CHAPTER VIII

CONCLUSIONS
The trucks and lorries hurtling down our highways often sport a slogan on their rear, which reads something, like 'remove your eye from the road and you land in a disaster'. Keeping the eye on the road is an obvious and oft repeated advice to drivers but keeping one’s mind on the road is equally important.

Many studies conducted in India and abroad above made it clear that a large number of traffic accidents are caused due to distracted driving. The Center Stage in this issue takes a look on the variety of distractions that a person has to face during driving and how it affects the safety on our roads.

To keep pace with the ever-increasing number of vehicles on our roads the number of petrol pumps are also increasing. However, due to the fact that each vehicle spends just over a minute or so at these fuel-vending points, their safety aspects are overlooked. Rear view highlights some of the safety issues related to petrol pumps.

Counsel in this issue continues its focus on Seatbelts and Safety in Cars. We also have in this issue a special feature on ‘Safety Road Map- New Vehicular Regulations’, which gives various rules and regulations governing the requirements of vehicular safety.
CONCENTRATION NEEDS OF DRIVING TASK:

Driver distraction is a huge unrecognized danger. It lead to slowed reactions, distracted perception, impaired co-ordination, decreased visual and auditory awareness, disorientation and slowed mental processing. Any of these impaired judgments increase the likelihood of a motor vehicle crash. In general, driver distraction is one of the leading causes of road accidents.

A driver requires certain skills to perform his driving task efficiently. The skills needed by a driver include:

- **Visual Skill (seeing):** e.g. watching the road in front and around the vehicle, using mirrors, shoulder checks, checking gauges, speedometer etc.

- **Auditory Skill (listening):** e.g. squealing of brakes, the sirens of an emergency vehicle, Vehicle sound etc

- **Bio-Mechanical (doing –hand-eye co-ordination):** e.g. turning the steering wheel, activating signals, headlights, horn, pressing the accelerator, brakes, clutch etc.
Cognitive (Thinking): e.g. anticipating any future movements, assessing situation such as movements of other vehicles, weather conditions, preparing to avoid hazards etc.

There is general agreement that distracted driving is the fourth most serious detriment to safe driving after drunken driving, aggressive driving and speeding. As per Rospa, U.K. in attention has a dramatic effect on safety. A driver at 50 kmph who exhibits 1-5 seconds of inattention will come to rest at the same spot in response to same stimulus as a driver at almost 75 kmph with no inattention. Research in Europe suggests that 2-5 seconds of inattention is fairly common place-, which can produce a similar effect to driving at over 90 kmph zones in a 50 kmph zone. A driver’s ability to manage distractions varies widely and can change day-to-day depending on their level of stress and fatigue.

Driving is a serious responsibility and it demands and deserves full and undivided attention of the driver. However today’s fast paced world is filled with many driver distractions which contribute
to crashes and injuries. Distraction is anything that takes hands, eye or attention of the driver away from the task of driving. It could be due to an advertisement hoarding, listening to cell-phone, changing CD or cassettes, reading newspaper or map, interacting with passengers in the case, eating. Drinking or smoking while driving, something going on outside the car, personal grooming or something as simple as trying to set the speed of windshield wipers.

Driving is a skill that requires constant and complex co-ordination of mind and body of the driver. It involves multi-tasks i.e. operating a heavy machinery at high speed, navigating across changing terrain, estimating speeds and distances and responding to all the other drivers and obstacles. Putting more activity in the mix- even talking to passengers or changing CD can be enough to make lose control of the vehicle or fail to respond in an emergency.

Longer commutes, an increase in heavy traffic and bottlenecks, the availability of in vehicle technology, and a blur between work and
personal time are all factors that result in driver distraction. Moreover time on the "road more traveled" results in less time at home or at the office, causing drivers to feel the pressure to multi task just to keep up with their responsibilities. Countless distractions tempt drives to forget that their primary responsibility is to drive focused and stay safe. Drives who is distracted fail to recognize potential hazards on the road and react more slowly to traffic conditions decreasing their margin of safety.

**TYPES OF DISTRACTIONS:**

Although it is commonly believed that cell-phone usage is the main distraction to safe driving, in fact, it is just one of many everyday distractions that drivers encounter. The list of driver distractions that contributes to crashes and injuries is long. However, the most common driving distractions are:

1. Adjusting the radio, cassette or CD player,
2. Using/dialing a mobile phone,
3. Eating and drinking while driving,
4. Other occupants in the vehicle,
5. Outside distractions like accidents, friends in other vehicles,
vehicles stopped by police, roadside advertising, new construction etc.

6. Personal grooming,
7. Pre-occupation in thoughts or mind wandering,
8. Reading and writing,
9. Activities of fellow drivers in the traffic stream,
10. Drowsy driving and driver fatigue,
11. Drinking and driving,
12. Smoking while driving.

ADJUSTING THE RADIO CASSETTE OR CD PLAYER:

A driver may think that adjusting the radio or changing the cassette or CD player is a routine. However, inserting a CD or searching for a radio station the six times more likely to get into an accident them glancing at the fuel gauge or speedometer. If a driver has to change the CD while driving, he has to get the right CD in his hand, get it out of the case, glance down to flip the right side up, look over again to get into right slot and press play. As he does all his eyes leaves the road, his hands leave the controls and his mind must co-ordinate all the actions. For the time it takes to do all, his vehicle is on "auto-pilot" - minus the pilot.
A National Highway Traffic Safety Administration Survey in the U.S. in 2002 found that 66% of drivers reported changing radio stations or looking for CDs or tapes. A May, 2001 report by the American Automobile Association identified driver distraction as the cause of 9% of serious or fatal crashes. In that adjusting the radio/CD etc. accounted for 11.4% of the total reported distractions - next only to things outside the vehicle (29.4%). It was also rotated less than 20 years old were more distracted by CD player. The Foundation for Traffic Safety at the American Automobile Association (AAA) videotaped volunteered drivers who did not know they were being tested for distracted driving. It found that 92% of the drivers would fiddle with radios or CD players.

An Israeli researcher Warren Brodsky (Transportation Research F, Vol. 4, Page 219) says drivers who listen to fast music, in their cars may have more than twice as many accidents' as those listening to slower tracks. As the tempo increased, Brodsky found drivers took more risks, such as jumping red lights and had more accidents
USING CELL PHONES WHILE DRIVING:

Cell phones are important part of every day life, but using them while driving increases one's chance of getting into an accident by 400 per cent. When the driver is using the cell phone while driving, he searches for a number, dialing or talking on a cell phone; he is not watching the road like he should. Hands free features help, but they can't prevent him from becoming involved in a conversation and losing concentration.

A survey of 837 drivers with cell phones found that almost half swerved or drifted into another lane, 23 % tailgated, 21 % cut off someone, and 18 % nearly hit another vehicle while using the phones. Cell phones using drivers' estimates that they spend and a verage 4.5 minutes per cell while driving. However, 13 % of drivers typically spend 10 minutes or more per cell. Approximately one in four (26 % ) drivers report involvement in motor vehicle crash in the past five years.

There are different views on the distractions caused by the cellphones use. AAA foundation for Traffic Safety in U.S.A. found that of the 26,000 traffic accidents analyzed less than 2 % of these caused by
distracted driving involved wireless phone use. A Study (Journal of Medicine, New England, 1997) found that talking on a phone while quadrupled the risk of an accident and was almost as dangerous as being drunk behind the wheel. Conversing on cell phones, while driving, disrupts the drivers attention to the visual environment leading to “in-attention blindness” or the inability to recognize objects encountered in the driver’s visual field.

Cell phones may be dangerous or not but while using one, attention obviously wanders and accidents can result. Using mobiles while driving in many countries is illegal. Portugal has completely banned them. Italy, Poland, Switzerland, Slovakia, Slovenia, Hungary and Spain require motorists to use hand-free sets. Making calls while driving is permitted in Germany, but hand-free sets are recommended. Safety campaigners in U.K. had been pressuring the government to introduce the laws to ban the use of mobile phones use is prohibited in Australia, Brazil, Chile, Denmark, Germany, Greece, Hungary, Italy, Poland, the Philip-pines, Romania, Slovenia, South Africa, Spain, Switzerland, Turkey, and the United Arab Emirates. Similar bans are in Hong-Kong and India.
EATING AND DRINKING WHILE DRIVING:

One of the most common driver distractions is while he or she is eating and drinking while driving. These days, we all seem to be in a rush and may scarf down our breakfast or lunch on our way to work. Some of the worst things while driving are coffee/tea, a hot spill on your leg that will certainly distract you, and also the hamburgers or sandwiches that drop stuff all over you while you are driving. Erie stuff that leaves you with greasy hands that could slip off the steering wheel. Similarly things like chocolate and jelly doughnuts that leave your hands sticky. Eating while driving, fumbling with napkins, condiments, wrappers, and beverages means you are not watching the road, can be messy and dangerous.

In the 2003 Nerves of Steel Survey, almost two thirds admitted to drinking beverages such as coffee or soft drinks and more than half had eaten while behind the wheel. A survey found nearly half of the drivers reported eating or drinking while driving. Similarly the American Automobile Association (AAA) videotaped volunteer driver as who didn’t
know they were being tested for distracted driving, and found that 71% are or drank. Researchers have also found that teenager's indulge more in eating and drinking as compared to older drivers.

**OTHER OCCUPANTS IN THE VEHICLES:**

Dealing with passengers is one of the most frequently reported causes of distraction the younger the passenger, the bigger the potential distraction. Energetic teen passengers can be particularly distracting especially to inexperienced, young drivers. Managing children and infants also requires special attention. Researches that kinds are four times more distracting than adults as passengers and infants eight times more distracting. Infants in distress require approximately 10 seconds of attention. Driving at a speed of 55 km per hour over 170 m without attention to the road, an accidents waiting to happen: Also when the driver gets into a discussion with co-passenger, his mind can become absorbed more with the discussion than with the driving. The Insurance Institute for highway Safety, U.S.A. reports that for every 1.6 km they drive, tens are four times more likely you be involved in a crash than other drivers.
Additionally, the crash risk increases with the number of passengers.

IN the 2003 Nervous of Steel Survey Commissioned by the Steel Alliance and Canada Safety Council, it is reported that over on quarter of the 88% drivers survived across Canada had argued with passengers. Another common driving distraction is getting into emotional or heated debate while driving or listening and intervening as your children in the backseat start with other passengers. It was reported by the AAA Foundation for Traffic Safety that 20-29 years old drivers are distracted more by other passengers in the arc. Also 2001 Neta Survey reported that 96% drivers were talking to passengers.

DISTRACTIONS OUTSIDE THE VEHICLE:

Out of the car distractions include friends in other vehicles advertisement hoardings, construction activities, accidents and hotties walking down the street. Sadly, teenagers don’t have staying focused. The study (AAA, 1997) found that during more than three hours of driving for the study, all of the
drivers were distracted at some point, 90% by something outside the car and 100% by something inside the vehicle. The mostly frequently reported source of distraction for drivers of vehicles in tow away crashes was outside persons and objects (29.4%). It was also observed that those aged 65 years were more likely to have been distracted by objects and events outside vehicles e.g. other vehicles, signs, animals, police, cars, children, pedestrians, bicycles, crash scenes, billboards and road construction. Another study (Gage A & James Ellis, 2003) found that drivers watching traffic events outside their own vehicles—‘Often’ car crashes—was implicated in 13% of all crashes. About 10% of other crashes involved drivers to look at scenery or landmarks. Altogether about a third of all distracted driver crashes involved watching something outside the vehicle.

PERSONAL GROOMING:

Though not very common, however, some of the driving distractions are also due to personal grooming while driving. The National Household Travel Survey (NHTS) in 2001—2002 showed that around 8% drivers were engaged in personal grooming. A 61% of drivers
perceived personal grooming to be a potentially distracting behaviour. People put on make-up, especially lady drivers, and style their hair while driving. 2001 NETS Survey indicated that 19% drivers were grooming while driving.

PRE-OCCUPATION OF THOUGHTS OF MIND WANDERING:

If a driver is pre-occupation in his or her thoughts, then he or she is not giving full attention to the tasks of driving. One is thus distracted and so can be involved in an accident. If you are upset, had a fight with your wife or husband or thanking about that big meeting with the boss while you are driving home, your body may be behind the wheel, but your head is back at the office and not concentrating on the task of driving. A study (journal of Experimental Psychology, June, 2003) found that overall, distractions of any type-reduced drivers' ability to detect changes on the road by up to 30%. Interestingly, the researchers found that 'endogenous' behaviour i.e. things occurring inside a drivers' mind are just as 'exogenous' behaviour i.e. talking on the phone.
Thoughts that require mental output rather than simply absorbing are the most distracting. Thoughts that require visualizing other spaces, especially if it involves motion, are also bad. Because what is being visualized may clash with the motion of the car. And any mental activity with emotional impact, such as arguing with a passenger or anxiety about an upcoming appointment, is also particularly distracting. Strong emotions reduce the ability of driver to think quickly. One can make the wrong decision or not make the right one fast enough. Also it can make more aggressive with other road users.

**READING NEWSPAPER / MAPS ETC. :-**

Reading a newspaper, a book or a map are examples of activates what people should not do while driving. If a driver is unfamiliar with he is going, it is better to check the route before departing avoid stress and distractions caused by seeing a map or directions. A 1993 study conducted as the University of Michigan Transportation Research Institute rankled the relative distraction of various tasks conforming drivers on a scale of 1 to 10. The most distracting task, reading a map was
found to be almost twice as distracting as talking on a car phone.

The National Household Travel Survey (2002) in U.S.A. showed that 12% of drivers read a map or directions while driving and around 4% read printed material. Also in around 10% of all trips drivers look at maps or directions. The survey showed that 80% drivers feel reading printed materials such as book, newspaper or mail makes driving much more dangerous. The research funded by the AAA Foundation for Traffic Safety found that around 40% drivers were reading or writing while driving.

**ACTIVITIES OF FELLOW DRIVERS:**

The National Household Travel Survey 2003 in U.S.A. reported that not only do drivers perceive distracting behaviour as more dangerous, but drivers also feel that some actions of other drivers are major threat to their safety. About 70% drivers felt it to be a major threat to their safety when other drivers looked at maps for directions while driving. Just over 50% felt that the use of cell phones while driving was a major threat to their personal
safety. In the 2003 Nerves of Steel Survey four out of five respondents stated that they had seen other drivers using a cell phone while driving.

DROWSY DRIVING AND DRIVER FATIGUE:

A driver is also disturbed from his driving task when he is feeling or has fallen asleep. The National Household Travel Survey, U.S.A. in 2003, reported that a significant number of drivers have experienced drowsy driving. Specially 37% of drivers had nodded for at least a moment or fallen asleep while driving at least once in their driving career and around 8% had done so in the past six months. Nodding off or falling asleep was observed to be more prevalent among drivers in age group 21-29 (13%) and in males (11%) and was least prevalent among drivers over age 64 (4%) and females (5%).

The study conducted in Norway in 2003 indicated that among the private drivers 44.8% had experienced falling asleep while driving one time or another and 11.1% experienced this during their previous year. It also indicated that few drivers seemed of the severity of sleep-related accidents
more so with private drivers (30%) as compared to professional drivers (50%). Also professionals to a larger degree take action when feeling tired behind the wheel compared to the private drivers—both in regard to measures before the drive and in regards to measures during a drive.

In the United Kingdom, driver fatigue is a contributory factor in around 10% of all road crashes involving car drivers and up to 30% of crashes on high-speed roads at certain times of the day. In Australia, it is estimated that up to 29% of fatal road crashes could have fatigue as a primary causal factor. Long, undemanding and monotonous driving is prone to induce sleepiness and in the United Kingdom, this occurs particularly on motorways where 20% of crashes are attributed to driver falling asleep at the wheel.

**DRINKING AND DRIVING:**

Alcohol has very high negative effects on driving and invariably causes distraction to the drivers. First of all, it decreases concentration and alertness, increase impulsiveness and risk-taking behaviour. It interferes
with co-ordination of mind and body. It also clouds thinking and affects judgment. It affects vision and delays reaction. Even small quantities impair driving skills. People are not aware of the impact of drinking on driving. People think drinking just a little is safe. They think that they will drive slowly after drinking. Also there is a feeling that beer and toddy are safe drinks. However, all these are myth only.

According to a study conducted (CRR, 1971) it was revealed that non-drunken drivers took longer time to react to complete situations than the drunken drivers. However, drunken drivers showed a lot of tremor in hand indicating that these drivers had poor hand steadiness as compared to the non-drunken drivers. Also higher mental functions like reasoning and thinking were seriously impaired under intoxication. Alcohol also impaired the performance of drunken drivers on field of vision, depth perception, complex reaction time, hand steadiness tests and capacity to see far to the right side.

Impairment is reported with blood alcohol level (BAC) as low as 0.02%, with 60% studies reporting impairment at or below
0.05 % BAC. It appeared that information processing skills are impaired at relatively low BAC, with 75% reporting impairment at or below 0.08 %. Driving performance on similar as well as on road testing conditions during intoxicated versus normal conditions showed that drivers performed drastically poor during intoxication.

SMOKING AND OTHER DRIVING DISTRACTIONS:

Smoking distractions are all attributed to cigarettes and included in this category are about equal numbers searching for a cigarette, lighting it, dropping it and having it blown back into the vehicle when trying to dispose it outside. According to the American Automobile Association Foundation for Traffic Safety, around 1.2 % of distraction related accidents are smoking related. According to the University of North Carolina Highway Safety Research Center, smoking was responsible for 0.9 % of the total distractions and other objects accounted for 2.9 % of driver distractions. It was also observed that 7.1 of the subjects were smoking at 1.6 of total time observed.

SURVEY OF DISTRACTED DRIVING IN DELHI - In Delhi, a survey of car driving population was conducted in the month of June and
and July 2004. A questionnaire to solicit the experience of car drivers on the various type of distractions faced by them, while driving, was designed. In all 226 car drivers in Delhi interviewed. In the sample 77% were males, 23% were females. Car drivers below the legal limit of 18 years of driving age were also driving and formed around 3% of the total sample size. About 21% of subjects were below 25 years, 33% were in the age group 25-35 years and 27% belonged to 36-45 years age group. The older car drivers 46-60 years were 19% of the total sample collected.

Drivers of different educational background were interviewed. Around 50% were post-graduate, while graduates formed around 24%, up to 12 standard 12%, matriculates around 10% and 4% were below matriculation. The sample consisted of persons from various walks of life. The students formed around 13% of the total sample size, housewives 3% business-classes 14% and people in service consisted of 51% of the total sample size. The commercial drivers formed 19% or around 1/5th of the total sample size. Driving exposure i.e. the number
of years a person is driving his or her vehicle also affects the type and nature of driving distractions of a person. In the survey, around 15% were the novice drivers i.e. the drivers having driving exposure to less than 2 years, around 22% were having driving exposure upto 5 years while 26% were driving their vehicles for around 5 to 10 years. About 22% were having driving experience of between 10-20 years while 17% were driving for more than 20 years.

RESULTS OF THE SURVEY ON DISTRACTIONS WHILE DRIVING:

The survey brought out some interesting results. The driving population was asked to give their opinion on what activities they thought to be the cause of driving distraction. The frequency of activities leading to driver distraction, as perceived by the respondents, were classified into the three categories of ‘Often’, ‘Sometimes’ and ‘Never’. Generally, it is thought that the use of cell phone is the prime cause of driver distractions. However, the results of the survey showed that the driving population surveyed ranked talking to co-passengers as the number one cause for their distractions. Around 55% were ‘Often’ distracted on this account, followed
Table 1: Driving Distractions Amongst Car Drivers in Delhi

<table>
<thead>
<tr>
<th>Distractions</th>
<th>Often (%)</th>
<th>Sometimes (%)</th>
<th>Never (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-----------</td>
<td>---------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1. Talking to Co-passengers</td>
<td>49</td>
<td>78</td>
<td>55.0</td>
</tr>
<tr>
<td>2. Changing CD’s or Cassettes</td>
<td>37</td>
<td>55</td>
<td>42.0</td>
</tr>
<tr>
<td>3. Outside Distractions</td>
<td>34</td>
<td>47</td>
<td>37.0</td>
</tr>
<tr>
<td>4. Fellow Drivers in Traffic</td>
<td>33</td>
<td>29</td>
<td>32.0</td>
</tr>
<tr>
<td>5. Pre-occupied in Thoughts</td>
<td>23</td>
<td>28</td>
<td>26.0</td>
</tr>
<tr>
<td>6. Use of Cell Phone</td>
<td>22</td>
<td>18</td>
<td>21.2</td>
</tr>
<tr>
<td>7. Kids in the Vehicle</td>
<td>19</td>
<td>20</td>
<td>18.0</td>
</tr>
<tr>
<td>8. Making SMS</td>
<td>9</td>
<td>12</td>
<td>9.5</td>
</tr>
<tr>
<td>9. Alcohol, Tiredness or Medication</td>
<td>8</td>
<td>12</td>
<td>9.0</td>
</tr>
</tbody>
</table>
by changing CDs or cassettes (42%), outside distractions (37%), and the fourth cause ranked was activities of fellow drivers (32%) followed by pre-occupied in thoughts (26%). The use of cell phone as a distraction was ranked to be the sixth cause of distraction while driving (21%) by the respondents. Some examples of the driving distractions are given in Table 1 on Page no. (302).

USE OF CELL PHONE WHILE DRIVING:

Around 84% respondents were having the cell phone. Amongst the cell-owning subjects, about one fifth, that is around 21% used the cell phone ‘Often;’ while driving. Table 1 (page 302) shows that the use of cell phone while driving was quite prevalent among Delhi drivers 58% using at least sometimes. However, making SMS was stated to be less prevalent as only 9.5% respondents reported doing SMS “Often”, and 27% “Sometimes”.

It was observed that the ownership of cell phones was much higher with lady drivers, as compared to male drivers, 98.0% versus 79.4%. However amongst the cell owners, the use of cell phones was more common with male drivers as compared to female drivers. Around
22.3% males reported using cell phones ‘Often’, as compared to 18% for female drivers. However, lady drivers were doing more SMS as compared to male drivers around 12% ‘Often’ doing, and 24% "Sometimes". As compared to 8.6, and 20.9% for male drivers. A Survey conducted by Hutch in Delhi also showed that women do more SMS as compared to men, 4.2 versus 2.2 per day.

The education level had a strong positive relationship with the use of cell phone as may be observed from the Table 2 (on page No. 305). The ownership of cell phone was increasing with the level of education.

It may be seen from Table 2 (Page 305) that drivers with lower education level were using cell phones or doing SMS more frequently than driver with higher education level. It looks that those with higher literacy level used mobile phones relatively more sensibly.

The ownership of cell phone was highly age-related. There was an ownership level of 96% for those of 25 years age or below. However, only 82%
Table 2: Ownership and Use of Cell Phone According to Education Level (%)

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Own Often</th>
<th>Own Sometimes</th>
<th>Own Never</th>
<th>Cell Phone Usage</th>
<th>SMS Often</th>
<th>SMS Sometimes</th>
<th>SMS Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculates</td>
<td>52</td>
<td>37</td>
<td>32</td>
<td>31</td>
<td>13</td>
<td>31</td>
<td>56</td>
</tr>
<tr>
<td>12th Standard</td>
<td>68</td>
<td>37</td>
<td>37</td>
<td>26</td>
<td>10</td>
<td>37</td>
<td>53</td>
</tr>
<tr>
<td>Graduates</td>
<td>95</td>
<td>20</td>
<td>55</td>
<td>25</td>
<td>11</td>
<td>22</td>
<td>67</td>
</tr>
<tr>
<td>P Graduates</td>
<td>91</td>
<td>18</td>
<td>35</td>
<td>47</td>
<td>8</td>
<td>17</td>
<td>75</td>
</tr>
</tbody>
</table>

Subjects with more than 25 years age were having cell phones. The use of cell phone amongst age group 25 years was also more as just 23% people reported using cell phone 'Never' while driving, in comparison to 32% older among more than 25 years of age. Younger people in comparison to older age group people also used SMS more frequently.

The ownership of cell phone in the sample was 100% with housewives and business group and between 91 to 93% with students and service class. Around 59% commercial drivers were having a cell phone. The uses of commercial drivers were having a cell phone. The use of
cell phone was higher with business group, commercial drivers and housewives, as 30% of them admitting ‘Never’ using the cell phone in comparison to 45% among the service class stating so. However, use of SMS was more common among housewives and commercial drivers as only 30-35% of them stating it to ‘Never’ do in comparison to other groups where it was between 60--75%.

The ownership of cell phone was found to be higher with people having lesser driving exposure, highest with the novice drivers, 94% in comparison to 79--81% with people having driving experience of more with experienced drivers as around 30--34% of them reported to use it, ‘Often’ in comparison to 9 10% for drivers with driving experience up to 5 years. Same was true for doing SMS while driving.

CHANGING CDs OR CASSETTES WHILE DRIVING:

Around 82% driving population surveyed was having the music system on in their vehicles. The use of music system was found to be, much more than the use of cell phones as around 42% respondents stated to use their music system and change CDs or cassettes while driving ‘Often’, 39% ‘Sometimes’ and just 19% stated as ‘Never’ doing so.
Again a higher proportion of lady drivers was having music system on in their vehicles as compared to male drivers – 92.2 % versus 78.8 %. However, lady drivers were fonder of music, with 55 % of them admitting to change the C.D. or cassette ‘Often’ as compared to just 37 % male drivers doing so. Only 15 % lady drivers reported ‘Never’ changing the Music system, as compared to 12 % male drivers.

Changing of CDs or cassettes was found to be slightly more among the highly qualified persons and also the ownership level as is evident from Table 3

TABLE -3 Ownership and use of Music System

According to Educational Level ( % )

<table>
<thead>
<tr>
<th>Educational</th>
<th>own</th>
<th>often</th>
<th>sometimes</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculates</td>
<td>55</td>
<td>35</td>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>Up to 12\textsuperscript{th} Standard</td>
<td>82</td>
<td>35</td>
<td>39</td>
<td>26</td>
</tr>
<tr>
<td>Graduates</td>
<td>91</td>
<td>47</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td>Post Graduates</td>
<td>85</td>
<td>44</td>
<td>40</td>
<td>16</td>
</tr>
</tbody>
</table>
Again, the ownership and use of music system in the vehicle were found to be correlated with age around 93% younger people were observed to town music system in comparison to 71% by older age group. Also the younger age group people i.e. up to 25 years reported to change their CDs or cassettes ‘Often’ (50-60%) and just 15% stated that they ‘Never’ changed CDs or cassettes while driving.

The ownership music system was less frequent with service class, as 16% of them were not having it. Similarly 31% commercial drivers were not having it on their vehicle. However, its use was more prevalent with housewives, service class and business group as around 50--57% of them reported to use it ‘Often’ and just 15-21% ‘Never’ using it.

The ownership of music system had no bearing with driving exposure. However, listening to music was found to be more among inexperienced drivers, as around 40-45% of them reported listening to music ‘Often’ in comparison to 20-30% for experienced ones.

**TALKING TO CO—PASSENGERS WHILE DRIVING:**

Talking to co-passengers while driving was also found to be quite common
among Delhi Drivers, as around 55 % stated talking quite ‘Often’ 37 % ‘Sometimes’ and just 8 % ‘Never’. So also 92 % drivers indulge in talking to co-passengers while driving which can be a major cause of distraction and inattention driving.

Analysis of survey responses brought out that ladies were more talkative. The survey findings revealed that around 78 % lady drivers admitted talking to co-passengers ‘often’, as compared to just 49 % for male drivers. Around 18 % lady drivers talked ‘Sometimes’ to co-passengers, as against 41 % male drivers. However, only 4 % lady drivers said that they ‘Never’ talked while driving, as compared to 10 % of male drivers.

Talking to co-passengers was positively related to the education level as higher the education level, the more number of subjects reported talking to their co-passengers. The drivers who were educated up to matriculation stated as talking ‘often’, 45 % in comparison to 50 % up to 12th standard, 65 % graduates and 52 % by post-graduates. The reason might be that drivers with lower education level might be the commercial drivers who usually do not talk with their employer while driving.
Talking to co-passengers was more amongst youngsters as 100% below 18 years and 77% up to 25 years reported talking 'Often', with co-passengers, in comparison to just 45% with persons falling in age group 35-45 years and 33% with age group 45-60 years. However, all groups reported that they talked 'Sometimes' with co-passengers while driving.

Talking with co-passengers was found to be the highest amongst housewives, as 83% of them reported talking 'often'. Next was the group of students who formed 80%, followed by business class - 63%. It was comparatively less common with service class and commercial drivers who constituted 650-52% of the respondent.

Talking with co-passengers while driving was the highest for drivers having 2-5 years of driving experience, 67% talking 'often' in comparison with 45% so with above 20 years of driving exposure.

DISTRACTIONS DUE TO KIDS IN THE VEHICLE:

Distractions due to kids was not much reported by the respondents as only 18% said 'often', 45% 'sometimes' and around 37% 'never'.
It came out that ladies were 'often' as much distracted, when there were kids in the vehicle, as were the males 19.7% ladies and 18.9% males. However, more males reported as being distracted 'sometimes' due to presence of kids as compared to females 50.9% versus 25.4%. Around 55% reported as 'never' being distracted due to kids in comparison to 30.3% for male drivers. It seems that females have better capacity to cope up with the kids as compared to male drivers. The highly qualified persons were more sensitive to distractions by kids than the drivers with lower education level. Around 50% post-graduates replied kids to be 'often' distracting in comparison to 26% under graduates, 11% up to 12th standard and 22% matriculations.

Distractions due to kids in the vehicle was reported the most by the people falling in the age groups 25-35 years as 32% reported 'often' distracted in comparison to 8% below 25 years and around 12.19% older than 35 years. Probably, between 25-35 years age group, people make comparatively more trips with kids in comparison to all other age group people.
Not much difference was observed due to kids in vehicle profession wise only students reporting then to be ‘often’ distracting, 28 % in comparison to other professional groups lying between 17.19 %.

Presence of kids was reported to be a cause of distraction mostly by the people having experience between 10-12 years -27 % reporting ‘often’ and 23 % between 2-5 years, in comparison to just 8 % drivers having more than 20 years of driving experience.

PRE-OCCUPATION WITH THOUGHTS AND MIND WANDERING WHILE DRIVING: It seems that due to stress and fast modern life people are more pre-occupied in their thoughts. The survey results showed that around 26 % drivers stated to be ‘often’ pre-occupied in their thoughts, another 55 % ‘sometimes’ and just 19 % ‘never’. So only less than one fifth admitted to drive with their minds fully devoted to the task of driving.

The ladies reported to be pre-occupied in their thoughts in greater proportion, as compared to the male drivers. More than one fourth, i.e. 27 % ladies admitted that they were ‘often’ pre-occupied in their thoughts while driving, as compared to 23.4 % of male drivers.
The education level did not cause any marked variation on the pre-occupation in one’s thoughts and mind wandering except that 60 % of highly qualified subjects found themselves to be ‘sometimes’ occupies on their thoughts, in comparison to 45 % of those upto 12th level education. Also one-fourth to one-fifth of more educated people expressed to be ‘often’ pre-occupies in their thoughts, in comparison to around 43 % of up to 12th standard education. Around 36 % people with lowest education level stated ‘never’ to be engaged in their thoughts, as compared to 11-20 % of drivers with higher education level.

The age was not found to be related to distractions due to being occupies in one’s thoughts. Almost 20-30 % subjects older than 25 years stated to be ‘often’ pre-occupied in their thoughts while driving. However, the person below 18 years stated to be more pre-occupied in their thoughts, 67 % of them reporting so.

Housewives (67 %) and commercial drivers (55 %) reported to be more ‘often’ pre-occupied in their thoughts, in comparison to other groups, which were between 20-27 %.
Being pre-occupied in thoughts and mind wandering was reported more by experienced drivers around 35% of them reported ‘often’ in comparison to 18-19% of less experienced drivers. It shows that experienced drivers, being more confident of their driving abilities tend to stray from driving task and tend to concentrate on non-driving matters.

LOSS OF CONCENTRATION DUE TO ALCOHOL, TIREDNESS OR MEDICATION :-

Very few people reported this factor to be a cause of their distraction. Many people stated that they do drive after drinks, but they drink within their limits and so they do not have any kind of distraction on this account. However, research studies have shown that these are myths only. The survey results showed that only 9% respondents thought it to be a cause of distraction ‘often’, 35% ‘sometimes’ and 56% ‘never’.

For this factor 11.7% lady drivers reported their response as ‘often’ as compared to 8% by male drivers. In ‘Sometimes’ category only 23.5% lady drivers were there and the males were much higher at 38.3%. However, around 54% male drivers and 65% lady drivers reported that they have ‘never’ lost their concentration while
driving. Around 46% male drivers admitted that tiredness, medication or alcohol did affect their concentration while driving.

Loss of concentration due to alcohol, tiredness or medication was having some differences between the lesser educated and the higher educated drivers. Up to matriculates, only 3% reported ‘often’ and all others having higher level of education reported ‘often’ response between 10-17%.

Influence of alcohol, medicine or tiredness while driving was reported more by the people falling in age groups 21-45 years. Only 50% people in this age group stated to be ‘never’ distracted due to influence of alcohol, medicine or tiredness in comparison to 85% people below 21 years and 62% people above 45 years for similar response.

No difference was found on this factor amongst different professional groups.

DISTRACTIONS OUTSIDE THE VEHICLE WHILE DRIVING:

The survey results showed that Delhi driving population finds itself to be quite distracted due to happenings outside their car, like accident,
construction work, pedestrians etc. Around 37% respondents stated to be distracted 'often' on account of outside distractions, 53%, 'Sometimes' and just 10% 'Never'.

Lady drivers seem to be more distracted by outside distractions as compared to male drivers. Around 47% lady drivers said that they are 'often' distracted due to outside events, as compared to only 34.1% male drivers. Only 2% lady drivers said that they were "never" distracted as compared to 13% male drivers, due to happening outside their cars.

Outside activities and events like traffic, accident, construction work etc. distracted comparatively more persons with less educational background, as around 23% with matriculation and 61% up to 12th standard stated "Often" in their response, in comparison to just 28% with post graduation and 46% with graduation. The percentage of highly qualified being 'Never' distracted was higher, 14% in comparison to 3% with lesser educational background.

Younger people reported more 'Often' distracted due to outside events as 55-67% people below 21 years reported so in comparison to 30-40% people above 21 years.
Commercial drivers stated to be more 'Often' distracted by outside distractions, 59% followed by students 52% and business class 40% in comparison to 17% by housewives and 29% service class. 

**ACTIVITIES OF THE FELLOW DRIVERS IN TRAFFIC STREAM:** Respondents were asked on different activities of fellow drivers in the traffic stream which generally distract them. It came out that the use of cell-phone and changing of CDs or cassettes was more distracting in comparison to other activities as shown in Table 4 (Page no. 318). It is interesting to find from this table that a high percentage (93%) the respondents 'often' (53%) or 'sometimes' (34%) noticed other fellow drivers in the traffic stream using cell phones while driving. However, only 21% and 37% respondents respectively admitted using cell phones themselves 'Often' and 'Sometimes'. This shows the general driver character and belief that it is not they but other drivers who violate the traffic rules.

There was not much difference, as per the educational of the Subjects, in the way they felt distracted by the activities of fellow drivers in that traffic stream. However, it appeared that the overall
Table 4: Observed Activities of Fellow Drivers in Traffic Stream:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Activity observed By Respondent</th>
<th>Often (%)</th>
<th>Sometimes (%)</th>
<th>Never (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Using their Cell Phones</td>
<td>59</td>
<td>34</td>
<td>7</td>
</tr>
<tr>
<td>2.</td>
<td>Eating or Drinking</td>
<td>29</td>
<td>50</td>
<td>21</td>
</tr>
<tr>
<td>3.</td>
<td>Engaged in Personal Grooming</td>
<td>18</td>
<td>52</td>
<td>30</td>
</tr>
<tr>
<td>4.</td>
<td>Reading/ Writing</td>
<td>12</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td>5.</td>
<td>Changing CDs / Cassettes etc.</td>
<td>41</td>
<td>45</td>
<td>14</td>
</tr>
</tbody>
</table>

Distractions due to fellow drivers implying that educated drivers concentrate more on their own driving as compared to lesser educated.

There was some difference in the activities in the activities of fellow drivers being watched by different age groups. It was deducted that younger people more ‘Often’ noticed the activities of fellow like using cell phone changing CDs or cassettes, drinking and eating etc. as compared to the older drivers.

Things distracting them the most as stated by drivers:

In an open ended and un-structured question at
the end of the questionnaire the subjects were asked to list the things, which distracted them most while driving. They had the option to list more than one response to the question.

The most distracting thing, as stated by approximately one-third of the respondents, was the indiscipline of the other road users. Around 19% stated pedestrians and 18% headlight glare as the things, which distracted the most while driving. Around 14% stated advertisement hoardings, use of cell phones, cattle and slow moving vehicles causing distraction while driving. Around 10% stated to co-passengers and traffic congestion as most distracting. Other commonly stated things were drinking and driving, outside distractions like beautiful scenery, accident scenes, wrong parking, faulty road surface etc. Around 8% respondent stated being pres-occupies in thought as the cause for their distractions and equal number mentioned drinking and driving and fatigue and also faulty traffic signs, speed breakers etc. Around 7% people stated opposite sex as the cause of distraction.

Slow moving vehicles and outside distractions were weighed equally by both the sexes more lady driver stated to
be distracted by opposite sex 10% in comparison to 6% by the male drivers. Similarly beautiful scenery distracted 12% of the lady drivers in comparison to just 3.4% male drivers. However, the male drivers found pollution to be more distracting in comparison to females who stated wrong parking to be the cause of concern.

CONCLUSIONS AND RECOMMENDATIONS:

All drivers, every one of them, engage in some form of distracting activity while they are drinking. And while, all cell phones are the distraction people love to hate, other distractions are more prevalent and could be more hazardous. Distraction occurs when a driver is delayed in the recognition of information needed to safely accomplish the driving task. The delay could be because of some event, activity, object, or person within or outside the vehicle, which compels or induces the driver’s shifting attention away from the driving task. Distraction can be both physical and cognitive. Distraction is a significant casual part of traffic safety. It is one of the leading causes of road accidents and injuries.
The study of a sample of drivers in Delhi confirmed that
distractions such as outside objects and activities, eating and drinking,
adjusting radio / cassette and interaction with fellow passengers
happened more frequently than cell phone usage. Many socio – economic
parameters seem to be related to frequency of distractions among driving
population.

If a person is driving in a big city, there are plenty enough
distractions all around him, crazy drivers, traffic lights, road rage, traffic
jams sudden stops, tailgate, lane dodgers, traffic control signs and bill
boards everywhere, a pretty girl next to him, not to mention
complications caused by weather and night time limits of visibility. With
all these distractions, it simply does not make sense to add to it by eating
and talking on a cell phone etc. Anything that takes your attention away
from driving can cause you to make poor decisions and impair your
reactions at a crucial moment.

The public and private road safety organizations should undertake
efforts to increase drivers’ awareness of distractions through training,
educational materials and publicity designed to emphasize the
importance of suitably attentive driving. There is no substitute for an alert and cautious driver. Ultimately motorists are individually responsible to carefully attend to their primary task, driving.

While driving if you ever tune the radio, change CDs or cassettes, eat, drink or smoke, pick up from floor or between seats, reach for glove compartment, take on cell-phone, argue with another passenger or clean the inside of the wind shield, then you are a distracted driver. Trying to simultaneously drive and perform unrelated tasks reduce your concentration and may cause you take your eyes of the road. Some tips on avoiding driver distractions include:

* Avoid emotionally charged or complex conversation.
* When hungry or thirsty take a break.
* Attend to personal grooming and check your route before you leave.
* Make it a habit to use your cell phone only when parked.
* Never read or take notes while driving.
* Identify and present your vehicle’s climate control, radio and CD player.
* Make sure your children are comfortable and properly buckled up.

- Resist the urge to get a god look at the accident scene.

In nutshell, drivers should avoid getting distracted. One should always keep in mind that the driving is a full time job requiring one’s full-time attention. When you are behind the wheel, your responsibility is safety to your passengers and to motorists and others around you.
REFERENCES:


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8. Mick Hammer, "Fast Music Linked to Car Crashes", Transportation Research (Vol. 4, pages 219)


Since the inception of CMVR in 1991 there has been a continuous update of the rules and regulations governing the requirements of vehicular safety. The basic safety requirements on vehicles like brakes, steering, grade ability etc. were introduced followed by the gradual inception of various safety standards, on components and systems like safety glass, lamps, safety belt, wheel rims, fuel tanks, door locks and hinges, side door impact requirements for cars etc. The agricultural tractor industry and the construction equipment industry were also brought under the safety and emission governance of CMVR. The chronologies of how various rules were implemented for automobiles in the country are given below.

1991. Vehicle testing requirements for performance related safety, with regard to Brakes, Steering, grade ability, dimensions, Lighting were implemented.

1993 Requirements of Safety Belt, Windshield wiping, speedometers, Laminated Safety Glass, Reflectors, Steering effort and pass by noise level requirements became mandatory.
1995. Stricter Braking Standards became effective.

1996. Implementation of Rules 124 of CMVR, on the Safety requirements of Components and Systems like, Automotive Lamps, Control Cables, EMI, lighting and Signaling devices, wheel rims Fuel, tanks, Door Locks and Hinges, Window retention and release, Accelerator control tests, Tell-tales, etc. became effective. Passenger cars were to comply additionally with the Side Door Impact, External Projection, Hood Latch, Wheel Guard and Telltale requirements. The construction vehicle industry was also brought under the ambit CMVR.


2001. CNG and LPG approval procedures, new noise regulations, tires and the chassis number coding system were introduced.

The Ministry of Road Transport and Highway, during the early 1990’s appointed two committees the CMVR Technical Standing Committee (CMVR – TSC) and the Automotive Industry Standards Committee (AISC) to continuously review, update and implement
standards and procedures in complete harmony with global acceptable ECE regulations and to enable the India Automotive Industry to compete in the International market. Both these committees are functioning under the chairmanship of B. Bhanot, Director, ARAI. The Standing Committee on emissions was also formulated under the Chairmanship of Joint Secretary, MORT&H to specifically look into the emission test procedures and norms. There has been a continuous updating of regulations governing safety and the Environment and the gap between ECE and Indian norms have been significantly reduced. ARAI has been playing the leading role in the formulation and implementation of various standards and procedures involving experts from the relevant industry and other sister accredited testing agencies. On the Safety front, long-term vision is to fully harmonize with ECE regulations by 2010. The gap in the emission regulations will also reduce significantly depending upon the commensurate plans of the Oil Industry to provide fuel of the same quality as in ECE.

EMISSION REGULATIONS:

There had been a continuous improvement on the emission front as far as the reduction in vehicular exhaust emissions are concerned.
Prior to the mandatory emission norms in CMVR, which came into effect during 1991, the vehicles were tested for idle emission norms from the year 1984 in accordance with the requirements of the Bombay Motor Vehicles Act, prevalent in the State of Maharashtra. The mass emission test standards were introduced for the first time from April 1991 for gasoline vehicles and from April 1992 for diesel vehicle. These were further made stricter in April 1996 in metro town having major pollution problems. The Euro- I equivalent Bharat Stage-I norms and the Euro- II equivalent Bharat Stage- II norms were made effective. The chronology of how the emission regulations were made stricter over the last decade are as given below :-

1984 - As per the Bombay Motor Accidents Act in Maharashtra State.
- Idling Co test limit 3% for the gasoline vehicles.
- Free Acceleration smoke test limit 65 HSU for the diesel Vehicles.

1989 - Idle Emission / Smoke test Regulations introduced in India.
1991 - CMVR 115 (3)- mass Emission test on chassis dynamometer for all gasoline vehicles (CO & HC) were introduced.

- CMVR 115 (4)- Full load smoke & Free Acc. Smoke for diesel vehicles/ engine were introduced.

1992 - CMVR 115 (5) – Mass Emission for diesel vehicles/engines on Engine Dyno. (CO, HC & NOx) were introduced.

1995 - Fitment of Catalytic Converter for gasoline vehicle in Metropolitan cities by virtue of Supreme Court order and unleaded petrol was made available.

1996 - Emission norms for gasoline (CO, HC + Noc) & diesel vehicles were made stringent.

- Evaporative emission requirement was added and the limit of 2.0 /test for gasoline passenger cars were made effective.
Cold Start mass Emission test for diesel vehicles on chassis
dynamometer were introduced.

1998 --Cold Start Mass Emission test for gasoline vehicles below 3.5
tones GVW were also introduced.

1999 --Preponement of India 2000 (Equivalent to Euro-I) norms for
passengers’ cars in National Capital Region (Delhi).

2000 --Bharat Stage - II (Equivalent to Euro-II) norms for gasoline
vehicles introduced in National Capital region (Delhi).
- Particulate limit values introduced for diesel vehicles.

2005 --As per Mashelkar Committee next stage of Euro-III
regulations will be introduced in 2005 followed by further
tightening in 2010 when Euro-IV will become effective in
metro cities.
<table>
<thead>
<tr>
<th>Safety Standards</th>
<th>Implementation Date</th>
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<tbody>
<tr>
<td>Rules for Construction Equipment Vehicles:</td>
<td>27th August 2002</td>
</tr>
<tr>
<td>Ais-001 : Automotive Vehicles - Rear View Mirror Specifications.</td>
<td>1st January 2003</td>
</tr>
<tr>
<td>AIS-002 : Automotive Vehicles-rear View Mirror Installation Requirements</td>
<td>1st January 2003</td>
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<tr>
<td>AIS-003 : Automotive Vehicles0- Starting Grade ability- Method of measurement.</td>
<td>1st January 2003</td>
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<tr>
<td>AIS-004 : Electromagnetic Radiation from Automotive Vehicles-Permissible Levels and Methods of tests.</td>
<td>1st January 2002</td>
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<td>AIS-005 : Automotive Vehicles: Safety Belt Assemblies-Specifications</td>
<td>1st October 2002</td>
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<tr>
<td>AIS-008 : Installation Requirements for Lighting and Light Signaling Devices for Motor Vehicles Having more than three wheels, Trailers &amp; Semi-Trailers Excluding And special purpose vehicle.</td>
<td>1st January 2003</td>
</tr>
<tr>
<td>Safety Standards</td>
<td>Implementation Date</td>
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<tr>
<td>AIS-009 : Installation Requirements of Lightening And Light Signaling Devices for two And three Wheelers.</td>
<td>1st January 2003</td>
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<td>AIS-011 : Test Procedure for the windscreen Wiping System for other Than MI Category of Vehicles.</td>
<td>1st January 2003</td>
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<td>AIS-014 : Automotive Vehicles-Horn Installation Requirements</td>
<td>1st January 2003</td>
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<tr>
<td>AIS-015 : Automotive Vehicles: Safety Belt Anchorages-Specifications</td>
<td>1st October 2002</td>
</tr>
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<td>AIS-016 : Automotive Vehicles: Seats, Seat Anchorages and head Restraints For category MI-Specifications With Luggage Retention.</td>
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<tr>
<td>AIS-017 : Procedure for type Approval And Certification of Vehicles For compliance to CMVR.</td>
<td>1st January 2003</td>
</tr>
<tr>
<td>Safety Standards</td>
<td>Implementation Date</td>
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<tr>
<td>AIS-018 : Speed Limiting devices as Would be approved by the Category of commercial vehicles.</td>
<td>As may be decided by the individual State.</td>
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<td>AIS-019 : Test Procedure for Wind Screen Wiping System for M1 Category Vehicles.</td>
<td>1st January 2003</td>
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<td>AIS-022 : Automotive Vehicles - Advance Warning Triangles Specifications.</td>
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<td>AIS : Code of Practice for Bus Body Design and Approval Seat belts For passengers occupying, rear Seats.</td>
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<td>IS 11919 : Automotive Vehicles Steering Control systems impact protection Requirements.</td>
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<td>IS 14495 : Automotive Vehicles- Pillion Hand Holds for two Wheeled Vehicles- Requirements.</td>
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<td>IS 14681 : Automotive Vehicles- Fuel Tanks for two or three Wheels.</td>
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<tr>
<td>Safety Standards</td>
<td>Implementation Date</td>
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<tr>
<td>IS 14812: Automotive Vehicles- Rear Under Run Protective Device General Requirements.</td>
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<td>IS 11852: High speed braking requirements for MI category.</td>
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<td>IS 7079: Hydraulic brake hoses</td>
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<tr>
<td>IS 11948: Steering efforts Requirements</td>
<td>1st January 2003</td>
</tr>
<tr>
<td>IS 14413: Tell-Tale System and controls On two wheeled and three Wheeled Vehicles.</td>
<td>1st January 2003</td>
</tr>
</tbody>
</table>
ROLE OF TECHNICAL COMMITTEES

The Automotive Industry Standards Committee (AISC) was constituted in the year 1997 as a supportive committee under CMVR- TSC to review the safety in the design, construction, operation and maintenance of motor vehicles. This committee works under the chairmanship of Director, ARAI and had formulated 23 standards so far and 29 more standards are under finalization/preparation. The standards called AIS, formed by this committee are later converted into BIS. This committee had been framing standards at a faster rate so that the Indian Auto Industry could catch up with the world wide automotive technology. The basic approach is to harmonize the Indian Standards with ECS as quickly as possible.

Other important subjects like Battery operated vehicles, transport of hazardous goods, agricultural tractors and trailers, automotive trailers, 3-wheeler bodies, quality marking schemes for safety components, etc., have also been brought under the ambit of standardization. The CMVR-Technical Standing Committee with the appreciable contribution from the testing agencies, auto industry and the automotive component
industry were highly responsible for the recent implementation of the following standards and procedures, which were finalized after series of discussions with the technical experts

**FUTURE REGULATIONS:**

Some more regulations are in the evolution stage under the CMVR- Technical Committee Chaired by B. Bhanot, Director ARAI. The roadmap for the future safety regulations has been drawn and the technical committee is working towards the achievement of this goal. The details of this road map are given in the Table 2.

**TABLE 2**

**SAFETY REGULATIONS --- ROAD MAP**

Under implementation in the year 2004:

- Generator set norms for emissions and noise.
- Tightened idling emission standards for motor vehicles.
- Power steering requirements for N 3 category vehicles.
- Vertical orientation of dipped been head lamps.
- CMVR requirements for agricultural tractors.
= 338 =

: For implementation in the year 2005 or 2006 :

- AISD -008 : Vertical orientation of dipped been headlamp.


- AIS- 010 : Performance Requirements of Lighting and Light Signaling Devices for 2/3 Wheelers.

- AIS- 012 : Performance Requirement of Lighting and Light-Signaling Devices for 4 Wheels and Gas Discharge headlamps.

- IS 14664 –1999 Brakes for 2 & 3 wheelers.

- IS 11852 - Part 1 to 9 (2001) – Brakes for 4 W.

- AIS 023 : Seats, Their Anchorages and Head Restraint for Passenger Vehicles of Categories other than MI and Goods Vehicles of Category N- specifications.

- IS 15223 – 202: Interior Fitting for MI.

- AIS - 035 : Anti–Theft Devices Immobilizes


- AIS- 044 Part 1, 2, 3 : Tyres for Commercial Vehicles, Passenger Car and 2/3 Wheelers.
*AIS - 034 : Automobile Lamps (Bulbs).

*IS 15061 : Automotive Vehicles – Flammability Requirements.


*AIS- 031 : Strength of Super Structure.

*AIS (Under Formulation) : Retro- Reflective Markings For Heavy And Long Vehicles.

AIS –029 : Survival space for the protection of the occupants of the cab of a commercial vehicle (N Category).

*AIS (Under Formulation) : Arrangement of foot Controls.

*AIS-006 : Bumpers for MI and NI.


*AIS 021 : Field of Vision of Motor Vehicles Drivers of MI Category.

*AIS- 057 : Retro – Reflecting Devices for Power driven Vehicles and their Trailers.

*AIS – 063 : Additional Requirements for School Buses.
CONCLUSIONS

The Indian regulations are being gradually harmonized and aligned with ECE regulations as far as possible, to be internationally competitive. The Automotive Industry Standards Committee and the CMVR-Technical Standing Committee have been playing their prime roles in making rules and standards under CMVR, on various technical aspects. This effort to upgrade the standards has stimulated the Indian Auto Industry to engineer their vehicles and systems for necessary compliance. India’s participation in the WP-29 becomes vital and our Industry should prepare itself to participate in Global Technical Regulations making body at Geneva. To gear up to the future legislative requirements and to offer high technical service to the Auto Industry and the nation at large, ARAI is planning to enhance its capabilities in various fields of NVH. Emissions and other aspects of vehicular safety. ARAI would continue to play the leading role in the field of Automobiles and would help the auto industry to upgrade itself to the International levels both in Safety and Environmental sustainability and thus truly becoming a global prayer.
WOMAN SENDS SMS RAMS INTO POLICEMAN :-

Angela Shala, 33 year old Swiss woman was sentenced to two-and-a-half years in prison by a French Court for driving her car into a French Police van and killing two officers while distracted by sending a text message on her mobile phone.

According to prosecution, at the time of the accident that happened in June 2003, Shala was driving at a speed of 170 km per hour while tapping away on her mobile. She was trying to locate a friend’s car she had been following.

CAUGHT IN THE ACT:

A hit and run driver was arrested in Germany after he stopped to ask police for directions. The 38 years old man had sped off after crashing into another car. But he got lost and showed down to ask directions from two cops as they were getting into their patrol car.

What he did not realize was that the police officers were getting into the car to look for him after a phone call from the man whose car had been hit giving them a description of the driver and the number on his license plate.
A spokesman of the police department said "We informed the suspect he had found where he needed to go and we also thanked him for saving us a lot of time and effort."

NOT SAFE ANYMORE :-

A deliveryman crashed his van two hours after his bosses gave him a safe driving award. Steve Coles, of Ealing in London, had just received a gift voucher by his employer. His 12-year accident free driving record impressed them. The 17 years old deliveryman said, "I'll never live it down."

A1 GORE CAUGHT SPEEDING :-

Former US Vice President A1 Gore paid Dollar 141 (80 Pound) fine for speeding on a highway near Oregon's coast, according to a state police official. Gore was driving in a rented car to visit family when he was issued a speeding ticket for going 75 miles per hour in a 55 mph zone on a highway between Portland and the oregano coast, a popular summer destination. A spokesman for the Oregon State Police said Gore was cooperative, polite and respectful. Gore mailed in his cheque for the ticket, well ahead of the deadline.
DIVORCE BOOSTS CAR CRASH RISK:

Being freshly divorced or newly separated boosts the risk of a road accident by 400 per cent, according to a French study. Three per cent of all road accidents in France occur among people who have just broken up with their partners, amounting to an annual tally of 170 dead and 3000 injured, the study published in a recent issue of the journal Epidemiologists said.

The heightened risk is attributed to two likely factors—emotional stress and the use of an tide—presents. The research is based on questionnaires returned by 20,000 employees of the state electricity and gas firm, EDF and GDF. The study was co-coordinated by Emmanuel Lagarde of the National Institute for Medical Research.

GERMAN STUDY LINES TRAFFIC JAMS, HEART ATTACKS:

In a new study, researchers have concluded that people caught in traffic are three times more likely to suffer a heart attack within the hour than those who aren't tied up on the road. A study of hundreds of heart attacks in southern Germany published in The New England Journal of Medicine in October this year found nearly one in 12 attacks was linked to traffic.
Traffic Jams were more likely to take a toll on women and on people 60 and older. Whether the excess heart attacks were due to stress or exposure to vehicle pollution isn't known. The research team led by Annette Peters of the National Research Center for Environment and Health in Nuremberg based their study on interviews with 691 volunteers who survived a heart attack from 1990 to 2001. The patients were asked to outline their activities during the four days before their attacks.

Traffic posed a risk regardless of the mode of transportation. Heart attacks were 2.6 times more common for people stuck in cars, 3.1 times higher for people stalled in traffic while taking public transportation, and 3.9 times greater for those jammed up while on a bicycle.

U.S. MOTORISTS SPEND TWO DAYS A YEAR IN JAMS:

The average U.S. motorists spend 46 hours each year or nearly two full days stuck in rush-hour traffic jams.

An annual report by the Transportation Institute at Texas A & M University found Los Angeles to be the worst U.S. City for congestion, based on 2002 federal and state highway data.
The average motorist spent 93 hours sitting in peak hour traffic in Los Angeles compared with 67 hours in Washington and 50 hours in New York City.

Traffic delays have more than doubled since the early 1980s as more vehicles have packed an ageing highway system in large and fast-growing metropolitan areas. Motorists wasted 5.7 billion gallons and fuel idling in traffic, the study showed.

The annual financial cost traffic congestion as measured in wasted fuel and lost productivity is estimated at more than 14 billion (7.9 billion pounds) two decades ago. The average cost per motorist was 829 per year, up singly from 2001.

HUNDREDS OF TREES BURST AS SCREWS CARPET A TAIWAN HIGHWAY:

BOOM' BOOM' BOOM' that was all the drivers on a Taiwan highway heard for several minutes on a late Friday afternoon. This was thanks to 30,000 screws that spilled from the back of a lorry on to the road and it was just impossible to avoid them. The screws punctured the tires of more than 100 vehicles behind the lorry, leading to a series of loud explosions. A
A speeding lorry was careering down a winding slope when one of several barrels of screws it was carrying fell.

**SUPREME COURT RULES OUT COMPENSATION FOR INJURED VEHICLE OWNER:**

An owner traveling in his car, insured against third party claims will get no compensation from the Insurance Company even if he gets injured in an accident involving the vehicle, the Supreme Court has ruled. However, persons other than the owner, injured in the accident would be entitled to compensation from the Insurance Company under the third party claim.

An Apex Court Bench comprising Justice S. N. Variava and Justice A.K. Mathur in a decision delivered in September this year said “where the insured, that is the owner of the vehicle, has no liability to a third party, the Insurance Company has no liability also”. “An owner of the vehicle can only, claim provided a personal accident insurance has been taken out, “ Justice Variava, writing for the Bench said

Referring to Section 147 of the Motor Vehicles Act, 1988, the Court said, the Section did not require an Insurance Company to assume risk for death or bodily injury to the owner of the vehicle.
WEARING HELMETS A MATTER OF SAFETY

COMFORT:

Two Supreme Court judgments, which have raised the issue of safety of Sikh women driving two wheelers or riding on their pillon brings into focus the conflict between Fundamental Rights to safe life and the statutory rules over looking it.

Way back in 1988, a Bench of the then Justice E.S. Venkataramiah and M.M. Dutt had upheld the exemption given to Sikh women from wearing helmets while riding a two-wheeler.

It had, however, turned down a public interest litigant's plea that the protective headgear obstructed his movement and affected his health due to itching when worn, and therefore, the relevant provision of the Motor Vehicles Act (MVA) should be struck down.

Sixteen years later, a bench of Justice Arijit Pasayat and P.P. Naolekar said that any direction passed in public good must conform to the provisions of the MVA.

The latest Supreme Court ruling arose out of a Punjab and Haryana High Court judgment in 1998.
that enforced wearing of the helmet by Sikh women driving or sitting on the pillion of two wheelers in Chandigarh.

Now, the High Court will again revise its direction in the light of the apex court’s ruling to conform to the Motor Vehicles Act, which exempts Sikh women from wearing protective headgear.

In other words, safe driving or safety on which is also subject to certain provisions that bluntly violate the constitutional guarantee that no one shall be discriminated on the basis of sex or religion.

GUJARAT HIGH COURT TAKES NOTE OF RISING ACCIDENTS:

Taking note of increasing number of road mishaps in the State the Gujarat High Court has issued notice to the State Government, Director General of Police and Police Commissioners of Ahmedabad, Surat, Vadodara and Rajkot and asked them to take steps to avert the number of accidents.

Expressing concern over the rising accidents the Division Bench of Justice K.R. Vyas and A.H. Mehta recently issued the notices
respondents to explain what measures are being taken to avert or minimize the number of accidents.

The Division Bench observed, “With growing number of accident cases it has become a matter of grave concern for the government, law enforcement agencies and citizens.”

The court said, “safety of the citizen is of paramount interest but the same is being overlooked by all concerned authorities. The provisions relating to vehicular traffic are being flagrantly violated.”

ROAD SAFETY SCENE IN PERU:

Bus crashes are a dime a dozen in the South American nation Peru. Peru has an illegal bus industry and callous chauffeurs often drive drunk and fall asleep at the wheel and the roads are poorly maintained.

According to Peruvian Transport officials many buses are not even fit to be driven on the roads. July and August this year saw more than 100 people killed in bus crashes. According to police sources 715 people died in bus crashes in the capital city of Lima alone, 6 per cent more than in the same period last year.
The main victims of the burgeoning road traffic accidents are poor Peruvians. Officials say accidents are so lethal in Peru because many bus companies run illegal buses built on the chassis of cargo trucks known as bus trucks which, though much cheaper than modern coaches, break up much more easily on impact and provide little protection to passengers. Moreover the drivers are over worked and fatigue is a leading cause of accidents on the Peruvian roads.

Peru has a population of about 28 million and more than half of it can be termed poor by any International Standards. For them cheap travel is often more important than safety. Officials say the biggest hurdle to improving safety is Peru’s liberalized public transport market, where anyone with a driving license can register a transport business.

77,664 people killed in road accidents in China in nine months:

Road accidents claimed 9,679 lives in China in September this year, the highest monthly fatality of this year. The death toll on the Chinese roads in the first nine months of this year was 77,664.
According to a report issued by the Chinese Ministry of Public Security, China's traffic police handles 43,982 cases of road accidents in September, 15,431 less than the same period last year, but the number of the injured rose by 1,248 to 45,828. According to the Report, a total of 384, 381 road accidents happened from January to September this year, which claimed 77,664 lives, injured 347, 351 people. The number of road accidents in the nine months dropped by 24.7 per cent from the same period of last year. The number of the injured also fell respectively by 7.7 per cent compared to last year, but the death toll rose by 23 per cent, the Report said.

WHO EXHORTS CHINA TO IMPROVE ROAD SAFETY:

The World Health Organization has called on China to improve road safety as an estimated 680 people are killed each day on the country’s highways (more than twice the figure reported by China Government, which recently said that 285 people die on the highways daily).

The World Health Organization recently presented its World Report on Road Traffic Injury Prevention to Chinese officials in Beijing saying
China has the most deadly roads in the world. Some 1.2 million people die every year on roads around the globe, about 20 per cent of them in China.

Etienne Krug, the WHO’s Director of Injury and Violence Prevention, says that while industrialized nations have seen their road accident deaths diminish every year, developing countries are experiencing a rise in highway fatalities and most of the victims or road accidents are pedestrians, people on bicycles and on motorcycles.

According to WHO report the economic impact of road accidents has also been enormous. In the case of China, the annual cost of traffic deaths is equivalent to 1.5 per cent of the country’s gross domestic produce or up to Dollars 20 billion. With China’s economic boom fueling an automobile revolution that is putting 14,000 new cars on the roads each day, road fatalities are increasing at an alarming rate.

Who officials have called on the Chinese Government officials to heed recommendations that include preparing a plan of action, and backing it up with funding. The agency has also recommended
launching a public information and education campaign to reach millions of China’s new drivers about the dangers of speeding, driving under the influence of alcohol and the importance of using seatbelts and child restraints.

BANGLADESH MOOTS INTERNATIONAL ROAD SAFETY DAY:

Bangladesh has sent a proposal to the United Nations to declare October 22 as the International Road Safety Day to bolster public awareness and contain road accidents around the world. The country’s Government has decided to observe October 22 as the National Road Safety Day every year to curb road mishaps as well as to raise awareness on road safety.

Road accidents in Bangladesh this year have so far claimed 4,000 people and injured 5,000, of which pedestrian fatalities are 53 per cent, besides causing a loss of Dollars 300 million in financial terms. Lack of proper knowledge of road safety among people is one of the major causes of times road accidents according to official sources in Bangladesh.
According to Road Safety Cell of the Bangladesh Road Transport Authority, the annual fatality rate in road accident in Bangladesh is 85.6 per 10,000, which is very alarming. Poor enforcement of traffic law, absence of proper drivers’ training and testing, weak publicity on road safety issue, lack of vehicle fitness and adequate medical services to the victims of road accident are the main causes of growing road accidents in the country. 58 per cent of the accidents in Bangladesh are caused due to human behaviour, 34 per cent due to road defects and 8 per cent due to lack of fitness of vehicles.

Often due to fund constraints the authorities in Bangladesh are unable to implement many awareness and educational programmes to reduce road accidents.