

Citizenship in Collision: Notions of Agency in Road Safety Work

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Abstract

In 2004, the Norwegian Accident Investigation Board (AIBN), previously restricted to civil aviation, was expanded to include a new section for road traffic, which was to investigate individual road accidents. The overall ambition behind the new organisation was to reduce the number of fatalities in road traffic. This article explores the idea that the main task of the Accident Investigation Board's section for road traffic was to construct a new kind of narrative about road accidents, which would in turn open up new possibilities for intervention. The article examines what characterizes the narratives they have constructed and how these narratives interact with conceptions of risk and causality. It also discusses how they fit into the existing structure of road safety work in Norway. It concludes that the Accident Investigation Board's narratives are implicitly political, as they partly deconstruct the notion of liberal citizenship underlying the legal system, and that this deconstruction can potentially have far-reaching practical consequences.

Keywords: Road traffic, road safety, narratives, risk objects, citizenship accidents.

"The death of one man is a tragedy; the death of millions is a statistic".

Attributed to Josef Stalin

Introduction

Road accidents are the eighth leading cause of death globally, and the leading cause of death for people aged 15–29 years (WHO, 2013). Norway, however, is one of the countries in the world with the lowest number of road fatalities relative to kilometres driven¹ (European Transport Safety Council, 2013), and Norwegian authorities have long made targeted efforts to reduce the number of fatalities and injuries. In 2004, the Norwegian Accident Investigation Board (AIBN) was thus expanded to include a new section for road traffic. Their task,

as defined by the Government, was to investigate individual road accidents, and to construct road safety advice on the basis of the investigations. The overall ambition behind the new organisation was to reduce the number of fatalities in road traffic (Norwegian Road Traffic Act, §44).

This article explores the idea that the main task of the Accident Investigation Board's section for road traffic was to construct a new kind of narrative about road accidents. It discusses what kinds of narratives they have constructed, how these interact with conceptions of risk and causality, and how they fit into the existing structure of road safety work in Norway. I argue that the Accident Investigation Board's reports have constructed new kinds of risk objects (Hilgartner, 1992) and

that the novel narratives and the risk objects they call into being are implicitly political, as they partly deconstruct the notion of liberal citizenship underlying the legal system.

The article is based on government reports and whitepapers, published reports from the AIBN's section for road traffic, and interviews with employees in the road safety section of the AIBN, in the Norwegian Directorate of Public Roads, and in the Ministry of Transport and Communications.

The liberal citizen

The automobile and its infrastructure are important defining features of modern societies. Roads, bridges and tunnels for cars are among our most costly and invasive infrastructures, and the car-system shapes our cities (Hommels, 2005), neighbourhoods (Bendiktsson, 2015) and even our natural landscapes (Hvattum et al., 2011). Road crashes are one of the main "unnatural" causes of death in most societies, developed and developing alike. On this background, cars, roads and road safety are strangely marginal topics in STS literature, where studies of cars have often been historical, typically centred on the development of alternative automotive technologies such as electricity (Gjøen and Hård, 2002; Brown, 2001), gas (Braun, 1992), and ethanol (Carolan, 2009).

With increasing focus on issues such as pollution, public health, urbanisation, densification, and land use, road traffic and car-dependency are increasingly seen as problematic aspects of our societies. In addition, efforts to prevent traffic fatalities have intensified, and radical new approaches to road safety have been developed in several countries (MacAndrews, 2013; Elvebakk, 2009), which involve a reconceptualisation of the relationships and responsibilities between actors in the road system.

Jain (2004) and Wetmore (2004) have demonstrated that the current distributions of agency and responsibility in road traffic and road safety are not given, but the outcomes of complex and reversible processes of negotiation and renegotiation. Recent concepts in mobility studies such as 'the car-driver-hybrid' (Sheller and Urry, 2000), 'the driver-car' (Dant, 2004), and 'the autoself' (Randell, 2016) likewise highlight how technical

assemblages blur or challenge notions of subjects and objects in road transport. Although most people spend considerable parts of their lives in road traffic, little attention has been afforded to how these hybrid assemblages impinge on and interact with wider societal notions of subjectivity and citizenship².

The liberal notion of citizenship is fundamentally linked up with individual freedom (Schuck, 2002). Traditionally, liberal theories accept restrictions on the actions of individuals in so far and only when they interfere with the rights and liberties of others: your liberty to swing your fist ends where my nose begins. Implicit in this principle is the idea that the individual is the fundamental building block of society, whose actions, plans and strategies, in so far as they are not harmful to others, require no further justification. Arguably, this conception also implies that the liberal citizen is fully formed, and must be accepted as such, without reference to the formative process. John Stuart Mill, for instance, states that "there is a part of the life of every person who has come to years of discretion, within which the individuality of that person ought to reign uncontrolled either by any other person or by the public collectively" (Mill, 1999: 371). Thus being an autonomous agent involves being an independent entity (Dworkin, 1972). John Rawls' similarly presents the "political conception of a person" (Rawls, 1993), which has been described as "an antecedently individuated subject, the bounds of whose self are fixed prior to experience" (Sandel, 1998: 55).

Sandel's criticism is usually categorized as communitarian, but also feminist theorists such as Robin L. West (1999), Judith Butler (2011) and Wendy Brown (1995) have presented alternative visions. They argue that these tenets of liberalism overstress the masculine values of autonomy and independence, while ignoring that individuals belong in tightly knit networks, most importantly families. According to McClain (1991: 673), liberalism presents a "model of separate, atomistic, competing individuals establishing a legal system to pursue their own interests and to protect them from others' interference with their rights to do so". A central aspect of the feminist criticism is that it frequently problematizes the liberal distinction between the public and the private, arguing that

the (public) voluntariness advocated by liberals is illusory, as people's choices are formed by their (private) socialization into, among other things, gender roles (Higgins, 2003). In other words, liberal theories ignore the histories behind the autonomous subject.

The corresponding tendency in ethical theory to treat individuals as fully formed and independent has been challenged by those espousing alternative approaches to ethics, perhaps most notably theorists associated with 'the ethics of care' (Gilligan, 1982). These criticisms tend to emphasise that borders between individuals are secondary, and that relationships of entanglement and responsibility are prior to universal human "rights", especially the right of non-interference. Autonomous subjects are constructed through a process of rearing, where women typically play a significant role. We could sum up these criticisms as maintaining that the liberal subject does not have a history, is not to be found in a specific context, and has no concrete, specific relations to others. Kymlicka (2001) concludes that while liberalism seems a valid description of ethical relations between independent individuals, an ethic of care better describes relations to dependents. Since all individuals start out as dependents, having dependents is a necessary condition for having independents. The question then, becomes where to draw the line between the two states; when an individual can reasonably be considered autonomous, as is a premise for much liberal theory.

In liberal societies the tension between dependence and autonomy has frequently been solved through excluding certain individuals from the sphere of full citizenship. Various gatekeeper functions define when, and in what circumstances, one should be accepted as a fully formed citizen. Children are usually excluded, and so, in many contexts, are persons with severe mental deficiencies.

The particular citizen of Norwegian road traffic is often defined with reference to paragraph 3 in the Norwegian Road Traffic Act, which states that "A driver shall show consideration and be alert and cautious so that he does not cause damage or risk, and so that other traffic is not unnecessarily obstructed or inconvenienced". In road traffic, licencing requirements and regulations exclude

children, sufferers of various deceases (such as Alzheimer's, etc.) and individuals in states that can interfere with their ability to make choices (e.g. drink drivers) from driving a car. This citizen works as a standard, and like all standards, it will exclude as well as qualify: some people are not allowed to drive cars, because they are too young, do not possess the relevant physical or mental abilities, have not passed a driving test, or have had their licence revoked. For shorter periods, one is excluded from the standard when under the influence of alcohol, drugs, or certain kinds of medication.

Making Norwegian road safety work

In Norway, road safety work is mainly organized on three levels; national level (Ministries, the Norwegian Public Roads Administration (NPRA) and directorates), regional level (counties and regions) and municipal levels. Various public bodies and NGOs contribute considerable efforts on all three levels.

At the level of government, the Ministry of Transport and Communications has the primary responsibility for road safety, while the Ministry of Justice is responsible for enforcement, and the Ministry of Education for traffic education in schools, and driver training. Technical road safety work is the remit of the Norwegian Public Roads Administration.

In practice, the work has been divided into three separate spheres; on the one hand, there is the judicial sphere, encompassing law-making and enforcement by the traffic police. Secondly, there is the Norwegian Council for Road Safety (*Trygg Trafikk*), which is an umbrella organisation for voluntary road safety work and serves as a link between voluntary associations and the road safety authorities. The Council is to promote the best possible road safety for all groups of road-users, and holds a special responsibility for promoting traffic education in schools and kindergartens (Norwegian Council for Road Safety, undated).

Thirdly, there is the Norwegian Public Roads Administration (NPRA), led by The Directorate of Public Roads. The NPRA has sectorial responsibility

for roads and road traffic. The agency is, among other things, responsible for planning, building and maintaining state and county roads, and developing regulations and guidelines for road design, road traffic, driver education and vehicles. The NPRA also performs controls of workshops, vehicles, driving and resting times and seat belt use, and conducts driving tests and supervises driving schools. The organisation has an overarching responsibility to actively promote road safety, for instance through measures such as road safety campaigns. This means that historically, the NPRA has had a very broad influence over many aspects of Norwegian road safety work, and has not been subject to independent scrutiny, with the exception of the Government.

The narratives about road accidents produced by the NPRA have traditionally been stories of aggregated numbers. The keeping of statistics on road accidents with injuries to persons or major material damages dates back to 1939 in Norway, while from 1964, only accidents with injuries to persons have been reportable to the police. From 1977, a joint form for reporting accidents has been shared between the Police, Statistics Norway, and the road authorities. About 9000 accidents are reported annually (Statistics Norway, undated). These statistics contain information such as the date and location of accidents, the age and sex of those involved in accidents, the category of road user group (driver, passenger, pedestrian, cyclist, etc.), and the severity of injuries. Provisional³ accident statistics are published monthly, and routinely compared to the number of fatalities the corresponding month the previous year and to the aggregated mean for the last five years.

The NPRA and other actors such as research institutions develop further statistics on the basis of this data, for instance pertaining to the average age of drivers involved in accidents, the average age of the car, the day of the week and time of day when accidents take place, the risk of specific groups of road users, etc. Accident statistics are also linked to other records, such as The Road Directorate's registries of motor vehicles and driving licenses, and drug use data from the Norwegian Institute of Public Health. These narratives about road accidents have thus relied heavily on a statistical style of reasoning (Hacking, 1990),

where aggregated numbers are used to construct law-like connections between (an increasing number of) phenomena and outcomes.

In addition, the NPRA's regional accidents analysis groups (AAG) publish annual reports on fatal accidents in their regions and occasional thematic reports on topics such as fatal accidents involving young drivers or cyclists. These groups began their work in 2005, and display an influence from system oriented safety thinking (Shalom Hakkert and Gitelmann, 2014) in their multi-causal approach to accidents and explicit avoidance of apportioning blame. Their reports, however, follow the traditional logic of the accident statistics; they provide more detailed information on vehicles, road users and environments involved in accidents, but they still present their findings in terms of aggregated numbers and well-defined categories, and their results are combined to form a searchable database.

These stories told by the road authorities have served a specific purpose in the Norwegian system of road accident prevention; they establish causal links. For instance, the disproportionately high number of young drivers involved in accidents has contributed to constructing the young driver as the kind of thing that may cause accidents, as a 'risk object' (Hilgartner, 1992). In this system, the risk object is never so as an individual, but as a representative of a group, and its existence is necessarily established over long time periods and through high numbers of instances, to avoid arbitrariness. Thus the calculated 'normal' functions not only as a descriptive, but also as a normative standard (Hacking, 1990). Specific measures have been developed to bring down the risk of 'high risk groups': older drivers are required to go through medical certification; driver education has been modified to improve the performance of the young⁴; targeted safety campaigns have been run, etc. A risk object is not necessarily a road user, however; there is an ongoing effort to remove unsafe cars from the roads, and the entire Norwegian road system has been divided into stretches and given a safety rating based on accident numbers (compared to the calculated mean). When there is a disproportional number of accidents on a stretch of road, the NPRA will consider various measures to make

it safer, such as improving the road, reducing the speed limit, or installing speed cameras (Ragnøy and Elvik, 2003).

These aggregate numbers thus work as basis for policy, and policy is justified with reference to accident statistics. Statistics is accumulated over several years, however, and it can take a long time from a potential problem is identified to measures are taken. Measures have typically also been justified with reference to cost-benefit analysis: measures – and certainly big and costly measures – should ideally be profitable societal investments. Currently, a statistical life in traffic is valued at around 35 million NOK (Statens vegvesen, 2010), which means that life-saving measures will be deemed profitable if they cost less than the number of statistical lives saved multiplied by this sum. The rationality of the system therefore rests on this logic of statistics and macro-level predictability, and the quantitative stories guarantee the rationality of the system of accident prevention. In this system, a single accident necessarily has limited informational value.

Investigating road accidents

Around 2000, Norwegian roads were among the safest in the world, yet the Ministry of Transport and Communications was strongly committed to working for further reductions in the numbers of fatal and serious accidents. Their ambition was to see accident statistics improve from one year to the next, in spite of the continuing growth in traffic. At the time, the government was also working towards adopting the Swedish concept *Vision Zero*, a long-term vision of a road system that does not lead to fatalities or permanent injury (Elvebakk, 2007; MacAndrews, 2013.) However, many traditional road safety measures were perceived to be exhausted, at least within realistic budgetary constraints. The question that arose, therefore, was, as one of the employees in the Ministry of Transport and Communications put it, “what next?”

The Norwegian National Transport Plan 2002-2011 announced the Government’s intention to consider the establishment of a joint accident investigation board “for all major accidents and incidents in sea, air, rail and road

transport.” (Ministry of Transport and Communications, 1999). In 2001, the Government appointed a working group to review an expansion of the existing Accident Investigation Board for Civil Aviation into an organisation similar to the American National Transportation Safety Board, which holds a broad mandate and investigates accidents in civil aviation as well as major accidents in the other transport modes.

The governmental working group submitted its report in 2002, recommending that the AIBN be expanded to encompass the road and maritime sector. The report predicted that such a multi-sector organisation would benefit from economy of scale, and enable the introduction of a cross-disciplinary approach that would complement technical investigations with insights from the social sciences and competence on human factors (Ministry of Transport and Communications, 2002a). This recommendation led to the appointment of a second working group, tasked with considering consequences of the expansion of AIBN to the road sector. The report from the second working group was published in April 2003 (Ministry of Transport and Communications, 2003).

The expansion of the Board met with no political opposition; the central-right Government which replaced the social democratic Government in 2002, included the establishment of a cross-sectorial accident investigation board in their government platform (Ministry of Finance, 2002), and the bill passed through Parliament on a unanimous vote and without debate (Norwegian Parliament, undated) in 2005.

Among professional actors in the road sector, however, a more cautious attitude prevailed. According to the informants from the Norwegian Directorate of Public Roads (the lead agency of the NPRA), the Directorate was overall in favour of the expansion of the Accident Investigation Board to the road sector, but expected the Board to possess a competence that complemented rather than competed with their own (at this time only planned) accident analysis groups.

The official documents provided a general framework for the activities of the new organisation. The Proposition to Parliament (Ministry of Transport and Communications, 2005) presented

a regulatory framework for the road section of the AIBN (hereafter AIBN-Road) that differed from the other sectors, as it needed to be adapted to the Road Traffic Act, but the organisation's mandate was not described in detail. There was an explicit ambition for the organisation to benefit from its autonomous position (Ministry of Transport and Communications, 2003), and thus there was considerable room for manoeuvring when the practical day-to-day operations of the Board were to be given shape. The intention was for the new section to benefit from its co-location with the rest of the AIBN, and for it to adopt a methodology similar to the one used in aviation. There are significant differences between these sectors, however, which constitute potential obstacles to successfully copying methods between sectors. Most importantly, in contrast to what is the case in aviation, road traffic is characterised by a very high number of accidents, most of which do not lead to serious injury, and even in fatal accidents, the number of fatalities is usually very limited.

The high number of potential accidents meant that an attempt to investigate *all* accidents and "serious incidents", as in air traffic, would be forbiddingly expensive, especially since the new section was intended to be staffed with 4-5 persons (Ministry of Transport and Communications 2005). It was therefore necessary to find some way of delimiting the task. The first working group report suggested that the Board should focus on accidents with "high risk potential" (not necessarily catastrophic consequences), and, most importantly, accidents that held a promise of safety improvement, through the acquisition of new knowledge (Ministry of Transport and Communications, 2002b). The report further assumed that these guidelines would probably lead to a focus on accidents involving professional drivers, such as public transport and road haulage, which could more profitably be investigated with the methods used in aviation, due to greater similarities between the actors involved. As in aviation, one could address an organisational environment, rather than individual drivers and their diverse backgrounds and networks.

Unlike police investigations, the AIBN-Road explicitly—and in compliance with international regulations for airline investigations— should

avoid stating only one cause of the accident; the aim is to find out how several causes interact, and how the processes leading to the accident could have been intercepted at different points. Its investigations should not allocate blame, and the information uncovered in their interviews cannot be used as basis for criminal procedures (Norwegian Road Traffic Act, § 49).

Narrating the accident

The AIBN-Road published its first report in 2006, and has since published 3-8 reports per year. The AIBN-Road freely chooses which accidents to investigate, and publishes its findings in reports, which conclude with a list of "safety recommendations". The recommendations are based on the findings in the individual investigations, and point to weaknesses in the system of road traffic. The AIBN-Road submits its recommendations to the Ministry of Transport and Communications, which, in turn, forwards them to the Norwegian Directorate of Public Roads. The Directorate is the agency responsible for 'closing' recommendations, i.e. following them up with practical measures or policies. The Directorate reports to the Ministry, which informs the AIBN of the process. The AIBN's responsibility ends with the completion of the report, however, as any further involvement might jeopardize its autonomy.

The reports usually focus on single accidents (typically involving at least one professional driver), and sometimes include lengthy technical appendixes. These reports introduced an entirely new genre of storytelling into Norwegian road safety work, as the focus was no longer on the big picture, but on one single accident at the time. The AIBN investigations have a duration of several months, and the reports relate the story of the individual accidents in painstaking detail, as illustrated in the quote below (all quotes translated by the author).

Around 8 o'clock in the morning on Thursday September 29th 2005, an 18-year-old girl drove from [...] in the direction of [...] High School, where she was a student in her final year. On her way she went by a house in [...], to pick up her 17-year old-friend. (AIBN, 2008: 5).

As we can see, this AIBN-Road report sets the scene quite differently from the standard accident statistics. It relates the story of the accident; how it unfolds inexorably towards the point where the car is hit by a truck when turning onto the state road, and the crash leaves the young driver dead and her passenger severely injured. The report is illustrated with maps and photographs from the scene of the accident. It briefly describes the two drivers; her experience with driving and her performance in driving school education; his daily job and routines as a lorry driver, and working conditions on this particular day. From this point, the investigation turns to the causes of the accident, and how the accident, or its consequences, could have been prevented.

The report cited above concludes with the following three safety recommendations:

- The Norwegian Public Roads Administration should detail requirements for visibility from driveways on the basis of existing regulations, and develop a system for following up the requirements.
- The Norwegian Public Roads Administration should establish guidelines to ensure that the right of way on crossroads leading onto heavily trafficked roads is made clearer to road users.
- The Norwegian Public Roads Administration's should analyse accidents involving drivers with recent licences in relation to their achievements in driver education and driving tests.

The recommendations function as the conclusion of the report, although not in the sense that the report is a deductive argument, as the logic of a causal analysis does not lead directly to recommendations for prevention (Hopkins, 2014). The set of potential causes is infinite, and the analysis must always be based on a counterfactual story and expert judgment. The implicit counterfactual narrative is one in which the accident does not happen, or does not have severe consequences, and this does not follow from an accident analysis, however detailed.

Thus the conclusions to the reports do not follow from the facts with logical necessity, and

they can be disputed. In the early years of AIBN-Road, the NPRA indeed frequently disagreed ardently with its conclusions and recommendations. This specific accident and the subsequent report had become a source of conflict between the AIBN and the NPRA at the time of my study, and was brought up in several interviews. The investigator in charge (ICC) of this analysis at AIBN was therefore on the defensive when describing the reactions to his report:

[This report] has become a laughing stock [with the NPRA], because they think we have expected more than they should really be held accountable for. But I disagree with them, and – of course lots of other things are more important, but it's such a central finding, that I believe it is important. This is to do with visibility; that you make sure that visibility is sufficient for you to actually drive safely. It's not according to the books; that's not it, but about what can be safely performed. And I believe that the road authorities should take on that responsibility and make sure that any driveway into the road network is sufficiently safe. (AIBN-employee, interview)

In the narrative constructed in the report, there is clearly something that could be done in order to prevent this accident: improved visibility and a clearer right of way might have made a difference. There is a point at which the relevant authorities might have intercepted, erected a safety barrier, and prevented the tragedy. The system had a flaw, and was less safe than it might conceivably have been. The narrative also introduces a novel risk object; the unsafe driveway, against which measures should be taken. But on the other hand "lots of other things are more important" in the sense that they would be based on accumulated evidence, show up in the statistics, and probably prevent a higher number of accidents.

This kind of narrative did not sit well with the Directorate for Public Roads, and one of the informants there presented the same case in a very different light:

Two years ago there was this eighteen-year-old girl, recent driver's licence, had driven from home and onto the public road, from her own driveway, and was killed because she didn't look around. And then they made a recommendation that the NPRA

should control every driveway every year or at least at regular intervals. And, you know, it was her own driveway, and inattention. If, on the other hand, we were to inspect every driveway in Norway, that would probably amount to a hundred man years or so a year. (DPR employee, interview)

This creates an entirely different narrative: the story is first and foremost one about individual blame; a recent licence, she does not pay attention, and it is her own driveway, with which she should be familiar. Thus, the endpoint to this story is an established risk object, 'young driver' and a well-known statistical category, 'human error'. These terms serve to tidy up the narrative through placing the failure in a category which relegates it from the traffic system to the moral and legal system.

The story of individual blame ties in with the quantitative approach to road safety. The facts listed are *known* risk factors that are already familiar from road safety statistics, and as such, the story is brought to a satisfactory end: there is, after all, one cause, and that cause can be located in the single, young, inexperienced and inattentive person. The last sentence in the quote also refers to the rationality of the system; it can be read as an elliptical reference to cost-benefit calculations. Given that we have to accept that humans are fallible, and still allow them to drive, there really is not much to do about it. This is a narrative that does, in its own way, have a neat closure. In the manner of a crime novel, and in the manner of the criminal investigation frequently following a road accident, the story is brought to a close when the guilty person has been identified.

This approach to road accidents was also referred to by another employee of AIBN-Road, who contrasted their own methods to the tidy ending to investigations in the legal system:

The police want to allocate blame and responsibility. If you have a single accident and the driver was killed, then it is not interesting, and the case is closed, because the guilty party cannot be found. (AIBN-employee, interview)

The closure of this kind of story is convenient, because it seems to suggest that there is actually not very much to be done. The isolated individual

is to blame, and therefore the system is blameless. The story told by the road authorities contributes to upholding a stable set of relations between actors in the system, where the individual driver is allocated certain characteristics and responsibilities, and the demarcation line between the individual and the system is drawn with reference to such characterisations. Failing to perform relative to the standards places you outside of the system of orderly traffic, and renders you a subject of the separate system of legal accountability, and categories such as 'inattention', 'inexperience' and 'young driver' serve as keys changing between these registers. The legal system thus upholds the system in cases of failure – it is the guarantee that the system is working, even in the cases when, apparently, it is not.

Another employee at the Directorate for Public Roads was explicit that even if you could always "blame the system", this was not always a fruitful approach to take to accidents:

Causal chains can be traced too far, not every consideration is equally interesting. But this probably stems from the methodology, which to some degree locks in the AIBN's work, and sometimes leads the recommendations in too many directions. It gets too complicated, too specific. One has to ask oneself what will contribute to the reduction of the number of casualties and injuries. (DPR employee, interview)

This quote illustrates how establishing the causes of road accidents is not a neutral and descriptive activity (Fahlquist, 2006), as causality is not just a factual aspect of the accident; it is related to the practical day-to-day work of accident reduction. Finding a cause involves proscribing a cure, and extending causal links might mean extending the responsibility of the relevant authorities in unforeseen and unwanted directions. An important element of the construction of risk objects consists in constructing linkages between objects and harm (Hilgartner, 1992). Since there are many branches in the processes leading to harm, and because the branches in principle have no end-points, such a construction is always problematic. However, some such end-points have been established as 'final causes', among them 'bad luck'⁵, 'acts of God', and importantly, in this context, 'human

error'. The deconstruction of these established end-points that is a corollary of severing the link to the statistical categories leads to a proliferation of risk objects. This proliferation naturally poses a challenge for agencies tasked with interrupting causal chains that point in "too many directions"

As noted, the NPRA has traditionally delineated their charge through a form of cost-benefit calculation: any big investment should pay off in the form of improved accident statistics; ideally a sizeable reduction in the number of fatalities. The ICC in charge of the report was also quite aware of this of this problem, and did indeed see the Directorate's perspective:

You have 10 000 road accidents in Norway every year, and some – I don't know how many – are related to lack of visibility, but I don't think that's a lot. And then this is a kind of recommendation where you don't go "Naturally, we'll have to do this". In light of having a lot of accidents, and then you are told to prioritize visibility in driveways, it's no wonder you laugh at it. But then you miss out on a perspective – you are more concerned with the forest, as such, but not the individual trees, if you see what I mean. (AIBN-employee, interview)

The AIBN, of course, was explicitly established to consider individual trees. Their task is to construct the story of the individual accident and its possible prevention. In contrast, the NPRA's focus was not to prevent every single accident; it was to reduce the overall number of accidents as much as possible within the limits set by available resources, and within the framework of established routines, regulations and practices. As one of the managers in the department of safety in the Directorate saw it:

The problem is that when [recommendations] become too specific you could have a problem with finances. For problems can be solved in many different ways, and not necessarily in the most expensive way. And you do not always need a 100 % effect; you can do well with a 50% effect, to put it a bit simplistically. (DPR-employee, interview)

The NPRA narratives were not stories about rendering the individual accident impossible. These were narratives of a reasonably safe system, where accidents might occur as the result of individuals

failing to meet reasonable standards. The road authorities were committed to improvement, but perfection did not really seem to be on the cards, as long as individuals were fallible. Thus, their narratives frequently established end-points that excluded accident causes from the system of traffic. In the AIBN-Road's narratives, however, these causes were firmly placed within the system, and consequently, the NPRA was attributed a greater responsibility. These narratives, then, were revolutionary narratives, redistributing roles, agencies and responsibilities (cf. Wetmore, 2004), and suggesting a novel techno-scientific assemblage, which did not allow for the relegation of malfunction to the system of blame and law.

Narrative strategies

What made the AIBN's narratives revolutionary? For one thing, the individualised reports may in themselves be read as calling for more drastic measures and they create a greater sense of urgency than the aggregated numbers presented by the NPRA, where individual accidents are statistical aberrations until otherwise proven. An employee in the Department of Transport and Communications remarked that reading the reports from the AIBN served as a cruel reminder of what she was actually working with. Unlike the statistics, the narratives contain characters who, although elliptical and anonymous, are made present to the reader through brief descriptions of their age, gender, occupation and everyday routines. Narratives work through absences and lacunas as well as through what they choose to display (Lothe, 2000), so when presented with the 18-year-old girl on her way to school, in her own driveway, with her friend, it is easy for the reader to fill in the neighbourhood, her family, her friends. The report's brief account of the lorry driver's working day before the accident seems to build up to the disaster through its undramatic style and content:

His trip was the first of the day. He was to ferry concrete to [...] a few kilometres north of the scene of the accident. Work this day was as usual, according to the driver, not stressful. He started driving at about 8 o'clock, and chose the same route as a colleague who had delivered a load to

the same address half an hour earlier. The driver reported that he was acquainted with the route, and had clear ideas about the right of way for the crossroads. (AIBN, 2008: 10)

The description of the routine and ease of the day renders vivid not just the man's reconstruction of the events leading up to the accident, but also the sudden reversal of his day from routine to tragedy, and his painful justifications for his actions after the fact. The narratives from the AIBN have more in common with classic literary genres than with statistics; they have characters, a beginning, a middle and a tragic end. Thus the AIBN's narrative turns the accident from a "normal accident" (Perrow, 2011) and a number in the statistics, to something profoundly tragic, and, it would seem, something that should be prevented at almost any cost.

Secondly, the narratives of the AIBN-Road were obviously differently framed. In the traditional narratives from the NPRA, only a few factors – although their numbers have been steadily increasing – were allowed inside. In the NPRA's annual statistics for 2011, the following categories were used: factors related to road users (speed, lack of skills, driving under the influence of alcohol or drugs, fatigue, disease, other factors), factors related to vehicles, factors related to roads and road environment, and factors related to external conditions (Norwegian Public Roads Administration, undated). The category of 'human error' – a collective term referring to a number of the factors related to roads users – was one of the largest. The categorization enables comparison over time and across locations, and exemplifies "the strategy of moving toward universality: rendering things comparable so that each actor may fit their allotted position in a standardized system and comparisons may be communicated across sites" (Bowker et al., 1996: 353). Classification, however, has not only a practical, but also a political function; rendering something explicit means rendering it visible, while other factors are excluded. While the category of human error was thus made very visible, its concrete instantiation, and any possible problematization, disappeared from view (Star, 2001).

The individuality of the stories recounted also brought with it a distinctively new kind

of geographical framing; in these narratives, accidents take place in specific, modifiable geographical localities. The tragedy takes place in this specific driveway, where visibility could easily be improved by cutting down specific trees. This is in stark contrast to how accidents, from the perspective of the Road Directorate, could be seen as taking place in an abstract sphere of identified risk factors interacting in semi-predictable ways (Beckmann, 2004). However, some of the employees in the AIBN suggested that their position was better understood by people working closer to the operative part of the Roads Administration who "felt the problems more acutely". This statement is illustrative of a perceived dichotomy between the local, material practice of preventing accidents, and the dislocated and atemporal scientific approach of the central organisation. There are two seemingly incompatible speeds at work; the urgency of the specific, local situation is at odds with the timeless, universal truths of science. Statistics seek the static; to determine whether the seeming cause is a real cause, or a spurious association, and whether the risk object is real or only apparently so.

Thirdly, as noted above, the AIBN's narratives did not find their natural end-point in the responsible and fallible human actor, but extended agency spatially and temporally. In the Road Directorate's publications, the individual history of the deceased driver is left out of the frame along with the disastrous aspect, the tragic. The AIBN's approach was originally deemed best suited to professional traffic, since in organisational safety work, the choices and behaviours of the employees are seen as being at least partly within the remit of the employer. The employer can be expected or required to train or supervise employees, and in many cases, the organisation will be accountable, rather than the individual. In other words, the original instructions to the AIBN suggested that private citizens were better suited to remain end-points, and be evaluated in terms of individual liability and blame, whereas the actions of professional drivers could more fruitfully be seen as consequences of external factors. The AIBN challenged this idea, however. In the detailed narratives they constructed, every actor was part of a network that could be modified, and

that was already subject to official regulation and modification:

[...] you actually have organisations behind every accident. If private citizens are on the road, then there are, we might say, no organisation behind them, but you still have an organisation behind the road system, which we look into. And we also look into how the systems work, among other things where health information is concerned. How that is taken care of; there are health requirements for driving. The health system, how it works, how it operates relative to licencing regulations. (AIBN-employee, interview)

These narratives created an image of an encompassing network, where individual actors are not isolated first movers, but enmeshed in systems that shape actions and consequences. Contrast this with this opinion offered by an employee in the Directorate:

Your average car driver is not a professional, and using a "systems approach" is more fruitful when you are part of a system, such as employed by a company. In many accidents, the driver is the main cause of the accident, we are talking about explicit mistakes, and if that is the case, recommendations directed at other fields appear odd. (DPR-employee, interview)

There is a practical reason why the Directorate resists such attempt to challenge traditional notions of agency in traffic: if individuals are not responsible for their explicit mistakes – who is? If agency is spatially and temporally extended, who needs to act to make the roads safer, and who should control and monitor this onslaught of novel risk objects? So, again, it was suggested that a story should end when the culprit had been identified. The employees of the AIBN, however, objected to the use of 'human error' as a natural kind, and worked to pry open the category.

It's fine to have guidelines and road standards, and everything, but you also need to know that those standards work. If you built a road in accordance with the standard, and 30-40% of the people using the road use it incorrectly: is there something wrong with the system or with the people using the system? (AIBN-employee, interview)

The AIBN-Road's narratives thus challenge the clear demarcation line between the human subject on the one hand, and the road system and the wider society on the other. Instead they present agency and human errors as network effects. These two types of narratives will have radically different practical implications for road safety work, and simultaneously perform fundamentally different ideas about the nature of citizenship.

The citizen in accident investigations

As we have noted, liberalism's essentialising of the political citizen, and disregard for contexts, histories and relationships arguably contribute to upholding the political status quo. The statistical accounts of road accidents similarly close off the citizen, through allowing their narratives to end where the citizen has been found guilty of 'human error'. Thus, road safety policy also constructs a specific kind of liberal citizens, responsible for the consequences of their actions, but not themselves the outcome of earlier processes.

In the case of the accident report discussed above, the recommendations given by the AIBN open up the citizen in different directions. One way of opening it up is through recommending that the story of deceased driver should include her performance during driver education. This recommendation suggests that having passed the test and becoming a licenced driver is not sufficient, that the history of the subject remains relevant after she has been accepted as a car-driving citizen, and that the interactions of individuals, regulations and practices are (still) part of the story behind the individual accident. This suggests expanding the narrative of the individual driver, and to allow this narrative to remain relevant after legal accountability has been established.

Second, it opens up the citizen through suggesting that the regulations governing the road users' actions may not be sufficiently clear; thus the blame shifts from the blameworthy individual to regulating authorities. Although the regulations were not legally ambiguous, the report suggested that they might still be ambiguous to road users. Again, this suggests that

the story needs to be expanded: it now includes a larger number of actors –actors invisible in the official story as long as no formal mistakes have been made. The new actors are not those interacting in the traffic system, but those shaping it, for instance through developing regulations. The system is capable of unambiguously allocating blame, but is now accused of co-producing this blame.

Third, the recommendation that the NPRA should develop requirements for visibility from driveways and a system to follow them up indicates that the actions of an individual cannot be understood in separation from their material context, and that the material environment must be adapted to humans, rather than the other way around. The responsibility of the individual is presented as a quality that comes in degrees; it is possible to modify the surroundings in such a way that the individual is *more likely* to act correctly although it should already have done so; the fatal action is not so much a choice made by an autonomous subject, as the outcome of a material network of interconnected relations. This recommendation also illustrates that the move from aggregate numbers leads to a proliferation of risk objects. When the risk object no longer emerges from long series of events and disproportional risk as compared to a 'norm', what you try to do, in fact, is to prevent *this* accident in the future. Since every accident is unique, the number of elements is in principle infinite.

The recommendations thus present the accident as the outcome of a temporal and spatial history involving a number of agents, where the agency of the legally accountable citizen is a constructed entity and the result of a history, not a final and unitary cause. When opened up, the road using citizen turns out to have a Medusa head, with contents uncontrollably snaking their way in every direction. This distributed agency implicitly presents the system as liable to be held accountable as the road user. This is clearly at odds with the Norwegian Traffic Act, according to which the drivers have strict liability for their actions.

Concluding remarks: Narratives and politics

As an extension of and supplement to concepts such as 'the car-driver-hybrid' or 'the driver-car', this case demonstrates how hybridity is not limited to the single vehicle. The borders between the individual, the vehicle, the surrounding environment, and social and legal institutions are all open to renegotiation. Just as intelligent transport systems installed in cars will imply that "only as the car-driver hybrid can both subject and object get 'smarter'" (Beckmann, 2004), an improved driveway might transform 'inattention' into 'alertness' and improved driver education could eliminate the 'young driver' as a risk object.

The narratives of the AIBN remove some of the agency from individuals to their social, material and institutional contexts. This technical move is also political. There is a reason why "liberal theory has had to take individuals much as it finds them on the surface." (Schuck, 2002: 132.) The AIBN's reports present a view of causality and agency that conflicts with the one prominent in the NPRA. The AIBN's approach to accident investigations problematizes the notion of free choice through seeking the causes of individual actions and behaviours in the subjects' past, and thus casts doubt on the citizens' agency. The smaller the scope for relegating actions to the moral/legal category, the more circumscribed the liberal subject. The laying bare of the processes behind an action is a double-edged sword; if a process is implicit, opaque and crudely articulated, this may be a sign of the powerlessness of the actors involved, but it may also an indication of their self-determination (Star, 1990).

Risk objects are causal, and thus the proliferation of risk objects will infringe on the presumably non-causal (moral, legal and reason-governed) sphere of society. Law and Mol (2002: 10,) thus warn that "absolutist" safety work comes at a price: "Too much of one good undermines some other good". Arguably, the reports of the AIBN do not only go against the grain of liberal theories in their presentation of the subject; their focus on how public actors might prevent the individual tragedy can also be seen as an attempt at placing responsibility above autonomy, as advocated by an ethics of care. There might be a tendency,

however, that the consolidation of the individual as an *object* of value, leads to a weakening of the individual as *upholder* of values, as individuals' actions, reasons or beliefs, once explained by reference to contexts, seem to lose some of their independent value.

There is a danger of overstating the break with the past that the AIBN represents. Obviously, the legal system has always taken mitigating factors into account in road accidents (see for instance Fedtke, 2003). Also, assessing the safety performance of different kinds of infrastructure is an established practice (explaining, for instance, the proliferation of roundabouts), and the existence of road safety programmes for children shows that the state does not take the formation of traffic-savvy citizens as a given, but as something to be constructed. The narratives of the AIBN are

not completely novel, and they will not in themselves deconstruct the liberal subject – they are only stories. But, as Law and Singleton (2000: 769) argue, the difference between telling stories and acting realities “isn't so large”. So far as AIBN's narratives and recommendations are included in road safety practices, at least in the sphere of road traffic, a slightly different kind of citizen is being enacted.

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NOTES

- 1 The risk of road accidents can be measured and reported in different ways, and the choice of measure is not innocent. The simplest measures, such as the absolute number of fatalities relative to the population, do not control for the number of driving licences or the number of cars in a country, for instance. The more frequently employed measure, used in this article, controls for the number of kilometres driven, which means that less affluent countries may perform worse, but also that efforts to reduce accidents through reducing car-dependency and traffic in society will be invisible in the statistics. This effect is reinforced by the fact that measuring risk relative to distance travelled will favour faster modes of travelling, implying that more sustainable modes, such as walking or cycling, appear relatively riskier than they would if, for instance, risk was measured through exposure time or the number of trips made. It is therefore a commonplace among road safety professionals that a shift to more sustainable forms of transport will typically lead to a higher number of road fatalities and injuries.
- 2 Brown (2001) is an interesting discussion of the notions of citizenship implicit in California's Electric Vehicle Program. In his account, however, the role as citizen is opposed to the role as consumer, as the Program is seen to promote a consumerist conception of citizenship. While the distinction between citizens and consumers can impinge on the role of road users in various contexts, it is not directly relevant to the focus of this article, which is the regulative and retributive aspects of citizenship as it related to individuals in a government-controlled legal and technical environment.
- 3 The reported numbers of fatalities and injuries are provisional until the publication of final annual numbers, usually by the end of May in the following year. Although the numbers do not usually change much, the process illustrates how the category of "traffic fatalities" is a complex construct: Only fatalities taking place within 30 days of the accidents are included in the statistic, and confirmed suicides as well as accidents assumed to be the result of sudden illness are excluded. Thus, the number of fatalities in the official statistics are usually, counter-intuitively, lower than the provisional figures published.
- 4 Interestingly, while young drivers did for a long time appear to be a very enduring risk object, this has now started to change: figures from 2013/14 revealed that the risk (per kilometre driven) of drivers ages 18 to 19 had been reduced by 40 % in four years (Bjørnskau, 2016).
- 5 In this light, we might also interpret the fact that the World Health Organization launched its World Health Day in 2004 under the heading 'Road safety is no accident!', as an illustration of how the traditional end-points of road safety have been challenged for some time.