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Capturing the consumption of distance? A practice-theoretical investigation of everyday travel

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Abstract

This article contributes to current debates on (un)sustainable mobility by re-conceptualising everyday travel as a set of consumption practices. Treating physical mobility as ‘consumption of distance’ with considerable social, ecological and economic consequences, the article’s theoretical focus moves beyond conventional approaches that have hitherto dominated transport research and policy in Europe and beyond. In addition, it demonstrates how a carefully operationalised practice-theoretical approach can shed new light on the social and material contingency of human (travel) behaviour. By transforming qualitative evidence from Ireland into an innovative typology of commuting practices, this article captures the importance of intermeshing social and material contexts for people’s everyday consumption of distance. Overall, we seek to add to the already significant body of literature that evaluates the suitability of practice-theoretical core concepts to the empirical study of everyday life.

Keywords

Consumption, ‘consumption of distance’, mobility, practice, practice theories, sustainability, transport

Introduction

In this article, we advocate a re-conceptualisation of individuals’ daily commute as ‘consumption of distance’, that is, a socially and culturally significant practice that

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is contingent upon diverse material and infrastructural conditions and that shows significant variations in how it manifests itself both temporally and spatially. Viewing everyday mobility as collectively negotiated consumption practice implicitly challenges existing explanations of human travel behaviour that (over) emphasise the importance of individuals' choices and that underestimate the significance of social conditions in the formation of everyday mobility. We apply a carefully crafted practice-theoretical approach to researching travel behaviour to a case study of commuting patterns among the workforce of a large company in the West of Ireland.

Initially, this article critiques existing individualistic theories of human travel behaviour and responds by developing a practice-theoretical alternative that places such behaviour in its wider social, cultural and material context. Building primarily on Theodore Schatzki's practice theory, we synthesise his central theoretical claims and further extent them with conceptual ideas by other practice theorists, including Andreas Reckwitz, Alan Warde and Elizabeth Shove. The inclusion of material aspects into practice theory is argued to be vital for understanding consumption practices, more generally, and commuting, in particular, many of which rely on complex infrastructure.

The second part of this article focuses on the operationalisation of this practice-theoretical framework, to facilitate an empirical investigation of commuting patterns. While practice theories have received increased attention in recent years, few studies have directly connected theory and empirical work. Drawing on an empirical study carried out in Ireland in 2011, this article introduces a typology of commuting practices and their performances and offers some answers to long-standing sociological questions regarding the nature of human behaviour and its transformation over time.

Methodology

This article uses qualitative data collected in a large firm in Galway City in the West of Ireland during a workplace-based mobility management programme entitled *Smart Moves*. The programme complemented three conventional interventions – information provision, incentivisation of 'green' commuting and infrastructural changes – with an innovative month-long sustainability competition. *Smart Moves* combined an assessment of transport-related features of the company site, whose comparatively small area and close proximity to the city centre made it a prime target for traffic reduction efforts, with an examination of the commuting habits of parts of the workforce. *Smart Moves* incorporated three waves of interviews, one prior to the change initiatives (T1), one immediately afterwards (T2) and one 3–4 months after completion (T3). These interviews were intended to elicit in-depth information about respondents' social and material context as well as spatial and temporal aspects of their daily lives.[1] A transport infrastructure and policy analysis, three exploratory focus groups, firm-internal travel surveys and observational data collected within the firm and its immediate surroundings (e.g. field records of

Table 1. Methodological design.

Exploration T1	Change initiatives	Evaluation T2 (short term)	Evaluation T3 (long term)
Travel Survey (October 2010)	*Earth Day* (20 April 2011)	22 travel diaries (covering *Smart Moves Challenge*)	Travel Survey (October 2011)
3 focus groups (December 2010)	*Smart Moves Challenge* (27 April–2 June 2011)		
42 interviews (April 2011)	Recruitment of 27 participants	18 follow-up interviews with participants who changed their mode of transport (June 2011)	11 follow-up interviews with participants who changed their mode of transport (September 2011)
Observational data	Observational data		

observable activities around cycling facilities and observations of on-site traffic flows during peak time) complemented these interviews. Data from the CONSENSUS Lifestyle Survey (Lavelle and Fahy, 2012) on commuting trends in Ireland North and South served as quantitative backdrop (Table 1).

For the sake of clarity, the empirical part of this article concentrates on the initial assessment of employees' commuting patterns in T1 and its practice-theoretically informed analysis (see Heiβerer, 2013) for a detailed analysis of all aspects).

All eyes on the individual: A critical examination of transport behaviour research

Until recently, social research on human (travel) behaviour has been largely dominated by two actor-centric approaches. The first views the individual as self-interested actor (*homo economicus*) and considers societies (or markets) to be aggregates of individuals' choices and rational actions. The second one explains human action as primarily shaped by shared attitudes, norms, values and moral beliefs (*homo sociologicus*) and stresses the role of society as a system of rules that leaves little or no room for human agency. Both approaches share a strong focus on individuals for understanding human actions, offering predominantly cognitive explanations of travel behaviour as outcome of deliberate decisions.

Actor-centric approaches have attracted considerable criticism recently for their overemphasis on individuals making deliberate decisions as well as their propensity to overlook the wider social and material contexts of human behaviour (Jackson, 2005; Shove, 2010; Warde, 2005). Although we recognise that proponents of actor-centric approaches have addressed some of these criticisms by either expanding or remodelling their theoretical foundations, two major objections remain.[2] First, many of these models assume behaviour to result from conscious choice, despite ample evidence to the contrary (e.g. Dant, 2004; Hagman, 2010; Klöckner and Matthies, 2004). Second, their applicability to real-world situations is often limited by their lack of focus on contextual factors.

In the area of transport research, three key issues demonstrate the limitations of many actor-centric approaches. First, different transport modes carry significant social and cultural meanings beyond individuals' affective attachment. These include socially shared concepts of safety, status, flexibility, independence and the life course. Cars in particular fulfil important social and cultural roles in many developed and developing societies. For example, a father may find himself in the situation where he trip-chains on his way home from work, picking up his children from the crèche, stopping by his elderly mother and doing some last-minute shopping. Being able to complete these tasks may give him a sense of being a caring father and son. A greater understanding of the social functions and meanings of transport modes and everyday mobility is thus crucial to understanding people's travel patterns.

Second, actor-centric theories almost always assume that people have control over their everyday travel behaviour and that their individual attributes explain their actions. However, such assumptions ignore people's dependence on and influence over other people's needs, expectations, opinions and skills. For instance, parents might resort to driving their children to school because of bullying on the school bus. To recognise the social nature of people's (travel) behaviour means to move beyond narrow individualistic explanations.

Third, people's travel practices reflect (infra)structural aspects such as transport policy, infrastructure, laws and regulations and financial (dis)incentives for different modes. However, most actor-centric models largely neglect such structural influences on travel behaviour, which restricts their explanatory power. While it is obvious that a person cannot choose to travel by bus if there is no public transport system, other impeding factors may be harder to detect. For example, most modern transport systems favour car use over alternative modes of transport. In Ireland, the legacy of urban sprawl forces many people to commute long distances, with carless households facing difficulties accessing jobs and public services (Rau and Hennessy, 2009). To understand current transport patterns and what influences them, it is thus crucial to examine these structural aspects.

Recently, social-scientific and interdisciplinary inquiries into (un)sustainable consumption have offered some credible alternatives to actor-centric work, most notably in the form of practice approaches (Gram-Hanssen, 2011; Schäfer et al., 2012; Shove, 2010; Warde, 2005; Watson and Shove, 2008). We argue that a re-conceptualisation of everyday travel as 'consumption of distance' serves to highlight its immediate resource implications as well as its dependence on material- and energy-intensive aspects of production that underpin transport infrastructure systems. This is particularly important for research on modern resource-intensive mobility practices and possible ways to change them. The following section critically examines the merits and demerits of adopting such a consumption-focused view.

Conceptualising travel as 'consumption of distance': Benefits, opportunities and limitations

What are the merits of re-conceptualising mobility as 'consumption of distance'? And what limitations arise from such a perspective? There are four key reasons why framing mobility as an act of consumption offers a ground-breaking alternative to conventional conceptual approaches. First, travelling inevitably involves the use of various resources, including time, space and diverse materials. The analysis of everyday travel through the lens of consumption brings into clear focus the resource implications of everyday mobility. This is particularly useful for research on transitions towards ecologically, socially and economically sustainable transport systems that examine the resource implications of modal shifts and reductions in travel distance, among other things. While the most obvious form of transport-related material consumption is the use of fuel, being mobile also relies on more or less resource-intensive infrastructure such as roads, railway tracks, airports, cycle lanes and footpaths. Resources also go into the building of vehicles such as bicycles, cars or trains. Finally, travelling takes time; thus, the (un)availability of temporal resources needs to be taken into account. These are just the most obvious forms of resource consumption associated with everyday mobility. In addition, the concept of consuming distance offers an analytical framework for integrating material and (infra)structural factors, on one hand, and socio-cultural influences on people's behaviour, on the other hand, a vitally important synergistic effort that has been largely absent from mainstream transport behaviour research.

Second, talking about the 'consumption of distance' immediately evokes images of transport-related (in)conspicuous consumption (Veblen, [1899] 2005) and its connections with wider socio-cultural, material and structural conditions, including class, gender, professional status and access to infrastructure. In other words, how much distance people consume and in what ways both shape and reflect infrastructure and policy but also socially constructed needs and desires to be mobile that mirror prevailing economic, cultural and political conditions For example, the growing spatial separation of residential areas, work places and services in Ireland during the 20th century has produced highly complex travel patterns which people experience as both beneficial and burdensome and which have been the subject of political intervention through transport and land-use policies. However, the influence of peers, public opinion and advertising on individuals' consumption decisions cannot be understated. This goes back to Veblen's ([1899] 2005) argument that individuals emulate other individuals' consumption patterns and that people engage in forms of (in)conspicuous consumption to express their social status. These arguments later re-emerged in Pierre Bourdieu's (1984) practice-theoretical work on class, status and consumption, most notably in his book *Distinction*. More recent sociological studies examine how everyday consumption patterns emerge from the collective socio-material activities of individual actors (Warde, 2005), a topic that had been largely absent from transport studies.

Introducing practice-theoretical approaches to consumption into the realm of transport research can make visible previously unrecognised connections between the social and the material dimensions of everyday travel.

Third, focusing on the consumption of distance (demand) also throws up interesting questions about the production of distance (supply), including the spatial distribution of people, places of work, leisure and services. For example, the consumption of distance (demand) in terms of physically moving from A to B is inevitably influenced by the production of distance (supply) through land-use and transport policies and infrastructure, to name but a few. Similarly, the (un)availability of infrastructure (e.g. public transport system) and different types of vehicles (e.g. fuel-efficient cars and SUVs) significantly impacts how (far) people can travel and what mode they can use to reach their destination. In addition, the production of distance also captures wider social, cultural and political conditions, including whether or not physical mobility is seen as beneficial or undesirable by politicians and their electorates. Moreover, there has been a serious lack of social research into aspects of distribution, that is, linkages between places of production and places of consumption, although this is directly relevant to the study of mobility. Again, by focusing on the consumption of distance, links between production, consumption and distribution are placed centre stage.

Finally, linking daily mobility and consumption offers opportunities to connect much of the existing literature on travel and mobility to the rapidly growing pool of practice theories that have been instrumental in advancing social-scientific consumption research in recent times. As stated above, people's individual actions need to be understood as embedded and constituted within their socially negotiated practices (Schatzki, 2001: 3). Adopting a practice approach thus helps to identify social drivers of (in)conspicuous consumption related to private transport, such as the role of peer pressure in determining how much distance people consume and what mode of transport they choose. Finally, analysing people's travel patterns through the lens of consumption practices addresses gaps in mainstream transport research related to the almost complete absence of theoretical and empirical work dealing with affective aspects of everyday travel.

To summarise, mobility practices such as car-based commuting are an essential part of people's daily routines. Embedding the idea of people 'consuming distance' within a practice-theoretical framework opens up fruitful avenues for researching shared social conventions that influence how (far) people travel and for what purpose. Moreover, practice approaches offer a credible alternative to dominant actor-centric thinking by focusing on how people share practices. Analysing people's travel patterns through the lens of consumption and against the backdrop of practice theory thus means to 'move beyond the ABC' (Shove, 2010) to identify socio-cultural and material catalysts of transport-related (in)conspicuous consumption, including peer pressure and prevailing systems of provision. Finally, a consumption-focused practice approach to travel behaviour ensures and recognises the relevance of affective aspects, including people's emotional attachment to their particular mode of transport and resulting barriers to change.

The following section outlines the theoretical cornerstones of a practice approach to researching the consumption of distance. Drawing on Theodore Schatzki's work, we deploy a twofold practice concept that differentiates between the performance of a practice and the practice as entity. It is argued that this distinction facilitates a thorough investigation of both individuals' action patterns and the structural foundations of practices, including common rules, shared understandings and social meanings. Recognising the centrality of (infra)structural factors in any investigation of the consumption of distance, we also extend Schatzki's practice concept to include a strong material dimension.

Practice-theoretical underpinnings of the 'consumption of distance' concept

People's actions always reflect their social context, their obligations towards others as well as opportunities afforded by the material environment. (Re-)conceptualising human behaviour as an array of practices that are routinely acted out and that both shape and reflect wider social, ecological, political and economic conditions clearly recognises the significance of this intermeshing of routines, structural constraints and human agency for everyday life:

> A 'practice' (Praktik) is a routinised type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. (Reckwitz, 2002b: 249)

This is not to suggest that a conceptual and empirical focus on practices is the only credible approach to researching (un)sustainable consumption. However, we agree with Warde (2005) that practice theories can provide 'new insights into how consumption is organized and how it might best be analysed' (p. 132).

Although practice theories do not form a discrete, homogeneous school of social thought, some commonalities exist between many (if not all) of them. Arguably, practice theorists share an interest in the theoretical and empirical investigation of practices as key constitutive elements of human social life. To them, practices exist because individuals routinely and collectively perform them in everyday life. They view human behaviour as rooted in shared knowledge relating to how people interpret and influence their environment (Reckwitz, 2002b: 245). Perhaps more importantly, many proponents of practice theory view people as *practitioners* who act according to their understanding of the world and who use their know-how to reproduce a particular practice (Reckwitz, 2002b: 256). This implies people's active involvement in a social practice, that is, in collective efforts to act in the context of particular material and social conditions. Such a perspective starkly contrasts with views of human behaviour as either autonomous and self-interested or severely constrained by the system they inhabit.

This article mainly draws on theorists from the ‘second wave’ of practice theory development that followed the ‘first wave’ led by prominent 20th-century social theorists like Bourdieu and Giddens (see also Postill, 2010). Practice theorists of the ‘second wave’ include Schatzki (1996, 2002) and Reckwitz (2002a, 2002b) whose work extends ‘first wave’ ideas. For example, Schatzki’s highly systematic theory of social practices is clearly rooted in Wittgensteinian philosophy and convinces through its explicit focus on the practice concept (Reckwitz, 2002b: 211, 244). Both Schatzki and Reckwitz have had considerable influence on (un)sustainable consumption research.

To empirically investigate commuting practices, we constructed a practice-theoretical framework based on Schatzki’s work, featuring four major concepts: (1) a ‘materialised’, twofold practice concept; (2) practical intelligibility; (3) the social site; and (4) the field of possibilities (Table 2).

Table 2. Practice-theoretical key concepts.

Concept	Description
Twofold practice concept (performance and entity)	*The performance of a practice describes . . .* A set of actions belonging to a practice The ways in which these actions are carried out *Practice as entity:* Doings and sayings which belong to a practice and which are organised by . . . - Rules - General and practical understandings - Teleoaffective structure - Built and natural material context, bodies and objects involved in practice
Practical intelligibility	What makes sense to people to do and think
Social site	Captures the network of practices and their social orders
Field of possibilities	*Practices draw up a field of possibilities by . . .* Equipping actors with skills and knowledge Laying down rules of appropriate ways of acting in certain situations Creating an environment that is conducive to performing a practice Additionally, the material world influences the field of possibilities through the built and natural environments which are favourable to specific practices but not to others

Schatzki's twofold concept of practice – performance of a practice and practice as entity – deserves particular attention because of its utility for investigating both existing practices and individuals' actions. The performance of a practice comprises the actual enactment of actions that belong to a particular practice (e.g. a parent driving the children to school on the way to work). The concept of practice as entity captures the underlying organisational principles or linkages that shape the actions that make up the practice. To put it simply, the organisation of a practice determines whether certain actions are correct (in certain situations) or acceptable. It also signals what projects, ends and tasks are more or less important; how they follow one another; or what counts as appropriate (re)action in certain situations (e.g. it is sensible for sportive cyclist to wear a safety helmet).

Both notions of practice are highly relevant to the study of commuting. On one hand, an empirical investigation of what people *actually do* captures the performance of actions which belong to a particular practice (practice as performance). People who drive to work are engaged in the performance of a car-based commuting practice. On the other hand, it is important to recognise the rules and understandings that underpin and guide people's actions, including perceived purposes, beliefs, emotions and interpretations (practice as entity). People may value commuting by car because of its (perceived) practicality or perhaps because of positive childhood memories that link car use to family outings.

There are three linkages that hold a practice together: (1) rules; (2) shared understandings; and (3) a so-called teleoaffective structure, that is, customary ways of doing things. Rules are explicit formulations, principles and instructions that direct and guide people to perform certain actions but not others (Schatzki, 2002: 79). A typical example would be rules of the road that guide the practice of driving. Practices also connect with other practices by sharing rules. In other words, practices can both enable and constrain each other as well as enable and constrain the actions of individuals.

Second, practitioners acquire shared practical and general understandings both prior to and during their participation in a practice. Practical understanding allows practitioners to enact specific *actions that make sense*, such as to indicate before turning at a junction. General understanding involves a broad grasp of the practice of driving.[3] While practical understanding is often directly observable, general understanding is more difficult to detect empirically. Overall, practices are held together by both explicit rules and shared understandings. For instance, traffic regulations and transport policies shape how people commute. At the same time, practices equip their practitioners with knowledge and skills that allow them to carry out meaningful actions. If people do not know how to cycle, they cannot be practitioners of a cycling practice.

The teleoaffective structure of a practice constitutes the third linkage and can be defined as a complex hierarchical ordering of actions according to their relevance, importance and emotional salience (Schatzki, 2002). Importantly, a teleoaffective structure is the property of a practice (not the feature of an individual actor or 'practitioner'). In fact, tensions may arise between the practice-internal teleoaffective structure and individual practitioners' understanding. Moreover, teleoaffective structures can be difficult to measure directly. To empirically investigate them might thus require the use of proxies, such as accounts by practitioners regarding their understanding of what makes sense to do. Schatzki's concept of 'practical intelligibility' can help address this issue of (im)measurability. Practical intelligibility describes how practitioners carry out actions that make sense to them.[4] 'Practical intelligibility determines *what it is* that a person does next in the flow of conduct' (Schatzki, 2010: 114, emphasis in original). It thus belongs to the individual practitioner (not the practice). Interestingly, people's understanding of what makes sense to do varies across practices. One of Schatzki's central arguments is that interrelated social practices constitute the context within which social orders are established, resulting in the emergence of a social site.[5] In this social site, people's lives are related to each other through a network of interlocked practices and social orders (Schatzki, 2002: 70).

The concept of practical intelligibility is central to this research in two respects. First, it explains variations in the performance of a practice between practitioners. Second, and perhaps more importantly, it facilitates qualitative inquiry into individual practitioners' ideas of what is the right thing to do, capturing aspects of a practice's teleoaffective structure 'by proxy'. In this study, individual commuters told their own story of how and why they do things. The resulting data were used to identify their daily commuting practices and related secondary practices. This approach recognised that practitioners are skilled agents who negotiate and perform a range of practices in their daily activities and that a sole focus on one practice would miss their position within complex networks of interrelated practices.

Fields of possibilities are the conditions that frame practitioners' doings and sayings and form another key feature of practices. Schatzki (2002) coined the term 'prefiguration' to describe how potential future actions are initially categorised according to certain criteria, for example, whether they are easier or harder to accomplish, or more or less socially desirable (p. 225). As a result, some actions appear more feasible than others. The resulting field of possibilities is also influenced by the aforementioned linkages that organise practices, namely, rules, understandings and teleoaffective structures, as well as material conditions.

Fields of possibilities are neither stable nor clearly delineated. There is nevertheless merit in trying to capture them empirically because they reflect both the practices people are involved in and their individual circumstances, including their physical and mental abilities. Moreover, dominant practices have the capacity to produce fields of possibilities for very large social groups whose members inhabit similar material realities and also adopt the same practices. While this holds true for most human activities, it is particularly important for travel practices which are highly infrastructure-dependent. Drawing on efforts by key practice theorists like Reckwitz (2002a) and Shove and Pantzar (2005) to advance the 'materialisation' of practice theory, we advocate a broad understanding of the material dimensions of practices that includes objects and human and non-human bodies. In addition, we consider aspects of the built and the natural environment as part of the material foundations of human social life, more generally, and (transport) practices, in particular. For example, the practice of commuting is contingent upon material objects such as vehicles and roads while its performance depends on interactions between practitioners (e.g. drivers) and these objects.

Practices influence people’s actions in two distinct ways. First, people’s involvement in a practice allows them to learn the rules and acquire necessary skills and knowledge, including knowledge about the actions which are appropriate in a particular situation. Second, practices shape people’s physical–technological environment, with technologies enabling or constraining the performance of a particular practice.[6] For example, the advance of the automobile during the 20th century not only required the construction of a large road network but also facilitated new ways of travelling (e.g. fast travel on motorways) while marginalising others (e.g. children commonly walking very long distances to school).

Are there any disadvantages to using a practice-theoretical approach to study commuting? A major criticism of Schatzki’s approach relates to its relatively underdeveloped material dimension. In contrast, Reckwitz (2004) advocates the materialisation of practice theory and argues that the successful performance of a practice partly depends on the availability of bodies, things and artefacts as well as other practitioners (p. 45). For example, the emergence of driving as a widely shared everyday practice was contingent upon the availability of (affordable) cars, adequate infrastructure and people with driving skills. Recognising the merits of Reckwitz’ arguments, we extended Schatzki’s practice-as-entity concept to include significant material aspects such as residential location, availability of infrastructure and different modes of transport and weather conditions.[7] The following section details the operationalisation of our practice-theoretical approach.

Translating practice theory into empirical research

Many practice theories are too abstract and far-reaching to be used directly to collect, analyse and interpret empirical data (Warde, 2005). This said, we believe that core elements of Schatzki’s approach can inform and guide empirical research on commuting practices if subjected to careful and considerate operationalisation. Table 3 details our efforts to operationalise Schatzki’s five key practice-theoretical concepts, that is, to translate them into more concrete propositions that lend themselves to empirical scrutiny. This table also lists examples of the kinds of data that could be expected to emerge in relation to each concept.

Arguably, observing the performance of a practice and identifying the basic rules and material conditions that underpin it can be relatively straightforward. For example, participants’ self-reports can yield useful insights into their daily routines and related material contexts. Similarly, a transport policy analysis can reveal the legislative conditions that shape a practice, such as rules of the road or fiscal measures to encourage cycling. In contrast, it is often more difficult to directly observe practical and general understandings and non-material elements of the teleoaffective structure, partly because they comprise complex linkages between doings, sayings and moods. People generally do what makes sense to them, although they may not always be able to verbalise it. This said, studying expressions of practical intelligibility such as respondents’ reasons for using their car to commute to work allowed us to draw conclusions ‘by proxy’ about the teleoaffective structure.

Table 3. Operationalisation of five key theoretical concepts.

Concept	Theoretically informed propositions suitable for empirical testing	Example of relevant data material
Performance of practice	*What:* Account of what people actually do *How:* Overview of how people commute based on survey data and personal accounts of how people perform commuting practice	Interview data that show that some commuters trip-chain while others go to work directly
Practice as entity	*Rules* *What:* Explicit rules and instructions that influence actions *How:* Empirical work revolves around a review of policies that affect commuting and private transport in general	Policy document detailing employer-based tax-saving scheme to encourage cycling
	Practical understandings . . . *What:* Overview of knowledge required to carry out actions *How:* Interviews and observations that capture peoples' skills and knowledge	Data showing that participant knows how to cycle safely
	Teleoaffective structure *What:* Linking of doings, sayings, emotions and beliefs that are appropriate to a particular practice *How:* Focus on what makes sense to people to do (beyond particular rules and understandings)	Interviewee's expressed view that they feel that the car is a safe mode of transport for children
	Material aspect *What:* 1. Bodies and material objects (e.g. transport modes or person giving a lift) 2. Material context of a practice including built environment (e.g. land use and transport infrastructure) and natural environment (e.g. landscape and climate) *How:* Collection of observational and documentary evidence, including site analysis in company, maps.	Information about availability of public transport service and transport-related infrastructure

(continued)

Table 3. Continued.

Concept	Theoretically informed propositions suitable for empirical testing	Example of relevant data material
Practical intelligibility	*What:* Information about what makes sense to people *How:* Interviewing and observing people to establish what makes sense to them to do (This also facilitates 'research by proxy', indirectly capturing general understandings, teleoaffective structures and fields of possibilities.)	Interviewees feel that it is more practical to drive their children to school than to have them wait for a school bus
Social site	*What:* The social site is constituted through a web of practices that influence people's commute to work *How:* Collection of observational evidence and interview data that captures practices related to commuting practices	Evidence of specific working practices preventing use of public transport (e.g. night shifts)
Field of possibilities	*What:* Actual and perceived options for action *How:* Gathering of information about which actions are easier or harder (acceptable or recommended) to perform	Data that reveal that a lack of cycle paths prevents cycling

To sketch the field of possibilities in relation to commuting, this study explored customary ways of getting to and from work, the built environment, available infrastructure and people's access to transport modes. This was complemented with an examination of individual practitioners' skills and circumstances, including their physical ability and their family circumstances. The next section details how our theory-guided analysis of a selection of data collected in phase T1 using three focus groups and 42 semi-structured interviews (cf. Table 1 for details) produced an innovative two-stage typology of commuting practices that contrasts with conventional approaches to behaviour segmentation that focus on the characteristics of individuals.

Developing a practice-theoretical commuting typology to classify travel practices and their transformation

Analysing participants' accounts of their everyday travel practices through a practice-theoretical lens, we were able to develop a two-stage typology. Initially, a dominant car-based commuting practice was contrasted with a marginalised alternative commuting practice (i.e. walking and cycling). Subsequently, interviewees' accounts were used to distinguish between four performance versions of the dominant car-based commuting practice: (1) commuting from the hinterland, (2)

Table 4. Typology of commuting practices.

	Type	Label	Number of respondents
Car-based commuting practice (dominant)	Type I	Commuting within the city	14
	Type II	Commuting from the hinterland	7
	Type III	Hybrid	4
	Type IV	Trip-chaining	9
Alternative commuting practice (marginalised)	Type V	Active commuting (e.g. walking and cycling)	8

commuting in the city, (3) hybrid (car use and active commuting combined) and (4) trip-chaining.

The typology reveals the diversity of commuting practices, which in turn reflects practitioners' varying social and material circumstances. This is particularly true for the category 'car user' which is commonly treated as homogeneous. Our results demonstrate that although the majority of participants engaged in car-based commuting, they did not perform the practice in the same way. Observable differences were mainly contingent upon practitioners' living conditions, including housing and family life, thereby confirming the socially embedded nature of car use.

Using practice-as-entity as a starting point, we created a general description of both the dominant car-based commuting practice and the alternative active commuting practice that highlighted their central characteristics, including customary ways of acting, that is, what people considered a good way of commuting. These descriptive accounts also captured practitioners' practical and general understandings, teleoaffective structures and material conditions, including transport-related infrastructure, availability of public transport services and weather conditions. Following on from this, our analytical efforts then concentrated on the performance of the car-based commuting practice. The four performance types not only share some of the features of the overall car-based commuting practice but also reflect patterned variations in people's routines due to divergent social and material conditions.

While a detailed discussion of the data relating to the four subcategories of the car-based commuting practice is beyond the remit of this article, we can nevertheless provide a brief overview (see also Table 5 for details). First and foremost, we were able to identify three key areas that significantly influence the material and social context within which people's commuting practices occur: housing and residential location, the organisation of family life and working practice. The emphasis here is on material and social aspects of commuting patterns that hamper or enhance a modal shift away from the car. The first two performance types share central features, as their labels indicate. But their possibilities to switch to non-car-based commuting vary greatly, which is mainly due to their geographical location

Table 5. Typology of commuting practices and practice-theoretical descriptors.

	Car-based commuting practice				Alternative commuting practice
	Commuting from the hinterland	Commuting in the city	Hybrid	Trip-chaining	Active commuting
Central features of performance	Main mode: car	Main mode: car	Main mode: car, bicycle used regularly in summer	Main mode: car	Main mode: active commuting or carpooling
	Direct commute to or from workplace	Direct commute to or from workplace	Direct commute to or from workplace	Commute covers multiple destinations	Direct commute to or from workplace
Social site	Location: rural	Location: urban	Location: rural	Location: diverse	Location: urban
	Social obligations: only their own transport needs	Social obligations: only their own transport needs	Social obligations: occasionally provide transport for others	Social obligations: regularly provide transport for others	Social obligations: only their own transport needs
	Working practice: adjusted to traffic	Working practice: adjusted to traffic	Health and fitness are important	Working practice: adjust to family life	Health and fitness are important
Field of possibilities	Car is superior	Car is superior	Car is superior except for active commuting under specific circumstances	Car is superior	Active commuting and carpooling are viable alternatives

and which is the reason why they are presented as separate types here. The central feature of the commuting type II, commuters driving to work from the hinterland of Galway City, is that drivers are frequently on their own in their cars. They do not make any detours on their way to work or home and they take a direct route without any stops. Most practitioners stressed that they enjoy the idea of being independent and flexible, to go wherever they want after work or during their breaks, and that their car facilitates that. This group faced the most significant material restrictions because they lacked access to public transportation, and many of them lived too far away from their place of work to walk or cycle. Most practitioners in this category had children, but they were not in charge of giving them lifts. People commuting within the city (type I) showed the same performance pattern as the commuters from the hinterland; they routinely drive alone in the car directly to work. They also had no obligations to provide a lift to anybody. However, type I practitioners faced the least restrictions regarding alternative transport modes, with public transport services available in close proximity to their place of residence and with their homes in cycling distance[8] from work. Despite the availability of alternatives, this group did not perceive them as attractive.

Type III stood out because its practitioners alternated between being car drivers and active commuters. These participants belonged to a minority. The car was the main mode of transport, and practitioners considered it to be an absolute necessity because they all lived more than 10 miles away from their place of work. However, in the summer time when it was still bright outside after work and in good weather conditions, they cycled on a regular basis to stay healthy and increase their fitness. In contrast to practitioners of the non-car commuting practice, their transport mode depends on the season. Type III interviewees faced a similarly restrictive range of alternatives compared to commuters living in the hinterland. However, due to their fitness levels and their interest in exercising, they viewed cycling as viable transport option as long as weather conditions allowed it.

The final performance version of the car-based commuting practice is trip-chaining (type IV). All practitioners in this group had social obligations and, therefore, did not commute using a direct route. Instead, their trip to and from work included various different stops along the way. Almost all of them had to trip-chain to provide transport to relatives. While they all had to manage these social obligations, they did not face the same restrictions in terms of alternatives to the car. Some lived in cycling distance in the city and had access to public transport. Others lived in the countryside and lacked such alternatives.

Finally, interviewees who engaged in the marginalised alternative commuting practice (type V) all lived within a 6-mile-radius from their workplace. Although their perception of the viability of cycling and walking as transport mode differed vastly, most of them owned a car and agreed with car-centric commuters that it is necessary to own a car to meet everyday transport needs in Ireland.

To summarise, the typology of commuting practices sheds light on systematic differences between car-based commuting routines that are often subsumed under the general heading of ‘car use’ and that reflect variations in practitioners’ social and material circumstances. The typology also draws attention to influences that either prevent or promote a change in commuting patterns that have largely been overlooked in transport behaviour research in the past. The latter will be discussed in more detail in section ‘Conclusion’.

Conclusion

Re-conceptualising everyday travel as a set of consumption practices with considerable social, ecological and economic consequences signals a clear departure from many conventional approaches to transport research and policy. The contribution this article makes to current debates on (un)sustainable consumption, more generally, and mobility as ‘consumption of distance’, in particular, is twofold. First, by applying a practice-theoretical framework that takes seriously both material and socio-cultural dimensions of commuting, we were able to move beyond an actor-centric analysis of mobility behaviour that focuses solely on the actions and motives of individuals. In particular, using practice-theoretical concepts for data analysis and interpretation revealed how commuting is interwoven with many other areas of social life and the practices embedded within them. This challenges much existing work in conventional transport research which tends to neglect the wider social and material impacts of transport. A practice-theoretical approach that treats every mobility practices as acts of consumption also opens up opportunities for combining existing theoretical and empirical work in the field of (un)sustainable consumption research. This can produce new synergies that have the potential to fundamentally transform how we view transport and mobility, more generally, and the causes and consequences of current transport-related unsustainability, in particular, and what types of policy interventions are deemed suitable for curbing the consumption of distance.

Second, by transforming qualitative evidence from Ireland into an innovative typology of commuting practices, this article captured the importance of intermeshing social and material contexts for people’s everyday consumption of distance. Focusing on the empirical investigation of commuting practices (as opposed to the characteristics of individual commuters) and its subsequent ‘translation’ into an innovative typology of practices opened up new avenues for understanding travel patterns as well as opportunities for and barriers to increasing their sustainability. Based on an iterative data analysis process that moved between theory and empirical evidence, we developed a practice-theoretical typology of commuting that captured what interviewees do – their commuting patterns – as well as the social site and the field of possibilities. The typology thus captures hitherto neglected socio-cultural and material aspects of commuting routines that can act as opportunities or barriers to a transition to more sustainable patterns and which have hitherto been largely neglected in transport behaviour research and policy development. As such, it can serve as a basis to devise and target policy.

Although the challenges of operationalising complex practice-theoretical concepts cannot be underestimated, we nevertheless advocate their application to study how people consume distance. We believe that doing so produce new insights to inform innovative policy and change initiatives that go well beyond current actor-centric behavioural change programmes and that have the potential to overcome some of the persistent problems that have hitherto marred transport-related sustainable consumption efforts in Ireland and internationally. Overall, this article makes a valuable contribution to social-scientific transport research by developing, operationalising and empirically grounding a practice-theoretical alternative to mainstream actor-centric models of human travel behaviour. While the empirical part of the study was confined to data from the West of Ireland, we argue that the approach presented in this article offers promising theoretical and empirical options for researching human behaviour, more generally, and car-based mobility, in particular.

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Notes

1. We are fully aware of the methodological disadvantages of self-reporting. However, given the nature of the project and the relatively low sensitivity of the data collected (e.g. residential location, route to and from work, morning routine and trip-chaining habits), self-reports were deemed to be the most appropriate form of data collection.
2. The authors also recognise that behaviour models may serve to answer research questions other than the ones that are posed in this study. However, a critical review of these improved models is clearly beyond the remit of this article.
3. It is important to note that Schatzki has been criticised for neglecting tacit and unconscious components that shape people’s actions. The authors argue, however, that Schatzki’s interest in the general understanding of practices incorporates different forms of tacit knowledge that serve as a normative frame for how things are done.
4. Here, it is important to caution against the conflation of Schatzki’s concept of practical intelligibility with his concept of practical understanding. While practical understanding enables practitioners to execute the identified action, practical intelligibility singles out which action to perform in a certain situation.

5. It is important to note that Schatzki has repeatedly been criticised for not explicitly including power relations in his practice theory. Other prominent practice theorists including Giddens, Foucault and Bourdieu explicitly recognise the significance of power and power relations in society. The authors argue that Schatzki's notion of the social site encompasses not only practices but also social orders with their inherent power relations, although the latter are not always made explicit in Schatzki's work.
6.

> Practices thus conspire with physical states of affairs to delimit what people are generally able to do – by outfitting people with the wherewithal to carry out particular activities, by helping to establish both what customarily makes sense to people to do and what is correct, prescribed, and acceptable in general, and by physically excluding some possibilities while admitting others.

7. We also recognise that this emphasis on the material (in addition to social and cultural) poses considerable challenges for social scientists who are traditionally concerned with 'social facts' and whose theoretical and empirical work rarely concerns itself with tangible material conditions such as society's interactions with the natural environment (cf. Dunlap 2002, Groβ and Heinrichs 2010). However, it is hoped that our efforts in this article will draw further attention to the significance of the material aspects of social practices.
8. Perceived cycling distance varies greatly among participants and largely depends on people's fitness. Here, it is assumed to be approximately 2 miles.

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