

Legislation, Regulation and Enforcement for Dealing with Distracted Driving in Europe

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Introduction

This presentation discusses the topic of legislation, regulation and enforcement for dealing with distracted driving in Europe. It comprises four main sections: legislation and regulation; evaluation; enforcement; and public attitudes towards the issue of distracted driving. Information on the topic was gathered through a classic approach of running a query on certain key words. In addition to this approach a small survey was conducted regarding legislation and regulation in European countries.

Legislation and regulation

Roughly speaking, there are three legal sources containing relevant information for European countries regarding distracted driving. Besides national legislation as the most obvious source, there are the European conglomerate of regulations, recommendations and guidelines at the European level and the international standards and the Vienna convention at the worldwide international level.

National level

A small survey was conducted asking experts of different European countries to disclose information on their national legislation, relevant to the topic of distracted driving. A clear distinction was made between causes for distraction inside the car and outside the car. As not all the Member States/countries were contacted and as not all the contacted respondents replied to our request, the information available is not exhaustive.¹ The results can be summarized as follows.

In several countries a general law is in force, stating that the driver must be in control of his vehicle at all times. Furthermore, a specific law on the use of cell phones exists in most Member States of the European Union (EU) including Austria, Belgium, Czech Republic, Italy, Netherlands, Slovenia and Spain. In addition to the Member States such a law is also in force in Norway and Switzerland. In each country where such a cell phone law exists, it stipulates that handheld cell phone use while driving is forbidden, while hands-free cell phone use is allowed. Specific laws regarding the use of other electronic devices are rare. Finally, some countries have regulations regarding billboards alongside the road, for example allowing the authorities to remove the billboard if it obstructs the view of drivers or if it compromises traffic safety in any way.

¹ European countries that replied to our request are: Austria, Belgium, Czech Republic, Greece, Italy, Netherlands, Norway, Slovenia, Spain, Sweden and Switzerland.

European level

A draft version of the revised European Statement of Principles on the Design of Human Machine Interaction (ESoP, 2005) was recently released. This statement summarizes essential safety aspects regarding the Human Machine Interface (HMI) for in-vehicle information and communication systems. Both public organizations and the industry were represented in the task force that revised the previous version of the statement. Several principles of this document explicitly refer to distraction and how to avoid it. The European Commission (EC) thus seems to be concerned with the issue of distracted driving, as was already the case when the original version of this document was published in 1999 (Janssen, 2000). Good and bad examples are given with each principle in the newly available draft version, making the principles less vague than before.

In a subproject of the European Integrated Project AIDE (Adaptive Integrated Driver-Vehicle Interface; <http://www.aide-eu.org>) an overview was made of the available guidelines and standards relevant to HMI developments of in-vehicle information systems (IVIS) and advanced driver assistance systems (ADAS) (Schindhelm et al., 2004). Three regulations and directives concerning type approval in Europe are mentioned, more precisely regarding interior fittings of motor vehicles and mirrors and supplementary systems for indirect vision.

International extra-European level

Besides the numerous international standards relevant to HMI (for an exhaustive overview, see Schindhelm et al., 2004) another important legal source is available at international level, more precisely the Vienna convention of 1968 and related amendments (United Nations). The Vienna convention on road traffic stipulates in article 8 point 5 that “every driver shall at all times be able to control his vehicle...”. Several European countries signed and ratified this convention, and as discussed in the previous section on national legislation, have, in accordance with ratification, inserted this particular clause in their national legislation.

Evaluation

Several European countries commissioned some institute or university to conduct a study on the influence of the use of cell phones on traffic safety, including Belgium (De Proft et al., 1997), Norway (Sagberg, 1998) and Sweden (Patten et al., 2003). These studies have all been carried out mainly to advise the government whether or not to vote to implement a bill regarding prohibition of cell phone use while driving, rather than to evaluate an already existing law.

Although there is an abundance of European research projects on the topic of HMI (for an overview, see Hoedemaeker et al., 2002; and http://prevent-ip.org/en/links/european_projects), not a lot of evaluation research of the impact of legislative and regulatory measures concerning distracted driving has been carried out to date.

Another European project relevant in this regard is SafetyNet (<http://safetynet.swov.nl>), a project to build a European Road Safety Observatory as defined in the EC White Paper on Transport Policy (EC, 2001). The Observatory addresses the specific need for co-ordinated accident and injury data resources that will supply the basic information supporting safety policy decision making at EU and national level. In one of the work packages of this project a methodology for traffic safety performance indicators is being developed, but gathering

information on the prevalence of distracted driving is not planned. However, gathering in-depth accident data is part of another work package in SafetyNet. This will allow for further investigation of specific accident causes and the related databases could be considered as promising tools for future evaluation research.

Enforcement

To our knowledge information on enforcement of the relevant laws in force is scarce. Although plans are underway to set up a uniform enforcement data collection system in Europe as one of the main objectives of the recently approved European project PEPPER (Police Enforcement Policy and Programmes on European Roads), the attention will primarily be focused on speeding, drink driving and seatbelt use.

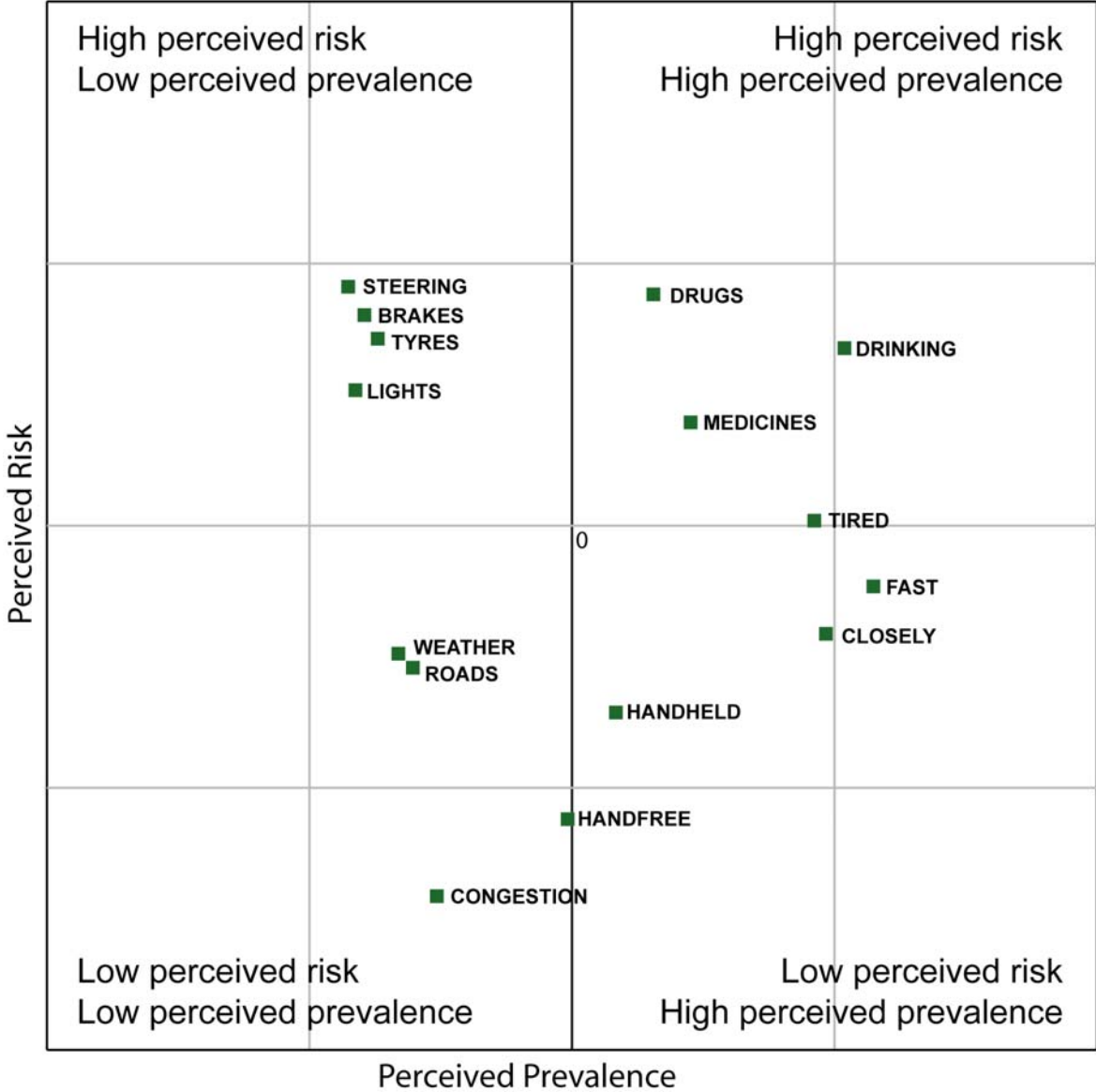
Public attitudes towards the issue of distracted driving

Research conducted in the USA suggests that drivers are not aware of the negative effects of using cell phones on their driving performance (Lesch and Hancock, 2004). An in-depth analysis carried out as part of the EU project SARTRE3 (Social Attitudes to Road Traffic Risk of car drivers in Europe; <http://sartre.inrets.fr>) corroborated this conclusion for European drivers (Vanlaar and Yannis, 2005). A perceptual map was drawn based on the outcome of a multidimensional scaling of a dataset comprising data from 23 countries. The map has two dimensions, perceived prevalence and perceived risk, and four quadrants:

- 1) High perceived risk/low perceived prevalence items;
- 2) High perceived risk/high perceived prevalence items;
- 3) Low perceived risk/high perceived prevalence items;
- 4) Low perceived risk/low perceived prevalence items.

Consider driving under the influence of illicit drugs or alcohol and driving using a handheld cell phone or a hands-free cell phone on the perceptual map (Figure 1). Drugs and drinking are both considered as high-risk phenomena, while both forms of cell phone use while driving are considered to be low risk phenomena. Drivers attribute a low risk level to cell phone use while driving while there is a consensus that both items are related to an elevated risk (e.g., De Proft, et al., 1997, Oei, 1998, and Patten et al., 2003). One study even found evidence that the elevated risk level is comparable to the risk related to driving under the influence of alcohol with a blood alcohol concentration (BAC) of 0.8g/l (Direct Line Motor Insurance, 2002). The resulting perceptual map indicates that drivers might underestimate the danger of using their cell phone – either handheld or hands-free – while driving.

Figure 1: Perceptual map with four quadrants, each referring to high or low perceived risk items and high or low perceived prevalence items



Conclusion

Distracted driving features have been incorporated in the available legislative and regulatory documents for several years, albeit originally in a disguised and very general fashion. Only recently, in parallel with fast developing technologies like cell phones, legislation exists that describes aspects of distracted driving more concretely. However, due to the fast pace of developing technologies, legislation in Europe can no longer keep up with the constantly changing reality; a phenomenon, which is not unique to Europe but rather common all over

the modern world. Therefore, other instruments like recommendations, standards and guidelines are becoming available.

Evaluation of the existing laws and information on enforcement of these laws is scarce or not at all available. Some plans are underway to collect information that could serve as data to conduct evaluation research. The uniform collection of enforcement data regarding distracted driving, however, is not yet considered to be a priority. Lack of a clear definition of distracted driving and of the risks related to the different aspects of distracted driving probably discourages involved parties from collecting information about the phenomenon.

Finally, there is evidence suggesting that European drivers underestimate the danger of using their cell phone – either handheld or hands-free – while driving. This is alarming considering the consensus in the literature about the elevated risk of phoning while driving, regardless of how the cell phone is used. Since this conclusion is probably just the tip of the iceberg, more research is needed to investigate drivers' attitudes towards the relevance of other aspects of distracted driving.

References

De Proft, K., Pauwels, J., Beirinckx, M., 1997. Effecten van het rijdend telefoneren op het rijgedrag. Faculteit Lichamelijke Opvoeding en Kinesitherapie, Labo Motorisch Leren, KULeuven, Leuven.

Direct Line Motor Insurance, 2002. The Mobile Phone Report. Direct Line Insurance, Croydon.

EC, 2001. White Paper – European Transport Policy for 2010 – Time to Decide. EC, Luxembourg.

ESop, 2005. European Statement of Principles on the Design of Human Machine Interaction. Draft, June 2005.
(http://www.europa.eu.int/information_society/programmes/esafety/index_en.htm).

Hoedemaeker, M., de Ridder, S.N., Janssen, W.H., 2002. Review of European Human Factors Research on Adaptive Interface Technologies for Automobiles. TNO Human Factors, Soesterberg, The Netherlands (TM-02-C031).

Janssen, W.H., 2000. Driver distraction in the European statement of principles on in-vehicle HMI: a comment. Paper 'Internet Forum on the Safety Implications of Driver Distraction when Using In-Vehicle Technologies'; NHTSA.

Lesch, M.F., Hancock, P.A., 2004. Driving performance during concurrent cell-phone use: are drivers aware of their performance decrements? *Accident Analysis and Prevention*. Vol. 36, No. 3, pp. 471-480.

Oei, H-L, 1998. Telefoneren in de auto en verkeersveiligheid. SWOV, Leidschendam (R-98-41).

Patten, C., Ceci, R., Malmström, T., Rhenberg, K., 2003. Mobiltelefonerande i trafiken (Vägverkets utredning om användning av mobiltelefoner och andra IT-system under körning). Vägverket, Borlänge.

Sagberg, F., 1998. The effect of mobile telephone use on traffic accident risk. Institute of Transport Economics, Oslo, Norway (report 387/1998).

Schindhelm, R., Gelau, C., Keinath, A., Bengler, K., Kussmann, H., Kompfner, P., Cacciabue, P. C., Martinetto, M., 2004. Report on the review of the available guidelines and standards. AIDE-BASt-D-WP4_3-R1-V04-Review of Standards.DOC.

United Nations, 1968. Convention on Road Traffic. Done at Vienna on 8 November 1968.

Vanlaar, W., Yannis, G., 2005. Perception of road accident causes. *Accident Analysis and Prevention*. Vol. 38, No. 1, pp. 155-161.