Car Custodians

Reflexive Automobilization under and in the eye(s) of FDM[1]

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1. Introduction

The benefits of modern transportation are manifold – and so are its risks. The difference between these two is often anything but clear. While a particular decision, policy or measurement was once seen to be a solution to a transport problem, it has later turned into a problem itself. Problems are risks, are benefits, are solutions. It all depends upon the worldview (or in this case the "mobility-view") that is at work. Consequently, different actors within the field of transportation define and respond to what they see as risks in different fashions. Both their reflections on and their "reflexes" to, what I call, the risks of automobilization[2] differ widely.

It is the aim of this academic piece of work to cast some light on processes that underpin the *reflexivity* of contemporary experts and non-experts in transport and mobility. I am trying to reply to the question of *how a particular social agency conceptualises and responds to the risks of automobilization*?

In generaL, utomobilization risks embrace all sorts of threats to both nature and culture. Examples are the degradation of the environment, the threats to the human body that result from traffic accidents or the speed-up of every-day life that is often related to transport innovations. The actor, I am focusing on is the Danish Automobile Owners Club ("Forernede Danske Motorejere" – FDM). According to its statutes, it is FDM's primary objective both to develop individual passenger transport and to safeguard its members' practical and economic interests. In this paper, I will argue that FDM as Denmark's largest consumer organisation is contributing to the reproduction of automobilisation by means of its members' and cadres' reflexive actions towards the risks and benefits that evoke from the mass-utilisation of the automobile. They are the custodians of automobilization! How they actually go about in "Keeping the Holy Grail of the Automobile" I hope to show in this paper.

2. Theoretical Framework and methodological considerations

In the academic piece of work – of which this paper is an abstract – I am particularly interested in the kind of "cultural filter" the club applies to define and respond to risks like traffic safety and threats towards the environment. This, I hope, will contribute to a better understanding of what makes a particular community of car users "tick". A better understanding of how an automobile club fosters a distinct view on automobilization risks can be regarded to be a precondition for future sustainable policy-making in the field of transport and mobility.

As for the illustration of the cultural filter through which risk is defined and acted upon, I will make reference to the German term "Leitbild". This term translates directly into the phrase of a "guiding image". It resembles the notion of "vision", but is nevertheless of lower abstraction. Here, the

[1] FDM is an abbreviation for "Forenede Danske Motorejere" – the Danish Automobile Owner Association.

[2] Automobilization, I understand as a social and cultural process that has its basis in the transport sector, but expands across the boundaries of this sub-system into a variety of other social sub-systems. Consequently, the question of where automobilization is located cannot simply be answered by pointing at the transport system and more or less equate automobilization with growth in individual motorization. Instead, automobilization is better conceptualised as a *mobility paradigm* that has spilled and woven its tissue into contemporary society. This mobility paradigm of automobilization then provides "normal spatial mobility", i.e. the type of spatial mobility routinely exercised day after day.

"mobility Leitbild" is seen as a cultural filter on mobility, i. e. it embodies the cultural perspectives of a group of actors on mobility in general and automobilization in particular. Consequently, the mobility Leitbild as a cultural filter shapes the social construction of automobilization risks among the servicemen and members of FDM. In order to unfold the content of FDM's mobility Leitbild I *look* – in the very meaning of the phrase – at the front pages of the club's monthly magazine MOTOR. By employing qualitative and quantitative methods of picture analysis, I take the notion of the Leitbild literally. Both the content analysis and the more interpretative approach aim at describing and analysing the kind of risk definition and responses that are prevailing in the club.

The empirical work undertaken is grounded in a theoretical frame. I have selected the *theory of reflexive modernization* as a magnifying glass through which I look at the risks of automobilization. I employ notions like risk and reflexivity on transport and mobility in order to understand how movement in space by means of a particular technical device is intertwined with current spatio-temporal, social and technological transformations. In doing so, I look at how risk definitions and risk responses are socially and culturally grounded. The ground, I am working my way through, is that of a community of transport users, who reveal a distinct affinity to the automobile. By focusing on the reflexivity that defines the risk-construction among the makers of MOTOR, I hope to widen the concept of what some call "reflexive institutions" (Beck/Hajer/Kesselring 1999), i.e. institutions that respond to the new demands forwarded by the emergence of the "risk society". Thereby, it will become apparent that the notion of reflexivity can be interpreted in a number ways. To conceptualise reflexivity as inherently critical towards a traditional modernization – or in this case traditional automobilization – may subsequently appear as biased. Thus, to juxtapose traditional and reflexive automobilization demands more explanation, because – as I will argue by looking at FDM – even amongst those social actors that foster a traditional trajectory of automobilization distinct types of reflecting on and "reflexing" towards the risks of an increasing car use can be detected. Now, without any further introductory remarks or theoretical considerations I will turn directly to the subject matter and outline the empirical work that I have undertaken *so far*. The results and conclusions presented in this paper are consequently of preliminary character.

3. Moving images and images that move the world

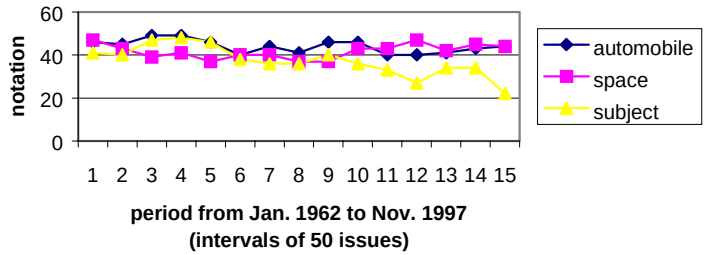
Automobilization is a visual phenomenon. It is visible in the streets of contemporary cities, in the warehouses and shopping malls, on road maps, in the statistics of local, regional and national traffic departments and in the form of advertisement or other visual images in newspapers, magazines, the world wide web, movies and television series. These visual images do not simply mirror or picture automobilization, but at the same time formulate and define the generic characteristics of automobilization. Consequently automobilization is just as much produced by its representations as it is by the practices of the individual transport user. Thus, the visual images on, for instance, front pages of automobile magazines are part of the social phenomenon and mobility paradigm they describe.

In the analytical expositions below I focus on the representations of automobilization as they are found on the front pages of the "MOTOR" magazine published by the Danish Automobile Owners Club (FDM) between 1961 and 1997. MOTOR appears to be suitable empirical material because it both mirrors and inflicts upon automobilization in Denmark. It mirrors automobilization because it reveals, illuminates and denotes the current socio-political and techno-economical developments in automotive-traffic. And it inflicts upon automobilization because it represents the "voice" of the automobile lobby and, thus, spills its tissue into the politico-scientific arena as well as into every day life. In so doing, the front page of MOTOR is just as much "making automobilization" as it is "showing automobilization". Consequently, an analysis of MOTOR's front page can be regarded as an attempt to "seeing automobilization". However, MOTOR represents a particular voice within automobilization. It almost exclusively addresses the community of automobile-users. It provides information for the motorists on the latest developments within automobilization and offers helpful advice for the individual automobile user. In so doing it takes up a pro-automotive position, which appears as somewhat logical if one takes a closer look at FDM's set of goals and objectives.

One aim of the empirical work conducted in this study is to construe the development of the mobility Leitbild of FDM over the past decades. In order to realise this aim, content analyses of the prime images found on MOTOR's front page were carried out. These content analyses were based on 750 consecutive issues from January 1961 to November 1997[3]. The content analyses were grounded in the theoretical and methodological considerations in so far as they assigned a central importance to the representation of the *subject*, the *vehicle* and the *spatio-temporal* dimension[4] of automobilization. Thus, each issue of the whole sample was scrutinised in terms of whether an automobile, a spatial context or one or more persons are pictured. The item "automobile" was noted whenever an automobile or parts of an automobile – which could clearly be determined as such – appeared in the picture. If this automobile was placed as a central figure in front of a spatial background, the item "space" was noted. This was as well the case, if an automobile or a person was lacking and only a landscape was visible. In such cases the representation of spaces – no matter whether they resembled urban, non-urban or abstract landscapes – had obviously moved from the background into the foreground and became the prime figure itself. The results of these analyses are shown in the graph below (see graph 1).

The content analyses reveal a significant decline of representations of any subject over a period of approximately 37 years. During the same time the amount of front pages exhibiting automobiles and/or those showing a spatial context has remained fairly constant. Obviously the "human being" has been partially bracketed out from the representations of automobilization ever since the beginning of the 80's. While the previous two decades were largely determined by a "liason" between the three dimensions, the last two decades are defined by a farewell to classical representations of human beings.

Graph 1: Representation of the three dimensions of mobility



period from Jan. 1962 to Nov. 1997 (intervals of 50 issues)

In the 60's and 70's humans and automobiles have merged together to an "automotive unit" that could not be thought of without a spatial setting surrounding it. There were strong ties between all three dimensions. Automobilization was constituted by a human being using an automobile in order to explore space. Thus, in many representations the human being was placed in or next to an automobile – and united in such a way they were embedded in a rural or urban space. During these years MOTOR's front pages suggested that automobilization was about *"what one can do with the automobile as a vehicle", i.e. "where one is able to go and what one is able to wherever one goes"*. One may argue that once a human being was clearly visible (maybe even with a facial expression resembling happiness) the automobile was rendered real, it was part of every-day life of people shown

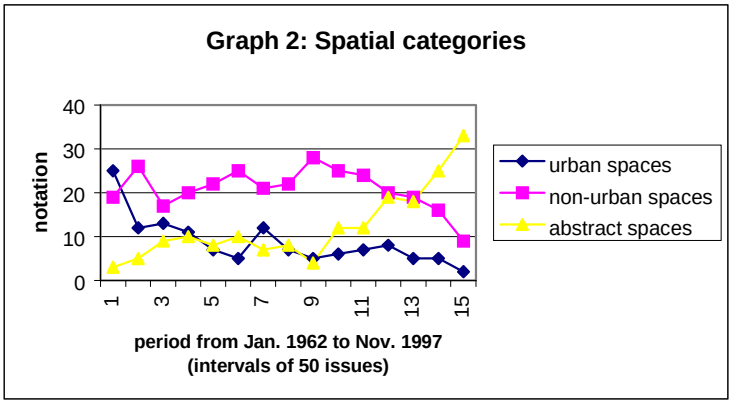
[3] Some issues, however, were missing. These were the issues 1962/11, 1971/19 until 1972/15, 1972/25 and 1980/03. The issues 1981/07 until 1981/11 were not published because of a strike in the Danish printing industry.

[4] At the time being, I have not analysed any representations, which make a reference to "time". Instead of looking for a spatio-*temporal* dimension of automobilization, I limit the picture analysis to the spatial context in which the vehicle is embedded. Further analytic steps concerning "time *and* space" will be made subsequently as the research project continues.

in the picture. *The usage of automobiles was thus normalised*. With the absence of humans on the front page the automobile became de-normalised or even mystified in some cases. More and more cases appeared, which showed no subject at all. Such under-representation of humans was accompanied by an increasing amount of head pictures in which the only person visible was the one behind the steering wheel. These drivers, however, were hardly detectable and often only a silhouette could be recognised by the onlooker.

This vanishing of the human being from the foreground of MOTOR's front pages fosters the thesis that from 1981 onwards the subject has somewhat been disconnected from the mobility Leitbild of FDM. After the humans have left the scenery it is the automobile that remains in the centre of the stage and takes over the leading part. Thereby it is not part of the staging anymore, but the dominant actor. With this, the *use value* of it is replaced by its *sign value*. The traditional use value of the automobile, i.e. to take trips is not any longer what the makers of MOTOR are concerned with – it is now its sign-value. With this the automobile changes its character. Instead of a vehicle for the planning and making of trips, it has become an object for a variety of other purposes.

This process is illuminated by another aspect, that is to say the alternation of spatial representations found in the head pictures of MOTOR's front pages. Although the above graph (graph 1) shows no significant changes in the absolute number of spatial representations over the 37 years, the generic characteristics of the pictured *spaces*, nevertheless, have changed drastically. These changes can be summarised under *an increasing abstraction of any spatial representation from the somewhat traditional environment of the automobile*. This traditional environment is defined by urban and non-urban, i. e. rural landscapes. It is the space in which the automobile is utilised for the purpose of overcoming geographical distance. Abstract spaces are on the other hand those spaces, which are not part of the traditional environment of the automobile. In other words they are neither of the aforesaid categories. An exhibition hall, for instance, would be such an abstract space. Furthermore, abstract spaces are also created by a de-familiarised traditional environment. If the urban or non-urban space is altered in a manner that alienates it from its original character of providing a traditional environment for the automobile, then it has turned into an abstract space.



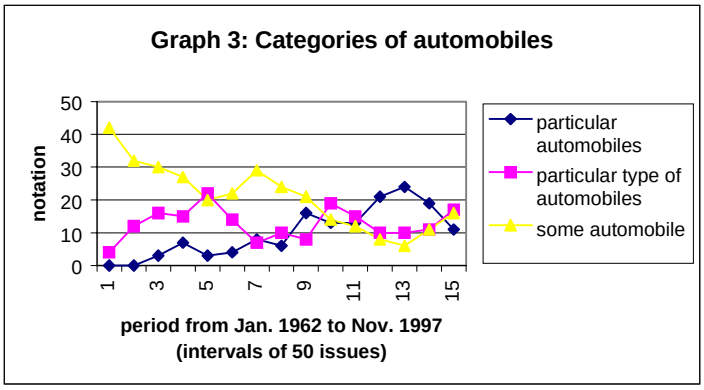
The course of the three graphs of spatial categories reveal how the number of representations of urban spaces constantly declined over almost 4 decades. While half of the first 50 analysed issues show automobiles in an urban setting, the last set of issues contain less then five front pages representing urban spaces. Non-urban spaces, i. e. open rather than built spaces, have been the preferred category over most of the period. Only from the late 80's onwards are they loosing their dominant influence in the representations of space on MOTOR's front page. Their decline however begins around 1980, when the abstract spaces start to become increasingly influential.

The rise of abstract spaces must be seen in relation to the effect, which is caused by the disappearance of the human being from the front page. Both developments inflict upon the communicative message of the head picture and alter the meaning of the automobile itself. Automobilization, in these pictures is increasingly disconnected and disentailed from both its subject and the traditional environment of

the automobile. The reason for the freeing of the automobile from its spatial connections can be found in the growing constraints that evolve from the traditional environment. Neither urban nor non-urban spaces are nowadays conceived of as the perfect "spatial solvent" for automobiles to "dissolve" in. Here, automobilization has created the known problems that limit its further development along traditional growth patterns. These self-induced constraints now reflect on the representation of automobilization. In order to maintain its existence the automobile is given a new spatial context – since the old is more likely to threaten than to enhance its further existence.

Eventually, the abstract space is displacing the meaning that used to be ascribed to the presentation of non-urban spaces. This spatial category served as a means to constantly rebuild some of the central Leitmotifs of automobilization, such as the increased overcoming of space, the dismantling of spatial barriers or the escape from an over-crowed city into the revitalising spheres of a countryside weekend. With transport growth and spatial developments like, for instance, a continuous sub-urbanization even the trip to the nearby countryside lost its fascination – and with this, the meaning of rural spaces as *open spaces* has lost its value. The "openness" of this spatial category had steadily declined while being substituted by the "even greater openness" of abstract spaces. Abstract spaces can be altered according to the needs of individual driver. They do not impose any limits on automobilization like the urban or the rural space. They are spaces in flux. Abstract spaces can be any space – and what sort of space they shall be depends on the type of automobile one drives. In other words, space is defined by the specific automobile, with which one attempts to overcome that very space. Or to put it in a nutshell – *the automobile is the space*.

This becomes more lucid if one focuses on another transformation, which subsequently took place in the head picture of MOTOR's front page. The aforesaid disembodiment and de-spatialisation in the representations of automobilization has been supplemented by a shift in the representation of the *vehicle itself*. While early issues are determined by non-specified automobiles, latter issues are more and more defined by a particular automobile or a particular type of automobiles. Once again, it was in the beginning of the 80's, when the representation of non-specified automobiles lost its dominant position. Before this period, the automobile was neither named nor was the manufacturer's symbol clearly visible. After the early 80's this changed. It was now a particular automobile shown in different contexts that decorated the front page. Or it was a particular type of automobile, for instance a number of similar automobiles selected for a common test conducted by FDM's experts. This specification was accompanied by a more direct staging of the vehicle itself. Instead of being part of a situation the automobile was somehow lifted upon a stage, where everyone could clearly see (or read) which or what kind of automobile is presented here. Thus, the communicative message is more or less that mobility cannot be exercised as well with just any mundane automobile as it can with the particular automobile in question. Here again, one dimension of mobility, i. e. the vehicle, receives central importance. Graph 3 illustrates this development.



The transformation of the representation of the automobile itself on MOTOR's front page can best be described as a process of *objectualization*. During this process the automobile has altered its earlier role of being "a companion" in many of the every day activities performed by the subject. Instead of

being with the subject it is now without a subject. It stands for itself and has moved from a peripheral position in the representations of automobilization towards the centre. Here it attracts the attention of viewers. With this, the automobile has become less of a vehicle for the overcoming of space, and rather the pivotal object for all sorts of other activities that are centred around the vehicle. This is exemplified by the rise of "do-it-yourself" sections, the reoccurring theme of group tests or a focus on specific technical devices like safety-belts, the catalytic converter or the significance of proper head and tail lights.

The shift in the representation of automobilization can as well be interpreted as a result of the very spatial practices it has produced. Automobilization – over the years – has shaped a particular form of spatial action, which is primarily determined by an increased overcoming of geographical distance. Such development is in particular omnipresent in contemporary tourism. Once the automobile was the key that provided access to the exotic and unknown. As a Danish automobile owner of yore and a member of FDM, one had the chance to see Italy, the mountains of southern Germany or the forests of northern Scandinavia. Thus, travel became closely intertwined with the automobile. However, once these places were visited, new attractions had to be invented and explored. Automobilization contributed in such a way to an increasing supply and demand for places to go.

To recapitulate, over the years from 1961 to 1997 the context into which the automobile is embedded on MOTOR's front page has certainly changed. An explorative analysis of the front pages reveals that a strong abstraction from the automobile's traditional environment is taking place. While many of the early issues show the automobile in an urban, sub-urban or rural context, the latter issues place it inside mere abstractions of such traditional environment. Thereby the automobile is removed from one context and subsequently situated into another. This de- and recontextualization can be viewed as a consequence of the increasing difficulties that automobilization has to cope with. Throughout its traditional environment the threats produced by automobilization have now become visible: mass-motorization, congested urban and sub-urban roads, degradation of landscapes due to road infrastructure extensions or overcrowded parking areas. Thus, to sustain a positive image of the automobile it is placed in an ever more abstract context. These abstractions of space then bundle the attention on the single automobile – thereby, space becomes subordinated to the vehicle.

Furthermore, automobilization is increasingly disembodied. Alongside the disappearance of the traditional setting MOTOR's front pages are determined by the vanishing of the subject. These two processes coincide with each other and alienate the first dimension of mobility, i.e. the vehicle from the two other dimensions. The automobile is now by itself. Automobilization is about the automobile – and nothing else. It is not any longer simply a vehicle – it is now an object that can be filled with a variety of meanings. There is no limitation to ascribing any meaning to the automobile any longer. Both spatio-temporal and subject-related restrictions are gone: Former spatial limitations have been rendered abstract – it is now possible to drive *anywhere*. And former subjects of automobilization have been abandoned from the front page – it is now possible for *anyone* to drive *anywhere* or fill the vehicle with *any sort of meaning*.

To conclude, as a result of the content analyses I claim that the mobility Leitbild as a cultural filter in the "risk thermostat" of MOTOR's makers and readers is determined by

- a vanishing of the human being over time
- an increasing abstraction of the spatial context over time and
- a growing importance of the technical and aesthetic formation of the automobile itself.

The mobility Leitbild of FDM is in essence vehicle-oriented. It pays little or no attention to the other two dimensions. Both the subject and time/space are subordinated to the needs of the car. This brief sketch of the mobility Leitbild of FDM is regarded to make up the cultural filter through which risks of automobilization are perceived. It will provide a frame of reference in the following second part of the empirical analysis, which aims at the features of reflexivity amongst "the people of FDM".

4. MOTOR's representation of risk

Automobilization risks are manifold. Seen through the eyes of FDM they appear in a number of different "costumes". Examples of risks representations on MOTOR's front page are safety risks for car drivers, passengers and other transport users, economic problems for car owners, threats to the environment as well as risks threatening transportation flow. In order to understand how FDM defines and responds to what it views as risks, the focus within the research design is now shifted from a quantitative content analysis that was employed before, to a more qualitative and interpretative approach. Instead of carrying out a somewhat rigid coding procedure using the complete sample, I will only refer to a number of selected front pages.

Still, to give a brief overview of how the risk representation on MOTOR's front pages has changed over time I will make use of the content analysis again. This, however, can only be seen as an introduction to the problem of FDM's reflexivity. To enable a meaningful interpretation, I consider any image that confronts the spectator with a *problem of automobilization* as relevant. A problem as such is anything that hinders or disturbs the continual self-reproduction of automobilization. With this broadened definition it becomes possible to capture all sorts of dangers, barriers or anomalies that in the eyes of MOTOR's makers are either seen to be threats *for* or threats *of* automobilization.

Less then a third of the complete sample shows a "problematic" front page. Nearly two thirds of such "problematic" cases are concerned with issues that are neither related to traffic safety, nor to environmental protection. These front pages covered topics such as automobile insurance, holiday preparation, infrastructure maintenance, capacity problems, taxation and group tests. The remaining third of problematic front-pages focusing on traffic safety from a variety of angles. Only a minority of front-pages raises (and answers) questions concerning the environmental aspects of automobilization.

In addition to simply addressing a problem MOTOR's front page often offers a *ready-made solution*. This is in particular the case whenever the reader is confronted with problems of how to administrate motorization efficiently. Such problems usually evolve from the simultaneous mass-production and consumption of automobiles and have caused a demand for additional expertise on questions like "how do we deal with the capacity problems?" or "how does one find a price-worthy used automobile?" or "which automobile is the best amongst this year's sere of, for instance, station wagons?". The answers to these questions are given by MOTOR. Often it is not only the problem itself any longer that is addressed by the front page. The viewer will also find a hint of how the problem can be solved. The solution is delivered along with the problem and it is in the hands of the single motorist to accept this solution. If s/he, for instance becomes a member of FDM, s/he will neither have the problem of how to plan a holiday nor will s/he be left without support once the car breaks down.

This, however, represents a shift in the understanding of reflexivity. Responses to the risks are no longer formulated by a social group, but are now in the hand of the individual FDM-member. The *personalization of risk responses* is best expressed the in the rise of the do-it-yourself-sections over the years. "*Doing-it-oneself*" is, one could argue, not only about repairing one's automobile. It has turned into a metaphor for how the community of automobile users shall deal with the problems of automobilization. Apart from fixing minor technical defaults oneself, it is now up to the single user to individually solve the problems of automobilization. This is particularly visible when it comes to traffic safety – it is left to oneself to get his rear and head lights frequently checked; to use the safety belt before starting to drive or to buy a children's safety seat.

Furthermore, it is the representation of traffic safety that illuminate some interesting aspects of FDM's social and cultural construction of risks. Within the area of traffic safety, problems are no longer coming from out there, but are conceived of as threats that evolve from automobilization itself. They are acknowledged risks of automobilization, that is to say they are recognised to be produced by the car-driver hybrid itself. This, however, does still not present a real threat endangering the very foundations of automobilization. *Traffic safety risks are rendered manageable on the front pages.*

They are presented as being predictable, calculable and insurable risks. Due to expert knowledge and expert systems the individual driver can cope with these threats and respond to the risks by following the safety recommendations of FDM's experts. This is in particular the case for the risk representations on front pages in the 80's and 90's. While earlier issues often present the topic of traffic safety as an open question, the latter issues recommend some way of overcoming the risk.

The absolute number of MOTOR front pages that express an environmental concern is surprisingly small. Nevertheless, they do exhibit some crucial aspects of how environmental threats are perceived by FDM. The first issues to address environmental threats in some form date from 1979. Their publication coincides with the changes that take place within the representation of space and the vanishing of the subject from the front page. These issues either recommend a technical fix or the alteration of individual driving behaviour as a response to the threats posed against nature and the environment. With regards to technological interventions the foci lie on solar vehicles, electric vehicles, the catalytic converter or rape as an alternative fuel.

To summarise, MOTOR's representation of such risks of automobilization, which are the least calculable, tangible or reversible (i.e. the threats posed against the environment) suggests the exact opposite of what they actually are. Environmental threats are presented as solved or solvable and, thus, calculable and reversible. The solution lies in the technological improvement of an existing technical artefact, i. e. the automobile itself. It is once again up to the individual driver either to consider these solutions or to reject them. Apart from this personalization of automobilization risks, which leaves the responsibility to the individual person, it is in particular the absence of the spatio-temporal dimension of mobility that characterises the representation of environmental threats. This is as well mirrored by the fact that such risks are presented as local rather then global risks.

5. The role of the "FDM" – the "Friend who Defines Mobility"

The risks of automobilization are being taken care of by FDM. It is in particular the FDM-experts, often pictured on the front page, who evoke trust. They come across as somewhat of a friendly and helpful character that enable us to organise our mobility better – they are the "*F*riends that *D*efine *M*obility". Thus, the communicative message of many of the front pages tends to reinforce the trust into the expert of automobilization.

MOTOR's front page fosters what could be called a mobilization of expertise. With the distribution of the monthly magazine a particular expert view is distributed. This view frames the reflexivity of FDM's members. The visual representations of automobilization risks transform an ostensibly objective view on risks and reflexivity into a more "colloquial" and "mundane" context. The front pages allow the "Friends who Define Mobility" to express themselves and it enables the lay user to grasp the experts' view on risk. The consequence is that *risks are made more visible and thereby better understandable.*

The representation of automobilization risks is crucial for both the expert and the lay user. This is the more important the lower the tangibility and perceptibility of the risk is. Automobilization risks are only visible as a result of their representation – without its representation, the risk would remain invisible for the human eye. Both experts and the lay user then see the risk in a distinct fashion. They both look at it through the eye of a scientist who gazes at his subject by means of the "inscriptions" he or she produces in the laboratory.

To illuminate the import of MOTOR's front pages for the construction of facts and expertise one may compare them to the diagrams and images of modern scientists. Both forms of representations of expert knowledge make visible how mobility is seen through the eyes of the makers of MOTOR, or in other words, in the space of expertise. This space of expertise is normally a "terra incognita" for the lay person, but has become accessible through the representations on the front pages. The more representations there are the greater the divide between experts and lay-people – or between those,

who produce the representations and those who consume it. The result of this is what could be called a new *"world of expertise"*, that is to say a world in which automobilization risks are formed by the experts and their particular way of constructing facts. It is Bruno Latour, who explains how disagreeing with the expert view becomes increasingly difficult in such a world. "The effect on the construction of facts is sizeable if a writer is able to provide a reader with a text that presents a large number of the things it is talking about in one place. If you suppose that all the readers and all the writers are doing the same, a new world will emerge from the old one without any additional cause. Why? Simply because the dissenter will have to do the same thing as the opponent. In order to "doubt back", so to speak, he will have to write another book, have it printed and mobilize with copper plates the counterexamples he wants to oppose. The costs of disagreeing will increase" (Latour 1990, p. 34).

Thus, one could argue that the images on MOTOR's title pages stem from the same sort of rationality that makes risk-managers and scientists calculate and measure risks. Their "risk-inscriptions" – the diagrams and tables on which they base their risk-assessment – are the prime lenses through which they perceive the subject of their research. The front pages are then simply another object that contains an inscription of how to perceive and respond to risks. With this the front page becomes another "immutable mobile" – as Latour calls the two-dimensional inscriptions on paper that are produced by scientists (Latour 1990). It accelerates the displacement of an "objectivist" view on risk from the heart of the club to its members.

Consequently, these "immutable mobiles" not only inflict upon the members' perception of risk and their risk-response but eventually alter the risks themselves. They render risks calculable. What is made visible becomes perceptible and thus calculable. The picture is structured and the risk is assembled in such a manner that the risk-response can be read off the front page. The *risk-inscriptions* on the front pages unite experts and lay-people in that they impose the risk-definition of the former on the latter. Thus, inscription has enabled conscription – to use one of Latour's words.

6. Conclusion

What we eventually witness in MOTOR is the *scientization of automobilization*. The interference of knowledge cultures is subjected to a process of scientization. Science is used to defend a particular mobility Leitbild and reinforce the mobility paradigm of automobilization. The use of science in MOTOR, one might argue, is equivalent to the use of science to silence public concern in relation to major industrial hazards. Irwin argues: "The technical language of the public information over major hazards aims to reassure the public and to avoid any larger social debate over the location of hazardous industry. It permits the appearance of openness (and so helps 'incorporate' local people in the status quo) but without engaging in discussion over competing assessments of the risk of major accident" (Irwin 1995, p.29).

At the same time MOTOR contributes to a *popularization of the scientization of automobilization*. The "public face of science" becomes particularly visible on the front pages of MOTOR. The colourful visual expressions on MOTOR's front pages certainly bear little resemblance to the "dull" black and white diagrams produced by the risk-researcher. Nevertheless, they both serve a similar purpose that is to inform an audience about the generic characteristics of or the potential responses to a particular risk. Many front pages of MOTOR, and many issues of the magazine as such can also be seen as part of so-called "popular science". They offer a popularised scientific approach to automobilization and its inherent risks. It is the purpose of any pop-science media product to inform its audience about the merits and virtues of modern science and technology in an understandable way. In doing so they reproduce the scientifically-based world view, that is to say the ability to overcome current problems by means of more and better scientific solutions and technological applications. Pop-science media products just like MOTOR express an "enlightened" view of science – and in the case of FDM's magazine an enlightened view of automotive technology. With this, automobilization risks appear primarily as a technical and sometimes an organisational problem of transportation rather than of late

modern mobility as such. The scientific worldview of the makers of MOTOR prevents them from seeing *that the technology they promote as a solution is in essence part of the problem*.

Altogether, MOTOR's front page provides a good example for the social construction of automobilization risks. The risks presented by the makers of MOTOR are primarily risks for automobilization rather than of automobilization. In other words, the automobile is mostly not seen as a risk technology. Nevertheless, if automobilization does pose any risks to the human being – the experts of MOTOR have the answer: it is exclusively end-of-the-pipe technologies that provide the solution to the problem.

The fact that the number of risk representations increased at the same time the subject began to vanish and the spatial context was rendered abstract, suggests a correlation between these developments. These alterations in the representation of automobilization might be interpreted as a result of the transformation of automobilization itself – a metamorphosis from somewhat of a traditional phase to a reflexive phase. Seen in such a light, reflexive automobilization is just as much disembodied as it is situated within a variety of abstractions of concrete or real space. Even though the risks of automobilization are not really visible on the front pages of MOTOR, their existence has altered the representation of the three dimensions of mobility in the head pictures. And with this, one might argue, the very characteristics of the vehicle, the subject and time/space have been transformed subsequently. Although the transformation from a traditional phase to a reflexive phase is not so much visible in the representation of risks of automobilization, it is expressed in the modification of the three dimensions and the altered interrelation between them. The reading of the head pictures suggests that the reflexivity of the makers and readers of MOTOR is defined by what can be called the self-modernization of automobilization. During this modernization process, automobilization has dealt with the self-produced risks by freeing itself from the context in which these risks materialise. Both the subject and the natural environment of the automobile are no longer affected by these risks because they have moved out of sight. This, at least, is what one sees – or rather not sees – on the front pages of MOTOR. The effort to demolish the grounds, on which the risks materialise, has been accompanied by the endeavour to concentrate risk solutions on the automobile itself. This however, does not alter the generic characteristics and the trajectory of automobilization as a mobility paradigm. It rather reinforces the logic of traditional automobilization, i.e. an unchallenged growth orientation. Reflexivity amongst the readers and makers of MOTOR, therefore, is determined by a strong focus on the vehicle – and so is their mobility Leitbild.

Bibliography

Ball, Michael S, & Smith, Gregory W. H. (1992): Analyzing visual data. Newbury Park/London/New Delhi: Sage Publications.

Beck, Ulrich; Giddens, Anthony & Lash, Scott (1996): Reflexive Modernisierung. Eine Kontroverse. Frankfurt am Main: Suhrkamp Verlag.

Beck, Ulrich, Hajer, Marten, Kesselring, Sven (1999): Der unscharfe Ort der Politik. Empirische Fallstudien zur Theorie der reflexiven Modernisierung. Opladen: Leske+Budrich.

Canzler, Weert (1996): Das Zauberlehrlingssyndrom. Enstehung und Stabilität des Automobil-Leitbildes. Wissenschaftszentrum Berlin für Sozialforschung (Hrsg.). Berlin: Edition Sigma.

Irwin, Alan (1995): Citizen Science. A study of people, expertise and sustainable development. London/New York. Routledge.

Kuhm, Klaus (1997): Moderne und Asphalt. Die Automobilisierung als Prozess technologischer Integration und sozialer Vernetztung. Pfaffenweiler: Centaurus-Verlagsgesellschaft.

Latour, Bruno (1990): Drawing things together. In: Lynch, Michael and Woolgar, Steve: Representation in Scientific Practice. Cambridge/London: MIT Press.