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**Abstract:**

This paper argues that practices and technologies of *relational governance* are central to the everyday and mundane ways in which local and national governments try to reshape the behaviour, habits, actions and movements of ordinary citizens. While behaviour change theories may acknowledge the role of material technologies and environments in enabling positive behaviour change, they fail to acknowledge how actions, habits, practices and movements are multiple, emergent, distributed and relational. In this paper I argue that approaches that highlight the distributed aspects of processes of relational governance can reveal how attempts to govern and shape mobility are underpinned by environed understandings of embodied practices, habits, and governmental technologies. The paper illustrates this by focussing on changing practices and policies relating to the control of parking in England since the 1950s. I examine how all manner of material things – from parking meters and traffic wardens, to parking apps and ANPR camera technologies – have emerged in a wide variety of attempts to influence and reshape parking habits, allowing the government of subjects 'at-a-distance' in more circumstantial ways through a range of political programmes, monitoring technologies, and design solutions.

**Keywords:**

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**Introduction**

> …mundane governance depends on the localized, *in situ*, recursive enactment of ontologies. (Woolgar & Neyland, 2013: 260)

In their 2013 book *Mundane Governance*, Steve Woolgar and Daniel Neyland examine how 'mundane governance involves the ontological constitution of the objects and subjects of governance' (Woolgar & Neyland, 2013: 136). Drawing upon perspectives from Science and Technology Studies (STS), their conceptual arguments echo writings in material culture studies, the history of technology, actor-network theory, post-humanist thinking, assemblage thinking, and political geography that have examined the role of more-or-less mundane or ordinary 'things' in political relations and networks, facilitating governance, control and discipline, whether close-up or at-a-distance (e.g. Law, 1986; Latour, 1987; Rose & Miller, 1992; Meehan et al. 2013). Their work may be positioned in a long but varied history of political theories that have recognised the role of material things in facilitating programmes and technologies of government, from Marxist writings on political economy, to Foucauldian writings on discipline and governmentality (Foucault, 1975, 2009; Dean, 1999; Rose, 1999; Barry, 2001), and post-structuralist work on 'vibrant materialities' (Bennett, 2010). Many accounts of relational governance are grounded in 'common-sense' understandings of thing-power that permeate Western economies, societies and political programmes. Indeed, governments, police authorities, companies and private citizens have long understood the very practical ways in which mundane things – from speed control bumps and recycling bins, to pharmaceuticals and advertising – can be deployed and arranged in attempts to influence and shape the conduct and actions of individuals. In contrast, in this paper I want to highlight the value of more radical relational approaches in understanding networked and distributed political relations, 'mundane governance' (Woolgar & Neyland, 2013), and what I term *relational governance*. A focus on *relational governance* encourages scholars not simply to decentre political decision-making and delegate political responsibility away from human agents, but to acknowledge and trace the ways that material technologies and environments have become vital constituents of the strategies, capabilities, decisions and actions of political authorities. My assertion in this paper is that more *distributive approaches* to relational governance and political action are necessary in order to understand the affective politics, practices and techniques of government and control, wherein a broad range of technologies, environments and infrastructures play key roles in reshaping habits, behaviour, actions and feelings.

In the following section I explain what I mean by relational and distributive approaches to governance, positioning my approach in relation to theories of behaviour change, social practices and habit. I explain how distributive approaches to government, behaviour and habit can provide more nuanced perspectives on the complexities of decision-making, action, movement and affective relations. In the third section, 'Economies of habit', I trace how economic aspects of parking have been central to ongoing debates about governing parking habits in England since the commodification of on-street parking space and time with the introduction of parking meters in the 1950s. On the one hand, the individual motorist is presented as a rational actor whose parking choices are shaped by availability and cost, but upon closer inspection it is apparent that all manner of material things, technologies, government programmes, planned environments, and ambitions for town centres have become enrolled into programmes and policies for governing parking practices and spaces. In

section four, 'Governing habits', I examine how parking enforcement techniques have been framed as central to the affective reconfiguration of habits, tracing the tactics and technologies used by traffic wardens when governing parked vehicles and attempting to monitor the practices of motorists. I show how parking management and regulation is performed through interactive relations between parking wardens (and their enforcement practices), charging technologies, parking environments, and motorists, with habits, technologies, and environments becoming reconfigured and assembled in distinctive ways. I then examine the strong emotions that gather around parking practices, parkers' rights, and enforcement practices, tracing campaigns by parking activists who have challenged the use of automated camera surveillance technologies. Overall, the paper serves as a critical attempt to shift scholarly attention on political practices away from rational, monadic subjects towards more distributed, relational understandings of action, agency, responsibility and movement.

**Relational Governance and Distributive Approaches to Behaviour and Habit**

There is no question that contemporary academic and policy debates about political technologies and government control tend to be dominated by approaches that attribute human actors privileged agential powers above other entities. Take, for example, theories of behaviour change, wherein material things and non-human relations are considered through concepts such as 'choice architectures' (see Thaler & Sunstein, 2009; Dolan et al., 2010).[1] At first glance, behaviour change theories may appear to present a new and persuasive language for understanding both behaviour and political technique, but I would argue that this broad family of approaches can most usefully be placed in a genealogy of distinctive *governmentalities* or governmental rationalities by which politicians, civil servants, 'psy' experts, academics and others have sought to acquire knowledge, exert authority, and more-or-less subtly shape and 'nudge' citizen-subjects to act in ways deemed to be beneficial to themselves, society and the nation-state (cf. Dean, 1999; Rose, 1999). Indeed, behaviour change theories are frequently underpinned by conceptions of subjectivity, psyche, and behaviour rooted in scientific understandings of decision-making, action and the self, and these theories tend to reinforce binary divisions between psyche/self/body and material things/environments, down-playing or ignoring the importance of social practices and contexts (Shove, 2010; Strengers & Maller, 2015) and the distributed nature of agency and habit (Schwanen et al., 2012). Behaviour change theorists may emphasise the importance of engineering environments, contexts and 'choice architectures' in order to influence individual behaviours and habits (see Thaler & Sunstein, 2009), but *responsibility* is ultimately placed on the individual citizen-consumer who must adapt their behaviour and enact change (Schwanen et al., 2012; Barr & Prillwitz, 2014). The resulting *ideal* model of action for liberal paternalist policy-makers entails small and imperceptible 'nudges' influencing individual decisions; a model that embodies 'neo-liberal' political agendas, as well as 'psy' and 'neuro' scientific constructions of individual behaviour and subjectivity (Jones et al., 2013: 49). In doing this, behavioural and neuroscientific theories largely ignore the role and responsibility of large corporations (and, in an overt sense, governments) in enacting change (Barnett, 2010; Shove, 2010), as well as overlooking the importance of social and cultural practices and relations (Shove, 2010) and what some consider to be 'structural constraints' to change (Jones et al., 2011: 56). More fundamentally, there is a significant disjuncture between the models of subjectivity and agency articulated through 'social theories of behaviour' and more 'practice-based' approaches to the unfolding of actions, events and environments. As Elizabeth Shove has explained:

Whereas social theories of practice emphasise endogenous and emergent dynamics, social theories of behaviour focus on causal factors and external drivers. Likewise, people figure in the first case as carriers of practice and in the second as autonomous agents of choice and change. (Shove, 2010: 1279)

Sociologists and philosophers of practice have argued that questions surrounding practices, behaviour and habits require a more radical rethinking of conceptual understandings of practical action and collective practices, as well as a rethinking of psychological and economic approaches to social, economic and environmental change that tend to focus on individual behaviour and choice, market logics, and technologies for shaping change (Strengers & Maller, 2015: 2). This has resulted in academics adopting a range of approaches aligned with more distributive versions of relational thinking and agency that require a decentring of human subjectivity, a displacement of action and habits, and a rethinking of 'common-sense' relational approaches that underpin life in many Western nations.

These relational approaches that invoke more distributed notions of agency tend to be grounded in an array of quite different relational and practice-based philosophies – ranging from actor-network theories and post-humanist approaches, to processual thinking and affect theory – where practical action tends to be characterised as multiple, emergent, distributed and relational, rather than being *actioned* by individuals moving in relation with contextual environments. Such a focus on distributed agency, multiple practices, and emergent assemblages requires alternative conceptions of subjectivity, embodiment, and political action. One body of work where such approaches have been fairly evident is in writings on governmentality, wherein 'technologies of government' have been defined as:

an assemblage of forms of practical knowledge, with modes of perception, practices of calculation, vocabularies, types of authority, forms of judgement, architectural forms, human capacities, non-human objects and devices, inscription techniques and so forth, traversed and transected by aspirations to achieve certain outcomes in terms of the conduct of the governed (which also requires certain forms of conduct on the part of those who would govern). These assemblages are heterogeneous, made up of a diversity of objects and relations linked up through connections and relays of different types. They have no essence. (Rose, 1999: 52)

Relational governance, in this context, is a continual and heterogeneous process of establishing relations, connections and collectives. There are clear parallels and explicit links, here, with theoretical approaches to 'assemblage' (De Landa, 2008; Anderson et al., 2012; Anderson & McFarlane, 2011), but in this paper I focus on parallels with another set of debates around the distributed nature of 'habit', because the reshaping of habits and behaviours forms an explicit focus of many policy makers.

In the past half decade or so there has emerged a now extensive literature on habit underpinned by the work of Félix Ravaisson; where habit is approached as an unreflective, involuntary, inclined 'way of being' and moving with things in environments (Ravaisson, 2008: 25, 51, 69; cf. Bissell, 2011, 2013; Schwanen et al., 2012; Bennett et al., 2013; Bissell & Dewsbury, 2013). As David Bissell has explained:

rather than habits being apprehended as resources located within individual bodies that are at the mercy of disruption from the outside… we carve out a much more 'displaced' understanding of habit where habit does not reside within bodies but is the more creative and unpredictable process through which bodies and environments

mutually evolve and take shape through the dual process of the taking on of, and annihilation of, form. (Bissell, 2013: 121)

Human subjects emerge and are configured through embodied *processes* and *relations with* other bodies, other things, and particular environments, and habits are approached, here, as distributed or relational aspects 'of mind-body-environmental assemblages' where:

> questions of dis- and re-habituation are [no] longer posed as matters of "changing the subject" but as ones of modifying the arrangement of such assemblages. (Bennett et al., 2013: 12)

Bennett et al. (2013) remark upon the parallels between emerging writings on embodied practices and habits, and the kinds of Foucauldian writings on technologies of government discussed earlier (e.g. Rose, 1996, 1999; Barry, 2001), but relational approaches to habit are frequently framed through a Deleuzian lens, in part because there are clear connections between Ravaisson's processual and distributed notion of habit and the processual philosophies and ontologies traced by Henri Bergson and later Gilles Deleuze (Dewsbury & Bissell, 2015).[2] Habits thus form an important component of the emergent *becoming*, *assembling* and *environing* of bodies:

> Habit, then, would present less a compromise between a transcendentally fixed separation of the individual and the environment and more a mutually emergent system of processes of immanent becoming at once organic and inorganic, interior and exterior. (Dewsbury & Bissell, 2015: 23)

Bodies and environments are, here, figured as dynamic, shifting, distributed and becoming; with movement and mobility being framed as central to the assembling, environing, and governing of particular actions, events and subjects. A number of post-structuralist political theorists, sociologists and human geographers have been quick to engage with such distributive and relational approaches to action, movement and habit, including those seeking to advance distributed, processual and relational understandings of political action, technique and technologies (e.g. Bennett, 2010). Indeed, at a time when neoliberal governments place a great emphasis on freedom, individual responsibility and political programmes that are light-touch, imperceptible, devolved and delegated, there continues to be an increasing faith in mundane technologies and practices that cannot easily be associated with decisions made by political authorities of various kinds (cf. Woolgar & Neyland, 2013).

This *distribution* or *delegation* of governmental actions, decisions and practices is particularly evident in attempts by political authorities to shape and govern mobilities, whether through taxation, policing, driver education, driver and vehicle licensing and testing, traffic engineering, manufacturing regulations, or other behaviour change techniques aimed at ensuring safety, reducing congestion and emissions, and enacting modal shifts (Rajan, 1996; Merriman, 2005; Paterson, 2007; Packer, 2008; Seiler, 2008). While relational and distributive accounts of people-in-cars have, to date, largely been limited to studies of road rage and emotions (Lupton, 1999; Michael, 2000; Sheller, 2004) and situated driving practices (Laurier, 2004; Merriman, 2007, 2012; Pearce, 2016), political authorities make calculated judgments about the most politically-acceptable means of trying to govern car use, which in turn require them to make judgements about the materialities, ontological relations, and affective tensions weaving together people, things and environments (Paterson, 2014; Merriman & Jones, 2017).

In this paper I engage with distributive and relational approaches to government, behaviour and habit in order to understand the changing political debates, governmental technologies, affective atmospheres and resistive practices that have gathered around the practices and spaces of parking cars in England over the past 50-60 years. The underlying research includes archival and documentary research on changing debates about parking in an English context, as well as textual analysis of documents by key actors who have commented on attempts to shape government policy. Parking may appear to be a rather banal and insignificant (if ubiquitous) set of practices associated with everyday procedures for stilling mobilities and enacting arrival, but it is just these kinds of distributed embodied practices that are vital to people's everyday lives and are the setting for often impassioned debates about practices of 'mundane governance' (see Woolgar & Neyland, 2013). Parking is heavily legislated, regulated, commodified, and policed, both in the UK and elsewhere. Government legislation and practices of parking enforcement have been widely debated and proved highly emotive and contested over the past 50-60 years, demonstrating how seemingly mundane and prosaic political practices and spaces can gain unexpected significance and importance in liberal, welfarist and neoliberal political programmes (on 'prosaic' stateness, see Painter, 2006). While parking has been examined by academics studying transport policy, land use, retailing, housing, and architectural design (e.g. Jakle & Sculle, 2004; Henley, 2007; Shoup, 2011; Ben-Joseph, 2012; Marusek, 2012), very little research has focussed on the broader political, social, cultural, and geographical significance of parking practices, spaces and policies; practices that involve embodied performances of moving *and* stilling (though see Laurier, 2005; Henderson, 2009; Valverde, 2012; Merriman, 2016). Practices of mobility and transport are frequently approached through a behavioural lens that individualises choice, decisions, action and blame, but in this paper I build upon recent calls for more distributed notions of mobility practices (Schwanen et al., 2012) to trace how mobility habits and parking practices are governed through an array of distinctive and distributed political techniques, material technologies and reconfigured environments.

**Economies of Habit**

Traffic congestion, urban circulation and parked obstructions have a long history. In London, metropolitan authorities were provided with various regulations to tackle parked vehicles in the nineteenth and early twentieth centuries (Royal Commission on London Traffic, 1905; Morrison & Minnis, 2012). By the late-1950s – a time of rapidly increasing car ownership in the UK – the numbers of parked motor cars on urban streets was seen to constitute something of a 'problem', and British civil servants turned their attention to different strategies for expanding the amount of parking space, regulating on-street parking, and reshaping people's parking habits (MoT, 1946; MoTCA, 1958). The government hoped that private companies and local authorities would increase provision by constructing multi-storey car parks, but the widespread availability of free on-street parking was seen to discourage motorists from paying for off-street parking, as well as providing a disincentive for developers to build such structures. As the Parliamentary Secretary to the UK Ministry of Transport and Civil Aviation stated in June 1959: 'nobody will risk their money in private enterprise ventures when there is the alternative of parking in the street for nothing' (Nugent, 1959: 410). The solution was to simultaneously regulate and commodify public parking space, imposing time limits and clearly demarcating spaces for on-street parking. However, with prior knowledge that such regulations 'were difficult to enforce', the UK government introduced parking meters under the Road Traffic Act of 1956, installing 647 in Central London in July 1958, with a total of 4600 in operation in London by December 1960 and 10,300 by December 1962 (MoT, 1963: 11, 13, 15). Parking meters were a distinctively new technology of

mundane, distributed and relational government designed to reconfigure the spaces, times and habits of parking, and bring a sense of order and discipline to the chaotic streets of London. As Minister of Transport Ernest Marples reflected in 1963:

> The spread of parking meter schemes in London has injected the discipline and control needed to keep traffic moving smoothly and safely. On the whole they have worked well. Traffic speeds have increased, kerb space has been freed for loading and unloading goods and picking up and setting down passengers, the short-term parker has found some space at the kerbside, local authorities and private developers have been encouraged to provide more car parks off the highway. (Marples, 1963: 4)

Just as car number plates, road signs, speed limits, the Highway Code, speed bumps and police patrols had emerged and been promoted as effective techniques and technologies for governing and disciplining vehicle drivers (see Merriman, 2005, 2006, 2012), so parking charges and parking meters emerged in the UK in the late 1950s and 1960s as a key mechanism and technology through which government authorities attempted to control the behaviour and reshape the habits of parking motorists through a form of distributive or delegated governance. Then, as now, motoring and parking habits were seen to be embodied and performed by human subjects, but there was clearly a practical appreciation by civil servants of how habits emerged with, and were shaped by, a complex array of mundane technologies, and through the enactment and figuration of material assemblages. These included a new device for measuring parking duration (the 'meter') that required drivers to carry loose change, make decisions about how long they wished to park, keep accurate time, and find a demarcated space in the desired area. In the UK government's eyes, *cost* and *availability* were the key variables through which they would attempt to reconfigure parking habits and driver behaviour, and govern relationally, with a focus on funding new local authority car parks, discouraging over-staying, encouraging the use of public transport, and freeing-up on-street space. Drivers were approached as rational economic actors who made clear and careful decisions based upon convenience, availability and economic factors:

> The loss of free all-day parking space on the highway has discouraged car commuters and an incentive has been provided (not only for commuters) to use public transport wherever possible. (MoT, 1963: 19)

Congestion and obstructive parking were deemed to be the main problems, not the environmental impacts of car use (whether in terms of resource use or emissions), and hence with the increasing difficulty of finding 'an empty meter bay in parts of central London during the day' in the early 1960s, a decision was made to 'adjust meter charges so as to bring demand and supply nearer together' (Marples, 1963: 4). The aim was to manipulate meter charges in order to encourage the use of off-street car parks and achieve an 85% occupancy rate of on-street short-term spaces (MoT, 1963).[3] A lower occupancy rate and an increased availability of parking would reduce congestion and delays caused by 'space searching', producing receptive parking environments with the capacity to meet parkers' demands.[4]

Civil servants grounded their parking policies in models of rational economic behaviour that were themselves built around fairly simplistic and pervasive psychological and biological approaches (Jones et al., 2013; Strengers & Maller, 2015), but despite their focus on individuals and their rather basic assumptions about how to enact behaviour change, they also demonstrated an awareness of the complex interrelations between parking practices and environments. Geographical knowledge relating to local parking practices and habits was

positioned at the heart of decisions made by planners and politicians, for it was deemed essential for traffic planners to understand the spatialities and temporalities of local life, as well as the complex geographies and 'space-finding' practices underlying the parking habits of different types of motorist in different areas. It was recognised that some areas had a high demand for day-time parking, while in others it was for evening or overnight parking (MoT, 1963). At first, parking meter charges were geographically uniform across central London, but this produced very different results, with some areas becoming overly congested, and others being under-utilised. The edges of parking meter zones presented particular challenges, as the government acknowledged that 'the streets outside the zone became packed with cars, while meters just within the zone… are little used' (MoT, 1963: 26). The solution was to vary meter charges and durations across the central parking area, taking into account the habits and practices of motorists and the availability of free parking on the periphery, as well as 'the cost of garaging in each area and the availability of garage space' (MoT, 1963: 26). Governments and local authorities not only attempted to understand existing parking habits but to pre-empt them through simple behavioural logics and to influence them through changes in infrastructure and pricing designed to achieve the 'optimum' occupancy rate.

While civil servants applied fairly simplistic understandings of choice and behaviour in 1950s and 1960s Britain, little appears to have changed today and parking pricing is still framed as one of the key determinants of parking decisions and modal choice (e.g. Tsamboulas, 2001). With the increasing regulation of on-street parking in 1950s and 1960s Britain, private sector companies such as National Car Parks (NCP) rapidly expanded their network of inner-city multi-storey car parks (Morrison & Minnis, 2012), while the increasing privatisation of parking enforcement in recent years has resulted in the parking management sector becoming a multi-billion dollar global industry, represented in the UK by the British Parking Association (BPA). Parking space is now widely acknowledged to be a highly valuable commodity, with private parking spaces adding significant sums to the rental and sale prices of inner-city residential and commercial properties in much of the developed world (Henderson, 2009). In May 2012 the UK's *Guardian* newspaper reported that a freehold double garage in the exclusive Knightsbridge area of London was on the market for £525,000 (*The Guardian*, 2012), while in August 2013 a parking space near Hyde Park was put on sale for £300,000 (BBC News, 2013).

The humble parking space is an unusual and subtly variable commodity that may appear to have few characteristics beyond the available land it occupies, but organisations such as the BPA highlight the *differentiation* and *distinction* of high-quality parking facilities, in which there is a commodification of the affective qualities of these environments, the convenience of location, and the security and safety of both parked vehicles and motorists (BPA, 2013a, 2013b). Since 1988 the British Parking Association has run the 'Park Mark® Safer Parking' scheme on behalf of the UK Association of Chief Police Officers, accrediting car parks that are well-designed, safe, and secure. Through this scheme the BPA provide a 'mark' by which owners and operators can demonstrate to 'customers a commitment to creating a high quality parking facility that feels safe and has measures in place to reduce levels of crime' (BPA, 2013a). The intention is that drivers will associate the 'mark' with particular qualities, moods, atmospheres and aesthetics, developing the habit of regularly parking in such places. Feelings of convenience, security, safety, and aesthetic pleasure are framed as an integral part of the parking practices and habits of the discerning, trusting and perhaps slightly fearful motorist, and distributed and relational understandings of drivers-in-cars-in-particular-environments are positioned as essential for the effective governance of parking habits, practices, and experiences (after Bennett et al., 2013; Bissell, 2013).

Over the past few years, interactive and real-time technologies linked to smart-phone and satellite navigation systems have provided new ways to locate and select parking spaces,

and direct, govern and collect data on parkers' movements. These digital monitoring systems and information sharing platforms form one strand of the *automatic government* of driving subjects (after Thrift & French, 2002; Dodge & Kitchin, 2007), distributing and delegating parking knowledges, information, and techniques of governance in new ways. Local authority roadside digital information boards instruct motorists approaching certain towns and cities of how many spaces remain at each site. Companies such as ParkMe, Parkopedia, JustPark, and Confused.com provide web-sites and mobile phone applications enabling motorists to locate the closest and cheapest car parks to either their current location or projected destination, providing real-time information for the parking consumer and reducing the frustrations, wasted time, and emissions linked to space-searching (see Laurier 2005). Some of these same companies enable property-owners to lease unused parking spaces to motorists (whether at offices, flats or private houses), enabling them to 'monetis[e] their underutilised space' and helping motorists to 'find, reserve and pay for parking seamlessly' at competitive rates determined through 'intelligent pricing' systems (Just Park, 2017). In a small but important way, these parking 'market places', digital platforms and their underlying algorithms are reconfiguring the spatialities, temporalities, economies and governance of parking, forming one element in a broader reconfiguration and relational distibution of parking practices and habits, in which private citizens (as well as private companies and government authorities) may influence and profit from the movements and parking habits of motorists. As Just Park boldly claim, they are 'rethinking parking for the 21st century' and 'leading the disruption of a global market worth over $50 billion' (Just Park, 2017).

In the UK, local government authorities raise significant sums of money from charges and fines relating to on and off-street parking and they have become important sources of income. Between April 2015 and March 2016, English local authorities raised over £1.5 billion for both parking charges and penalty fines, equating to a surplus profit of £756 million after operating costs (Leibling, 2016: 2). These public sector surpluses have always proved controversial, not least because when parking meters were introduced under the 1956 Road Traffic Act, the government were quite clear that any surpluses should be used to help facilitate and regulate parking practices and habits, for they 'must by law be put towards the cost of providing and maintaining off-street parking' (MoT, 1963: 12). The later Road Traffic Regulation Act 1984 empowered councils to use these funds for parking infrastructure, public transport services, concessionary fare subsidies, road improvements and environmental improvements, with other permitted uses requiring explicit government approval. However, with annual increases in both charges and surpluses, central government politicians have expressed criticisms of local authorities and their use of surplus funds. Speaking in 2013 the then Local Government Secretary Eric Pickles distanced central government from the parking charges and enforcement practices of local authorities, declaring his support for the rights and freedoms of motorists and small businesses. In a neoliberal 'distancing' manoeuvre, championing the freedoms of the individual citizen, Pickles expressed his desire to limit the control of local authorities, initiating a review that would 'rein in unfair town hall parking rules' by which local authorities seemed to use parking charges as an easy and unnoticeable way to increase government revenues:

> This government has scrapped the last administration's Whitehall rules which told councils to hike up parking charges and adopt aggressive parking enforcement. But councils aren't listening, and local shops and hard-working families are suffering as a result. The law is clear that parking is not a tax or cash cow for town hall officers. (DCLG, 2013)

These warnings echo the belief of many Conservative politicians that motorists should retain certain freedoms to act and move with minimal government intervention, as well as following accusations by parking campaigners that some local authorities has been actively raiding their 'parking fund'. In July 2013 Barnet Car Parking Zone Action Group in North London brought the first successful case against unfair charges; winning a high-court victory after Barnet Council increased resident parking permits from £40 to £100 a year (and visitor permits from £1 to £4 per visit), with court evidence revealing internal council proposals to 'hike CPZ charges to plug a shortfall in the council's annual' budget (Lamden, 2013). The Barnet case reveals how parking economies and parking governance have become inseparable from broader debates about local authority finances, as well as demonstrating how strong emotions can gather around charging for the mundane and habitual practice of parking outside one's home (DfT, 2009). What's more, it is not just private motorists who have expressed concern about rising levels of parking charges, parkers' rights, and the role of charges in the unfolding and reshaping of motorists' habits.

In 2008, the UK Federation of Small Businesses (FSB) argued that the adjustment of parking charges could play an important role in governing and reshaping the habits of motorist-shoppers, stating that appropriately priced parking charges were 'crucial for a sustainable town centre' (FSB, 2008: 6), particularly in view of the free parking available at large out-of-town shopping centres. Three years later, the independent *Portas Review*, published by the UK government's Department for Business, Innovation and Skills, and authored by the well-known retail expert and broadcaster Mary Portas, suggested that 'free controlled parking schemes' could be a key way of encouraging motorists to change their shopping habits, as well as supporting city-centre traders by enabling them to compete with out-of-town shopping centres (Portas, 2011: 27). In both of these reports the focus is on how revised parking policies might help to reconfigure the shopping habits of motorists, revitalising and indeed 'saving' some town centres, and there is an implicit acknowledgement of the distributed and relational nature of shopping, motoring and parking habits *and* environments (FSB, 2008; Portas, 2011).

*The Portas Review* struck a chord with the public – especially motorists and small business owners – but the British Parking Association (BPA) provided a cautious response, noting how 'there is no such thing as free parking space' and how 'no-one fully understands the relationship between parking, parking charges and town centre prosperity' (BPA, 2013b: 1, 2; McDonald, 2013). The BPA expressed concerns that *The Portas Review* made no mention of the cost of maintaining car parks or the importance of high quality parking facilities. Underlying their response is a clear concern about what free or low cost parking might do to the profits of private parking companies. Nevertheless, the report acknowledged that parking policies (including charging structures) and the location and design of parking environments formed important elements in 'changing driver behaviour', which could include delegated strategies designed to reduce vehicle use for environmental reasons, or those designed to 'entice shoppers into the town centre but encourage commuters to park edge-of-town' (McDonald, 2013: 10).

**Governing Habits**

With the adoption of automated meters for governing parking times, spaces and rhythms in the 1950s and 1960s came the broader challenge of realigning the practices of motorists with the new parking regulations and technologies. Public information and media campaigns formed one important element in attempts to reshape the expectations, habits and movements of motorists, but it was clear that *people* would be needed to enforce the regulations, patrol the streets, and enact successful distributive forms of governance. At a time when traffic

enforcement was reported to consume 10% of total police time, the then Minister of Transport explained how traffic regulation was now 'a great burden' on them (Marples, 1960: 907). As a result, the government introduced a new 'traffic warden system' on 19 September 1960 in an attempt to separate parking enforcement from other kinds of law enforcement, as well as bracketing parking laws off from other kinds of motoring offence. Traffic wardens would ensure that parking laws were upheld, parking was effectively governed, and it was expected that this would lead to a reshaping of people's parking habits. At first, the Metropolitan Police in London explicitly excluded women from becoming traffic wardens, recruiting older men (average age: fifty) such as 'retired policemen and ex-servicemen' and those not 'tall enough to qualify as police constables' (*The Times*, 1960: 13). Gender stereotypes about the challenges of the job, coupled with the perceived risks of exposing women to hostile motorists and foul language, appear to have prevented women from being recruited, but by March 1961 Leicestershire Police were presenting similar gender stereotypes as reasons why women *would* make effective traffic wardens. Women traffic wardens were said to be more friendly, tactful and kind; leading to fewer confrontations when regulating the parking practices of the public, and diffusing tensions that might be expressed by motorists towards parking wardens. As *The Times* remarked of Leicester's new recruits:

> More than half of Leicester's first nine wardens are women because some psychological reasoning has been taking place in the city police headquarters. "One-third of the prosecutions for parking in this city during recent years have been brought by women police, and we have never had a single complaint against a police woman from a motorist", a police official said. "A man feels a fool arguing with a woman. Nor can he suggest that she ought to be out catching burglars". (*The Times*, 1961: 6)

Masculine stereotypes about women's embodied capacities, emotional intelligence, strength, and appropriate duties converged in Leicester's approach to traffic enforcement, and women's bodies were actively enrolled into this distributed relational programme for governing parkers' habits in an attempt to diffuse tensions and engineer affects and emotions.

Traffic wardens were controversial figures around whom gathered a complex array of mythologies, narratives, prejudices and satirical commentaries (e.g. Fenton, 1985; see also Richman, 1983). During 1969 and 1970 sociologist Joel Richman undertook a detailed ethnographic study of the practices of parking enforcement in Manchester and Salford, which was published in the early-1980s as *Traffic Wardens: an Ethnography of Street Administration* (Richman, 1983). Richman's study not only revealed the attitudes, working practices and experiences of a group of traffic wardens, but also the lay understandings of motorists' practices, habits and behaviour that were acquired by traffic wardens. Richman revealed the strategies and techniques used by wardens in enacting distributed forms of governance, detecting illegal parkers, as well as the complex decisions and discretion of wardens when deciding whether to issue a ticket. Traffic wardens gave a variety of explanations for why they thought motorists became hostile about parking enforcement, with a common explanation being that 'the car transforms people into "creatures of habit"' who 'like to park in the same spot' (Richman, 1983: 125). Indeed, many residents and business owners had got used to parking on the street outside their properties, but new parking regulations and enforcement practices were designed to reconfigure the public's habitual use of such space, at the same time as parking space was re-valued and leased as a commodity to paying motorists. People's parking habits had become embodied and environed through habitual practices in frequently inhabited spaces, and in an attempt to continue as before, some motorists adopted tactics to try and circumvent the rules and evade the enforcement practices of wardens. The illegal activity of 'meter feeding'[5] was widely reported, but

wardens themselves adopted distinctive counter-strategies for governing practices and surveilling illegally parked vehicles – utilising a range of techniques and technologies to try and determine how long a vehicle had been present and whether, when, and how far it had moved, including notes on timings, vehicle mileage, the position of tyre valves, and the temperature of the exhaust and radiator (Richman, 1983: 69).

As the front-line (human) agents of parking governance, traffic wardens were and are frequently criticised, stereotyped, verbally abused and physically assaulted, but they form just one component in the performance, habituation, and distributed and relational governance of parking habits. Parking habits are practised, spaced, timed and reshaped through different alignments, performances or assemblages of parking regulations, legal frameworks, yellow lines, parking meters, sign posts, traffic wardens, vehicles, drivers, and much more.

In recent years there have been significant transformations in the techniques by which on- and off-street parking regulations are enforced. Since the late 1950s, on-street parking enforcement has largely relied upon mobile traffic wardens who may or may not detect over-staying or non-paying parkers using techniques of visual observation, timing technologies, note-taking, and other evidence gathering. However, over the past decade there has been a rapid increase in the use of CCTV cameras and Automatic Number-Plate Recognition (ANPR) software as a means of identifying vehicles and motorists who park illegally, particularly in off-street car parks. This forms another strand of what might be termed the *automatic governance* of drivers, driving, and driving spaces, wherein a range of computer and visualisation technologies have become central to the relational governance of parking (after Thrift & French, 2002; Dodge & Kitchin, 2007). Data released by the UK government's Driver and Vehicle Licensing Agency (DVLA) in 2012 revealed the sharp increase in automated requests from parking management companies for vehicle registration details – up from over 272,000 requests in 2006-7 to over 1.17 million requests in 2010-11 (Hough, 2012). One of the UK's largest providers of ANPR enforcement services, 'Parking Eye', deploys its parking management cameras at over 900 sites in the UK, but while the automated and distributed governance of parking has now become normal and ubiquitous, the use of CCTV and ANPR enforcement has become embroiled in extensive debates about parkers' rights.

The most contentious use of these 'automatic' parking enforcement technologies has been by local authorities on public roads, with campaigners arguing that these enforcement tactics are about revenue-raising rather than reshaping motorists' parking habits using techniques of distributed governance. Between July 2010 and 2014 the direct action group 'Campaign Against Revenue Driven Enforcement' (or NotoMob) campaigned against the parking enforcement practices of local government authorities who used mobile CCTV vehicles to enforce both parking and moving traffic offences (Jones & Reynolds, 2013). In addition to lobbying the government and individual local authorities, NoToMob regularly sent out teams of masked motorcyclists to target areas that received high numbers of parking tickets and where CCTV enforcement vehicles were regularly used, with a favourite tactic being to follow local authority enforcement vehicles, warning approaching motorists not to stop in restricted areas they were monitoring. The group claimed that their campaigns led to the return of over £2.8 million of illegally enforced fines to motorists, and while some criticised them as vigilantes (who wore 'V for Vendetta' face masks), they presented themselves as 'a group or "mob" of ordinary people who are standing up and saying "no" to the injustices we encounter on a daily basis' (Jones & Reynolds, 2013: 36):

> …we are merely answering the Prime Minister's call for a "big society". We will hold local authorities and their contractors to account. We will also hold to account those

responsible for unlawful practices in the private parking industry, evidence of which we have already found. (Jones & Reynolds, 2013: 39)

NoToMob presented their activism as an example of 'Big Society' community empowerment, responsibility and action, interpreting the Conservative Party's neoliberal agenda for the benefit of their campaign. High levels of car ownership in the UK have lent a strong populist tone to campaigns such as this, which was pitched as a fight for the rights, freedoms, and habitual practices of the 'ordinary motorist'. The lobbying of NoToMob and other groups appears to have worked, with the UK government ministers for both Communities and Local Government (Eric Pickles) and Transport (Patrick McLoughlin) expressing sympathy for the complaints of motoring and campaign groups about CCTV enforcement. Following a public consultation in late 2013 and early 2014 (DfT, 2014) it was announced that 'in a victory for drivers and shoppers, the government will make it illegal to use closed circuit television (CCTV) "spy cars" alone to enforce on-street parking ending the plague of parking tickets by post' (DCLG & DfT, 2014). In a somewhat populist press release, the government again announced its efforts to support struggling town centres, by giving 'hard working people and local shops a fairer deal by reining-in over-zealous parking enforcement practices' (DCLG & DfT, 2014). The ban on mobile CCTV cars to enforce parking regulations was presented by campaigners as a key victory for the rights, freedoms and ordinary practices of motorists, but campaigners continued to contest the automated enforcement practices and fines imposed by both local authorities and companies enforcing parking on private land.

For parking regulations to be legally enforceable the rules and regulations for demarcating and signing parking spaces and enforcing tickets must be correctly followed, and knowledge about the complex rules and design of enforceable parking spaces is frequently used by activists, campaigners and ordinary motorists who seek to challenge their and others' tickets. Formal appeals mechanisms are in place by which motorists can challenge penalty charge notices – notably the Parking and Traffic Appeals Service (covering London) and the Traffic Penalty Tribunal (covering the rest of England and Wales) – while a further agency – POPLA (the Parking on Private Lands Appeals) – considers appeals by motorists who have received parking charge notices for breach of contract while parking on private land or in private car parks. Parking campaigners and activists have become highly adept at contesting charges, and a small number of high-profile campaigners deliberately acquire parking tickets in order to contest them on technicalities, with a few taking their campaigns against local authorities to the high court (BBC News, 2010; Eccles, 2013). Other campaigners use their expert knowledge about rules governing distributed techniques of parking regulation to help members of the public contest their tickets. In November 2003, parking activist Barrie Segal set up the website appealnow.com 'to help motorists fight unfair parking tickets', as well as establishing 'the Crazy Parking Ticket Awards' and publishing a popular and humorous book on the subject (Segal, 2007: 9, 10).

What is clear is that a significant number of motorists get passionate and indeed angry about the governance and availability of parking – particularly about the use of automated and distributed enforcement techniques, the general conduct of public and private enforcement agencies, perceptions of infringements to their rights and freedoms, and the interruption of their daily habitual practices. Car parks are increasingly being framed as important public, community or commons spaces that are essential to daily life, which we should all have the right to inhabit, and in which we should all be able to park our vehicles (cf. EPA, 2006; Ben-Joseph, 2012). It is with such views in mind that concerns have been expressed about the increasing number of UK councils who have attempted to sell-off car

parks to private operators or developers, whether this is to raise cash for infrastructure projects or to fill gaps left by central government budget cuts.

**Conclusions**

At first glance, programmes and techniques for governing mobility and parking practices might appear to be underpinned by fairly long established Western governmental policies and actions designed to influence and shape the decisions and choices of rational individuals. Politicians, parking organisations, parking enforcement agencies and parking campaigners frequently focus on the decisions, freedoms, rights, habits and behaviours of the individual driver or parker, and where material technologies, environments and spaces are enacted in political imaginations and programmes they appear to be underpinned by clear ontological divisions between acting, thinking subjects and inert objects – recognising that material things and environments play a key role in shaping experiences, practices, behaviours and subjectivities, yet assuming that power, action and responsibility lie *with* free-thinking human subjects. In such accounts, the thinking and acting subject is seen to decide or choose between different options, but in this paper I have argued that such approaches consistently overlook the fundamental role that material technologies, complex environments and distributed forms of power play (and have long played) in the unfolding of practices, actions and relations. In conclusion, I would argue that mobility scholars and political geographers can usefully adopt more distributed approaches to *relational governance* that are grounded in practice theories, relational philosophies, processual approaches, non-representational thinking, assemblage theory, post-humanist thinking, and actor network approaches. In their different ways, these theories can enable scholars to account for the active role of technologies and environments in governmental programmes, economic relations, and political practices; examining how practical political action is multiple, emergent, relational and distributed rather than simply actioned by individuals against fairly neutral, passive backgrounds. For some academics and commentators, such distributive and relational approaches to habit, behaviour and practices might not have the political cachet, explanatory bite, policy relevance, or apparent capacity to attribute blame and change behaviour that they desire, but they do provide important mechanisms by which critical social scientists and political theorists can expose the complex, collective inter-subjective practices, embodied relations, materialities and techniques by and through which habits and behaviours emerge, unfold and evolve.

With the increasing purchase of behaviour change thinking in political agendas and policy debates, such approaches are inevitably exerting a strong influence upon both academic and policy understandings of action, habits, and practices. In conclusion, I want to argue that the behavioural and neuro sciences (in all their diversity) are too wedded to uniform biological, psychological or neurological theories of action, decision-making and choice to effectively conceptualise such distributive relational geographies, economies and politics, and where non-human actors and environments come into play they all-too-often get caught in simplistic binaries (e.g. individual–environment). This problematic relation and binary tension might be seen to be reflected in the popular notion of 'nudge' that is regularly invoked in both policy and scholarly discussions of behaviour change (e.g. Thaler & Sunstein, 2009; Jones et al., 2013). The idea of 'nudging' presupposes a distinct *action* of nudging and a *separation* of agents who nudge and agents who are nudged. While the behavioural and neuro-sciences are highly diverse and widely debated, and scholars in these fields devote extensive time and space to understanding the complex relations between mind/psyche/brain/subject and 'external' influences and environments, these approaches create a binary tension and force a distinction that is represented in a rather simplistic linear

relation (the 'nudge'). In contrast, more distributive, relational and affective approaches to the unfolding of practices, habits, behaviours and events provide the potential to develop more critical and plural analyses of the social, cultural and political significance of habits, and to explore the multiple factors weaving together embodied, habitual, environed, and closely regulated practices like driving and parking. What is clear from the examples outlined here is that attempts to reconfigure parking habits are as much about reconfiguring collective habits and expectations, reshaping and commodifying the affective qualities of particular environments and developing new technologies for facilitating parking and enforcing rules, as about trying to directly govern what individuals might think, choose, or do. Parking policies, parking technologies, parking experiences, parking atmospheres, and parking economies reveal a complex array of motivations, actions, decisions, experiences, and affects that emerge from a diverse and related set of practices, materials, movements, relations and environmental situations.

**Notes**

[1] 'Choice architects' are individuals with 'the responsibility for organizing the context in which people make decisions', and choice architectures are the resulting socio-material frameworks, structures or environments that more-or-less subtly nudge people to alter their behaviour (Thaler & Sunstein, 2009: 3).
[2] There are a number of thinkers whose work problematizes or transcends any easy division between behavioural/neuroscientific and processual accounts of action, thought, and habit, including Catherine Malabou and Antonio Damasio.
[3] It is interesting to note that this 85% occupancy rate is still deemed to be the optimum rate for parking schemes (see Shoup, 2011).
[4] On practices of 'space-searching' see Laurier (2005).
[5] 'Meter feeding' is the insertion of coins close to the time limit to reset the meter and circumvent the time restrictions.

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