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Vehicles of control: the securitisation of surveillant automobility in the United Kingdom

Abstract

This paper explores how in the United Kingdom, traffic regulatory systems, cars, and our culture of automobility have been subsumed within a security agenda. Scholars have begun to examine the overlaps between mobilities and security studies, particularly in the context of topics such as migration and terrorism, framing security as a prerequisite to automobility. But little security-mobility research explores how drivers, and the population at large, are themselves securitised through institutions of automobility. The paper details how "surveillant automobility" has manifested in the seemingly mundane traffic systems of the UK, and the deficient transparency and accountability these systems afford. This paper uses government statistics and industry data to support an interdisciplinary theoretical approach, combining mobilities, security, regulatory and Foucauldian approaches.

Keywords:

Securitisation; roads; regulation; surveillance; cars; biopower

Introduction: Securitised automobility

This research investigates how in the United Kingdom, traffic regulatory systems, cars, and a culture of "automobility" (Urry 2004), are subsumed within a security agenda. Mobilities scholars have explored the paradoxes of automobility, the socio-political phenomenon of mass automobile transport (Conley and McLaren, 2009). It symbolises autonomy, and provides freedom for the individual driver (Rajan 2006), whilst creating structures of dependence and social coercion necessary for mass road transport (Soron 2009). Recently, mobilities scholars have started examining automobility through the lens of security studies, particularly how road systems and cars become secured against potential risks (Leese and Wittendrop 2018; Farrell and Brown 2016; Gayer 2016).

Less has been written about the "securitisation" (Waever 1995) of transport systems. This entails security becoming the "lens" (Zedner 2009, p. 4) through which that practice becomes analysed. A field usually perceived within its own semantics and logics, such as mobilities, instead becomes subsumed by security discourses and logics (Wyn-Jones, 1999). Mobilities scholars are increasingly combining critical security studies approaches into their research, particularly regarding overlaps of "dangerous mobilities" (Walters 2006) such as migration and terrorism. Air transport is an instructive example of a mobilities field which, particularly since 9/11, has become dominated by security discourse and practice (Salter 2008). In *Security/Mobility*, Leese and Wittendorp (2017) curate several essays exploring the frontiers of this "security-mobility studies nexus," focused on borders, migrants, cyber-attacks, and terrorism. Most similar studies focus on securitisation for the purposes of ensuring safe traffic movement (Jain 2004). But this body of work suffers two limitations. Firstly, little attention is given to the securitisation of the UK's mundane, ubiquitous roads system. Secondly, these studies frame the mobility-security relationship unilaterally: that security is a technique for ensuring safe automobility. Conversely, it will be argued here that automobility is also a vehicle, so to speak, for securitisation. UK road

traffic has been subsumed within a security and social control logic not just for the purposes of safe "circulation" (Foucault 2007) of transport, but for unrelated law enforcement and security purposes which are not made clear to drivers, and which suffer from deficits in transparency and accountability.

This paper uses government and industry data – from (inter alia) the Department for Transport ("DFT"), the Driving and Vehicle Licensing Agency ("DVLA") and the Motor Insurers Database ("MID") – to support its findings. It takes a novel interdisciplinary approach – founded on mobilities, security, regulatory and Foucauldian theoretical approaches – to frame the UK's "surveillant automobility" as a technique of securitisation and social control for purposes beyond merely ensuring safe flow of traffic. The government and industry data, alongside journalistic sources, provide evidence to demonstrate how these securitising theoretical frameworks manifest in practice.

Automobility's synthesis of securitisation and social control will be demonstrated in four respects: how traffic regulatory bodies facilitate security imperatives, intruding into drivers' personal lives pursuant to a "surveillant assemblage" (Ericson and Haggerty 2000); how cars become more heavily secured, controlled and monitored, "fetishised" (Neocleous 2007b) for their security implications; how drivers' bodies are subject to social control through Foucauldian "discipline" (Foucault 1991); and how automobility exerts social control to non-drivers in wider society.

The Foucauldian analysis is a central thread throughout this research, demonstrating how both public and private regulatory bodies effect biopower, and discipline: the observation, correction, and examination of persons (Foucault 1991; 2007). Surveillance is the paradigm technique of discipline (Ericson and Haggerty 2000). The regulatory systems and technologies of securitisation detailed in the first and second sections (regulation and securitisation of road traffic) all contribute to its covetous reach. Those familiar with Foucault's works will easily identify relevant instances of discipline and biopower through the surveillance systems detailed

in those first two sections, and will anticipate how these inform the third section on discipline, itself. However, the focused Foucauldian analysis must wait until after these sections have been explored fully, so that their own respective subjects can be presented distinctly before they are integrated into the wider Foucauldian heuristics.

The aim of this paper is to demonstrate that, contrary to the individualistic, liberal symbolism of the car (Dunn 1998), participation in the traffic system necessitates subjection to a pervasive security project, of which the general public is largely unaware. It is hoped that it will illuminate an overlooked but important overlap between mobilities and securities scholars, so as to provide guidance for further investigation into the securitisation of road networks and traffic policy, highlight the social injustices perpetuated by automobility, and pinpoint areas where UK traffic regulation and data management may be improved for the benefit of drivers and non-drivers alike.

Surveillant Automobility

Traffic regulatory systems have become subsumed within security systems and practices. This section will use governmental and industry data to demonstrate how UK traffic regulation systems – specifically insurance, licensing, and vehicle registration – have been repurposed and securitised for agendas beyond safe traffic circulation, as part of a wider "surveillant automobility," with direct implications for transparency and accountability.

Third-party insurance is mandatory for drivers by virtue of s. 143 of the Road Traffic Act 1988. This historically resulted from public policy demands that all drivers be able to provide compensation in the event of accidents: a regulatory "goal" (Hood 2001) of indemnity and social security. It necessitates a central database to record all insured vehicles, the Motor Insurance Database ("MID"), administered by the Motor Insurers Bureau ("MIB") – a limited company with

legal responsibilities and powers under the 1988 Act to compel membership and contributions from any insurer underwriting compulsory drivers insurance (MIB 2018). The MID includes the personal details of all drivers, accessible to members of the public through online searches subject to a small administrative fee, to get insurer details in the event on an incident. The predominant users of this service, however, are the police, who make over 2 million searches every month (MIB 2018) – approximately 67,000 per day. Some of these are for traffic purposes, such as speeding, but the Department for Transport ("DFT") allows this data to be shared with forces, for policing purposes over any criminal activity (DFT 2008), which could range from drugs investigations through to terrorism. This database includes sensitive data relevant to the insurance, including data relating to medical histories and marital status. A consequence, therefore, of this regulatory framework is the broad use of personal details of all UK drivers by law enforcement personnel. The history of car insurance follows the pattern of a regulatory system established for traffic-related policy objectives – ensuring vehicles are properly insured – subsequently repurposed by police forces for security goals.

This insurance-police connection is of considerable interest. In *Policing the Risk Society*, Ericson and Haggerty (1997) explored the role of the police as "knowledge workers," effectively gathering data for a network of actors in a broader system of minimising risks, whether risks to the insurer financially, traffic hazards, or criminal activity. Altogether, a network of institutions, both public and private, co-operates to monitor and curtail these various risks. The police are trained to fill pro forma documentation for insurance companies relating to incidents: much of Ericson and Haggerty's research focuses on the functional role of the police as aides to the insurance institution at large. They emphasise that this relationship is multilateral. The police in turn can traverse "any place as members of expert-systems of risk and security" (p. 46), including access to private insurer data. This exchange of knowledge between actors is the life-blood of risk governance. Regarding MID data, it is interesting to see concrete evidence both of this risk governmentality in action in a road traffic context, and of the sheer scope of this knowledge circulation.

The regulation of drivers licences follows a similar narrative. First mandated in the UK under the Motor Car Act 1903 ("1903 Act"), originally the framework was introduced "purely as a means of identifying vehicles and their drivers" (DVSA 2018). The goal was, again, regulatory in nature and intended to ensure safe roads – in governance terms, removing undesirable risks from "circulation" (Foucault 2007). In contemporary law the 1988 Act, s. 87 reinstates this licensing obligation, and data of licensed persons are stored with the DVLA, including personal details and driving histories. Public bodies however, including the police, Home Office and HMRC, access this information freely through "legal gateways" via the Driver Validation Service (DVLA 2020), for goals other than safe circulation. Analogously to drivers' insurance, this system – designed solely as a means of identifying drivers for traffic purposes – has become an indispensable resource for security objectives. Police forces sent over 550,000 requests for personal information this way between April 2018 and March 2019, (ibid. p. 2) 1,500 per day on average, and can do so for aims separate to policing traffic circulation.

Vehicle registration follows the same regulatory-security narrative. Since the 1903 Act, all vehicles must show registration numbers on licence plates, demonstrating that the vehicle is owned by a registered, licensed driver. Akin to the licensing system, the goal was traffic-oriented, to ensure that all cars could be identifiable. Today the Vehicle Register, which retains licence plate and vehicle information, is overseen by the DVLA. The information relating to the MOT, statutory off-road notifications, taxation and physical qualities of each vehicle is obtainable by a search available to the general public subject to a declaration of "reasonable cause", for example, where the vehicle has been involved in an accident, crime or trespass (DVLA 2018). However, the police and certain other government bodies can access this information without this requirement, for criminal justice and security purposes beyond the scope of traffic regulation. Between April 2017 and March 2018 these organisations submitted 967,556 requests for this data. Just for the year 2015/16, the rate was as high as 2.6 million (ibid. p.3).

These regulatory systems and databases often cross-pollinate for law enforcement purposes. Swathes of the MID are provided to state-operated automatic number plate registration ("ANPR") camera systems, which automatically detect and check registration details and ownership (MIB 2018). This is useful for traffic regulation, identifying drivers and their vehicles in the event of a breach of traffic laws. A plethora of driver and insurance information, however, is accessible to law enforcement personnel via these vehicle licensing and surveillance technologies, for their own security objectives. The police do not disclose the number or location of these cameras, which may pose concern to those suspicious of the scope of state surveillance. The National Police Chiefs Council (2016) claimed that "approximately 9000 cameras submit between 25 and nearly 40 million reads daily," to police databases, with 20 billion records stored at that date. The police justify this policy by stating that publicising camera numbers and locations would benefit criminals in their schemes (Police.UK 2018). They state that all cars passing by are logged and recorded for two years pending use in potential criminal investigations ranging from traffic offences to terrorism and organised crime. This is explicitly repurposing traffic systems for security and crime control logics. Otherwise discrete, heterogeneous systems of surveillance and knowledge databases coalesce into a "surveillant assemblage" (Ericson and Haggerty 2000), as police forces cross-reference information from traffic systems into their own police records.

The institutions of overlapping traffic governance no longer solely map a road traffic network: they form a security network (Dupont 2004). From a criminological perspective this might be described as "nodal governance" (Shearing and Wood 2003): multiple actors co-operating to achieve the security agenda of surveillant automobility, including parties not traditionally considered part of the criminal justice system. Central state security, local police forces, traffic authorities, and private insurance companies (Ericson and Haggerty 1997), all contribute regulatory governance functions in pursuit of wider security goals.

Using networked road traffic systems for surveillance purposes – this project of what will be termed "surveillant automobility" – poses difficult problems regarding transparency and

accountability. The presumption is that the use of these regulatory databases by state security forces in the UK is solely for legitimate law enforcement purposes: without reason to suspect abuse, one might not consider this aberrant to civil liberties or human rights. Parts 3 and 4 of the Data Protection Act 2018 provide general principles regarding how law enforcement and intelligence services respectively must handle personal data in the course of their duties. The DVLA Data Sharing Strategy (2017) states that sharing this information with the police under relative freedom of access, by virtue of being helpful to such objectives, is usually proportionate.

Information useful for criminal investigations should indeed be made available to law enforcement officials. It is however the scope, lack of transparency, and lack of oversight over accessibility at point of use, which cause concern. Regulation 27 of the Road Vehicles (Registration and Licensing) Regulations 2002 provides that the Secretary of State for Transport may freely provide this information to police without the "reasonable cause" requirements asked of members of the public. No vetting of police motivations occurs at point of request. There are no reported cases in which access by UK police forces to this data has been deemed a breach of an interest under Article 8 of the European Convention on Human Rights (ECHR). However, there have been cases in the US where access to this data has allowed unscrupulous officers to pursue unlawful agendas. In 1998, an officer pleaded guilty to using ANPR to track and subsequently blackmail the owner of a vehicle that had parked near to a gay bar (The Economist 2018). The risk of undetected abuse is equally possible in the UK, and regulatory and legal oversight is necessary to prevent improper use of this technology.

In the UK this oversight is retrospective, and reviewed internally by police forces. The *National Standards for Compliance and Audit of Law Enforcement ANPR* suggests that police services should audit some 2% of data retrievals per quarter to ensure compliance with their legal obligations (Home Office 2019), to ensure they were accessed by an authorised person and with some justification. This is not necessarily a disproportionately small sample for auditing purposes, given a dataset that size. The scale of information being accessed by police – millions of records

being obtained annually; millions of licence plates recorded daily (Police.UK 2018) – may surprise uninformed members of the public. In the midst of this "banal security" is the banalisation of mass surveillance (Goold et al 2013). The breadth and depth of retrievable information, and therefore the surveillance and databases necessary to monitor behaviour, allow security forces unprecedented access to personal details of drivers' lives.

De Hert and Gutwirth (2006) argue that in cases of access by police forces of non-police databases, the question is not one of abuse per se, but trust (p. 27). Those volunteering their personal data to the DVLA for traffic regulation purposes might not suspect that this information may be freely accessed by police for purposes as broad as counterterrorism profiling. It is not explicitly stated when applying for a drivers licence that one's information will be used for such purposes (GOV.UK 2020). Instead, important information about use and oversight of this data is buried in pdf files with unappetising titles such as *National Standards for Compliance and Audit of Law Enforcement ANPR* (Home Office 2019). Notwithstanding public policy security imperatives, the principle that data gathered for specific purposes should be used chiefly for those purposes is crucial data protection theory (e.g. Art 5(1)(b) GDPR). Where access for other purposes becomes facilitated, that core principle becomes endangered. Any exceptions to this principle must be carefully considered in light of the rationale and proportionality of any deviation, ideally with judicial oversight and accountability (De Hert and Gutwirth 2006), and made clear to the people whose data is being so used.

Ostensibly there exists a regulatory framework with which this use of road system surveillance data must comply. The use of overt surveillance cameras by police, and use of their data, for example, are subject to the Surveillance Camera Code of Practice (Home Office 2013) ("the Code"): this provides "guiding principles," which require that surveillance technology be used for legitimate purposes such as law enforcement or national security, and be employed proportionately in the context of what is necessary to meet those purposes. The Surveillance Camera Commissioner provides further guidance for compliance with the Code's principles. This

Code aims to reflect the requirements of Article 8 ECHR, that private and family life be respected, and any intrusions be proportionate to such necessary and legitimate aims. In the Code's own words,

"The purpose of the code will be to ensure that individuals and wider communities have confidence that surveillance cameras are deployed to protect and support them, rather than spy on them."

This reassurance falls flat in a number of respects. Firstly the Code is "guidance," and although it helps – alongside the Commissioner's own guidance – to demonstrate good intentions and a theoretical framework of proportionality, it sets no standards for what might be a reasonably proportionate interference with privacy. Secondly, it would struggle to set such standards because contextual variations in risks, and the necessary intrusions into privacy to address them, will differ from case to case. Thirdly, a number of (both public and private) organisations, the CCTV data of which are accessible to police forces, fall outside of the Code's regulatory jurisdiction altogether, including Transport for London (Big Brother Watch 2018). Where "TFL," schools, hospitals and universities are exempt from this Code, these difficulties of trustworthiness are compounded.

Fourthly, the Commissioner's 2016/2017 Report also stated that police forces complete self-assessments of compliance with the Code as and when they are willing and able (2018, p.37). The efficacy of the Code is difficult to measure when it is impossible to quantify the volume of number plate misreads or informal ANPR database access requests. Moreover, it is police forces themselves that decide when to submit self-assessments. The Home Office has declined to implement a system for centrally calculating the rate of and reasons for access, presumably on the grounds of administrative workability, which makes compliance harder still. The Commissioner's latest Report (2019) states that a great deal more is required to increase the transparency, public scrutiny and trustworthiness of these databases and their use. Furthermore the Commissioner "has no inspection or enforcement powers, nor any powers to investigate

complaints" (Police Foundation 2014, p.7). Given that the "integrated" surveillance systems of CCTV, ANPR and DVLA driver databases create bountiful opportunities for intrusion into privacy, it is unsurprising that civil liberties groups see a lack of transparency and accountability over their implementation, wary of an "unregulated and legally questionable" surveillant automobility (Big Brother Watch 2018). With the vocal concerns of such non-governmental organisations, the lack of academic commentary on the securitisation of ANPR systems – and the lack of transparency as to their use – is also notable, given the implications that surveillant automobility has for civil liberties and crime governance.

As the regulatory practice of ANPR is an emergent phenomenon is difficult to find jurisdictions that have robust approaches which the UK could easily emulate – but direction from both the European Court of Human Rights and the European Court of Justice on data protection and proportionality may paint a picture of what we should aspire towards. Lorna Woods (2017) has advocated for stronger supervision of ANPR use in the UK. Drawing from decisions including that of the European Court of Justice in *Tele2/Watson,* Woods identifies in European jurisprudence the need for "supervision of access" from an independent authority, preventing "fishing" of databases for personal information for police use. This would require a significant but important overhaul of the present system, which requires no immediate oversight at point of access by an independent regulator, and provides the Commissioner with few powers of investigation.

Fifthly and crucially, security is always by definition a legitimate aim – in the ECHR, the Human Rights Act 1998, the Code – and has a tendency to make any intrusion "necessary" to its pursuit proportionate by extension. This reflects the core difficulty in the traditional security discourse that describes a "balance" between personal freedoms, such as privacy, and security objectives: it suggests the two are commensurate or can be traded off (Dworkin 1977). In reality the relationship between rights and security is more nuanced. Neocleous (2007a) argues that historically, liberal democratic states have always contained an inbuilt imperative not dissimilar to "reason of state," or necessity, which prioritises security imperatives. In particular he examines

emergency prerogative powers of the executive, but in the ANPR example there is an important difference: these police powers are legislated, enacted within the rule of law rather than executive fiat; yet the same logics apply. Security and order are deemed "logically prior" (Zedner 2009, p. 44) to other public goods and goals, facilitating securitisation by prioritisation. What is "necessary" to achieve a law enforcement agenda does not face rigorous scrutiny under a proportionality doctrine. Necessity is the mother of intrusion.

Securitised Cars

This section examines the securitisation of the car itself. The presumption in the academic literature to date is that securitisation has been the servant of automobility. The "crime drop" in vehicle theft since the 1980s, internationally (Tseloni et al 2010) and in the UK (Farrell and Brown 2016), correlates with the proliferation of security devices such as central locking systems and car alarms, supporting a "security hypothesis" (Farrell et al 2011) that cars are becoming safer by virtue of security technologies. The motor industry demonstrates a "commodification" (Goold et al 2010) of security by virtue of market demands and sales practices pandering to perceived insecurities.

It can be argued, however, that cars are not just becoming the object or beneficiary of securitisation: they are themselves becoming a subject, or technique, of securitisation. They have become a component of security discourse and practice in three demonstrable ways. This section first demonstrates that the technologies used to secure vehicles are growing in manners that intrude upon and securitise the lives of individual owners. Then, it shows that technologies extraneous to the car per se, including smartphone apps, contribute to a broader public-private technique of surveillant automobility. Finally, it highlights security discourses which frame the car as a risk to security: "weaponization" (Counter Extremism Project 2018) reconceptualises the car, a technology of mobility, instead as a technology of (in-)security.

Technologies which protect both car and driver from theft, including central locking systems, have undoubtedly influenced the drop in automobile crime in the last three decades (Farrell and Brown 2016). Their purpose is to deter and prevent third parties from accessing the vehicle. Interestingly, contemporary technologies go further: they check the identity and track the progress of the individual driver. Internationally, services exist providing tracking and location features for clients travelling in high-risk locations such as Mexico (FirstCall 2017). Many cars in the UK now have inbuilt GPS tracking systems, used to record the car's movement. Furthermore, since 2013 companies such as Ford and Citroen have been working on "biometric" facial recognition, iris-reading and fingerprint technologies to verify driver identity (Biometric Technology Today 2014), and even mechanisms whereby driver breathing rates can be calculated to detect stress levels and engage "additional road safety measures" (Biometric Technology Today 2013). Such vehicles are not yet in widespread circulation, but the trend demonstrates a growing market interest in augmented security technologies, in which manufacturers are eager to invest (Venturebeat 2017). Not only the car is securitised here, though: the driver's identity and body become integrated into a bio-technical security assemblage. Some mobilities scholars have examined how cars become extensions of the human body (Urry 2004 p.31), augmenting speeds but tunnelling vision, limiting muscle control, creating a disciplined "driver's body" (Freund 1993). It is interesting to consider, from a critical security studies perspective, that the car might also become co-extensive of the human body as a security apparatus under these technologies, securitising both car and driver.

Secondly, there is a growing market for apps designed to guide drivers' navigation: many also help to locate parked vehicles, get live traffic updates and, crucially for current purposes, record travel movement (Exminster Garage 2016). The effects of GPS and smartphone technology have had a demonstrable impact on the safety of automobile transport. For the cab hire provision company, Uber, the additional security of live-tracked surveillance is itself a commodity, praised by the company (Uber 2018) and consumers alike. Many security risks faced by traditional

cabbies detailed in Gambetta and Hamill's ethnographical study, *Streetwise* (2005), involved unknown passenger identities and making off without payment, which the app obviates.

But there is a securitisation aspect intertwined with this proliferation of security technology and apps. Much contemporary academic research investigates how apps digitise securitisation between consumer, provider and state (Van Holstein 2018): regarding automobility, one sees similar processes occurring. This manifests not only for the purposes of protecting the consumer, but their other, insidious purposes. Some are produced alongside insurance companies, for example, the Aviva Drive app (Telegraph 2016), which records one's speeds, brake times and handling of corners. Safe driving behaviours are rewarded by reductions in premiums. This is interesting not only because these apps act as private surveillance of driver movements, and therefore provide security to the driver by way of assurances of observation and tracking: they also provide greater security for the economic interests of the insurers, who can factor the actuarial risks of individual drivers in calculating premiums. This overlap of interests in GPS surveillance is highly indicative of the surveillant assemblage (Ericson and Haggerty 1997), whereby continuous observation is incentivised to check and mitigate risks for drivers, private companies and the general population. In a vast public-private security network (Dupont 2004) whereby private surveillance data may be accessible to police, all component techniques of observation and risk management serve as part of a broader social phenomenon of integrated and "nodal" (Shearing and Wood 2003) governance of risk.

Finally, in recent discourse cars have become securitised not only as commodities of security, but as security risks. Attacks internationally and in the UK have brought this to attention, including the 2017 Finsbury Park and Westminster Bridge attacks (Telegraph 2018). These incidents are framed within a counterterrorism discourse from the offset (BBC 2018). This far exceeds the mobilities studies' adoption of a "security" lens for the purposes of maintaining safe traffic circulation (Rajan 2006): this entire discourse focuses on national security instead. The independent international policy organisation, the Counter Terrorism Project (2018), confesses

that despite growing discourse and media attention on vehicular terror attacks, there is "little that can be done to prevent the weaponization of motor vehicles," given their widespread availability and potential for catastrophic damage. To mitigate risk, increasingly investment has been placed into situational crime prevention techniques such as concrete blocks and structures near pedestrianised areas, and police forces have developed tyre-puncture technologies which can be swiftly deployed (Independent 2017a): an example of the hybridisation of traffic and police practices under part of a securitisation agenda. The Home Office has previously published its counter-terrorism guide, *Protecting Crowded Places* (2012), where "hostile vehicle mitigation measures" have been deliberated, including urban planning to reduce access to critical infrastructure. Other writers have explored the securitisation of roads and cities at much greater length (Houlihan and Giullianotti 2012; Secured by Design 2017). For current purposes, the car itself is here dissociated from its mobilities logic, and even a crime control logic of protecting the car and its driver from extraneous threats (per Tseloni et al 2010). In this discourse, it is solely a weapon, a risk to be calculated by security logics, subsumed under another field of governance (Waever 1995): securitised no longer as a commodity of security, but as an insecurity.

Collectively, traffic regulation, UK road networks, and the car itself have all been consumed by an ever-hungry security agenda, constructed according to a pervasive security discourse. These "everyday" security practices (Crawford and Hutchinson 2016) manifest in inconspicuous techniques and quotidian systems, constituting the surveillant mobility through which all driving behaviour is regulated, monitored and corrected. This securitisation goes well beyond the needs of maintaining safe circulation under a mobilities discourse: the aims of these practices are security-focused ab initio, or become subsumed by security; they securitise not only the circulation of traffic but the everyday lives, bodies and data of drivers.

These findings serve as a contribution to the critical mobilities literature, on the paradox contrasting liberal conceptions of automobility with the systematic controls necessary for its perpetuation (Urry 2004). The open road is in fact a closed laboratory system (Foucault 1991)

for monitoring and recording behaviour. Security underwrites the very possibility for automobility, and thereby securitisation is built into its design. The perpetuation of traffic circulation is dependent upon, and hence must be consumed by, the logic of security.

Disciplined Automobility

This section explores how this securitisation of automobility is reinforced through techniques of discipline and social control: that in addition to discipline ensuring greater security for the roads, it in turn reinforces automobility securitisation. "Discipline" encompasses the socio-political techniques employed to coordinate human behaviours. Social techniques of discipline actualise biopower, facilitating orderly collective human actions. Foucault explores in *Discipline and Punish* (1991) four aspects of control characterised by disciplinary mechanisms (pp. 141-169): spatially, the relation of bodies to one another; kinesthetically, their movements; developmentally, their training; and collectively, their coordination. These four characteristics are evident in the regulation of drivers, in terms of (amongst other things) road architecture, standard vehicle control designs to which drivers must choreographically adapt, driving tests, and traffic laws, respectively. Such formal, "concrete" designs of orderly control have been examined under Foucauldian analyses elsewhere (Simons 2009).

To effect continuous discipline, social ordering systems ordinarily employ three overlapping mechanisms of discipline (Foucault 1991, pp. 171-194): hierarchical observation of bodies, normalising judgment to reward compliance and punish deviation, and the routine examination of behaviours. Surveillance is the tool *par excellence* of implementing these mechanisms simultaneously (Ericson and Haggerty 2000). This conception of discipline has been adopted by numerous mobilities scholars in analysing the social control of drivers. Böhm *et al* (2006 p. 7) distil various commentaries, focusing on how, in formal traffic regulatory schemes,

"…a whole range of governmental institutions have emerged, engaged in monitoring, shaping, disciplining, drivers (and non-drivers) into behaving in ways consistent with an ordered, regulated, movement of automobiles…"

Tyfield (2014 p. 588) argues that liberal automobility policy is dominated by the governmentality of biopower, reliant upon the rational self-regulation of conduct. There is no contradiction between liberal governance and disciplinary social controls: contemporary liberal social life depends upon various auspices and mechanisms of discipline, especially so for safe traffic circulation (Kester 2018).

In a criminological and securities context, "discipline" analytically is adopted by writers such as Ericson and Haggerty (2000) regarding the surveillant assemblage and its omnipresent examination of behaviours, pursuant to a risk-mitigation imperative for "policing the risk society." However, they also submit that the "hierarchical" nature of observation should not simply be conceived as state-centric. Just as the surveillant assemblage comprises multiple institutions, both public and private, so too do the institutions of discipline. They refer to O'Malley (1991) in that insurance companies, and the imperative to adhere to policy requirements and exercise self-control, impose coercive social controls on the exercisable liberties of individuals. Within the scope of criminological and security studies, then, there is a growing understanding that the modalities of discipline take various forms across a number of public and private institutions.

Leese and Wittendorp (2018) observe a theoretical overlap between a mobilities-centred understanding of discipline and a securitisation conception in the emerging "security-mobilities nexus" of discourse. This includes the power of "knowledge" and surveillance for control, and the liberal governance of conduct necessary for safe circulation (Sheller and Urry 2016). There

remains however a lack of commentary on how these informal disciplinary mechanics over mobility effect a securitisation of individual drivers, not merely their overall circulation, and exercise social control through more subtle ways than formal or legal regulation, particularly regarding UK roads.

The scope of surveillant automobility over UK roads has been discussed in preceding sections, specifically regarding the formal regulation and surveillance of drivers, which all contributes to the reinforcement of discipline discussed above. This is how the Foucauldian disciplinary trifactor (hierarchical observation, normalising judgment, and routine examination) manifests at the regulatory, institutional level. What is more interesting, for current purposes, is the wider, informal surveillance network over road traffic, and the insidious effect it has upon individuals' behaviour.

We can now see how the subjects of the second section, the devices of securitisation, are incorporated into the systems which effect discipline over drivers. Aside from private CCTV and security, the proliferation of private "dash-cams", or cameras adhered to one's dashboard, increases roadside instances of observation (Economist 2018). These can benefit the individual in recording activity from one's car, both for traffic purposes and private security. Interestingly, insurers are incentivising individuals to install dash-cams, offering free cameras and lower premiums for routinely safe driving (Aviva 2018). Observation and examination are thus encouraged within the user's own vehicle. Furthermore, inter-driver observation and co-ordination has been facilitated by smartphone apps such as Waze, which encourages users to provide live feedback of congestion, routes taken, and even updates to house numbers and street locations (Waze, 2020). Real-time reporting of one's own driving data for the purposes of greater circulatory efficiency is the apotheosis of Foucauldian automobility biopower.

Where the public-private surveillance systems proliferate, greater use can subsequently be made of this data through "integrated systems", which can include facial recognition algorithms and – in the ultimate synthesis of risk theory and biopower – crime prediction software (Rose, E. 2017). Though frequently met with initial resistance, policing practices often adapt to the heightened efficacy afforded by integrated systems (Willis, Koper and Lum 2018), particularly as they create more efficient and reliable crime control outcomes. ANPR, CCTV and 911 call data, for example, form part of New York City's "Domain Awareness System" (Guardian 2012), using algorithms designed by Microsoft to help the NYPD to predict future locations of criminal activity. Given that Kent Police have already started to use predictive crime mapping software (Independent 2017b), one may expect greater integration between police databases and public-private CCTV systems in future for risk management purposes.

The steps necessary to jump from *being observed* to *being controlled* merit elaboration. Foucault argues that knowledge is power (2007): to be observed is itself to be subject to a relationship of power. To be watched often entails self-awareness and self-monitoring of behaviour, either out of sociability biases or fear of reprimand (Landsberger 1958). Awareness of surveillance is an important aspect of its effectiveness: epitomised by Bentham's panopticon, it encourages the observed to become self-controlled, seeking to avoid censure. For road traffic, the prevalence of CCTV has a quantifiable influence on driver speeds and safety, to the extent that even signs for upcoming CCTV cameras, and fake cameras, form part of the surveillance and social control assemblage in highway planning (Lippert 2009). Perpetual observation, judgment and examination are best achieved not just through a growing public-private surveillance apparatus, but through collective self-discipline.

The "normalising judgment" (Foucault 1991), punishing deviation, extends beyond legal reprimands for breaking traffic laws. Insurers' penalties, including loss of no-claims bonuses or higher premiums, form powerful economic, coercive aspects of this disciplinary technique

(O'Malley 1991). The requirement to provide ever-more information to one's insurer leads one to query the extent to which drivers voluntarily, or by inchoate obligation, must surrender privacy – providing increasingly detailed information and biomedical data, or even being subject to regular blood-pressure checks (Martin 2016). It also maximises the potential for punishment for minor deviations. The Claims and Underwriting Exchange ("CUE") is a database of incidents relating to insured vehicles gathered from drivers, police forces and insurance companies. Increasingly, drivers are finding that minor wear and tear to their vehicles, on which they would prefer not to claim, becomes recorded at some later stage on CUE and may invalidate more significant claims in future (GoCompare 2018): placing greater onus on drivers to declare minutiae to their insurers upfront. These often-cosmetic damages may not affect road safety or safe traffic circulation, yet could pose economic risks to the insurer. Insurers then are able to manage their own risks with exacting detail. Penalties for deviation – voided policies for non-declaration of minor damage, increased premiums for deviations or minor damage – tighten the net further still.

This control need not always be authoritarian or punitive to be effective. Foucault also discussed how "techniques of environmental technology or environmental psychology" (Foucault 2008 p.259) effect biopower subtly. For Schuilenburg and Peeters (2015), this manifests in certain criminological policies in a manner reminiscent of the economic theory of "nudging" (Thaler and Sunstein 2009). In the context of UK road traffic, reduced insurance premiums for app users, road architecture designed to slow traffic down by critical infrastructure, and signs for upcoming traffic cameras, are just a few examples of how public and private bodies contribute to an ecosystem of psychological nudges which encourage the individual to alter their own behaviour, without the immediate need for punitive intervention.

Overall, the effect of routine surveillance, these positive "nudges" and the risk of negative punishment for minor deviations to traffic behaviour, all create a climate of near-total control

over drivers (O'Malley 2004). This extends beyond the oversight necessary for safe circulation – which is the main focus of the mobilities-security nexus literature at present (Leese and Wittendorp 2018). It extends to cosmetic damage, how corners are handled on empty roads, whether one installs cameras in one's own car: the minutiae of drivers' lives. The theoretical parallels in the heuristics used within security and mobilities studies – the management of risks, safe circulation, management of information, control of borders (Kester 2018) – all are equally paralleled in formal regulation and surveillance of road traffic. However, the true mark of discipline is not the efficacy of external surveillance: it is the ability of the disciplinary system to encourage self-regulated behaviour. To take a literary metaphor: having a driving population that is willing to monitor itself through their dash-cams and smartphones, effectively placing surveillance "telescreens" (Orwell 1949) in their own cars, is the masterstroke. It is at the stage of "reflexivity" (Ericson and Haggerty 1997 p.51) on behalf of users, where they have become entirely accustomed to internalising judgment of social behaviour, that governance as the self-regulated "conduct of conduct" (Dean 2010) reaches maturity. It is no longer security that serves the safe circulation of free, autonomous traffic: one instead sees automobility regulated, disciplined and operationalised under frames of economic and national security.

Off-road Automobility

It is one thing to observe how surveillant automobility controls social behaviour *on-road*. It is another to observe how automobility and the securitisation of roads control social behaviours *off-road:* the "normative politics present at these everyday circulations" (Kester 2017, p.212) are diffused in the socio-political life of the UK. Four overarching effects of automobility as a social practice, to be examined here, include its stranglehold on political discourse, limitations on free driver behaviour, a neoliberal paradigm of drivers as labourer-consumers, and a perverse relationship with the car which affects the social and legal equality of non-drivers.

A noted effect of automobility is how it paralyses non-driving mobilities. Cars are "habit-forming" (Stokes and Hallett 1992): drivers become increasingly reliant on their cars for mundane purposes, reluctant to walk or use alternative transport, "at a loss" should their cars be unavailable for any time. The car is the most common resort for any journey over a mile in the UK (DFT 2016, p.28). In part this stems from behavioural and social conditioning to the norm of automobility (Urry 2004), culturally reinforced by media and advertising (Conley 2009): to drive is normal, and deviations require justification. However, long-term investment in automobile infrastructure, to the detriment of alternative social and logistical structures, creates a state of dependence. Soron (2009) demonstrates the practical reasons for this, including the geographical spaces between residential estates and industrial estates (p.184), the presumption of automobile mobility in the distribution of labourers and workplaces over the twentieth century, and a historical reluctance to invest in public transport. Not only are we trained to normalise car-driving as the "best" option: cars have shaped our geography to the point where automobility is, Soron argues, a "compulsory consumption," without which access to social and economic life is compromised. For poorer families, consequent reliance on underfunded public transport therefore impedes not just geographical mobility, but social mobility (Hernandez 2018). Car mobility allows employment opportunities and therefore access to greater wealth: in its absence, employment opportunities become limited by virtue of public transport limitations, creating a cycle of socio-economic exclusion (Skeggs 2004). Automobility, therefore, punishes nonconformity.

A related symptom of this social training, and infrastructural dependence, is a stranglehold on political mobilities discourse. Henderson (2006) argues that the social and infrastructural practice of automobility creates a political climate whereby increasing motor traffic is the presumption. The US discourse on the "inevitability hypothesis" (Vuchic 1999), is mirrored in the UK's "predict and provide" policy for road transport (Vigar 2002). Investment in other forms of transport, such as high-speed rail, is considered noteworthy precisely because of its aberrance.

Alternative systems of transport *are alternative,* distinguishable by virtue of not being petrochemical and automobile-centric (Tyfield 2014). Cars, as the essentialised manifestation of liberal autonomy, are prized in political mobilities discourse for their association with freedom (Dunn 1998): yet the bicycle similarly is a self-motivated form of transport, but is scorned – considered deviant and problematic for mainstream society (Böhm *et al* 2006, p. 8). Public mobilities discourse is dominated by the car as the principal, privileged system of mobility (Tyfield 2014). The political circulation of knowledge (Foucault 2007), and discussion on mobility within the UK – our understanding of it as a knowable social practice – starts and ends with the automobile.

The social controls of automobility also manifest in ways contradictory to its "liberal agency" paradigm (Conley 2009): the use of cars by the vast majority of drivers does not truly correlate with the freedom flaunted in car adverts. Cars are overwhelmingly used for the acquisition, and spending, of capital. For example, only 12% of SUV drivers ever use such vehicles for off-road purposes, despite the connotations of freedom and individualism symbolised within their marketing discourse. 40% of SUV drivers do not leave their city with said vehicle in any given year (McLean 2009).

Instead, cars reflect a neoliberal labourer-consumer ideal: drivers act primarily as self-directing economic units, travelling to workplaces and shops. Data from the DFT (2014; 2016) strongly support this hypothesis: two thirds of all commutes and business journeys are made by car; the majority of miles travelled by car in the UK are for commuting, shopping, or educational purposes, above social and leisure purposes. Cars *can* facilitate the pursuit of individual freedom, and adverts frequently fetishise their ability to do so (Ferguson *et al* 2002). However, in reality, given petrol costs, time constraints and other limitations, cars are used principally for practical, economic purposes: allowing labourers to access workplaces and shopping outlets, where decades of infrastructural policy has allowed reliance on the automobile to grow (Soron 2009).

Consciously or otherwise, the majority of the UK driving population has been disciplined into automobile reliance predicated on neoliberal paradigms of labour and consumption.

A final, troubling means by which automobility exercises social control, outside of the road system itself, is in how society's presumptions of automobile ownership affect individuals' legal and social standing. The presence, absence or value of a car in one's household are powerful social markers (Ellaway et al 2003), but can have profound impacts on one's legal relationship with the state. Tranter (2014) examined how in Australia, social security claims might be invalidated by the presence of a car on one's driveway, demonstrating evidence of capital wealth or income; or how claims might be approved given absence of a personal vehicle, showing poverty and "worthiness". In some tribunal decisions, the mere presence of a car registered in a male name on a female claimant's driveway was sufficient evidence to invalidate claims for single person's allowances. The car, Tranter argues, becomes an "avatar" for legal personhood: rich or poor, worthy or unworthy, male or female.

In the UK, such material considerations have been taken into account in benefits calculations: claimants' access to vehicles is monitored and sometimes circumscribed by the state, particularly regarding the "Mobility" component of benefits calculations (House of Commons Library 2018), with limitations on how long claimants might reasonably keep a car in their name while receiving benefits. Given that only half of households in the lowest income quintile in the UK have access to a car, against 90% of those in the highest quintile (DFT 2016, p.24), these attitudes to who descriptively does, and prescriptively should, own a car, do reflect economic reality.

A few implications of this deserve consideration. Firstly, car ownership by benefits claimants – not paradigmatically labourer-consumers – is suspect and demands scrutiny. Cars are for wealthier liberal legal subjects in a capitalist paradigm (Betts 2004): under this logic, non-participants should be excluded from mobility. They do not fit the neoliberal aspiration of self-

motivated, self-moving, *autonomous* legal subjects. Given that the poorest in the UK are the least likely to have access to, or drive, a car (DfT 2016) there is an unsettling classist reality to this paradigm.

Secondly, participation in automobility promises economic and social benefits (Soron 2009). Our legal obligations and social mobility are dependent upon membership of either driver or non-driver citizenships (Rajan 2006). Drivers may be subject to regulation and obedience, but they benefit from heightened mobility and access to the wider governance of the circulation of goods and services (Sheller 2014); and therefore have greater benefit from the economic gain that follows. Quite apart from the symbolic social status that car ownership entails, particularly among young adults (Betts 2004), it creates a social segregation between drivers and non-drivers in access to social goods.

The presumption that automobile possession is a badge of citizenship even extends to how we validate the identity of persons. The most common form of identification in British society – for purposes as broad as purchasing alcohol, opening a bank account, engaging a solicitor, and so on – is the driver's licence (GOV.UK 2014). Absence of a valid licence creates difficulties in ordinary participation in social life. So beyond the consequences of geographical limitations, discussed widely in the literature on "uneven mobilities" (Kaufmann 2002), one might also talk more broadly of the uneven citizenship between drivers – the identified, insured, recorded, but *included* – and those who do not directly operate within those regulatory, surveillant and security network systems (Rose, N. 2000), and who are, therefore, *excluded*.

The discipline and social control exercised by automobility extends beyond what is necessary for safe roads: it permeates into pedestrian, and even political, life. Automobility punishes nonconformity, rendering alternative transport abject and insufficient, and excluding non-drivers from public and social goods (Skeggs 2004). The best way to avoid this punishment is to

participate in the project of surveillant automobility as a fully paid, fully regulated, and self-disciplined member.

Conclusion

Mobilities writers have referred to securitisation in analysing how traffic circulation is sanitised of undesirable harms (Sheller and Urry 2016). Likewise, critical securities literature has looked at mobilities as a field of risks and solutions, with an infrastructure subject to a securitised discourse for the purpose of maintaining safe mobility (Aradau 2010). To that extent, there is a growing collaboration within the mobilities-securities "nexus" (Leese and Wittendorp 2018) on researching the securitisation of circulations. However, this study has sought to demonstrate that there remains an unexplored underside to both perspectives: that drivers and non-drivers, as individuals, become subject not only to these secured circulations, but to a whole regime of regulation, securitisation and social control of their private selves, within the political dynamic of automobility, often for purposes unrelated to safe circulation. It is hoped that future collaboration between security and mobilities scholars will continue to scrutinise these alarming phenomena, not least so as to impact future regulation of CCTV and ANPR systems – both in the UK, and potentially in other jurisdictions – to bring greater transparency and accountability to the pervasive surveillant automobility project.

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