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Distraction

Thematic File Road Safety N°5

(2nd edition, 2019)



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Executive summary

Distraction, which occurs when the driver's attention is drawn away from the actions required for driving to some other activity, is a major problem on the road. A distracted driver may still be alert, but instead focuses his/her attention on something other than driving, such as an activity that causes visual, auditory, physical and/or cognitive distraction. Potential distracting activities include: telephoning, reading and writing messages, operating a navigation system, talking with a passenger, eating, drinking and so on.

In Belgium, distraction while driving can be punished by three statutory articles in the Highway Code. Article 8.4 states that it is forbidden to make telephone calls while driving. Article 7.2 and Article 8.3 state that a driver must be capable of driving properly at all times and that his/her behaviour may not endanger other road-users. These two statutory articles may be used to punish forms of distraction other than making telephone calls.

There have been many studies dealing with distraction on the road, and particularly with regard to making telephone calls while driving. However, figures about the prevalence of this distraction are hard to come by. Research shows that motorists can be occupied by distracting activities for 25% to 30% of the time they are driving. But it is difficult to establish a causal link between distraction and traffic accidents. However, it is estimated that distraction has a role to play in causing between 5% and 25% of all road accidents.

Telephoning at the wheel

Making telephone calls while driving has a significant effect on driving behaviour. Possible consequences are: slower reaction times, reduced control over the vehicle, less awareness of the situation resulting in noticing changes in the traffic less quickly, taking more risks, less matching of speed and driving behaviour with the traffic conditions, and behaving in an exaggerating fashion to make up for being distracted. This takes the form of driving more slowly and allowing more distance to the car in front. Making calls hands-free is also dangerous, despite the reduced level of physical and visual distraction, because the level of cognitive distraction is just as high. Entering a telephone number while driving also has an effect on driving performance.

Research shows that between one-third and one-half of motorists use the telephone while driving. And although phoning is a frequent activity, it only takes up 1.3% of total driving time. Young drivers are more inclined to use a mobile phone and the effect this has on their driving behaviour is even more pronounced than it is for older drivers. Young people also consider using a mobile phone while driving to be less dangerous than older drivers do.

The risk of accident for drivers who use the telephone while driving is 3 to 4 times higher than for drivers who don't.

We can see that a "do what I say, not what I do" attitude prevails when it comes to making calls while driving. On the one hand, drivers know that making calls while driving is risky and they believe that doing so is dangerous. Having said that, making or receiving calls while driving is something they do themselves. According to the latest attitude figures among Belgian drivers, 91% agree that their level of attention for the traffic reduces when making calls that are not hands-free. 95% of drivers think that this is dangerous. Yet 32% of these drivers still admit to making 'the odd' phone call, holding their phone while driving.

Texting while driving

Texting, i.e. reading and writing messages while driving, causes physical, visual and cognitive distraction. The effect that texting has on driving ability is very similar to the consequences of making calls while driving: longer reaction times, the driver is less able to stay in the centre of the driving lane, the distance to the car in front becomes shorter, the driver tends to look away from the road frequently and various hazards and traffic signs are not noticed and interpreted as well as they should be. Writing a text message has more serious effects than reading a message. The smooth surface of a touchscreen requires more visual input, which means that drivers have to look at the phone more often. And having a smartphone means that a driver can do more than just make calls and send messages. For example, using a smartphone for social networking can have an even greater adverse effect on a person's driving ability than making calls hands-free and texting while driving.

International research shows that 12% to 16% of drivers read or send messages while driving, with reading messages more common than sending them. And younger people are more likely to text while driving than older drivers.

Texting while driving has a role to play in 2% to 3% of accidents. Texting while driving is particularly dangerous for professional drivers, for whom the risk of an accident is 23 times higher than for professional drivers who don't send or read texts while they're driving.

Advertising signs along the roadside

Advertising hoardings along the side of the road can also cause distraction, especially when they feature moving images, are placed centrally in the field of vision and at eye level, or if the message is loaded with emotion. Reaction times increase, the driver's eyes wander more often from the road, relevant traffic signs aren't noticed as well as they should be, responses to road signs are slower and the driver is less able to steer a correct course.

There are no prevalence figures available on this issue and research into the risk of accidents posed by advertising signs shows ambiguous results at best. Some studies indicate that there are more road accidents in the vicinity of advertising hoardings, while others suggest ads have no effect on road accidents.

Other forms of distraction while driving

Operating a music device may have a negative effect on driving ability. This is particularly the case for more complex actions, such as finding a specific track or song. The possible consequences of this include: being less able to steer the vehicle correctly, slowing down, longer reaction times and looking around inside the vehicle significantly more often. 47% to 95% of motorists operate a music device while driving, although this only accounts for 1.3% of total driving time. This means it is only a brief activity.

Music can also have an effect on driving behaviour. Loud music causes slower reactions and more traffic offences, while music with a fast beat prompts the driver to speed and commit more offences. However, music can also help drivers to stay alert and as such has a positive effect on a person's driving ability.

Using other portable electronic devices can also have a negative impact on driving behaviour. It's not that the devices themselves are unsafe, but rather the way in which they are used by the driver. One example of unsafe use is entering a destination into a navigation system while driving. 12% of drivers admit to doing this.

Eating and drinking while driving cause greater discrepancies in the vehicle's lateral position, as well as a reduction in speed and looking elsewhere (i.e. other than at the road) more frequently. Motorists spend between 1.4% and 4.6% of their driving time eating and drinking.

Other forms of distraction that involve a high individual risk of having an accident include reaching for an object inside the car, looking at an object outside the vehicle and carrying out personal grooming and hygiene activities.

Distraction when cycling

Making telephone calls when cycling or walking can also be hazardous. Telephoning while cycling causes the rider to slow down, increases reaction times and narrows the person's field of vision, which means that the rider is less inclined to see things. Pedestrians who spend time on the phone while walking along take more risks when crossing the road. They also walk more slowly, which means it takes them longer to cross the road and makes them more inclined not to see objects and obstacles that they otherwise would.

There are few figures available as to prevalence. In an exploratory study conducted by Vias institute, more than 12,000 road-users, including cyclists, were observed at traffic lights in Brussels, Liège and Antwerp. The study showed that 5% of cyclists used their phone at red lights, compared with 18% for pedestrians. Young pedestrians used their phones the most, with some 26% of these pedestrians reaching for their phone at red lights. Also, 7% of pedestrians were still holding their phone in their hand or holding it to their ear while crossing the road.

Cyclists who make or receive calls virtually every time they are out riding are 1.4 times more likely to have an accident than those who don't. This means that the risk of using a mobile phone while cycling is smaller than the same risk while driving.

Professional drivers

Some studies suggest that professional drivers, who are required to carry out other tasks at the same time, display distracted forms of behaviour more often. In fact, an observation study among Belgian drivers shows that the drivers of vans and trucks carry out distracting activities more often, and hence it is professional drivers in particular who are distracted behind the wheel. However, these drivers are less likely to be affected

by the consequences of distracted behaviour. For example, using a mobile phone to make calls has no influence over the risk of accidents likely to occur to professional drivers. Reaching for a telephone or other object while driving increases the risk of an accident by a factor of 3, whereas sending messages while driving multiplies the risk by a factor of 23.

Key figures for Belgium

The first Belgian observation study into distraction was conducted in 2013 and examined the frequency with which Belgian drivers carry out activities that are distracting. The study showed that 8.1% of drivers are guilty of carrying out a potentially distracting activity while driving. 3.2% of Belgian drivers are distracted by their mobile phone, with 2.0% using the telephone holding the phone in their hand and 1.2% making calls hands-free while driving. This percentage is higher on motorways. The drivers of vans and commercial vehicles use the phone more frequently while driving than other drivers. 1.2% of motorists also use their mobile phones while driving for things such as reading messages or using an app. Men do so more than women and using a phone occurs more frequently on motorways than on other types of road.

The 2015 national attitude survey revealed that of the respondents questioned, 32% said they made calls holding the phone in their hand, while 41% called hands-free. 34% admitted they had sent a message while driving, while 46% said they had read a message while on the move. The use of mobile phones while driving has increased significantly compared with 2009. The younger the driver, the more frequently mobile phones are used. Young drivers consider the risk of using a mobile phone while driving to be lower than older drivers do.

The ESRA project, which gathers reliable and comparable information about attitudes and behaviour on the road in various European and non-European countries, shows that Belgian drivers are among the highest-scoring countries in terms of having used a phone hands-free while driving over the past year (28% compared with the European average of 38%) or making calls holding a phone in their hand (41% compared with the European average of 51%). When it comes to reading and sending text messages or e-mails, Belgian drivers are ranked among the average for European drivers (37% for reading a text message/e-mail and 27% for sending a text message/e-mail).

Possible measures

Legislation and enforcement are not very effective when it comes to preventing distractions while driving. In fact distracting activities are difficult to pinpoint. However, were a ban to be imposed through legislation, it would have to be technology-neutral. Legislation goes hand in hand with enforcement. A high subjective chance of being caught may lead to a change in behaviour.

It is for this reason that awareness campaigns are very important, because they can point out to drivers the dangers of becoming distracted while driving. They can also help to create a social norm whereby engaging in distracting activities while driving becomes unacceptable.

Attention should also be focused on awareness as part of the process of learning to drive. Young learner-drivers should be given information about the dangers of distraction and about the various strategies that can be used to counter distraction. Attention must also be paid to the dangers of becoming distracted while driving during the advanced driver training courses that are mandatory for professional drivers.

Businesses and companies can also make their own contribution by implementing a safety policy related to distraction behind the wheel. Rules and regulations should be communicated clearly to employees and they need to be informed on a regular basis about the risks of distraction. Plus they need to be given support with practical training and courses.

Finally, there are plenty of technological solutions that might be considered, such as warning systems that monitor the level of distraction and which tell drivers that they are being distracted. These systems could even ensure that certain devices or equipment cannot be used, while driving and workload managers could be implemented to check on the level of workload a driver is exposed to and which stop incoming calls when that workload is too high.

