



Paternalism and acceptability in road safety work

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ABSTRACT

In order to improve road safety, a number of strategies have been employed, ranging from safety campaigns, training and education, to changed regulations, stricter enforcement, infrastructural improvement and safer vehicles.

The system of road traffic has traditionally been quite liberal, with low barriers to entry and respect for the privacy of individuals, as long as they abide by regulations. Arguably, the success of road safety work has come at the price of increased paternalism. The aim of this paper is threefold: first, to give a brief presentation of conceptualisations of paternalism, and their relevance to road safety. Second, to point out some of the influences leading to increased use of paternalistic measures in road safety work. Finally, I will try to define to what extent and in which situations overtly paternalistic measures appear to be (or are perceived to be) unacceptable to the public.

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1. Introduction

Road safety in western countries has made tremendous progress over the last few decades. In spite of increasing car use, the numbers of casualties have been falling relatively steadily. A number of strategies have been employed, ranging from safety campaigns, training and education, to changed regulations, stricter enforcement, infrastructural improvement and safer vehicles. Road safety research is an important part of this picture, as research contributes to establishing causes of accidents, suggesting new solutions, identifying high-risk groups, assessing the efficacy of measures and evaluating policies and strategies.

The system of road traffic has traditionally been fairly liberal, with low barriers to entry and respect for the privacy of individuals, as long as they abide by regulations, and frequently also when they do not (Elvebakk, 2007). Safety work, however, develops, and road safety thinking is influenced by developments in other fields of safety, with less liberal traditions. Arguably, the success of road safety work has come at the price of increased *paternalism*. The opposition against mandatory seat-belts is long forgotten in Europe, and a new series of measures partly aims at protecting the road users against themselves, and reduces individuals' freedom of action, frequently in ways they resist. These measures range from bicycle helmet-wearing laws (introduced in for instance Australia and New Zealand), to more invasive measures that have been suggested, but not yet adopted, such as banning the use of motorcycles or novel forms of surveillance and control.

The aim of this paper is threefold: first, to give a brief presentation of current conceptualisations of paternalism, and their

relevance to road safety. Second, to point out some of the influences leading to increased use of paternalistic measures in road safety work. Finally, we will try to determine whether introducing the notion of paternalism can help account for the acceptability of road safety measures, i.e. define to what extent and in which situations overtly paternalistic measures appear to be (or are perceived to be) unacceptable to the public.

2. Varieties of paternalism

Paternalism is commonly understood as “the interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, needs, interests or values of the person being coerced” (Dworkin, 1972). Paternalistic measures, in other words, are measures that force people to do something for the sake of their own good, although they themselves would not, or might not, have chosen to do so. Paternalism is widely considered to be an evil to be avoided in Western democracies, as it threatens the autonomy of citizens. Clear cases of paternalism in road safety policy include mandatory helmet-wearing for motorcyclists and seat-belt laws. Even though you as an individual might have preferred taking the risk of driving unprotected, the law forbids it.¹

¹ We should note that there are often good non-paternalist reasons for the state to adopt paternalistic measures, as accidents are costly. If this is the reason why a measure is adopted, according to many conceptualizations, the policy is strictly speaking not paternalistic, as paternalism can be seen to depend on the motives of the paternalistic agent (Shiffrin, 2000). In this article, however, I will disregard this issue, and – for the sake of argument – assume that at least some safety measures are in fact adopted in order to protect the road users themselves against their will.

Dworkin (2010) points out that interventions that are performed out of concern for how the actions of an individual might affect third parties may also be deemed paternalistic if they interfere with the autonomy of an individual. Typical cases include restrictions on production or sale of dangerous substances, such as illegal drugs or tobacco and alcohol. If we accept this definition, a wide range of safety measures could be construed as paternalistic policies. Consider, for instance, mandatory safety equipment in cars, and safety standards in general. Even if you would personally prefer to buy a car that offers very limited protection to its occupants in the event of an accident, in many countries you are not allowed to do so.

As demonstrated by the examples above, paternalism is already quite widespread in road safety work. Many of the road safety measures that are deemed most successful, are wholly or partly paternalistic.

Paternalism may be defended or attacked from various theoretical positions. The strongest critics of paternalism are typically libertarians, who hold that individuals should be given the maximum degree of freedom compatible with freedom for others, and that the role of the state should be as limited as possible. If that is your position, paternalistic measures are simply not acceptable – individuals should be free to make their own choices, whether or not the choices are judged to be good from the perspective of the state.

The argument for autonomy – and thus for anti-paternalism – has two different sources: one would be the claim that people make better choices for themselves than third parties are likely to do; the other, which is usually attributed to John Stuart Mill (1999), is that autonomy is a good in its own right, and that even bad decisions are therefore a good for the person making the decision, who executes a fundamental human right.

Consequentialist theories – the historical precedent of cost-benefit analyses – claim that an action or a measure is good in so far as it produces more happiness than unhappiness, when all the consequences are considered. On a consequentialist view, paternalistic measures will frequently be deemed acceptable, since more good than harm is produced. In the case of seat-belts or bicycle helmets, for instance, quite a few people may find wearing them slightly annoying, but this is outweighed by the huge amount of suffering that is prevented when fewer people die or are severely injured as the results of road accidents.

Note, however, that this may not be the case if autonomy is considered one possible, or even overriding, good. On Kantian (or deontological) accounts, paternalism will frequently not be deemed acceptable. This is because the autonomy of individuals is considered a right that every individual possesses. Political contractualism – which sees state power as justified if it can be presented as a contract into which citizens would rationally enter – might accept paternalism in cases where all would agree to the interference, given suitable knowledge and motivation. I.e. we might all agree to being forced to wear seatbelts if we were informed about our disposition to discount future benefits for present ones.

It has been argued that recent behavioural research has undermined many traditional arguments against paternalism, as it suggests that cognitive errors in decision-making situations and weakness of will frequently lead to people not acting in their own best interest (Camerer et al., 2003). The traditional arguments for paternalism were based on the assumption that certain categories of people (described by one 18th century writer as “idiots, minors and married women” (quoted from Camerer et al., 2003)) were not able to make decisions in their own best interest, and thus were essentially to be treated as wards of the state. Camerer et al. instead suggest a *situationalist* approach, where most people, in certain predictable situations will not act in their own best interest. However, they also note that the mistakes identified in behavioural research are not universal, and that the research is still

not conclusive. On this background, they suggest a principle of “asymmetric paternalism”, which “creates large benefits for those who make errors, while imposing little or no harm on those who are fully rational”. A measure is asymmetrically paternalistic only if the benefits to the error-prone outweigh the disadvantages to the rational. An unobtrusive alco-lock device – if installed to protect the driver – would for instance be asymmetrically paternalistic in this manner.

2.1. “Nudging”

The “nudge” theory, developed by Sunstein and Thaler (2003), has quickly become extremely influential, but also controversial. Critics claim that “nudging” is a form for covert paternalism. Thaler and Sunstein’s explicit starting point is that “in many domains, people lack clear, stable or well-ordered preferences. What they choose is a product of framing effects, starting points and default rules, leaving the very meaning of the term “preferences” unclear.” When people choose from a restaurant menu, for instance, they may not be entirely sure what they want, but research has established that if healthier options are listed earlier in the menu, people are more likely to choose these options. In a cafeteria, the location of the various types of food will influence choices made by customers. Thaler and Sunstein identify several mechanisms that influence people’s choices, even though the mechanisms do not make a fundamental difference to what the options are. Among these mechanisms or ‘heuristics’ is for instance a preference for “the default option”; if presented with something as the normal standard, people are more likely to go with this option, even if choosing another alternative does not involve any cost and only negligible effort. Based on such findings, Thaler and Sunstein’s position is that policies are bound to influence choices, and that paternalistic measures need not be coercive. Given this, they think that government, or other people who are in a position to frame choices, should seek to “avoid random, inadvertent, arbitrary, or harmful effects and to produce a situation that is likely to promote people’s welfare, suitably defined” (Sunstein and Thaler, 2003). The paternalism in this case is perhaps an intervention, but it is not an intervention that restricts individual freedom, although it is demonstrated, on an aggregate level, to have a very marked effect upon choices.

Sunstein and Thaler have been criticized for overstating their case, however. Mitchell (2005) argues that people having unstable preferences does not entail that others should seek to maximize their utility, but, at most, that others should seek to make their choices more rational, through such measures as increasing self-monitoring and making them provide reasons for their choices. A pervasive objection is that it is hard or impossible for a planner to improve individuals’ welfare, given that different individuals have different conceptions of welfare.

2.2. Paternalism in road safety

In the US, the question of paternalism has been very prominent in road safety discourse. Unlike Europe, the US has seen considerable debate around several safety measures due to their perceived paternalistic bent. This goes for mandatory seat-belts as well as for compulsory air-bags (Wetmore, 2004). Today, however, New Hampshire is the only state without a law requiring adults to use safety belts, at least in the front seat. In all other states and the District of Columbia, front-seat occupants are required to use belts (Insurance Institute for Highway Safety). Adult rear-seat passengers are covered by the laws in only 28 states and the District of Columbia. The history of helmet wearing laws for motorcyclists is particularly checkered, as federal law in this area has been changed several times. Around 1980, 47 states had universal

helmet-wearing laws for motorcyclists, whereas today this applies to only 19 states, while a further nine have laws applying to certain groups (typically those under 18). The arguments against helmet-wearing laws have typically not targeted the scientific findings, i.e. the safety effect of helmets, but the fact that the potential harm is self-inflicted. After the repeal of helmet-wearing laws, the number of injuries and fatalities has risen, as predicted by researchers. Jones and Bayer (2007) argue that the resistance against helmet-wearing laws is due to the enduring impact of libertarian and anti-paternalistic values in the US.

The justification for road safety measures, however, is not necessarily paternalistic even if it could be described as being so; many measures that protect you as the driver of a vehicle, simultaneously protect others. This goes for licencing, speed limits, and many other measures. Even strict libertarians accept that the state has a right to protect others from the consequences of your actions. Even measures that seem to protect only yourself may be justified with reference to the consequences for other people; the introduction of helmet-wearing laws for motorcyclists in the US, for instance, was justified with reference to the potential burden to society as a result of major injuries. Note that in social democratic states especially, such a line of argument could be used to defend a very wide range of interventions in individuals' lives, as almost any harm done to oneself would negatively affect society. If such a calculation includes the loss for the state involved in the death of a productive citizen, almost any measure or restriction on individual freedom is defensible. However, most people would probably think that this is taking the argument too far, as it could amount to denying all citizens any risky activity whatsoever, or even justify mandatory diet and exercise regimes. The question, then, becomes one of how severely it is legitimate to restrict the freedom of citizens for their own good.

The advocates of the nudging approach claim that paternalistic measures need not restrict the freedom of individuals at all. At the very least, this approach suggests that it would be fruitful and defensible to make the safer option the default option. This could be relevant when it comes to for instance optional safety equipment, such as intelligent speed adaptation (ISA) – this could go for new cars as well as for insurance contracts. If the default option when buying a new car were one with ISA or alco-locks, this would not restrict the freedom of individuals to choose otherwise, as long as they had the possibility to opt out. According to Thaler and Sunstein, this would probably in itself increase the number of users. Since they also believe that in decision-making situations, people often rely on what most people do, this could over time lead to a situation where an increasing number of people – and, we might even hypothesize eventually almost everybody – choose this option.

Nudging is not entirely unknown in road safety policy. Novel planning techniques often aim to influence the behaviour of road users without the use of coercion. For instance, the planning approach known as “shared space” seeks to communicate to drivers that an area is dominated by vulnerable road users through design; typically the use of flagstone instead of asphalt, for instance (Hamilton-Baillie, 2008). In road planning, it has become commonplace to employ narrower lanes and broader road shoulders, which means the road appears more narrow, without actually reducing road width (which might jeopardize safety). Studies have shown that this design leads driver to choose lower speeds (Godley et al., 2004). This latter case might be seen as a non-libertarian form of paternalism, however, in the sense that instead of making information available, it actively seeks to present disinformation. The aim is to make people believe that the environment is more dangerous than is actually the case. (The “shared space” example avoids this potential criticism, as the goal is to construct a certain kind of space through design choices).

There does not exist much research explicitly considering paternalistic measures in road traffic. Grill and Fahlgren (2012) discuss whether mandatory alcohol interlocks in cars would be an unacceptably paternalistic safety measure. They note that the measure may also be justified with reference to the harm done to others, but concede that at least in the Swedish context, the harm to drink drivers themselves is an important factor in the considerations. When we label measures paternalistic, we usually presuppose that the acts that are prohibited are undertaken voluntarily, which, the authors note, is a problematic assumption in the case of drink driving. The reason for this is that the person making the decision is impaired at the time of choosing to drive a vehicle, and might have made a different choice if sober. It may even be the case – and frequently is for drink drivers – that the person making the decision is an alcoholic, whose decision to drink in the first place is not entirely voluntary. They also hold that paternalistic measures are acceptable as long as the costs of limiting liberty are recognised and considered – a consequentialist argument with which libertarians, for instance, would clearly disagree.

McKenna (2007) argues that there are good reasons to adopt paternalistic measures and limit the freedom of individuals in road traffic, as freedom is more fundamentally lost through death, which is irreversible, and because there is reason to doubt that individuals are fully informed about their relative skills and risks. Secondly, as citizens are always parts of networks, rather than isolated beings, it is difficult to assess whether harm only befalls the individual. Since the consequences of actions can be extremely severe, beyond the point where a person can take responsibility for the consequences (as when becoming dependent on continuous care), the choice to undertake that action cannot be completely free. He further argues that many traffic violations are not undertaken deliberately, but as the result of inattention, and that the question of freedom therefore becomes less relevant. Thus, limiting freedom in road traffic is legitimate as well as desirable, and efforts should be made to transform public opinion, to the point where such measures are acceptable to the public. McKenna thus produces a two-forked argument; for one thing, if people are not fully informed, or inattentive when making bad decisions, the measures are not strictly speaking paternalistic, as the action in question is not completely voluntary. His other line of argument is more principled; he in fact argues that the state is in a better position than its citizens to determine how their welfare should be promoted, and that people should not be free to undertake actions that may have consequences for which the individual cannot take full responsibility. This line of argument, again, opens for a very wide range of liberty-restricting measures, many of which would probably be deemed unacceptable by the public.

3. Road safety paradigms

Road safety work in the Western world has made tremendous progress, but this also presents the state with a new dilemma. The state relates to the aggregate numbers of casualties, and from that perspective, it seems obvious that stricter measures are in order, as road accidents cause tremendous suffering as well as substantial financial loss every year. The individual driver, however, will relate to accidents as a matter of personal risk, and this risk, for any given individual at any given time, is actually very low (Vaa, 2007). Thus measures that can easily be justified on the aggregate level, as saving tens of lives every year, might, to the individual driver, represent a significant limitation of individual liberty or privacy, and only a very marginal reduction of individual risk. The trade-offs, so to speak, are very different.

Part of the problem can be ascribed to the fact that individual citizens may oppose stricter measures from an individual, liberal

or libertarian, political perspective, while the state favours them from a perspective we might refer to as risk management. The traditional conceptualization of the road traffic system as one involving the interaction between strictly separate individuals, however, does not readily lend itself to being analysed in terms of risk management literature. In this literature, it is typically taken for granted that individuals belong to managed systems, and that the management of risk levels is thus, fundamentally, the responsibility of the system manager. However, more recent approaches to road safety have challenged this sharp distinction.

Approaches such as Vision Zero, or the WHO's "There is no such thing as an accident!" campaign suggest an expanded role and increased responsibility for those who are now presented as system managers in road traffic, again seeking to turn the traffic system into a different, and less private sphere. Provided such a role is possible; what are the novel measures that are available for system managers in road traffic?

For one thing, there are the traditional measures of driver education, legislation and enforcement. These can be seen as natural elements of the traditional "liberal" conception of road traffic, where citizens are responsible for their actions, although subject to sporadic controls, and to penalties when found guilty of violations. These measures are apparently acceptable to the population, although complaints persist over such matters as selected speed limits.

The measures most clearly identified with the new, system oriented approaches to road safety are infrastructural. They include median guardrails and forgiving roadsides, measures that, in addition to being protective, are also concerned with reducing the consequences of accidents, rather than preventing accidents from happening. The main effects of such measures are to protect road users from non-voluntary incidents, such as veering into the opposite lane as a result of dozing off or losing control of the vehicle. To some degree, however, these measures also restrict the liberty of individuals, for instance when a median guardrail prevents a driver from taking over the car in front, even when the driver judges this action to be safe.

Generally, the risk management turn in road safety has, so far, not been very interventionist or restrictive, even though measures of this sort have also been suggested (Tingvall and Haworth, 1999). So far, the turn has mainly led to a stronger focus on the parts of the system that are not the individual road users, i.e. the aspect of the risk management idea that has been accepted is that there is a responsible management, not that the users of the system must be more comprehensively managed. Along with these measures, however, we also see increasing calls for measures that in various ways control the behaviour of individuals prior to accidents. Measures of the latter sort include mandatory helmet-wearing for bicyclists, stricter licencing requirements for high-risk groups (such as the young and the elderly), and forms of in-car technology such as alcohol interlocks, seatbelt-locks and Intelligent Speed Adaptation (ISA) systems. Although these technologies only reinforce existing regulation, they do in fact represent a considerable reduction of the individual road user's actual autonomy: while a ban merely adds a legal risk to the existing risk of the action, a coercive technology – if successful – physically prevents the individual from carrying out the undesired action. Thus, to the extent that the measures are introduced to protect the road users performing the undesired action, they do take paternalism to a significantly higher level.

It should come as no surprise that systems-based approaches to safety leads to more paternalistic systems: For one thing, the responsibility accorded to the system managers in itself will mean that someone beyond the individual road user has responsibility for the results of every action. This would suggest that the judgment of the individuals, even when related to their own safety,

no longer reigns supreme. Secondly, if the number of accidents is indeed to be reduced to zero, the system cannot allow for the possibility that individuals choose high-risk activities, even when that activity does not endanger others.

4. Acceptability

To understand why some traffic safety measures are accepted while others are not, it is important to understand factors important for acceptability. Different attitudinal models can aid in identifying the underpinnings of acceptability of intervening countermeasures. The so-called value belief norm (VBN) theory of environmentalism (Dietz et al., 1998) stipulates that general values (e.g., altruistic values) and environmental beliefs, such as awareness of environmental problems, as well as the belief that own actions may contribute to alleviating environmental problems, activate a personal norm. Moreover, the activation of a personal norm, experienced as a feeling of moral obligation to act, is important for environmentally friendly behaviour (i.e., a kind of altruistic behaviour).

Nordlund and Garvill (2002) sought to test a hierarchical model of the effects of general values, environmental values, problem awareness, and personal norms on general proenvironmental behavior. The model starts with the effects of the relatively stable structures of general values and moves toward effects of more specific environmental values, environmental problem awareness, and personal norms. A personal norm was expected to mediate the effects of values and problem awareness on proenvironmental behavior. Survey data from a Swedish sample of 1400 individuals were used in a path analysis to test the model, which was supported, and the results showed that the personal norm could be seen as derived from self-transcendent and ecocentric values and activated by problem awareness. The personal norm mediated the effects from general values, environmental values, and problem awareness on proenvironmental behavior.

Eriksson and Bjørnskau (2012) studies the acceptability of ICT-based road safety measures that have implications for privacy in Norway, Sweden and Denmark within the framework of a values-belief-norm-framework, and tests, among other things, how knowledge and beliefs influence individuals' acceptance of the measures (ISA, EDR and section control). Their starting point is that "Since the VBN-theory concerns the role of the individual in relation to a collective problem, it may also be relevant within the domain of traffic safety. In such a context, an awareness of the safety problems caused by driving in general, and by speeding in particular, paired with a belief that oneself has to contribute to the solution of the collective problem, can lead to the activation of internalised norms prescribing oneself to act." This, in turn, could lead to a higher acceptability for safety measures. They found that problem awareness and personal norms were important to acceptance, and further that certain demographic factors had an influence (men, younger people and people with higher incomes and higher car use were more negative). In regression analyses, background factors, knowledge, and general and specific beliefs were entered as predictors of acceptability. Awareness that speeding is a problem and evaluating the measures as fair, effective, and a less infringement on personal freedom and personal privacy, resulted in higher levels of acceptability. The effects of background factors and knowledge were limited after controlling for different beliefs.

The relationship between knowledge and acceptability is not straightforward, however: According to Vlassenroot et al. (2010), knowledge about the speeding problem as well as about different speed reducing devices may result in either higher or lower levels of acceptability of a certain device.

Studies suggest that while a certain share of drivers would willingly use in-car safety systems, their acceptance would be contingent upon ease of use, costs, and penetration in the fleet. (Katteler, 2005; Marchau et al., 2005; Vlassenroot et al., 2011, note also that Molin and Brookhuis, 2006, shows that acceptability of ISA is a function of the belief that driving too fast is a major cause of accidents and that ISA can contribute to attaining various personal and societal goals).

Other studies also indicate, however, that a sizeable portion of drivers would not be willing to use these systems, and these might be the drivers who are more at risk in the first place (Adell and Varhelyi, 2008; Garvill et al., 2003; Jamson, 2006; Warner et al., 2010). So while the use of in-car technologies such as ISA would be extremely beneficial from a cost-benefit perspective (Carsten and Tate, 2005), they would probably lead to public outcry, and would require determined political action.

Marshall et al. (2007) in a study of the acceptability of licencing restrictions for older drivers, found that preferences appeared to be inversely related to the impact on the autonomy of the driving task and the ability to access the community.

Generally, the acceptability of measures seem to partly be a function of factors such as cost, user-friendliness, and others' use. However, there are significant differences between individuals when it comes to what they find acceptable, which may be attributable to underlying values or beliefs.

5. Factors influencing acceptability

The research reviewed suggests that factors of different kinds may influence the acceptability of measures. General research on risk perception (Slovic, 2000) as well as studies of acceptability of specific road safety measures indicate that demographic factors (age, gender) play a role. Furthermore, the perceptions of individuals matter. This goes for perceptions about the safety problem, as well as perceptions about the efficacy of safety measures, and perceptions about the attitudes and behaviours of relevant others. However, it is important to bear in mind that these perceptions themselves can be highly flexible. The difference between Europe and the US when it comes to reactions to paternalistic measures is an indication that there are significant cultural differences when it comes to acceptability. The philosopher Jonathan Wolff (2012) contends that in spite of what most ethicists think, many of our moral convictions are based on current practices, or habits – while we could perfectly well get used to a new rule, and develop a different set of intuitions. Thus he claims that moral argument, even when convincing, will most likely fail to be sufficiently motivating to cause behavioural change. Instead, “Structural change is needed to facilitate behavioural change.” This position is also reminiscent of the “nudge” theory; behaviour can be modified by making certain choices easier, and once behaviour has changed, attitudes are likely to follow suit. This claim is further strengthened by Watling and Leal's finding that people are more prone to accept enforcement for behaviours they themselves are unlikely to partake in.

In general, public acceptability does not appear to be very principled. Since paternalistic measures such as motorcycle helmet wearing and seatbelt laws seem to be widely accepted and mandatory diet and exercise regimes probably would not be, it seems that some level of paternalism is acceptable to the public, but that there is a limit. Since no existing studies can indicate where and why this limit is to be drawn, in this section, I would like to suggest some factors, which, based on the available evidence, seem to play a role for the acceptability of paternalistic measures in road traffic. If we review what measures have been adopted, and which are not – yet – adopted, the following four measures seems to play a role:

- The level of risk you expose others to
- The level of risk you expose yourself to
- The magnitude of state intervention
- Whether the intervention is perceived to concern citizens' private sphere.

The first point is relatively straightforward: very risky behaviours, which expose others to danger, such as driving with a very high blood alcohol level (BAC) is usually considered unacceptable by most people. Watling and Leal (2012) examined attitudes towards several unsafe traffic behaviours, and found negative attitudes toward all of them, most strongly against drink driving, followed by driving without a seatbelt, fatigued driving and speeding. The relationship between perceived legitimacy of law enforcement and attitudes were significantly related, thus intrusive measures are clearly seen as acceptable when you expose others to considerable risk. Strictly speaking, when the main – or an important part of – the justification for a measurement is the desire to protect others, the measure is not paternalistic at all. The fact that the measure also protects you is a side effect. In our context, the pertinent question is to do with the level of risk: while you are clearly not allowed to intentionally crash into someone; how risky may your driving be? And who is to decide what the acceptable level of risk is? And, should your actions be restricted on the basis of a risk calculation that is based on averages, and that, therefore, will in many cases be inaccurate? (See Gusfield (1984) for a description of the relative arbitrariness of alcohol blood limits). Almost any action exposes others to *some* level of risk, but the cut-off point for acceptability is not very clear.

The second point seems a reasonable explanation of the fact that the opposition against helmet wearing laws for bicyclists is stronger than the opposition against helmet wearing laws for motorcyclists. In general, it seems to make sense that most people would object to helmet wearing laws for pedestrians, for instance, even though this might actually have more beneficial consequences on an aggregate level, as most people walk more often than they ride a bicycle. Thus it is not primarily the number of injuries prevented that seems to be the decisive factor, but the individual's own risk-benefit ratio. This would suggest that opposition to safety measures is not static; if the general risk aversion in society increases, this ratio will change. This might appear to be a trivial point, but in many contexts, the state may have an interest eliminating relatively harmless activities that many people engage in, rather than high-risk activities enjoyed only by a few people, because the financial burdens to the state are higher.

The third and fourth points are related. They both have to do with where the boundaries between the state and the private citizen are to be drawn. The first of them might for instance be relevant to the difference between seatbelt wearing laws and intelligent speed adaptation (ISA). The first of these impinges on one decision, but the consequences for the single individual are relatively limited, and the effort and discomfort of wearing a seat-belt is something most people are willing to accept. ISA, on the other hand, may be construed as the state taking over many of the decisions normally made by individuals, and controlling the individuals' actions for a lot of the time while driving, and threatening autonomy for a longer duration of time. This hypothesis is supported by Marshall et al. (2007) who found that resistance was correlated with impact on the autonomy of the driving task. People may object more to the continuous *experience* of having their autonomy threatened than by the mere fact.

The final point concerns whether the actions that are controlled pertains to you as a private or a public actor. This approach implies seeing the differences between accepted/acceptable risk between areas of activities as being partly politically motivated. We accept levels of regulation and intervention in some areas of our lives that

we do not accept in others. Hence, we are willing to be controlled and monitored as employees, in a way we would not accept in our private lives. Some aspects of our lives are seen as belonging to us as private individuals. This can be relevant for road traffic, for instance if people perceive their privacy to be threatened when control of road traffic is too tight. As a car user you occupy a semi-private space (which is also, usually, private property; another area that is frequently safeguarded from state intervention and observation), and you might feel your privacy as an individual should be respected here, when it comes to the right to remain unobserved, as well as the right to choose your own course of action. Even without the reference to private space and private property, an argument could be made that people spend such a great percentage of their free time in traffic, that constant observation or control would be an undue intervention, and a serious infringement on citizens' autonomy.

Another way the private/public distinction may come into play, is through the notion of ownership of action. While we are willing to act in a certain way as employees, because we are financially compensated for doing so, we could be less willing to adapt to an unlimited number of restrictions and requirements in our spare time, if this does not seem to benefit us directly, or be extremely detrimental to others. Although safety measures are ultimately justified with reference to lowered risk for ourselves and others, this reduction might appear too slight to be compelling, or even rational, for the individual. Driving is, on the whole, in spite of the accident statistics, a reasonably safe activity, and an average driver will never be involved in a serious accident. Thus, for most people, the risk they expose themselves and others to is really very slight, and other actions (such as boating, or skiing) will appear more risky, but, as they are engaged in on a less regular basis, the consequences for society as a whole are much smaller.

This leads us to a related point; that actions for which individuals take responsibility, are in themselves typically considered less suitable for government regulation. A risk freely taken is an individual choice, and an individual responsibility. Thus the state is less inclined to interfere when fatalities occur in the course of leisure activities than if they happen in the railway system. Although any action can be said to be a calculated risk on the part of the individual, there are certain contexts when you have a very limited number of alternatives. If you board a flight, for instance, you are unlikely to want a higher level of risk than necessary (and therefore, airlines have themselves a strong interest in reducing the level of risk, as a high level of risk is likely to reduce their revenue). If you choose to ride a car at a certain speed, and not use the safety belt, however, this may be seen a risk deliberately taken. And, in conjunction with the above points about privacy, the amount of time spent in the traffic system, and the relative privacy of driving a car may suggest to some that traffic is an area where such risk-taking should be, if not encouraged, than at least tolerated to a certain degree, as one way of safeguarding the liberty of individuals.

On this background, it is no surprise that attempts to change this state of affairs have often sought to draw road traffic into closer contact with spheres that are not associated with individualism and privacy. The conflict is fundamentally about what kind of sphere road traffic is, and what roles citizens enter into when entering the road system. Are we in the sphere of the private, or in the sphere of the public? Are we free individuals choosing our own actions, or social actors submitting to the rules of a system?

Thus, the creators of Vision Zero, for instance, have emphasized the importance of introducing more restrictive measures, such as alcohol interlocks and ISA, in cars that are government owned, or in professional traffic. This means that at least part of the car fleet will be redefined into more “public” and less “private” kinds of spheres. Given that these drivers are driving in a professional

capacity, it seems more reasonable to control and monitor their behaviour closely. Another approach that enables the introduction of restrictive measures without threatening personal autonomy is linking the measures to various kinds of incentives, such as lowered insurance costs. Increased surveillance or control is thus transformed into a rational choice, and a contract freely entered into by the individual. Rather than a controlling measure enforced by the state, an incentive is created to the mutual benefit between of private enterprise and a citizen. These are therefore both approaches to controlling the individual driver without unduly jeopardizing traditional notions of individual liberty in society, which may also, over time, change our ideas about the position of the road user in traffic. If some drivers relate to traffic as a professional sphere, there may be a “contamination effect”, so that eventually all do.

6. Policy implications

The efforts to make road traffic safer, has also led to an increasingly paternalistic system of road transport. In many cases, the state does not trust individuals to make the right decisions in order to keep themselves safe. Older measures such as seat-belt and motorcycle helmet wearing laws are clearly paternalistic, and suggested measures such as mandatory bicycle helmets or ISA and alcohol interlocks would reinforce this tendency. The public seems to accept paternalistic measures in so far as they protect others, or protect the individuals from significant harm without being overly intrusive. Problems with acceptance seem to arise, however, when low-risk activities are targeted, or the intervention is perceived as also being intrusive or controlling, or threatening the privacy of individuals. The increasing focus on professional road users can be one way of circumventing this problem, as it may increasingly make the public think of their cars as public rather than private spheres, and thus accept a higher degree of state monitoring and control.

The fact that many paternalistic measures are widely accepted indicates that the public's reaction to road safety measures is not necessarily consistent, in the way you would expect if somebody were arguing the case for an alternative, ideology-based, policy. It also demonstrates that many measures that are highly controversial prior to their introduction, are widely accepted after having proven their usefulness – and relative convenience – in practice. This may suggest that the public attitude is similar to the consequentialist approach endorsed by [Grill and Fahlquist \(2012\)](#), where loss of autonomy is counted as a cost, but not an absolute prohibition. It is also a helpful reminder that habit is often a stronger determinant of public acceptance than principles, as pointed out by [McKenna \(2007\)](#) in the case of smoking bans. Since acceptability also seems to be a function of how high the risk is perceived to be in the first place, increasingly safe and risk adverse societies will perhaps more easily accept a wider range of paternalistic measures.

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