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What do cars do when they are parked? Material objects and infrastructuring in social practices

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ABSTRACT
The paper problematises current conceptualisations of objects in social practices by investigating car parking, using original research material. Motionless cars are not only 'leftovers' of driving – they actively perform parking while waiting for their users to start driving again. They infra-structure everyday im|mobility and play a part in shaping urban environments. Two modalities of social practice are discerned and described to account for these performatve capacities of objects. By describing different ways in which cars are taken care of and take part in parking in the material setting of a street, the article argues for more attention to non-human objects involved in social practices, particularly in the context of their infrastructuring capacities. The article contributes to the current developments in theories of social practices, discourses on social materiality and infrastructuring and complements existing understandings of automobility.

Introduction

In this article I investigate parking as an important part of living with cars and contribute to the existing understanding of automobility as based largely on moving vehicles. I do so by investigating material aspects of the social practice of parking, in which the moving object – a car – has an immobile, but active, role.

In the article theories of social practice, especially those that include explicit consideration of material objects (Schatzki 2002; Shove, Pantzar, and Watson 2012; Reckwitz 2002, 2012) are critically engaged with to describe the specificity of the parking practice and to elucidate connections it makes with other elements and aspects of im|mobility, especially its infrastructural dimension. As parking is a practice unambiguously centred on a material object (Nicolini 2012, 112), I refer to existing conceptions of materiality in the theories of social practices (Shove 2017; Schatzki 2010a; Rouse 2007) and contribute to the ongoing discussion by interrogating variable materiality (Marres 2012) of a car as an im|mobility object.

The argument is that parking is a particular kind of practice, which reveals how material objects can be performers of practices. Motionless cars are not only 'leftovers' of driving – they actively perform parking while waiting for their users to start driving again. I distinguish two modalities of practice, one in which a human actor is responsible for the performance and the other when an object performs the practice instead of a person.

In parking, the first modality stops when a driver leaves the car. Existing interpretations of social practices (e.g. Shove 2017) would mark this moment as a shift of the object to the infrastructural relation with the practice. In my view, however, this is the beginning of the practice being taken over.
by a parked car, which effectively performs it. Parked cars do not only lay dormant (Spurling 2020) and wait for drivers to come back, they continue to park. I base this argument on the fact that stationary vehicles exert visible effects that result from the parking itself. This quality reveals new starting points for thinking about activity of im|mobile objects in practices and their infrastructural effects.

To support the argument of performative capacities of objects, I refer to the notion of infrastructuring as it is used to understand im|mobilities (Merriman 2016) and in relation to social practices (Shove 2017). In so doing, I highlight the facts that parked cars have abilities to infrastructure spaces simply by their presence and sometimes against the wishes of humans, and that their stationary life necessitates wide-ranging undertakings of infrastructural nature, for instance construction of car parks, or introduction of laws or planning regulations. Infrastructuring is always active and related to practices. In the case of parking, the notion responds to cars practicing parking and needs to accommodate this practice in the system of automobility.

By bringing these arguments forward, I attempt to make sense of the fact that urban life is full of motionless cars that change what, when and how people do things, and contribute to the reconfiguration of urban spaces on many levels – from a front garden of a private home to planning regulations and strategies.

I begin with a short description of the empirical material on which this article is based. Next, I situate the analysis in the conceptual discussions about objects in social practices. In the following sections I first define parking practice in reference to automobility and then sketch out infrastructural qualities of parking. Bringing the empirical material to the forefront, the section ‘Cars as problematic objects’ shows different ways of coping with the essentially unstable parking practice and details qualities that make cars performers of practices. The following part develops this argument by mobilizing examples of infrastructuring performed by stationary cars. In conclusion I summarise the argument and point to the relevance of performative capacities of objects in the perspective of futures of im|mobility and proliferation of automated objects.

**Material and method**

The material on which this text is based comes from the research about car parking practices and im|mobility infrastructures conducted between 2018 and 2020 in four European cities: London, Warsaw, Utrecht and Belgrade. The data in the project was generated by interviews, observations, im|mobile ethnography, participatory observations and digital data analysis.

In this article I refer mainly to data from interviews and on-street observations. Interviews with drivers explored the ‘human side’ of the practice by focusing on daily life experiences, and helped to uncover the problematic nature of the practice as well as different strategies used to overcome the challenges that come with the use of cars in dense urban areas. Apart from defining parking, interviews also pointed to the infrastructural dimension of the practice; for instance, a variety of temporal and spatial arrangements that serve the purpose of leaving a car.

Among interviewees were regular drivers (including professionals) of different age and genders, as well as experts; for instance, representatives of local administrations and municipal police, transportation planners or businesspeople working in the area of parking. Observations covered predominantly central areas of cities, but also included residential neighbourhoods.

The observations, inspired by ‘mobile methods’ (Büscher and Urry 2009; Fincham, McGuinness, and Murray 2010), conducted extensively in each city during walks, and supported by notes and photographic material, were focused on ‘vehicular side’ of parking, including mainly, but not exclusively, parking and stationary cars in on-street situations (i.e. excluding car parks, lots and other enclosed parking areas). This material allowed one to see the interactions of cars with their surroundings on different scales. I was interested both in minuscule interactions of cars, for instance with elements of the streets like kerbs, hedges, different surfaces, lampposts or lines; as well as in a large scale, infrastructural presence of vehicles in urban spaces, such as instances when cars, due to their large number, take over areas not intended for their use.
The term ‘im|mobility’ is used throughout the article to preserve the tension between the mobile and the immobile, underscore these conceptual qualities and relate to previous theorisations Kurnicki, (2020). With this use I intend to recognise that production of mobilities (Cresswell 2006) is always production of ‘im|mobilities’.

Theories of social practice informed this project from the inception and strategies used in fieldwork and interviews built on the possibility of understanding practices in everyday environments, so the initial questions were always oriented towards elucidating ‘doings and sayings’ (Schatzki 2002) that further lead to meanings, teleoaffective structures, materials, competences and social understandings. This procedure works well for the purposes of defining parking as social practice, both as ‘performance’ and ‘entity’ (Shove, Pantzar, and Watson 2012).

However, the application of this approach can become a challenge when, instead of describing human actors interacting with machines, the research turns to explaining the role of parked cars in urban spaces and socio-material consequences of their public presence. The latter can be succinctly formulated as: ‘what do cars do when they are parked?’ This article is an answer to this challenge, built on the critical adaptation of theories of social practice.

**Objects in social practices**

It has been acknowledged that there are two main orientations towards materiality in theories of social practice (Shove, Watson, and Spurling 2015). Objects are elements of practice (Shove, Pantzar, and Watson 2012) or form material arrangements in which practices occur (Schatzki 2002) and from which performers can draw when necessary (Schatzki 2010a). These broad approaches include explanations of the status of objects not engaged in practice. They are also not mutually exclusive.

In one of the recent conceptualisations, Shove (2017) distinguishes between infrastructural relation, devices and resources – orthings in the background, things in action and things that are used up – thus demonstrating how a particular object can be engaged in a practice and then moved to the background as people do not need it anymore.

The starting point of her description is that ‘materials are defined, constituted and positioned with respect to each other through their role within specific practices’ (Shove 2017, 157). This clearly posits that practices, which people perform, are activators of objects. Even in infrastructural and resource modes, objects matter to the extent that they support or contribute to performing practices. This does not exclude the possibility of things being active participants in practices, but nevertheless binds them to people who are solely responsible for practicing.

As observed by Kuijer (2019), there are, however, ‘automated artefacts’, such as washing machines, which are capable of performing practices without the presence of a human, to the extent of making autonomous decisions and ‘integrating elements into unique performance’ (Kuijer 2019, 198). The practice continues through automated co-performance of machines until a certain task, such as washing garments, is completed. Instead of switching to subordinate, infrastructural role, objects take responsibility for the successful performance of a practice. In this way ‘automation does not result in the “dissolution of practices”, but in a redistribution of roles within them’ (Kuijer 2019, 195).

The case of parking, as discussed in this paper, also involves objects performing practices. However, this significantly differs from co-performance because it is not a ‘division of roles’ (Kuijer 2019, 200) – a person does not delegate the completion of a task to a car. For a human practitioner, parking stops when a car is left in a safe manner, so when the purpose of the practice, as defined by a person, has been reached.

However, as I will argue later in detail in reference to im|mobility and productive stillness (Bissell and Fuller 2011), cars continue to practice parking, but they do it in their own specific way. Their performance goes beyond fulfilling tasks assigned to them by humans, as would be the case with coordination of practice (Mylan and Southerton 2018). In other words, parked vehicles are examples of objects that can perform practices.
Full co-performance occurs only in case of cars fitted with automated parking systems when a driver entirely relegates the manoeuvring to a vehicle. In a broader sense, automation raises new issues around objects, especially technological ones, in social practices (Morley 2017) – for instance, how to account for their decision-making and goal-setting capacities? Research about automation in social practices (Maller and Strengers 2019) does not, however, explain issues explored in the article, which is concerned with the analysis of non-automated machines. Besides, even if future cars can park themselves, they will still have active stationary presence in urban spaces, which has to be accounted for.

The notion of infrastructuring serves to explain better how cars are performers of parking practice. It has been used in relation both to parking (Merriman 2016) and social practices (Shove 2016). I describe infrastructural dimensions of parking in one of the following sections to substantiate the claim that this seemingly simple practice has an existence of large scale.

Moreover, focus on infrastructuring brings another element to the argument that stationary cars are practical performers – by doing parking they (re)produce infrastructure. In relational perspective, continuous practicing is necessary for infrastructuring (Korn et al. 2019). The performative aspect of infrastructures indicates that they need ‘ongoing situated work’, which is ‘necessary to maintain and uphold [them] but also to simply use and repurpose [them]’ (Röhl 2020, 24). In the case of parking, this work is done partly by cars.

Infrastructures have ‘a restless existence’ and depend on ‘continued enactment of various practices’ (Shove, et al., 2019, 6) and so I take up the infrastructural perspective not only to unwind the manifold large-scale consequences of parking but also to show that there are certain objects that take over and transform the performance of a practice. The shift of perspective and focus on material relations helps to disturb human-centric understandings of practice.

**Car parking as practice**

In this section I complement the understanding of cars as moving objects by focusing on stationary vehicles and car parking practices that make them immobile. Echoing Sheller and Urry’s (2000, 738) observation, my concern here is the absence of a parked car in the analysis of the urban space. Because indeed, when compared to literature on driving, both in individual (Laurier and Philo 2003; Sheller 2004) and cultural sense (Wollen and Kerr 2002), parking and storage of cars have featured in descriptions of mobility meagrely.

Parking has been largely forgotten, or ‘invisibilised’ (Michael 2001) both in everyday life and academic reflection, despite the fact that a typical vehicle spends most of its time stationary (Shoup 2005) and changes in parking can signal large-scale societal transformations (Tuvikene 2014). The dialectic of mobility and immobility (Urry 2003), in which the latter stays largely under the surface, reflects everyday, popular experience with car use, in which ‘parking problems’ are side-lined by users and manufacturers. Comfort, speed, flexibility, and pleasure are the default ‘automotive emotions’ (Sheller 2004; Kent 2015) that overshadow frustration, constraint, stress, and anger that characterise many parking situations.

The complex nature of automobility (Urry 2004) and negative consequences of car use (Böhm et al. 2006; Conley and McLaren 2009) have been analysed from various perspectives that connect personal and systemic aspects. Socially informed understanding of car use covers multiple areas of interest, from personal, psychological, and emotive perspectives focused on drivers (Laurier 2004; Sheller 2004) to cultural (Wollen and Kerr 2002; Miller 2001) and systemic analyses (Dowling and Simpson 2013).

Following the outlook of social practices, I argue that parking must be analysed differently than just as stoppage time of automobiles, like refuelling or mechanical repairs. In light of the ongoing discussions about distinctiveness of mobility and immobility and their intersections (Adey 2006; Bissell and Fuller 2011; Merriman 2016), I see parking as a kind of stillness that goes beyond ‘lack of movement’ and has its own potentials, capacities, and consequences (Bissell and Fuller 2011, 5–7), and relies of friction (Cresswell 2014), slowness and deceleration (Vannini 2014).
Every social practice has a material component. Parking, like most im|mobility practices, is constituted by major roles played by objects. To put it in the crudest possible way – there is no parking without a car. The same can be said about many other mobile objects, such as bikes, trains, planes or boats. All those practices are tightly bound with operating a machine (or at least coming into a close contact with it, as is the case of passengering; see Laurier et al. 2008), which makes them predefined in terms of the capacities of people coupled with affordances of vehicles.

They also take place largely in the public, shared spaces and are potentially interactional, unlike a plethora of practices that happen indoors (such as washing or taking a shower) or those that can be performed in an essentially individual manner (e.g. nordic walking). Therefore, im|mobility practices are characterised by a direct influence on the reality outside the practice, which in other cases is mediated by external arrangements.

The definition of parking as a practice hinges upon the variability of a car, which from a machine that provides movement in space becomes one that has to be stopped, fitted into surroundings and relinquished. On the performatative level, as Laurier (2005) observed, parking is highly interactional – the driver operates a car in a way quite distinct from driving, comes into contact with her surroundings and draws on practical, topographical, and situational knowledge.

If, as Urry has it, a car becomes an extension of driver’s body and senses (2004, 31), in parking this bodily sensitivity is targeted at specific kinds of feedbacks: caused by tightness and constraint of space, types of surfaces and avoidance of contact with people and things around the vehicle. Parking is an instance when a driver-car (Dant 2004) turns into aarker-car, human body prepares for shedding of the comfortable metal cocoon (Lupton 1999; Bijsterveld 2010) and interaction with the external world. In this respect, car parking is much different from bike parking (Aldred and Jungnickel 2013; Larsen 2015), because the cyclist is continuously in the open.

There is an emotional element of this changing bodily relation with the car, in which the machine becomes an object of attention, comes back into view as a separate thing that has to be taken care of. The practice of parking involves making sure that the car is safe, for instance by walking around it and checking if it does not stick out to the road. The situational awareness of a human is heightened even in instances when parking is a routine and happens in usual, familiar places, like driveways or private underground car parks.

When a person starts parking, the objective shifts from movement to achievement of immobility. Much less complicated than, for instance, pulling a yacht into a shore, but also requiring complex and skilful manipulation, coordination of objects and good sense of space, parking is as distinct from driving as sailing is to mooring.

Despite the repetitive, embodied character of parking, stopping a car should not be taken for granted. As a fully-fledged practice it requires particular coordination of complex and potentially changeable elements to be completed. It is also one that in real-life circumstances is likely to be unsuccessful, revealing the ‘broken promise’ of automobility (Hagman 2006).

One of the reasons for this are affordances built into a car, which prioritise speed and movement rather than stopping. Before the widespread adoption of power steering, manoeuvring into tight spaces itself required a lot of physical effort. Additionally, despite certain levels of standardisation, for instance of sizes of typical individual parking spaces, places of parking are much less predictable for car users than roads. This is the gist of the ‘parking problem’ from the driver’s perspective – not only might there be no spaces to leave a car, but also existing ones can vary considerably in terms of size, safety, quality, price, and availability.

In consequence, parking is a peculiar kind of practice that is expected to be difficult and prone to produce failed attempts despite being habituated and embedded into a course of everyday life (van der Waerden, Timmermans, and da Silva 2015; Chaniotakis and Pel 2015). In the fluctuating, moving world of automobility, stopping is actually a quite difficult thing to do.
Parking as infrastructure

Despite large-scale consequences, in social scientific literature parking is rarely seen as one of the urban infrastructures (although, see Guffin 2015; Spurling 2019). There are many possible reasons for this: it can be subsumed under automobile infrastructure, considered too fragmented and variegated to form a coherent system or, just like parked cars or underground car parks, ‘invisibilised’.

At the same time, parking has manifold consequences for the organisation of cities and urban life. It relates not only to driving and im|mobility or other practices that bind with it in the course of everyday life, like shopping, coming home, or flying for holidays, but also with issues that extend far beyond it: safety of schoolchildren, accessibility of healthcare or municipal budgeting. It also comes to bear on the logic of ownership and spatial entitlement Kurnicki, (2018)2.

Driving tacitly assumes that places, things and infrastructures will be shared between users and that access to them is relatively open. When it comes to parking, the issues of rights (or freedoms, see Tuvikene 2014), control, property and privilege come strongly into play (Marusek 2012). Residential areas and spaces that are routinely used by the same cars are particularly restrictive in that sense and can complicate parking policy solutions (Taylor 2020).

Moreover, as spaces can be owned by municipalities, companies and individuals, operated privately or have significant limitations of use (think, for instance, about spaces for people with disabilities, parents with children, types of cars, allowed durations of stay, etc.), performing parking becomes a highly constraining matter. This sort of constraint mixed with limitations of space make parking competitive and adds to stressfulness of the experience.

As observed by Henderson (2009), parking can also morph into a very contested issue, through which politics of im|mobility is fully revealed. In cities where I did the fieldwork parking features in ideologically charged discussions that bring together sustainability and environmental futures, social differentiations, land use and urban cultures Kurnicki, (2019). In this way, material objects find their active role in political imagination (Knox 2017).

Cities have to include parking in planning for the future in the perspective of new technologies, social and environmental challenges, or social and practical acceptability changes (Ben-Joseph 2015; Rosenblum, Hudson, and Ben-Joseph 2020). New approaches, such as ‘curbside management’ (Marsden, Docherty, and Dowling 2020), accommodate a diversity of uses and organise a variety of parking instances. On a larger scale, when the practice becomes a part of urban complexity, parking necessitates containment, control and ordering through formal rules, policies and infrastructure. There are different levels on which parking infrastructures urban environments (Blok, Nakazora, and Winthereik 2016).

The uncertain nature of parking combined with mass automobility (i.e. large number of cars) transform the ‘parking problem’ into an organisational challenge for municipalities, which have to deal with presence of stationary vehicles in limited spaces, often by creating appropriate infrastructures, both material, such as car parks, and immaterial, like payment zones and schemes.

This is a challenge that arises from the scale of the practice and its spatial distribution, closely reflecting limits of the automobility system. This confirms that cars significantly change their role in the im|mobility system when they are parked. Their problematic materiality becomes apparent and changes the balance so far kept in favour of the driver, whose mastery over the machine loses importance. Cars, because of what they do in urban spaces, become an inconvenience (Redshaw 2008).

This short overview of the infrastructuring role of parking serves to demonstrate the connection of this simple practice with wider arrangements and multiple environments. All of the examples above show the construction of an element of parking infrastructure – car parks need to be built, prices agreed on, rules set, cities redesigned (Spurling 2019) – but does it through other practices.
By approaching parking with the notion of infrastructuring, I bring attention to the dynamic infrastructuring qualities of parked cars, which form a part of the complex physical urban environment. Not unlike London’s fatbergs, parked cars can be ‘indicative of the functioning of infrastructures, or rather, of the processes by which infrastructuring is conducted’ (Michael 2020, 378). In the next sections I describe in more detail how some of these processes unfold.

**Cars as problematic objects**

Parking can be aptly described in the model proposed by Shove (2017) because a car is indeed variable in this practice. Cars are primary devices of parking but on a different level can be also considered infrastructures of immobility, as well as resources that are used up and replenished for everyday travel.

What I think is more difficult to agree with is the assumption, implicit both in ‘material elements’ and ‘material arrangement’ takes on social practices, that objects in practices are serving the purpose of those practices and their role is aligned with what actors want to achieve. These perspectives build their reflection on materiality that is routinised, repetitive and essentially functional for practices.

As I argue here, parking is a particular example that differs from this understanding. Cars and things that surround them are problematic and render the practice burdensome and laden with uncertainty. Parking in this sense is akin to disruption and breakup, both in a situational and an infrastructural sense. It is an instance of failure, when a car as an object of practice ‘slips from its object position, or when it becomes clear that an artefact will never quite fit correctly into that desired object position’ (Carroll, Jeevendrampillai, and Parkhurst 2017, 10).

Reliability of devices, infrastructures and resources implied in driving is undermined in parking even more than in the case of traffic jams, fuel shortages and breakdowns. The relevance of material objects is strengthened particularly in unstable situations (Boltanski 2011). And this state of parking practice being ‘out of order’ (Graham and Thrift 2007) is caused not by a malfunctioning or mishandled machine, but by a fully functional material object that cannot be fitted properly in a given space. Parking is expected to be problematic and difficult. It is a practice that is performed against its own impossibility.

**Sticking and hooking**

Sticking and hooking are two examples from the fieldwork, which show how problematic materiality of cars surfaces and is dealt with in on-street parking. Sticking occurs when some sort of disorder or exception on the street allows a car to be parked outside of designated spaces. For instance, construction sites provide opportunity for sticking – cars are left close to the fence of the site and due to the chaotic situation are much less visible than if they were left there in orderly circumstances.

Sticking (Figure 1) also causes cars to cluster around each other. One illegally parked car attracts others, as often happens in the vicinity of popular shops, schools and other frequented places. Cars also stick to other objects, like fences, portable toilets, or rubbish skips and by that become inconspicuous.

Hooking (Figure 2) occurs when cars are placed only partly inside designated places. It often happens when the last available space is too small for a car or when there is only a small fragment of parking space onto which it is possible to drive. When hooked, cars are ‘attached’ to the parking spaces and other parked cars only on account of their part being within a delineated space. This does not make it legal but nevertheless makes leaving a car acceptable. As a result of hooking, parking space expands according to the size of hooked vehicles.

These two examples show how the vehicles engaged in parking cause trouble and how their problematic nature is dealt with so that the performance of the practice is successfully completed despite disturbance. This is all while cars remain ‘devices’ and do not ‘switch status, for example between device-oriented and infrastructural roles’ and do not ‘flip between background and foreground
depending on the practices within which they are situated’ (Shove 2017, 64). Drivers are compelled to finish parking in one way or another even if obstacles seem overbearing. They have little control over the circumstances in which they want to park and cannot change the ‘device’ they operate.

Another instance which reveals the changing relations of objects within the same practice is the switch between car as a device and car as infrastructure. Parking is transformative both for drivers (and passengers) and cars. The former switch the mode of mobility – from bodies immobilised within a speed-providing machine to become (in most cases) independently moving humans again. The latter, from mobility device, become im|mobility infrastructure. The relationship with people in the context of mobility becomes indirect and a vehicle drops into the background, or into ‘infrastructural relation’, until it is used again and recalled into performative service for humans. Cars stop so that humans do not have to.

Figure 1. Examples of sticking in London and Utrecht. Drivers take advantage of extraordinary situation on the street caused by construction works to leave their cars in inappropriate spaces.
I argue, however, that in that process cars retain capacity to act. Stopped cars are actively parking. There are two main reasons to support this statement. First, parked cars interact with other cars (like in the examples of sticking and hooking described above) and their surroundings. Streets of cities are carscapes (Miller 1988) full of immobile vehicles and a way to account for their relentless presence is to say that they ‘do parking’.

Part of this answer, second, is that parked cars are im|mobility infrastructure, and as such they are actively infrastructuring nexuses of practices by shaping urban spaces. In their infrastructuring modality, cars can also establish extensions to wider phenomena of different sorts, such as political debates mentioned in the earlier section or production of algorithmic systems. For instance, they demand to be accommodated in discussions about pricing and city’s budgets or to be taken care of as part of digitalised transportation systems.

They differ significantly from other objects involved in practices in the respect that they retain an active role even when they are not actively used by people. When, as in Schatzki’s (2010b, 33) example, the tip of the pencil breaks, scissors are put in the drawer after being used for cutting or an operating theatre is switched off and disinfected after a procedure, they indeed cease to be equipment and shift into their background, infrastructural positions. Cars, however, retain activity, because even as dormant vehicles, they *are waiting* (Spurling 2020; italics added). There is practical capacity in stillness (Bissell and Fuller 2011). The next section looks at it in more detail.
Cars as performers of parking

Things in practices are usually understood as discrete, bounded objects whose role, meaning and significance for particular practices can be easily discerned. Showers (Hand, Shove, and Southerton 2005), freezers (Hand and Shove 2007), cars (Shove, Pantzar, and Watson 2012, 26–41) and Nordic walking sticks (Shove and Pantzar 2005) are examples of those things.

Problems start when objects in practice are unstable and uncontrollable, like cars. Or when they are analysed not in the framework of practice-as-entity but in the context of many actually unfolding performances of the practice, in which objects are dispersed in space. This is the case of cars, which can be, like algorithms, seen as a ‘connective tissue’ between different practices (Morley 2019). In the human modality of practice the car, in a device mode, can be said to be ‘handled’ (Reckwitz 2002, 221). But when it is turned off, it begins its own performance by becoming a part of infrastructures of im|mobility, weaving into relations with other cars, things and people and producing consequences for the environment it finds itself in (Figure 3) (Merriman 2016).

Figure 3. Material consequences of parking in Warsaw. The pavement and the tree are negatively affected by the presence of cars.
To acknowledge that parking practice is performed by cars themselves means to recognise two different modalities of this practice. After all, parking happens when the driver is inside – i.e., when the human actor takes responsibility for the performance – and only later becomes dependent on the machinic qualities and material dimensions of a vehicle.

There are other practices of this sort. Think, for instance, about baking at home. If not entirely automated, it requires both preparation of raw dough by a human and a period when it sits in oven-generated heat. The difference with parking is twofold. First, ovens, bread and cakes rarely have consequences as direct and extensive for people and things as cars placed in public spaces. They do not interact with other breads and cakes.

Second, when an oven bakes bread, it closely follows the intention of a human. Cars, when parked, have their own capacities, which are not all intended by drivers. In this example, baking is a continuum of human and extra-human performance that is oriented towards the same end. The ‘human’ modality of parking does not require much explanation in this context, and it is defined in detail in one of the previous sections of the article.

The object-dependent parking is an entirely different modality, in which performance of practice – its ‘doing’ – belongs to a car. Cars are not easily discarded and although they change their role in the course of parking, they do not switch between ‘active’ and ‘passive’ forms (Rinkinen, Jalas, and Shove 2015). The way to illustrate how they retain activity is to show the interactions that are based on automobiles’ materiality and do not involve humans and have been not intended by them.

For instance, cars interact with surfaces, leaving visible marks of their presence. Their transformation of the environment is well beyond the intention of people. They drip oil and other liquids, crack and displace paving slabs, destroy vegetation by shading ground from the sun and can weaken trees by standing on their roots or rubbing against their trunks.

All these interactions can only partly be ascribed to inconsiderate drivers who leave their vehicles in wrong places. For the most part, they result from cars continuing to do parking beyond human involvement and in excess of human intentions.

There is also a clear interactive element between parked cars and people or, writ large, society. In spaces of everyday life, people and stationary motor vehicles intermingle, often to the detriment of the former (Benediktsson 2015). People have to go around badly parked cars, squeeze on pavements or walk distances made longer by presence of car parks. Eliminating parking spaces and turning them into something else will not be easy despite clear benefits for sustainable mobility (Pitsiava-Latinopoulou et al. 2012; Rosenblum, Hudson, and Ben-Joseph 2020), which shows that the practice is infrastructured in a stable way.

At the same time, people react to parking cars in a variety of ways especially when they are considered problematic: from relatively benign – and indeed directed towards drivers rather than vehicles themselves – windshield notes to wrapping entire cars in cling film, scratching doors, or even puncturing tyres (all examples from interviews). These reactions can be interpreted as communication between exasperated pedestrians and drivers, in which a car is just a medium. However, as cars are both culprits and victims in this situation, it is to their material presence and performance of parking that people react to, and in a way that they would never do to immobile things like walls or trees.

For Merriman, infrastructuring is a reciprocal relation between how infrastructures produce ‘complex affects, experiences and atmospheres, “infrastructuring” practices, subjects, atmospheres and environments in diverse ways’ (2016, 87) as well as how these in turn reproduce, transform or challenge existing infrastructures; in his example, car parks.

While I am less focused on the affective and cultural factors that play a role in infrastructuring, I want to highlight the fact that the infrastructural relation itself grows from relations between objects and their material dispersion in space. Cars themselves, when they assume the role of im|
mobility infrastructure, co-constitute and thread through (Cass, Schwanen, and Shove 2018) other infrastructures. By continuous performance of parking, they comprise large socio-technical system of im\textsubscript{m}obility (Watson 2012).

On this infrastructural level, parked motor vehicles actively shape urban spaces and other infrastructures that exist in them and do so without human presence. They are the ‘missing masses’ (Latour 1992) of urban mobility, pushed to the side of the road, underground or behind car park’s facades. They ‘make im\textsubscript{m}obility’ by making sense (Jensen 2009) of automobility, silently supporting the workings of the system. They can also be said to support the ‘unbuilt and unfinished’ (Carse and Kneas 2019) infrastructure of im\textsubscript{m}obility because without their silent input systems of automobility would be drastically limited.

Their infrastructure-shaping capacities are not purposeful and result largely from the combination of cars’ practical capacities, dimensions and their number in cities. First, they can practically produce pieces of infrastructure simply by staying in particular places repetitively or extensively (Kurnicki, 2020). If a car is parked in front of your house often enough, the front yard effectively turns into the parking space.

Second, through the stickiness and hooking described above, vehicles tend to fill spaces which have not been necessarily designated for them. It happens, for instance, in housing estates, which often provide ample space for automobile expansion onto paved areas, lawns and pitches. Infrastructuring by stationary cars performs the boundary work for automobility, takes over spaces from other uses and surpasses lines (Marusek 2020).

In terms of social practice, the object-dependent modality is greatly different from the one enacted by people, whose main objective is to stop in possibly the most efficient and unproblematic manner. Drivers do not normally intend to produce parking infrastructure by parking somewhere, yet cars do it for them.

These examples challenge conceptualisations of objects in practices as defined by nexuses of human ‘doings and sayings’ (Schatzki 2002) or material-meanings-competences complexes (Shove, Pantzar, and Watson 2012). Stationary cars reveal that theories of practice run the risk of ignoring the performative activity of objects in practices.

While the example of parking does not oppose existing conceptualisations of practice, it supports the possibility of extending performative capacities to non-animated and non-automated objects independent from people. The materiality of cars and their ubiquitous public presence make them, in the context of practices, rogue objects that do not want to be relegated to the background of arrangements and whose role in mobility practices is not easily controlled. They can serve as bridges between practices (Yli-Kauhaluoma, Pantzar, and Toyoki 2013) that ensure smooth running of urban im\textsubscript{m}obility, but they might as well be completely dysfunctional and disruptive. In consequence, their performative modality becomes visible through their infrastructuring capacities.

**Conclusion**

In this article, I make a case for accepting that material objects can be performers of social practices. I do so by demonstrating, on the example of parking, that cars are not only practical devices or infrastructural resources, but fully-fledged practitioners, whose activities bring about consequences not intended by humans and who have significant role in processes of infrastructuring. I distinguish between two modalities of practice in which either a human or an object is responsible for its performance.

The article contributes to theories of social practices, in particular to the ongoing discussions about the role of objects in practices and their social materiality. Moreover, by making use of the notion of infrastructuring, I demonstrate how practicing objects can create and support infrastructures. By that, I recognise one of the varieties of ‘infrastructure–practice relations’ (Shove, Trentmann, and Watson 2019).
The discussion about the role of objects in social practices needs to attend to their potential for practice, or at least their ‘dynamic’ (Maller and Strengers 2019). This can result in broadening and strengthening theorisations of social practice, which is important in the perspective of social world being increasingly populated by things having functional autonomy, either pre-programmed or not. The case of parking and practicing cars can be an informative example in this context.

Additionally, the article contributes to the understanding of im|mobility of cars within the discourses of automobility. In so doing, it aims to bring to light the importance of parking both in the context of everyday encounters with cars and its manifold systemic consequences.

Better understanding of performative, infrastructuring objects is required as part of the changes in im|mobility systems happening in response to the climate catastrophe, as well as transformation brought about by automation and the development of artificial intelligence. In the first case, not only the use, but also participation of objects (Marres 2012) will be necessary to reconfigure existing infrastructures towards sustainability. In the second, cases of deaths and damage caused by autonomous vehicles already pose serious challenges to our understanding of legal and social responsibility or even recomposition of what is considered social (Gekker and Hind 2019; Marres 2020) and will bear heavily on how practices are designed, performed, and scaled up.

It is time to bring the practices of dynamic, performing objects from invisibility. Car parking is a multifaceted example, which adds to the understanding of automobility system, everyday im|mobility and role of objects in social practices on different levels.

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