

Freedom To auto enjoyment contra Freedom From traffic accidents.

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ABSTRACT

The drivers of vehicles on the roads want freedom from accidents. Quite some number of the same drivers want as well freedom to speed, acceleration, enjoyment and excitement on the roads. In a number of areas in the society stringent ethical norms are established. For the road traffic, however, we find no ethical norms.

The basic evaluation ends in a conclusion that we can not obtain both freedom to auto enjoyment as well as freedom from road traffic accidents. We have to select the one of the two. If the society change the priority and set freedom from accidents as the first priority, the auto enjoyment on the public roads will have to be taken away. The driving of cars would then be limited to the main purpose to move from A to B. The clear advantage of keeping the freedom To, away from the public roads are the added freedom From for the rest of us.

Safe traffic may be analyzed from three angles which all together have to be safe to get a safe traffic. These are safe vehicles on safe roads with careful drivers. If all these three items are safe, the chances for a safe journey are rather good. If one of the factors is not good, the journey may not be safe. The vehicles are improved in the task to protect the people inside against injuries in the case of an accident. The safest roads have at least two lanes in each direction with a solid barrier in between. In Sweden a 2+1 lane system has been taken in use over the last years. Between the two directions a strong mid barrier is installed. This design prevents the damaging head-on collisions by one car coming over in the wrong lane.

Seen from a safe traffic point of view, the drivers are the main important item. If the drivers are careful and responsible, even lack of safety connected to the car or the road can be compensated. If the driver goes for speed and enjoyment on the road, this may end in accidents even if the car and road are perfect. The drivers are therefore the key element in a strategy towards safe traffic.

From a technical point of view the vehicles may be equipped with a black box, knowing exactly where the car is at any time using the GPS system. This means that the car may know the speed limit at the road. The navigation box may include a verbal speed informing system, a high speed preventer and a data logger writing speed data.

Zero vision is a long term aim to avoid any killed or seriously injured in the road traffic. Is it possible at all to keep the freedom to speed and enjoyment and at the same time approach zero accidents? The zero vision is by definition close to impossible. If this impossible aim shall have any chance to succeed, this mean that the freedom From accidents have to get the first priority.

1 FREEDOM TO AND FREEDOM FROM

Freedom is a key item for most people. We all want freedom over a wide range from the free selection of education, the free selection of where to live, where to work and how to travel. The freedom To is an important side of our civilization. At the other side we also want freedom From a number of things as poverty, war, accidents and murder.

On the roads we want freedom To speed, acceleration, enjoyment and excitement at the same time as we want freedom From accidents, injuries and murder. For quite some individuals the conflict between the freedom From and the freedom To is not obvious. If you select the freedom To you may not get the freedom From, or at the other side if you select the freedom From you may not get the freedom To.

One part of this conflict is shown on figure 1. Here Volvo shows an ocean race sailing boat used by THEM. Further is shown a Volvo vehicle in great speed referred to YOU. The text tells about the adrenalin kicking action sports, clearly promoting the freedom To. The result of freedom To could end as shown on figure 10 with the two excited young men ended outside the road and one was killed and one prosecuted.



Figure 1: Volvo shows adrenalin kicking action sports for Them(DE) in a sailing bout and for You(DU) in a Volvo vehicle at high speed.

2 ETHICS IN TRAFFIC AND OTHER AREAS IN THE SOCIETY

In a number of areas in the society, stringent ethical norms are established. This applies to the doctors and nurses in the handling of sick people. The lawyers have their ethical norm covering how to behave towards their customers, the society and toward their colleagues. The same applies to a number of companies wanting to have a stringent and correct attitude towards their employees, their customers and suppliers. On the road, however, we find no ethical norm.

On the airports the passengers are controlled to avoid any terrorists on the airplanes. This control has been intensified at high cost and time delay for the passengers. This is done for the safety of the passengers, imposed by the authorities in the ministry of transport. It is hard to remember any Norwegian killed by a terrorist on a Norwegian airplane. The same ministry is responsible for the safety on the roads. Here one person is killed nearly every day. Why does the ministry of transport have one safety standard related to potential terrorists on the airplanes and another related to the road traffic?

An auto journalist in the Norwegian state owned TV have run for years a program named "Autofil". This TV program promotes unsafe driving on the road. The same is some car sellers doing through their sales material and advertisements. They promote the freedom to speed, auto fun and excitement on the road as shown in an advertisement from BMW on figure 2. As a result we find the lack of freedom from accidents involving both those responsible for the enjoyable driving, as well as a number of innocents.

3 SAFE TRAFFIC

Safe traffic may be analyzed from three angles which all together have to be safe to get a safe traffic. These are safe vehicles on safe roads with careful drivers. If all these three items are safe, the chances for a safe road journey are rather good. If one of the factors is not good, the journey may not be safe.

In January 2007 the number of killed by road traffic accidents in Denmark was 37. This number is three times compared to the number killed in 2006, then 12 were killed. The reason for this is explained by the director of Safe Traffic in Denmark, Mr. la Cour Sell. He explains that the January 2007 was mild with no snow and ice. The result was that the Danes were driving as usual, resulting in the normal number of killed in the traffic during one month. The special situation was therefore January 2006.



Figure 2: BMW: "Everything else got suddenly boring."

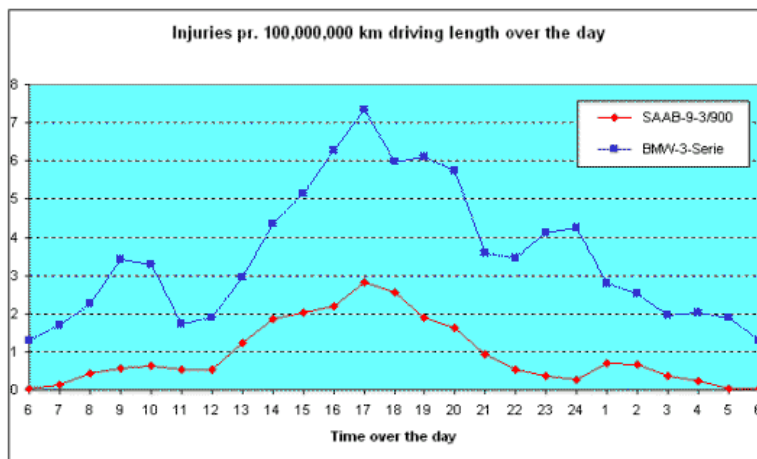


Diagram 1: Injured over the day by BMW and Saab models.

During that month the temperature was below zero with plenty of snow and ice on the roads. The Danish roads during that month were therefore less safe compared to the normal Danish roads. This could have resulted in a larger number of killed, if the drivers behaved as normal. Surely they did not. The traffic probably were reduced and the drivers

compensated the unsafe roads by being special careful in their driving on the icy roads. This together resulted in 1/3 number of killed on the Danish roads compared to "normal". A less safe road or a less safe vehicle can therefore be compensated by a careful driver.

We probably have the opposite situation as well. A safer vehicle may result in a less careful driving giving more accidents and a larger number of killed.

The Saab vehicle is regarded as one of the safest cars ever made. The BMW is at the other side not regarded as an unsafe car. It is no reason to believe that the BMW 3-Serie is less than 50 % safe compared to the Saab as indicated by the diagram 1 (2001 -2003). The reason behind the diagram is probably that the Saab drivers are more careful compared to the BMW drivers. This is also reasonable from the message the BMW marketing give of their cars. Figure 2 shows a full page advertisement by BMW in a Norwegian paper with the text: "Everything else is suddenly boring." (2003) BMW is by this advertisement promoting unsafe driving with their cars resulting in more injured and killed on the roads.

4 VEHICLES

The vehicles are improved in the task to protect the people inside the cars against injuries in the case of an accident. This is done by stronger cars with energy absorbing zones and protecting compartments, on one side and more safe interiors with driver and passenger's airbags, side and side-curtain air bags and safety belts with pre-tensioners and belt force limiters for all passengers in addition to correctly positioned head restraints. Further cars may be equipped with adaptive cruise control with collision warning and brake support in addition to lane departure systems as active safety devices.

Other areas of improvements are the ABS(Antilock Brake System) and the ESP(Electronic Stability Program) systems. These improve the ability of the driver to keep the car on the road.

The safer cars would reduce the number of injuries, under the condition that the car is driven at the same risk level. If the driver feels safer in the car and increase the risk level in his/her driving, the result could as well be increased number of killed in the traffic.

In EU all cars are controlled every second year. For a small country as Norway this gives an annual cost of around 500 million NOK. (60 mill. EUR) Does this cost pay in the way of reduced injuries and killed? An investigation performed by Institute of Transport Economics has concluded with a surprising answer. They found no reduction in the number of injuries and killed in road accidents as a result of the EU vehicle controls. The reason for this could be that the control mainly finds minor faults or that the drivers are aware of any major fault and drives more carefully until this is corrected.

The car manufacturing companies are competing in their sales of their cars. The more they sell, the more they earn. They are not responsible for the way their cars are used by the customers. In reality, the car seller would not cry if the car was driven to wreck and the owner bought another one. The car seller has therefore an economic interest in the freedom to speed, acceleration, enjoyment and excitement on the roads. For a number of cases their sales material and advertisement carries this message by promoting an unsafe driving on the roads. The more accidents, the more sales and the more repair in their repair workshops. This is shown on the bottom line.



Figure 3: Audi promotes their Quattro in a full page advertisement.

5 ROADS

The safest roads has at least two lanes in each direction with a solid barrier in between. These roads have further no level crossings. Even with heavy traffic these roads have least accidents in relation to the total driven vehiclekilometre. Only a limited part of the total road system can be at this standard.

In Sweden a 2 + 1 lane system has been taken in use over the last years. Here the two lanes are used for some km in each direction, one at a time. When it is two lanes in one direction there is one lane in the other. Between the two directions a strong mid barrier is installed. This design prevents the damaging head-on collisions by a car coming over in the wrong lane.

Roundabouts are regarded safer then normal crossings of two roads. The main reason for this is probably the need for reduced speed due to the shape of the roundabout as well as a lower number of conflict points. This in addition to the clear rules for who has the rights to drive, gives a better accident statistics compared to the normal crossings. The design of roundabouts are quite varied in Norway and there is a tendency to have a design allowing the cars on the main road the possibility to drive straight through without much reduction in the speed. This does increase the capacity. It is an open question if the safety is taken care of by this design.

6 DRIVERS

Seen from a safe traffic point of view, the drivers are the main important item. If the drivers are careful and responsible, even the lack of safety connected to the car or the road can be compensated. If the driver goes for speed, acceleration, enjoyment and excitement on the road, this may end in accidents even if the car and road are perfect seen for a safety angle. The drivers are therefore probably the key element in a strategy towards safe traffic. This fact should therefore open for active advocating of careful driving.

All drivers have to get their driving license to be allowed to drive a motor car. When a friend of mine renewed his license a few years ago the new date of expire was in 2041. At that time my friend is 100 years. The authority responsible for the driving competence has by this system disconnected themselves from a large number of drivers.



Figure 4: The Norwegian Prime Minister Jens Stoltenberg, is a car rally fun. Here in the Subaru driven by the rally driver Solberg.

7 MARKETING OF CARS

The marketing of vehicles are spanning a wide area. At one side is the marketing of cars by technical data and the visual appearance of the car. The other end is the association of speed and acceleration combined with auto enjoyment and excitement. At this end is the marketing of Mini, a brand of the BMW Group, by car "rally" in Tokyo. The Mini leaflet contained a CD showing the Mini in the streets of Tokyo. The Mini passed all other cars in a driving mode like a rally.

Other examples are from Volvo on figure 1, showing a sailing boat in good wind and a Volvo at high speed. The text talked about them in the sailing boat and you in the Volvo. In both cases the appreciation of the action sport with adrenalin pumping were promoted.

The message of joy and play is used in a number of advertisements from cars as Mercedes, Audi, Volvo and BMW. Also Nissan promises: "Never again a boring car."



Figure 5: This Volvo is marketed with reference to an amusement park.

8 MEDIA

Auto journalists seem to have a clear preference for the freedom To. In some papers the text is supporting the car advertisements as shown in figure 6. The Subaru rally car driven by Solberg is shown at high speed.

The Norwegian state owned TV sends a program named Autofil as mentioned under point 2. This program promotes unsafe driving by supporting the enjoyment on the road. The news paper is interested in advertisements and the TV journalist is interested in the audience in front of the TVs. Some of them feel no responsibility for the safe traffic on the roads.



Figure 6: Dagens Næringsliv supports Subaru cars.

9 TECHNICAL POSSIBILITIES

A major risk on the roads is the inappropriate car speed. The higher speed, the higher risk for an accident and in case of an accident, the worse damage to the vehicle and the persons involved. The power model, developed by Gørn Nilsson and described by Rune Elvik (2004) indicates an exponent of 4.5 for the number of killed in relation to average speed. If this model is used for Norway with 250 killed per year and assumed average speed of 80 km/hour, a reduction to 70 km/hour would reduce the number of killed to 137. If the average speed was

reduced to 60 km/hour the number of killed would be 69 or close to one quarter of the present killing rate.

From a technical point of view the vehicles may be equipped with a black box, knowing exactly where the car is at any time using the GPS system. This means that the car may know the speed limit at the road used. This could also include dynamic speed limits depending on the traffic and the friction on the road. The navigation box may include different alternatives. One alternative is a verbal system informing the driver if the car is going faster than the speed limit. Another alternative is to include a data logger writing the speed data. This data may be used by the police in the case of an accident or by the insurance company if that is a part of the insurance agreement with the owner of the vehicle. The most stringent use would be to make the speed data available for the police on line. This is quite possible from a technical point of view. If this is a too strong system an alternative is to limit this online information to cars fined for too high speeds.

Further the car may be equipped with a device making it difficult for the driver to drive faster than the allowed speed. Other options are to install systems for driving assistance.



Figure 7: Promotion of safety belts.

10 POLITICANS

The politicians main interest is to keep the number of voters and possibly increase this in the next election. They are afraid for promoting actions not popular for their voters.

During the last summers in Norway a promotion to use safety belts has been exposed by posters along the main roads. Figure 7 shows one of the posters used. If this results in more use of safety belts, the number of injuries will be reduced. An active promotion of careful driving has been suggested to the ministry of transport. This has, however, not been taken notice of. They are probably afraid for the negative comments from the drivers wanting freedom to speed, acceleration, enjoyment and excitement on the roads.

11 SAFETRAFFIC.INFO

The Website www.safetraffic.info has been developed to expose the conflict between the different interests. Car seller's advertisements promoting unsafe driving has been exposed. This Website has further been marketed by advertisements in some Web newspapers. Further this has been connected to information to the actual companies exposed as well as to the car sales interest organizations. This has not been appreciated. They do not want to have explained in clear writing what they in reality are doing. The result has been, however, that the number of advertisements promoting unsafe driving has been clearly reduced in Norwegian media.

This Website also exposes possible improvements on the road systems. One example was the opening of a new segment of the main road from Oslo to Stavanger (E39). The Minister of

Transport opened the new road with no mid barriers. She opened in 2006 a new main road which she does know is not built as a safe road.

12 FREEDOM TO AUTO ENJOYMENT

The freedom to auto enjoyment is introduced to our children at early age by the speed car plays at the PC or the Play stations. By that the children are made familiar to the driving at high speed and the related enjoyment and excitement. Figure 8 is showing the T-shirt picture on a 8 year old boy. He was proud of the fine T-shirt and underlined this by "Broom - Brooom".



Figure 8: T-shirt for a 8 year old boy.

This freedom to auto enjoyment does not only apply to the children. Figure 4 shows the Subaru rally car with the rally driver, Solberg behind the steering wheel. As the passenger is sitting Jens Stoltenberg, the Norwegian prime minister, also a car rally fan. He used to drive a Mini Cooper car and makes no secret of his car rally interest. Probably he believes this will attract voters appreciating the freedom to auto enjoyment.

The problem with arranged car rallies may not be safety as long as the risk is mainly connected to the actors themselves. As large athletic sports arrangements are regarded positive for the promotion of athletic sports activity in the community, car rally arrangements will probably influence the rally fans to seek more freedom to speed and fun on the roads as well. This does not promote a careful driving on the roads.

Some few years ago BMW used to regard themselves as "The inventor of Auto Enjoyment". The same message was used by Opel in an advertisement for their model Ascona as shown in figure 9. The picture of the young driver shows the excited driver of the Opel car.

13 FREEDOM FROM ACCIDENTS

The car drivers want to have the freedom from car accidents. No-one wants to be injured or killed if we disregard those using the car for their suicide.

Figure 10 shows the result of an exciting drive by two young friends in an open cabriolet. The picture indicates a high speed driving. The passenger was killed and the driver prosecuted. In this case the individuals having fun on the road were the victims of the accident. In other cases the victims could as well be innocent people in other cars or on foot or bicycle.



Figure 9: Enjoyed driver of an Opel Ascona.

The annual number of killed on Norwegian roads had a maximum in 1998 with one person killed in average every day. For the last 3 years the number of killed has been reduced by

around 100 persons compared to the situation 10 years ago. Still around 240 persons are killed every year on the roads in Norway. This is much too much.

14 THE ZERO VISSION

The zero vision is adapted in Sweden and Norway. This is a long term aim to avoid any killed and seriously injured in the road traffic. This vision is set forward by the Governments in the two countries. It is used in the political speeches and referred to as the right way forward.

What are the relations between the two freedoms and the zero vision? Is it possible at all to keep the freedom to speed, acceleration, enjoyment and excitement to the drivers on the roads and at the same time approach zero accidents? The zero vision is by definition close to impossible. If this impossible aim shall have any chance to succeed in reality, this means that the freedom from accidents have to get the first priority and the freedom to enjoyment as we know this, completely removed from the public roads.



Figure 10: One killed and one prosecuted.

15 EVALUATIONS

The basic evaluation ends in a conclusion that we can not obtain both freedom to auto enjoyment as well as freedom from road traffic accidents. We have to select the one of the two. Today the freedom to auto enjoyment seems to have a high standing. The resulting high number of killed and injured in the traffic worldwide seems to be accepted. The auto enjoyment for the large number is more valuable compared to the sorrow and pain for the families of the killed and the injured. Are the two alternatives clearly spelled out in the community? The impression is rather that the freedom To alternative is taken for granted by the car industry and the media. Together they make up an impressive pressure towards the auto enjoyment environment.

The freedom From alternative is not clearly spelled out. This alternative is rather hidden in the public domain behind phrases as accidents, injures, boring cars, etc.

If the society change the priority and set freedom from accidents as the first priority, the auto enjoyment on the roads for the large number of drivers will have to be taken away. This can be done by a massive PR campaign towards careful driving and further installment of black boxes preventing the driver to break the speed limits. The speed limits would further probably have to be reduced. Systems of driver assistance might be included limiting the driver to careful driving. The driving of cars would then be limited to the main purpose to move from A to B. The driving at allowed speed with quite limited number of bypassing, careful and polite behavior in the traffic, would for many be regarded quite boring and not very exciting. The car industry would suffer due to no market for the cars with too large motors. Who wants a car with a large motor if not allowed to show the back of the car to the other drivers? The car journalists would have to be re-educated to promote careful driving.

The possibility to get freedom From, as the main priority is an open question. Probably a real climate change scenario is needed to get a real push for vehicles with low emissions and by that reduce the possibility to speed and accelerations.

Would the auto enjoyment be gone forever in this case? Probably not. The children could still go to Tivoli and drive radio cars at maximum speed. The larger "children" could develop closed rally areas where the drivers have no speed limits and where other electronic devices were disconnected. Probably the insurance agreements also would be disconnected as well. With this type of auto enjoyment areas, the freedom to speed, acceleration, fun and excitement with the car would be allowed. The risk would be covered by the individual and the consequence of an accident would be kept by those seeking the freedom To. The driving on the auto enjoyment area would be comparable to the parachute jumpers from the top of tall buildings or from tall cliffs. It is allowed at own cost and own risk. The experience will be exciting and a fine talk piece at the lunch table next day - if there is a next day - alive.



The clear advantage of keeping the freedom To, away from the public roads, are the added freedom From for the rest of us.

Figure 11: A possible auto enjoyment area. (Audi advertisement: "It is hard to keep the auto enjoyment on winter roads.")

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