The economic approach of road safety; unique objective and contradictory motivations!

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Abstract: Although the topic is a multidisciplinary field, we will address, through this article, road safety from an angle, more or less economic. Thus, the scarcity of the human or material resources of the victims of the accident, the non-abundance of budgetary means allocated to mitigate the damage of the accident (hospital expenses, reimbursements of insurance companies, etc.), the efficiency of the choices to be learned by the public authorities to deal with the hecatomb and the socio-economic benefits of road users (individuals or companies), etc. are road safety issues that constitute, from near or far, a discipline that we can call "the economics of road safety".

Through our analysis we arrived at these results: Although the objective of road safety is clear: "to save as much life as possible from the traffic hecatomb", the motivations of each stakeholder in a road safety are not homogeneous and can be even contradictory, that it is within the same group of actors or at the level of the society as a whole. Thus, the sources of this contradiction can be: cultural, social, economic, etc. which divides instead of gathering opinion of the different actors on questions like: the causes of the accident, the settlement of the prejudices of the insecurity road, the regulation which frames the road organization, the solutions to elaborate, of time to another, to improve the lives of road users. Finally, the rationality of our days is approached in an artificial way, restricted and limited by a cost-benefit approach peculiar to a modern, liberal and immoral society!

Keywords: Road safety, the economic approach of road safety, the economic analysis of the road accident, the motivations of those involved in road safety.

Résumé : Bien que le sujet traité relève d’un champ pluridisciplinaire, nous allons aborder, à travers cet article, la sécurité routière sous un angle, plus au moins, économique. Ainsi, la rareté des ressources humaines ou matérielles des victimes de l’accidentalité, la non-abondance des moyens budgétaires alloués pour atténuer les préjudices du sinistre (dépenses hospitalières, remboursements des compagnies d’assurances ou des mutuelles, etc.), l’efficience des choix à apprendre par les pouvoirs publics pour faire face à l’hécatombe et les retombées socioéconomiques des usagers de la route (particuliers ou entreprises), etc. sont des enjeux de la sécurité routière qui constituent, de près ou de loin, une discipline que nous pouvons l’appeler « l’économie de la sécurité routière ».
À travers notre analyse nous sommes arrivés à ces résultats : Bien que l’objectif de la sécurité routière soit claire : « épargner le plus de vie que possible de l’hécatombe routière », les motivations, eux par contre, de chaque intervenant dans une sécurité routière ne sont pas homogènes et peuvent être même contradictoire, que ce soit au sein du même groupe d’intervenants ou au niveau de la société dans son ensemble. Ainsi, les sources de cette contradiction peuvent être : culturelles, sociales, économiques, etc. qui divise au lieu de rassembler l’avis des différents intervenants sur des questions comme : les causes de l’accidentalité, le règlement des préjudices de l’insécurité routière, la réglementation qui encadre l’organisation routière, les solutions à élaborer, de temps à l’autre, pour améliorer la vie des usagers de la route. Enfin, la rationalité de nos jours est abordée d’une façon artificielle, restreinte et bornée par une approche coûts-avantages propre à une société moderne, libérale et immorale!

INTRODUCTION

Recognizing that there is a resource constraint in road safety then militates in favor of developing an economic approach to road safety issues, that’s mean that exist an economy of road safety. It would be particularly inappropriate to deprive oneself of such an approach, in other words to give up a tool to grasp these dimensions and the associated stakes (Carnis, 2017). Economic analysis of road safety poses particularly demanding challenges, both in terms of theory and empirical estimates of relevant models and parameters (Boyer et Dionne, 1984).

Understanding the causes and consequences of the accident is not always easy. Because the multiplicity and complexity of stakeholders, their motivations and convections, which can sometimes be contradictory, push us to be vigilant in analyzing the objectives, strategies and policies proposed to manage a policy of change from several angles. Indeed, to properly identify the variables of the equation of road safety, to finally develop solutions that brings together.

A society does not form a coherent hierarchical system with precision, and therefore a comprehensive determination of its objectives is not always obvious. Its members act identically, they do not ensure their safety and that of others simply because they are informed and rational. So, they have personal representations of risk, more or less appropriate methods to avoid it, varying skills and motivations (Boyer et Dionne, 1984).

The concept of road safety is now obvious. It appears as one of the policies which, in the general field of risk prevention, the objective is to reduce the negative effects associated with road travel and, more particularly, those associated with the automobile practice. The existence of a public policy and a commitment of the State are attested in several ways: organizational, legislative and regulatory (Claude, 2006).

Road safety is a property that in some respects is private and in other respects is public (Boyer and Dionne, 1984). If road safety is a cost to the community, it also has business costs. Road safety also occurs where we do not expect it. Thus, road accidents are the second leading cause of death in armies, especially when personnel return from mission and escaped death in combat (Lagarde, 2019).

The purpose of this exploratory work was to broaden the thinking on road safety in the field of economics, by turning to economic analysis in order to understand the motivations of those involved in road safety and to fight against road accident. Thus, we will try to answer on the
following questions: *Does economic development affect road insecurity? Can the economy as a discipline help decision-makers to develop solutions that bring together the views of different stakeholders?*

1. THE ECONOMIC ANALYSIS OF THE EVOLUTION OF THE ROAD TRANSPORT SECTOR AND ITS RISKS

Several studies have focused on economic analysis of the evolution of the transportation sector, road accident and its socio-economic impacts. Thus, there are those who have highlighted the relationship between economic development and road safety (OECD, 2015, Garcia-Ferrer et al, 2007; Keeler, 1986); others have turned to the cost-benefit relationship of public policies to reduce road safety (Ringel et al, 2015; Haight 1994; Carnis 2015); and there are also those who have tried to highlight the burden of accidental costs on the victim, on the community or on society in general, etc. (Alfaro et al, 1994; Benson et al, 1999; Carnis et al, 2011; Fleury et al, 2012). The list of research topics and researchers is not exhaustive, so we will discuss other points that are related, near or far, with our analysis.

The economic development of a region or a country is conditioned by a geographical and demographic accessibility; this accessibility can be realized only by the transport in its multiple modes: terrestrial, rail, maritime and air.

Road transport is regarded as the most complex form among the other modes of transport, on the one hand by the different types of who provide this service: motorcycles, automobiles, buses, trucks, semi-trailers, etc. on the other hand, this complexity is fueled by the risk of road accident that is not homogeneous for all types of vehicles. Land transport is considered the most widely used mode of transportation worldwide, as well as more than a billion vehicles that provide daily transportation for the world’s population (Koulakoumouna, 1992).

Road traffic interests each citizen of a country, by different ways, and there is no need to stress the passionate nature of the debates that arise whenever a question is asked; whether it concerns automobile taxation, the level of investment, or, more simply, the regulation of traffic. The first difficulty of the problem therefore arises from the very great diversity of the economic activities, these involved each time one studies a problem of road investment (Claude, 1961).
1.1 Economic Development and Road Safety

The identification of transmission mechanisms from the economic and business world to road accidents highlights the existence of structured relations between the economic system and that of road safety, and in a certain way a relationship of dependency. In this, the road safety system can be analyzed as a subsystem of the economic system, thus suggesting that road safety can be considered both as a product of the economic system and a constituent of it (Carnis, 2017).

The relationship between road safety performance and economic activity must be understood as the product of two simultaneous and mixed dynamics; namely short-term and long-term dynamics, the effects of which may reinforce each other, even oppose. Thus, a dynamic economic situation would in the short term negatively influence road safety performance, while the country’s developed economic level would ensure a favorable trajectory to reduce road insecurity in the long term (Bougueroua et Carnis, 2015).

As example, we can cite two periods of the evolution of the transport sector and the road safety in Algeria, which may well be good examples of the relationship between economic development and the evolution of road accident in the short and long term.

In the short term, we distinguish the period from the mid-90s to the middle of the second decade of the 21st century, a period characterized by a fluctuation in the number of accidents, with an upward trend. Thus, we recorded 23949 accidents in 1996, at the beginning of this period, 19 years after we recorded almost double that number and 43777 accidents in 2004, the last year that marks the end of this period, which stands out, a peak never recorded until now. As for the number of injured, the evolution of this variable is characterized by a significant increase. Since we recorded 31952 injured in 1996, then this number has more than doubled in 17 years, a peak was recorded in 2013, unprecedented in this country, with 69582 injured. Regarding the evolution of the number of deaths, the evolution has fluctuated with an upward trend, since we counted some 3381 killed in 1996, after a stagnation that lasted almost 10 years, we distinguish a near-continuous progression since 2006 until 2014, and just a peak was observed during this there, never seen, with 4812 deaths. During this period, the evolution of the number of accidents, injured and killed followed the same upward trend, so we recorded growth rates during this period of: + 82.79%, + 117.77% and + 42.32%.

This further increase in road safety is probably due to the following decisions that have led to an increase in the number of road users during this period: the decision to liberalize public
transport and the transport of goods, a strong growth of the national transport park, and the opening of more and more motorways to traffic.

**Fig.1: The evolution of road safety on Algerian roads during the period 1970-2018**

![Graph showing the evolution of road safety](image)

Source: (CNPSR, 2019)

In the long term, the period from 2015 to 2018 is a good example; this period has seen a negative evolution in the number of accidents and in a remarkable way. After the number of traffic accidents did not drop below 40000 accidents, as of the year 2015 we recorded 35199 accidents, this number which has continued to fall further, since we recorded 22991 accidents in 2018. Ditto for the number of injured, we recorded a significant decrease. Thus, after we recorded 65263 injured in 2014, this number melted like snow in the sun, recording some 32570 injured in 2018. Regarding the third variable, this period stands out by a fairly significant decrease in the number of deaths in traffic accidents. Thus, in 2015 we recorded the number of 4610 deaths, this number gradually decreased during the next three years to reach 3310 deaths in 2018 (CNPSR, 2019). So, all three variables followed the same downward trend. Thus, the evolution rates of the three variables are respectively -34.68%, -50.09% and -28.20%. This decrease in the number of the three variables of road safety is mainly due to the reform of the Highway Code, in this case the hardening of the penalties (JORDAP, 2009; JORDAP, 2011).

### 1.2 Sustainable development and the transport sector

The transport sector plays a leading role in the fight against poverty, in prosperity and in the achievement of the Sustainable Development Goals (SDGs), as it is accompanied by serious problems that hinder the development (www.banquemondiale.org):
➢ **Climate change**: Transport accounts for around 64% of global oil consumption, 27% of energy and 23% of global energy-related CO₂ emissions. With the increase in motorization, it is expected that the impact of this sector on the environment will increase significantly.

➢ **Rapid urbanization and motorization**: 5.4 billion people will live in cities in 2050, or two thirds of the world’s population, according to projections. The number of vehicles on the roads will be doubled, reaching 2 billion by 2050.

➢ **Accessibility and affordability**: It is estimated that one billion people in low-income countries do not yet have access to roads. In many cities, time lost due to traffic jams hurts prosperity.

➢ **Road safety**: Every year, 50 million people are injured and more than 1.25 million are killed on the roads, 90% of them in low- and middle-income countries, while these countries account for only half of all vehicles in circulation in the world.

➢ **Air Pollution**: Pollution from motorized road transport is associated with many health problems; including cardiovascular and pulmonary diseases… it is directly responsible for nearly 185000 deaths a year.

### 1.3 Road investment and transport sector

We noted that there was some difficulty in analyzing the content of the concept of capacity. In addition, we feel that it is not very reasonable to study the development of a road without comparing, in one way or another, the profit and the cost of development. It therefore seems quite natural to analyze this profit and then to evaluate it, so that one has to reason only in monetary terms.

In fact, the development of a section of road, the creation of a new road, generally results in four direct consequences (Claude, 1961):

➢ **Reduced traction expenses**: lower consumption of fuels, lubricants, tires, less rapid equipment wear.

➢ **Time savings**: reduced expectations, increased average travel speeds.

➢ **Improved safety**: reduced number of accidents per vehicle / kilometer, and reduced accident severity.

➢ **Increased capacity**: increased circulation of vehicles.

In addition to these direct consequences, there are four other indirect consequences, which can sometimes play a significant role (Claude, 1961):
Influence on economic development, general or regional. An insufficient road network can compromise the harmonious development of a region;

The influence on tax revenues, that can affect the investment of roads and infrastructure;

The role of the car, a powerful means of escape and relaxation, which is only possible if the townspeople can actually return to and from their city;

Influence on the development of the automotive industry.

2. ECONOMIC ANALYSIS OF THE CONSEQUENCES OF THE ROAD ACCIDENT

Road insecurity is a global phenomenon, which causes more than 1.35 million people killed each year in traffic accidents. The risk of death from road traffic remains three times higher in middle- and low-income countries than in high-income countries, with the highest rates in Africa at 26.6 per 100000 inhabitants, and the lowest in Europe with 9.3 per 100000 inhabitants (OMS, 2018). Road safety is a real public health issue that needs to be studied in order to guard against traffic accidents, reduce their consequences and contribute to the sustainable development of road user safety.

The traffic accident is generally analyzed as a fact generating consequences traditionally appreciated by the damage caused. Public statistics report these consequences by a classification reflecting public health issues, namely the severity of bodily injury. It is then a question of counting the number of victims killed, hospitalized or slightly injured and to typify the characteristics of occurrence (place, time, user, vehicle, etc.), in order to propose adapted countermeasures. (ONISR, 2014)

2.1 Analysis of accident costs

The cost of road safety comes up against the problem of the cost of living for which there are three types of evaluation (Chapelon, 2008):

- **The cost of human capital method**: which represents the cost to society of the loss of life of a person, which is the addition of market costs (material, medical, loss of production) and non-market costs;

- **The method of assessing the cost of compensation**: what insurance companies pay to victims;

- **The individual preferences method**: what an individual is willing to pay on average to improve his security.
In fact, we note that is mainly the first two methods that are used (Chapelon, 2008).

2.1.1 The cost of human capital method

One of the commonly used definitions of road safety for the cost of living is the "cost to the community of losing a human life" (Chapelon, 2008). That is to say, all the expenses involved in the death of an anonymous individual, be it the loss of production for himself, for his family, for the nation, as well as the emotional loss borne by his relatives. If the constituent elements of the price of a human life are additive, it is enough to isolate them to distinguish anything that contributes to increasing the price of a life. Two categories of elements are at the base of this estimate: the objective elements and the affective elements. The former include a direct loss (care, burial, etc.) and an indirect loss (anticipated loss of production in the future), the most difficult to evaluate (Chesnay, 1961).

In France, in 2016, road accidents accounted for 2.2% of GDP, so the French state has had to pay 38.3 billion EUR because of accidents. Most of the public money has evaporated in hospitalizations, often long and expensive, victims, or 22 billion EUR. Another eleven billion are also spent to cover funeral expenses (www.lesechos.fr).

At the level of the countries of the European Union, the cost of traffic accidents is enormous, so we can appreciate the total costs for each type of accidents through to (tab.1).

<p>| Tab.1: Average values of the cost of road insecurity in Europe in 2017 (EUR) |
|---------------------------------------------------------------|---------------|---------------|----------------|---------------|----------------|---------------|</p>
<table>
<thead>
<tr>
<th>Medical cost</th>
<th>Loss of production</th>
<th>Human cost</th>
<th>Property damage</th>
<th>Administrative costs</th>
<th>Other Costs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadly accident</td>
<td>11757</td>
<td>727616</td>
<td>1809467</td>
<td>17542</td>
<td>8891</td>
<td>3817</td>
</tr>
<tr>
<td>Serious bodily injury</td>
<td>19158</td>
<td>50285</td>
<td>263945</td>
<td>11143</td>
<td>5557</td>
<td>709</td>
</tr>
<tr>
<td>Light bodily injury</td>
<td>1957</td>
<td>3629</td>
<td>21212</td>
<td>7231</td>
<td>2677</td>
<td>634</td>
</tr>
<tr>
<td>PDO crash (property damage only)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2795</td>
<td>764</td>
<td>40</td>
</tr>
</tbody>
</table>

**Source**: www.lerepairedesmotards.com

We can distinguish according to (tab.1) that the total costs of a fatal accident can exceed 2.5 million EUR, all costs are mainly medical, economic that are related to human loss and those which covers the material damage of the vehicle; a serious bodily injury often generates significant medical costs that are close to 20000 EUR, and all costs that exceed 350000 EUR;
a light bodily injury can cost up to 40000 EUR; road accidents that cause material damage, they can cost around 4000 EUR.

In Algeria, over the same period, several studies have focused on the average costs generated by a traffic accident in Algerian roads in recent years. Whether for minor or serious injuries and the case of death, all basic costs and additional costs are enormous: 400000 DZD or 3423 EUR for minor injuries, 70000 DZD or 5991 EUR for serious injuries and 7 million DZD or 59910 EUR up to 11 million DZD or 94145 EUR for a death [CNPSR, 2017 ; Boubakour et Bencherif, 2013]. Thus all traffic accidents are close to 100 billion DZD or 85587 million EUR annually, a burden on the back of the victim, the taxpayer and the state not to mention the social harm for the victim and his family.

2.1.2 The method of assessing the cost of compensation

This second completely different approach is to consider the cost of road insecurity as the cost of compensation paid to victims: this is the economic approach. From this point of view, the best source of information is that of the insurance companies, since it gathers information on the compensation actually paid following transactions with the victims or following court decisions.

In France, in 2016, the non deadly accident or corporal accidents, declared in civil liability with insurance companies, have cost 10.4 billion EUR to various insurance companies that activate in this country (www.lesechos.fr).

In fact, the turnover of insurance companies in Algeria for the year 2015 was 127.9 billion DZD or 1.09 billion EUR including 66.8 billion DZD or 571.17 million EUR made by the automotive industry, or 52% of the market shares. Insurance companies have settled for 71 billion DZD or 607.66 million EUR of claims in 2015, including 47.2 billion DZD or 403.97 million EUR in the automotive industry, which is characterized by a very significant loss ratio, since one million claims are registered each year (www.cna.dz).

2.1.3 The individual preferences method

This third approach implies individual choices: "the value term of human life refers to the price that individuals are willing to pay, to obtain a reduction in their probability of death. The daily decisions reflect the price implicitly attached to life "(Baumstark et al, 2008).
2.2 Economic circuit of road accident

Traffic accidents trigger a number of activities to somehow repair their consequences. An alternative approach is to grasp the road accident as the generator of financial flows (Badr et Triomphe, 1992). The approach by financial flows makes it possible to identify the actors, their relations, their nature and their intensity, but also to grasp the functioning of the road safety system mentioned previously (Carnis, 2017).

An economic circuit of road accident has been established for all the repair activities of the material consequences (concerning vehicles) and bodily consequences (concerning persons) related to accidents. Among the economic agents identified and taken into account are healthcare establishments, insurance companies, judicial institutions, automobile repair industries, etc. excluding prevention actors (Badr et Triomphe, 1992).

For claims of road accidents reported by all insurance companies operating in Algeria in the first half of 2018 totaled 42.4 billion DZD or 314.07 million EUR, an increase of 6.9% over the previous year. Total claims of road accidents settled at June 30, 2018, to 33.9 billion DZD or 251.11 million EUR, against 28.9 billion DZD or 214.07 million EUR, for the same period of the previous year, marking an increase of 18.3%. The same source observes that "the structure of regulations, in the first half of 2018, remains dominated by damage insurance with more than 95%, against 5% for life and health insurance. Thus, the claims payable for property and casualty insurance amounted to 78.9 billion DZD or 584.44 million EUR in the first half of 2018, compared to 66.4 billion DZD or 495.52 million EUR for the same period of 2017, an increase of 18.8%. This figure represents the debt of the insurance companies towards the customers. It should be noted that the average cost of a claim is estimated at DZD 67,037 or 496.57 EUR in the first half of 2018, an increase of 30.3% compared to the results recorded in 2017(https://www.algerie-eco.com).

Representing a total cost of 1.3 billion USD, including 150 million USD in counterfeit spare parts and counterfeit auto accessories in 2017 (https://www.liberte-algerie.com), the Algerian spare parts market is the second largest market on the continent after South Africa, the niche of the spare part in Algeria is undergoing a fulgurating counterfeit with dramatic consequences on the users of cars. In addition to the volume and importance of this lucrative market, experts believe that the repair and replacement part is another cause of the incident, instead of being a source of prevention and protection against road accidents.
3. CONTRADICTORY MOTIVATIONS OF STAKEHOLDERS AND ROAD USERS; THE ECONOMIC CIRCUIT APPROACH

The approach by the economic circuit highlights a plurality of stakeholders with interests that do not necessarily converge; this divergence is the result of conflicting motivations of social security, private insurance, health care institutions, repair activities of the personal injury of accident vehicles, accident prevention and protection, etc. Thus several sources of divergence can be explored.

3.1 Economic divergences

On the economic level, a fairly strong economic development requires an increasingly important support in the field of transport (Jaeger et Lassarre, 1999). In addition, the increase in the transport sector, more and more vehicles and more kilometers traveled, inherently carries an increasing risk in terms of incidence rate of the incident. Then a more sustained economic activity implies a greater demand for transport, which leads to a deterioration of the performance of road safety.

On the same level, a reduction in road accident is accompanied by a decrease in the volume of car repairs, which affects the activity of the latter: a drop in turnover on sales of new or used vehicles, a drop in turnover on sales of the spare part, fewer hours for repair trades (mechanic, auto electrician, the sheet metal worker, etc.), therefore a fall in road accident has a negative impact on the unemployment rate.

Developing an economic approach to road safety also raises awareness of the regulatory mechanisms at work in the making of road safety policies (Carnis, 2017). Ensuring the proper implementation of a road safety policy requires, among other things, ensuring the mobilization of resources, the amount of which must be adapted to the resources required by the said policy (Carnis, 2008; Carnis 2006).

3.2 Social divergences

Sociologically, the deterioration of employment and more generally the international economic situation are not without impact on the volume and distribution of road deaths that occur in the French countryside and probably also in those of other comparable countries (Grossetête, 2010). Global statistics teach us about the working class vulnerable to road disaster, as well as the countries that record the most casualties on its roads. Thus the less well-off people’s groups are the most concerned by road accident. Moreover, the developing countries are the ones who register the most victims annually (OMS, 2017).
At the same level, at-risk populations are the most vulnerable. Thus, drugs and alcohol are two serial killers on the roads. The internal conjuncture of a country where more generalized crises undoubtedly affect the purchasing power of middle- and low-income families, this situation may have a negative effect on the reaction of the parents in the families concerned, by becoming dependent of one or two substances. Thus, getting into the habit of driving in a state of drunkenness or drug addiction generates, in most cases, victims of the road.

3.3 Organizational divergences

In terms of prevention, understanding the accident and its prevention is not enough to transform the situation and install safety, either at the level of a person or at the level of a country. The policy of speed regulation in the United States and its evolution represents a case of exemplary historical experimentation. Indeed, speed limits present both a wide variety of different local states and remarkable scalability. For example, following the imposition of a federal speed limit of 55 MPH in Montana in 1974, Montana and similar states gradually resumed jurisdiction in 1986 and again in 1995 to determine their speed limits. The change in regulatory speed limits has resulted in economic costs for many road users, including freight carriers and the transportation industry (Keeler, 1986).

On the same level, the presence of different road safety officers on the roads is preventive and dissuasive. Thus, more technical means (radar, cars and motorcycles) and human resources require significant financial means. A significant reduction of the disaster can have a negative impact on the budget allocated for the bodies responsible for road safety in the medium term on the one hand, on the other hand we will be able to register fewer tickets paid to the public treasury, etc.

On the same level again, a new World Bank study highlights the significant gains that would come from lowering road traffic crashes in low- and middle-income countries, the study concluded that reducing road traffic deaths and injuries can boost economic growth. Thus, as the report highlights, road accidents have the effect of slowing growth prospects in the medium and long term, because they deprive the working population of adults in the prime of life, and they reduce productivity due to serious injuries. Using detailed data on deaths and economic indicators from 135 countries, the study finds that a 10% reduction in road deaths results in a 3.6% increase in real GDP per capita period of 24 years. Specifically, by 2038, halving road traffic deaths and injuries could increase GDP per capita by 22% in Thailand, 15% in China, 14% in India, and 7% in the Philippines and in Tanzania (http://www.banquemondiale.org).
3.4 Individual choices

On the individual level, the individual can also react because government intervention causes him significant additional costs and benefits. For example, the regulation of speed limits causes an increase in transport time but reduces energy consumption, and the wearing of the mandatory belt forces individuals to think of attaching themselves to guard against the accident and the contravention.

CONCLUSION

A society does not form a coherent hierarchical system with precision, and therefore a comprehensive determination of its objectives is not always obvious. It navigates between its motivations, sometimes contradictory, its insufficiencies and its excesses, according to its interests and its culture. Its members act identically, they do not ensure their safety and that of others simply because they are informed and rational, and they have personal representations of risk, methods more or less appropriate to avoid it, skills and variable motivations. Other research should highlight new alternatives of prevention and / or repression to better supervise road safety.

If the objective of road safety is unique and simple: "to save more life for road users", there are several obstacles to achieving this goal, these obstacles are often the result of the contradictory motivations of stakeholders in road safety. Thus, a management of change to improve the situation of road safety can be lucky to gather all the opinions and to be applied, and that for lack of socio-economic differences, organizational and those in direct relation with the behaviors of the users of the road. This kind of divergence can sometimes take the form of a stand-off between the various parties, which often requires the intervention of a pressure group, or influence (a lobby) to defend the interests of a stakeholder at the expense of other stakeholders; the case of the state of Nebraska in the USA.

Building a strategy for effective and sustainable road safety, would require solutions that bring together the views of the majority of stakeholders, which should be focused on the public interest, away from the immoral interests plagued by wild liberalism.
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