over the legal limit fro drinking and driving?"
- "On the typical drinking occasion when you may have been over the legal limit where had you mostly been drinking?"
- "In general when you are drinking and driving afterwards, what is the maximum number units of alcohol that you drink?"

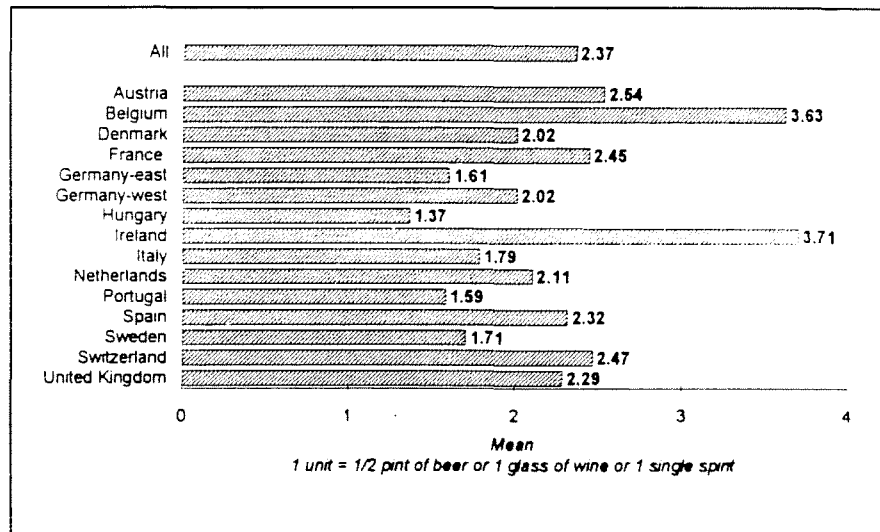


Figure 6. In general, when you are drinking and driving afterwards, what is the maximum number of units of alcohol that you drink...?

(Source: SARTRE Report 1)

- "How often do you: park on a pavement when not permitted / follow the vehicle in front too closely / dip your headlights when you meet an oncoming vehicle at night / give way to another vehicle when it has the right of way / give way to a pedestrian at pedestrian crossings / drive through a traffic light that is on amber / overtake when you think you can just make it / overtake on the inside on the motorway when not permitted / signal other drivers to warn them of a police speed trap ahead?"

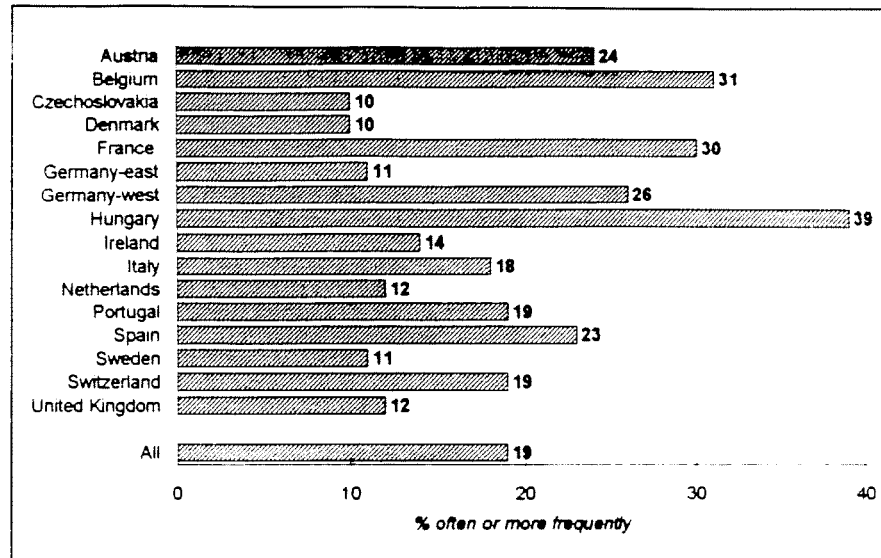


Figure 7. *How often do you signal other drivers to warn them of a police trap?* (Source: SARTRE Report 1)

Conclusion:

Some forms of road behaviour are related to lifestyle, such as alcohol consumption. For the social marketing of road safety policy, these data are important to set targets and to segment targets groups.

5.2.2 *With regard to attitudes towards road behaviour*

- "How often do you think other drivers break speed limits?"
- "If you drive carefully seat belts aren't really necessary..."
- "In most accidents seat belts reduce the risk of serious injury for drivers and passengers..."
- "When I'm not wearing my belt I feel less comfortable; as though something was missing..."
- "How important do you think each of the following qualities are in a car: appearance / reliability / low running cost / performance / comfort / size / practicality / safety / non-polluting?"
- "Could you answer yes or no to the following statements: I sometimes get very annoyed with other drivers / I enjoy driving fast / I use my horn a lot when driving / I worry a lot about having an accident while driving / I always indicate before turning right or left / I sometimes get involved in unofficial races with other drivers / I think most accidents are the result of bad luck / I enjoy taking risks while driving / I think a car is just a means of transport".

Conclusions:

These data are useful for the design of countermeasures in the field of education, enforcement and information. The comparisons between road safety and other health risks are useful for the design of the communication process.

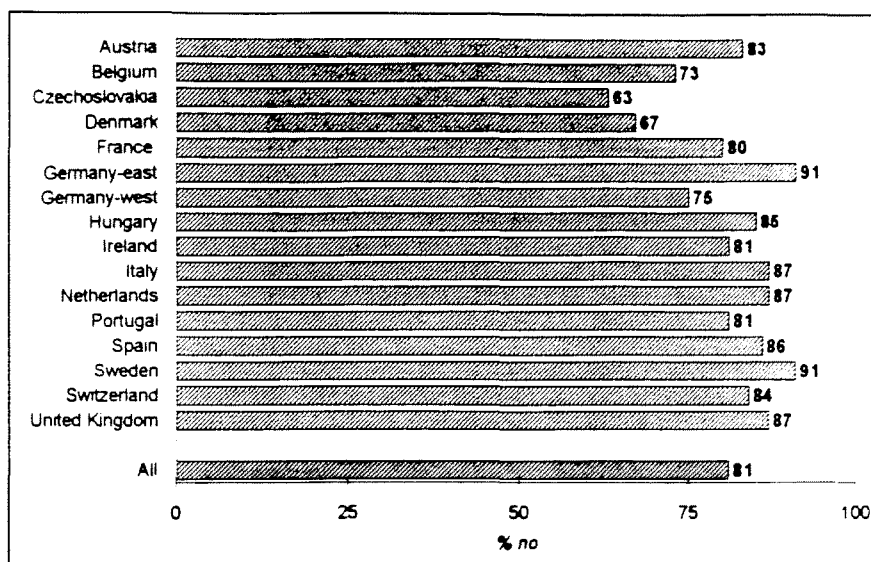


Figure 8. *I think most accidents are the result of bad luck*

(Source: SARTRE Report 1)

- "How concerned are you about each of the following issues: rate of crime / pollution / road accidents / standard of health care / traffic congestion?"

- "How concerned are you personally about each of the following risks: serious illness / unemployment / road accidents / burglary / pollution of environment / accidents at work / accidents at home?"

- "How often do you find yourself discussing with family or friends the risk of road accidents and injury?"

- "When this sort of discussion takes place how strong is the wish of those taking part to make a personal effort to improve safety on the roads?"

5.2.3. *With regard to attitudes about measures*

- "Would you be in favour of, or against, the government devoting more effort to the following road safety measures: improving driving training / increasing enforcement of traffic laws / organizing more road safety publicity campaigns / increasing vehicles' technical testing / improving road standards?"

- "Do you agree or disagree with the following statements: Penalties for driving offences should be much more severe / There are too many traffic regulations / People should be allowed to decide for themselves how much they can drink and drive / Car manufacturers should not be allowed to stress the speed of cars in their advertisement / More consideration should be given to pedestrians and cyclists when planning towns and roads".

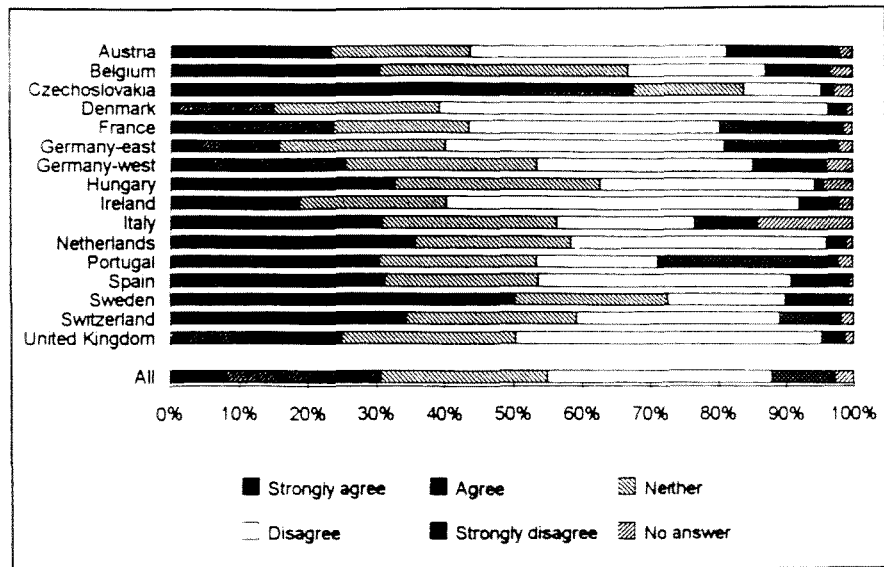


Figure 9. *There are too many traffic regulations* (Source: SARTRE Report 1)

- "People have different opinions about what the legal limit should be. Do you think that drivers should be allowed to drink: no alcohol at all / less alcohol than at present / as much alcohol as present / more alcohol than at present / as much as they want?"

- "How much are you in favour of or against the introduction of each of these measures: more breath tests by the police / harsher penalties for drivers found to be over the limit / a lower limit of alcohol for inexperienced drivers / an encouragement for hosts to limit the amount of alcohol their driver guests drink?"

- "There is a possibility of having similar laws and regulations applied to driving throughout Europe. In order to achieve this 'harmonization' would you be in favour of or against the introduction of the following measures throughout European countries: a minimum age for driving cars of 17 years / a tougher standard driving test / a penalty points system for traffic offences which results in loss of licence when exceeded / a common speed limit of 50 km/h in towns / a common speed limit of 120 km/h on motorways / a requirement that manufacturers modify their vehicles to restrict their maximum speed / a uniform low limit regarding drinking and driving / regular technical check-ups for all types of vehicle for safety reasons / regular technical check-ups for all types of vehicle to protect the environment / an obligation to use motor vehicle lighting during day-time / installation of a third braking light / an obligation to use seat belts both on front and rear seats?"

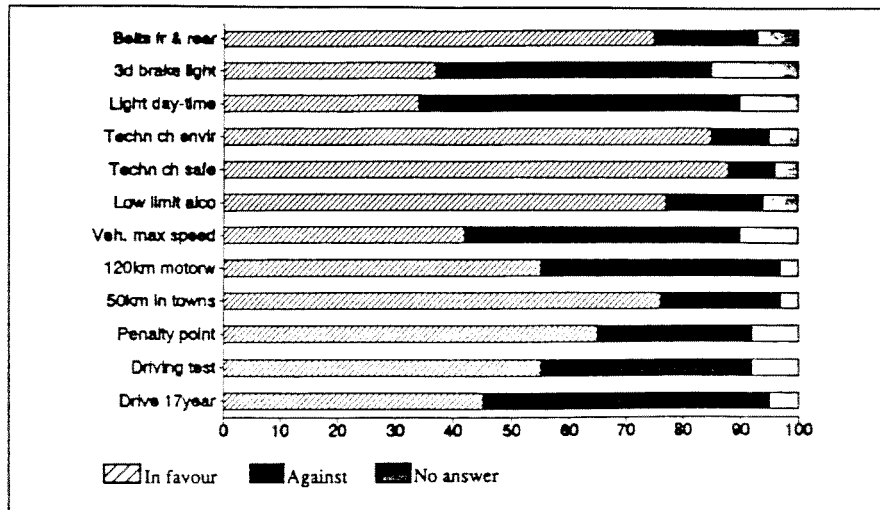


Figure 10. *Introduction of European harmonization measures*

(Source: SWOV)

- "The creation of an Agency in charge of road safety throughout Europe has been proposed. If you are in favour, do you think such an Agency should be: advisory only / responsible for drafting new laws / not in favour?"

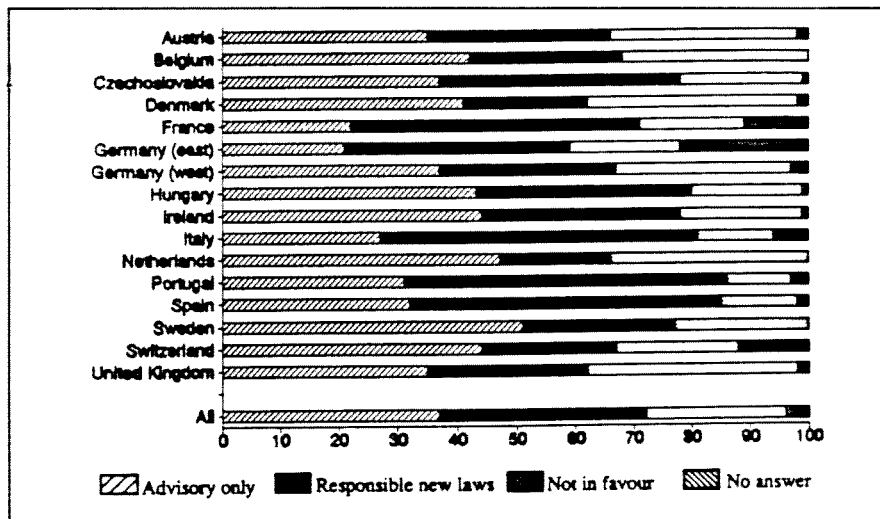


Figure 11. *Creation of an Agency in charge of road safety in Europe*

(Source: SWOV)

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