



Changing mobility practices. Can meta-ethnography inform transferable and policy-relevant theory?

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ARTICLE INFO

Handling Editor: Susan J. Elliott

Keywords:

Bourdieu
Change
Meta-ethnography
Mobility
Theory of practice

ABSTRACT

Social practice theories have attracted attention for their potential insights into how to change transport systems towards “healthier” states. However, most evidence is from small-scale qualitative case studies. We explored whether a synthesis of qualitative evidence on mobility practices in one country, informed by meta-ethnography and a Bourdieusian approach to practice, could produce theory that is of sufficient abstraction to be transferable, yet also capable of informing intervention planning. The synthesis identified three third order constructs: mobility practices result from habitus plus capital in fields; specific configurations of local mobility practices are shaped, but not determined, by material infrastructures and social structures; and changes in practice happen across a number of scales and temporalities. This body of evidence as a whole was then interpreted as an integrative “storyline”: Mobility systems are complex, in that outcomes from interventions are neither unilinear nor necessarily predictable from aggregations of individual practice changes. Infrastructure changes may be a necessary, but not sufficient, condition for change. Moving systems towards “healthier” states requires changing habitus such that “healthier” practices align with fields, and that interventions take sufficient account of the power relations that materially and symbolically constrain or enable attachments to and changes in mobility practices. Meta-ethnography is a useful approach for integrating qualitative evidence for informing policy.

1. Introduction

Reflecting the limited efficacy of “behaviour change” theories for offering insights for changing what populations (as opposed to individuals) do, there has been increasing interest in drawing instead on various kinds of practice theory to inform strategies that can shift systems into healthier states (Blue et al., 2014; Reckwitz, 2002; Shove et al., 2012). Although behaviour change perspectives may offer considerable purchase in, for instance, supporting individuals to adopt healthier habits, they may be less appropriate for designing and evaluating public health interventions at more upstream levels. Shifting everyday travel behaviour is a good example. Encouraging more walking and cycling, for instance, is a goal of much public health policy (WHO, 2018), but there is limited evidence that individual behavioural interventions have had much impact (Arnott et al., 2014). Social practice theories offer an alternative, positing that mobility, or everyday travel, is a set of practices, accomplished with other people and in particular cultural,

material and political contexts (Watson, 2012).

The social practice perspectives that have attracted most attention in the public health field (Blue et al., 2014; Cockerham, 2005; Maller, 2015) generally build on the important formulation of Shove et al. (2012) that social practices have key elements of “material, competence and meaning”. This framing of social practice perhaps risks underplaying some of the structural elements that shape what people do, which are more prominent in other practice theory traditions (Bourdieu, 1980; Giddens, 1986). In a similar vein, on the need for strategies to “decarbonise” transport, Watson (2012) notes the potential for practice theories to be deployed in combination with socio-technical systems approaches to add in a more macro level. This would, he argues, give purchase on the multi-scalar effects through which transitions happen, and, potentially, can be disrupted for change. Thus, identifying elements of practice, the ways in which practices are bundled together, or potential feedback loops in systems can all be points of potential intervention at which people could be recruited to (or defect from) mobility

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<https://doi.org/10.1016/j.socscimed.2023.116253>

Received 8 December 2022; Received in revised form 24 April 2023; Accepted 15 September 2023

Available online 23 September 2023

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practices. Watson's exploration was largely speculative, identifying a range of considerations that might inform selection of interventions. Here we build on this, drawing on grounded empirical work to explore whether synthesis might generate theoretical transferability that is useful for planning public health strategies.

Currently, for policy and practice, there remain challenges in using evidence from practice theory-based studies. First, much social practice-inspired analysis is orientated more to understanding how cultures and power relations are reproduced, rather than how and why they change (Watson, 2012; Yang, 2014). More recently, a small body of work has focused more on change, exploring the conditions of possibility for shifting habitus in directions more aligned to health-promoting rather than health-damaging practices (Maller, 2015; Shove et al., 2012). To date, however, these remain largely based on small case studies, which provide rich contextual detail, but may be limited in transferability. For policy and practice actors, the findings of small-scale ethnographies may appear rooted in their specific setting, with unknown relevance to other contexts. There is a need for comparing insights and theorisation across cases and developing approaches for "deriving meaningful generalisable inference" beyond or despite their unique contexts (Ogilvie et al., 2020). Meta-ethnography is one potential strategy for generating more abstract and generalisable theory. Developed by Noblit and Hare (1988, p. 9), who challenged qualitative researchers to advance the "interpretive understanding of social phenomena" through synthesis of multiple studies, meta-ethnography has been widely used as an interpretative qualitative evidence synthesis method in systematic reviewing, particularly in health related studies (France et al., 2019). We return here to the ideas that inspired Noblit and Hare, specifically the more qualitative and critical approach to meta-ethnography that focuses on developing integrative interpretations across a small number of theoretically-sampled studies on a topic, rather than "aggregative" synthesis of themes across more systematically sampled studies (Noblit, 2016). We take a series of (our own) in-depth qualitative studies conducted on the same social phenomena – mobility practices as part of everyday travel (on foot, by bicycle, bus or car) – and synthesise these to assess whether we can generate transferable insights across their distinct contexts. The aim is to explore whether this would enable us to derive generalisable inferences which were neither simplistic summary findings nor overly abstract. To be useful for public health practice or policy, sociological (or indeed any research) insights need to be transferable across contexts, but also reflective of the complexity of social life, and concrete enough to inform action. Could a meta-ethnography-inspired approach enable conceptual understandings of mobility that could also inform practical approaches to system change?

The case: everyday mobility

Our interest in mobility stems from the "biomedicalization" (Carter et al., 2018) of everyday travel, which has rendered choice of transport mode a domain of public health concern. Walking, cycling and (to a lesser extent) using public transport instead of private cars are positioned as effective ways to increase incidental physical activity levels in the population (Das and Horton, 2016) through incorporating activity into everyday life.

Against this backdrop, five public health research projects based in the UK (Christie et al., 2017; Green et al., 2014; Ogilvie et al., 2016, 2017; Steinbach et al., 2011) were selected to provide initial case studies for synthesis. These all: used qualitative methods; investigated mobility in a variety of circumstances and contexts, such as changing local infrastructure and everyday challenges of commuting; and aimed to understand varied aspirations, responses and positions in relation to different modes of travel. They also shared an approach of understanding mobility from a social and relational theoretical perspective rather than only an individualistic behavioural one. However, each of the analyses was firmly anchored in its respective context, and not all studies explicitly set out to explore and understand the potential for

change. By translating insights from these studies into each other following an established method of evidence synthesis (Noblit and Hare, 1988), we propose that we can identify transferable conditions for change of social practices at a population level, in our case those relating to "mobility practices".

2. Methods

We drew on the seven steps of Noblit and Hare's (1988, p.13) meta-ethnographic synthesis, aiming to: critically examine multiple accounts of the social phenomenon "mobility"; systematically compare the included studies as cases to draw cross-case conclusions; and synthesise the included research outputs for transferable conceptual insights.

1. Getting started
2. Deciding what is relevant to the initial interest
3. Reading the studies
4. Determining how the studies are related
5. Translating the studies into one another
6. Synthesising translations
7. Expressing the synthesis

2.1. Steps 1 and 2: Getting started and deciding what is relevant

Our selected cases were drawn from a larger dataset of qualitative studies on active travel generated in the Active Travel Synthesis Study ActS) (Haynes et al., 2019). These studies represent different population groups and UK contexts (for example by gender, age [from 12 to over 80], ethnicity, and location including Belfast, Glasgow, Cardiff, Cambridge and London) but all provided in-depth data of varied experiences of walking, cycling and motorised forms of travel. For the meta-ethnography, with the help of these projects' investigators, we started with an inventory of possible "cases" for our synthesis: all peer reviewed qualitative (n = 17) or mixed-method (n = 2) research outputs, and the final study reports (n = 5) of these projects (see [Supplementary Table A](#) in the Supplementary Material).

In the first tranche of case selection *exclusions* we were making exclusions. With our focus on analytical themes, we excluded the five final reports in consultations with their authors (if not us) to confirm that these summary reports were conceptually relatively thin and did not contain insights relating to social practice not covered in the primary papers. Basic information from the studies was extracted: research design, theoretical/conceptual framing and summary findings. Three more papers were excluded at this stage, because their conceptual focus was primarily methodological.

Next, we identified index papers. These were chosen from the larger list to represent all studies and settings, and the most theoretically explicit and coherent analysis, to furnish sufficient second order interpretations for synthesis. The selected papers (see [Table 1](#)) focused on understanding mobility practices through approaches to social fields and habitus (Guell et al., 2012; Nettleton and Green, 2014; Steinbach et al., 2011), tactics of everyday life (Guell et al., 2012), understanding social practices and desires (Green et al., 2018; Nimegeer et al., 2018), and social arrangements and social justice (Goodman et al., 2014).

2.2. Steps 3 and 4: Reading the studies and determining how the studies are related

This was not a thematic evidence review of qualitative studies on mobility practices and experiences, but rather a synthesis of the selected studies on mobility to advance conceptual understandings of walking, cycling, bus and car travel (for transport or leisure) as a set of interrelated social practices, drawing on Bourdieu's (1980) theoretical understanding. Our specific research question therefore aimed to focus our

Table 1
Index papers for meta-ethnography.

Lead author & year	Paper title	Research design	Research aim	Theoretical framing	Summary findings
Nettleton and Green, 2014	Thinking about changing mobility practices: how a social practice approach can help	Interviews and participant observations with adults who learn to cycle with N = 78 (42 cyclists, 24 non-cyclists, 12 cycle trainees) and one focus group (8 non cyclists), ethnically diverse, in London PLUS participant observations, informal conversations and interviews with veteran fell runners N = 19 (men and women, aged 55–85) in the English Lake District	To draw upon Bourdieu's (1977) Outline of a Theory of Practice to explore three modes of transformations in practice (unthinkable, thwarted and resisted), to demonstrate the potential of a Bourdieusian approach to the analysis of mobility as social practice	Bourdieusian practice theory	Three modes of transformation: unthinkable, thwarted and resisted, are rooted in differential interrelationships of field, habitus and doxa in these contrasting cases. We suggest that the notion of tacit, practical knowledge is more useful to understanding why change is thinkable or unthinkable than participants' reasoned accounts of their practice; that where new social fields are available that are congruent with habitus, change is possible and that where field and habitus are tightly aligned, the conditions of possibility for change are reduced. Efforts directed at changing practice might usefully focus not on behaviour or environments but on identifying the social fields in which mobility practices are likely to be malleable. The relative visibility of cycling when few do it means that it is publicly gendered in a way that more normalised modes of transport are not; conversely, the very invisibility of Black and Asian cyclists reduces their opportunities to see cycling as a candidate mode of transport. Following Bourdieu, we argue that the affinities different population groups have for cycling may reflect the locally constituted 'accomplishments' contained in cycling. In London, cycling represents the archetypal efficient mode for autonomous individuals to travel in ways that maximise their future-health gain, and minimise wasted time and dependence on others. However, it relies on the cultivation of a particular 'assertive' style to defend against the risks of road danger and aggression. While the identities of some professional (largely White) men and women could be bolstered by cycling, the aesthetic and symbolic goals of cycling were less appealing to those with other class, gendered and ethnic identities.
Steinbach et al., 2011	Cycling and the city: A case study of how gendered, ethnic and class identities can shape healthy transport choices	Interviews with N = 78 (42 cyclists, 24 non-cyclists, 12 cycle trainees) and one focus group (8 non cyclists), ethnically diverse, in London	To explore the range of 'accomplishments' and symbolic goals that cycling represented, and why the meanings of cycling might resonate differently across urban, gendered, ethnic and class identities, to shed light on the population differences observed in cycling in London.	Bourdieusian practice theory	Free bus travel enhanced young Londoners' capabilities to shape their daily mobility, both directly by increasing financial access and indirectly by facilitating the acquisition of the necessary skills, travelling companions and confidence. These capabilities in turn extended both opportunity freedoms (e.g. facilitating non-'necessary' recreational and social trips) and process freedoms (e.g. feeling more independent by decreasing reliance on parents). Moreover, the universal nature of the entitlement rendered buses a socially inclusive way for groups to travel and spend time together, thereby enhancing group-level capabilities.
Goodman et al., 2014	'We Can All Just Get on a Bus and Go': Rethinking Independent Mobility in the Context of the Universal Provision of Free Bus Travel to Young Londoners	(Some group) interviews with N = 118 (boys and girls, 12–18; ethnically diverse) in London	To examine how the universal provision of free bus travel has affected young people's independent mobility	Sen's theory of capabilities	Free bus travel enhanced young Londoners' capabilities to shape their daily mobility, both directly by increasing financial access and indirectly by facilitating the acquisition of the necessary skills, travelling companions and confidence. These capabilities in turn extended both opportunity freedoms (e.g. facilitating non-'necessary' recreational and social trips) and process freedoms (e.g. feeling more independent by decreasing reliance on parents). Moreover, the universal nature of the entitlement rendered buses a socially inclusive way for groups to travel and spend time together, thereby enhancing group-level capabilities.

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Table 1 (continued)

Lead author & year	Paper title	Research design	Research aim	Theoretical framing	Summary findings
Guell et al., 2012	Towards a differentiated understanding of active travel behaviour: Using social theory to explore everyday commuting	Interviews with N = 50 and follow-up photo-elicitations interviews with repeat subset of N = 18 [plus three children] (18–69, mostly White British), in Cambridge	To explore how people describe their commuting experiences and make commuting decisions, and how travel behaviour is embedded in and shaped by commuters' complex social worlds	De Certeau's practice of everyday life & Bourdieusian practice theory	Choice and decisions are shaped by the constantly changing and fluid nature of commuters' social worlds. Participants express ambiguities in relation to their reasoning, ambitions and identities as commuters. Commuting needs to be understood as an embodied and emotional practice. With this in mind, we suggest that everyday decision-making in commuting requires the tactical negotiation of these complexities.
Green et al., 2018	Automobility reconfigured? Ironic seductions and mundane freedoms in 16–21 year olds' accounts of car driving and ownership	Group interviews (N = 17) with 70 16–21 year olds and group interviews (N = 4) with 14 parents of 16–21 year olds from outside major metropolitan centres across England, Wales and Northern Ireland.	To explore the driving-related desires and practices of adults aged 16–21 and their parents from the UK.	Automobility systems theory	Cars remain necessary for mobility outside large cities. However, automobility, as a regime, had been reconfigured. Mobility practices were enmeshed in social networks, with cars offering young adults spaces for sociability, and as a preferred mode of transport. However, cars were positioned largely simply mundane tools in a local mobility network that included drivers (others as well as oneself), transport alternatives, and insurers, which made it a question of calculation (rather than desire) whether learning to drive was a priority or not. Automobility's promises of independence or freedom were undercut by material constraints; car ownership held only ironic seductions.
Nimegeer et al., 2018	Experiences of connectivity and severance in the wake of a new motorway: Implications for health and well-being	Interviews with N = 30 and follow-up photo-elicitation interviews with N = 12 (men and women, mostly from low SES, average age 52), and stakeholder interviews with N = 12, in Glasgow	To observe differences in severance and connectivity at both neighbourhood and individual level, and consider the ways in which active travel and social cohesion related to health may have been affected by the motorway extension.	Concept of severance and social capital	The motorway disrupted complex systems of both severance and connectedness; social connectedness, and the transport and health implications of change, have to be conceptualised beyond small geographic localities.

task on synthesising analytical rather than descriptive themes in selected research outputs. For our six selected index papers, we first developed an understanding of each case's contexts and overarching theoretical framing (Noblit, 2016), then compared them to identify common concepts (Britten et al., 2002). To get started with translating the studies into one another, the first author identified the key concepts (second order constructs) (Schutz, 1971) from the papers (see Supplementary Table B in the Supplementary Material).

2.3. Steps 5–7: Translating the studies into one another, synthesising translations and expressing the synthesis

The synthesis developed through discussing the relationships between the studies (comparing similarities and divergences: in Noblit and Hare's (1988, p. 38) words, "one case is like another, except that ...") and their authors' conceptual analyses for a first set of emerging cross-cutting concepts. In line with our theoretical aims, we approached translations of our index papers through the lens of Bourdieu's (1980) theoretical work that had guided several of the studies (Guell et al., 2012; Nettleton and Green, 2014; Steinbach et al., 2011). As this is a meta-analysis, our "primary data" are not the data extracts quoted in the papers (these are "first order" constructs), but rather the analysis reported by authors.

We then returned to the wider AcTS Study set of publications that spoke to and could be "folded into" our emerging key concepts (see

Supplementary Table B in the Supplementary Material), to check the comprehensiveness and credibility of our third order constructs. This was guided by an aim to sample for a variety of contexts to cover a range of transport forms, age, gender and locations (Ames et al., 2019) and a focused on tracing analytical themes across the different studies.

In the final synthesis step, we moved "from viewing the cases as parts of a collection to viewing the collection as a whole" (Doyle, 2003). That means we re-interpreted their "storylines" (Noblit, 2016) to develop our own line of argument. Here we deliberately focussed on the potential for "change". In developing these, we situated our analytical insights within the larger body of recent mobility studies.

3. Findings: Third order constructs

In our first step of translating insights across the chosen studies using Bourdieusian framing, we describe how mobility practices are the result of habitus, embedded in fields; how change in actors' mobility practices occurs at different scales and temporalities; and how local mobility practices are shaped, but not determined, by material infrastructures and social structures.

3.1. Mobility practices are the result of habitus embedded in fields

In most of our index papers, mobility practices were framed as arising from habitus in particular fields. For Bourdieu (1977, p. 72 and

78), habitus refers to “systems of durable, transposable dispositions” and the “generative principle of regulated improvisations”. Elsewhere he referred to habitus as “embodied history”, the (mostly implicitly learned and internalised) “rules of the game” (Bourdieu, 1980). Habitus is thus learned in and shared by social groups identified through intersections of gender, social class, ethnicity and other socially structured dimensions. A key way in which habitus was evidenced across the studies was dispositions towards particular travel modes. Cycling is an example. In London, the relatively low cycling rates made “the cyclist” stand out in their peculiarity and render this practice “unthinkable” to some, or at least requiring to be accounted for. Steinbach et al. (2011) suggested that for particular groups, cycling has gained particular symbolic meaning as an “accomplishment”, for example of leading a healthy and sustainable lifestyle, being free or having control over one’s travel through the city, whereas for other groups cycling seemed to require a particular (fit) body or outfit (see also Nettleton and Green, 2014). The latter, in Bourdieu’s terms, may not know the rules and definitely not play the game (of being the “right kind of cyclist”). More strongly, cycling was reported as remaining completely unthinkable for young adults in urban Northern Ireland (Green et al., 2018), a mode suitable for tourists and associated with “other places”.

One such place might be Cambridge, where being a cyclist might be professed as demonstrating one’s belonging to a locality and a shared pervasive cycling culture (see also Aldred, 2010) rather than as signifying belonging to a particular social group or class (Guell et al., 2012). Yet, cycling here was also socially marked – and while cycling was not particularly gendered for Cambridge residents, this is nonetheless a largely White and relatively affluent population, as few can afford to live within Cambridge rather than its sprawling commuter belt (Goodman et al., 2012). What might be for some more of a performative habitus of being “keen cyclists” – describing a lifelong habit from childhood, a favourite pastime or mode of transport of choice – was therefore thwarted by unaffordable housing, long commutes, family responsibilities or ill-health (Guell et al., 2012). Being a cyclist (or driver or bus passenger for that matter) played out in more ambiguous ways in this study than in London, possibly at least partly because multi-modal transport use was more of a focus in this study. In any case, “[t]he possibility of identifying with more than one habit or identity (“motorist”, “cyclist”, “pedestrian” and so on) at the same time challenges the assumption, implicit in most public discourse about transport policy, that such groups might be discrete and even hostile.” (Guell et al., 2012, p. 238). In such contexts, transport mode choices may not do the “work” of distinction.

Importantly, mobility practices are embedded in fields. “Field” is a somewhat ambiguous concept in Bourdieu’s writings, who cautioned “I do not like professorial definitions much” (Bourdieu and Wacquant, 1992, p. 95), but “may be defined as a network, or a configuration, of objective relations ..., relatively autonomous social microcosms” (p. 97). In essence, though, to extend the imperfect metaphor of the “game”, the field is the domain in which practices happen, follow specific rules or regulations, and have meaning. For Bourdieu, this included fields such as those of economy, education or art: relational networks of actors, institutions, values rules and beliefs, in which actors were playing their game of tacit rules (Bourdieu and Wacquant, 1992). Each of our index studies focused on mobility practices that were orientated to slightly different, if overlapping, fields: commuting (Guell et al., 2012; Steinbach et al., 2011), sociability (Goodman et al., 2014), transport (Green et al., 2018; Nimegeer et al., 2018), and sport (Nettleton and Green, 2014). These “fields” are very different. That is, although each study focused on “mobility” as the topic, the field most relevant for the practice was not necessarily travel or transport. Moreover, the dominant field in terms of actors’ own orientations was not always congruent with the initial framing of the research. Thus, for example, for young bus travellers in London, Goodman et al. (2014) suggested that the key domain for young people was “sociability”, not necessarily getting from A to B. Young people engaged in activities and rules of “being with

friends”, and travel as an incidental means to this end, with buses providing a candidate alternative not to other transport modes, but to being on the street, or in a bedroom. Similarly, for young people in Northern Ireland (Green et al., 2018) and residents of a Glaswegian neighbourhood severed by a new motorway (Nimegeer et al., 2018), it was social connectedness that was at stake. For older fell runners (Nettleton and Green, 2014), the rules of the game were rooted in the field of sport or leisure, not travel. Commuters in Cambridge explicitly reported operating across fields in travel – combining their journeys from home to work and back with leisure pursuits of getting exercise and enjoying nature on their bike, or with “me-time”, a book or a favourite radio programme on public transport or in a car (Guell and Ogilvie, 2015; Guell et al., 2012).

When there is slippage between habitus and field, mobility practices such as use of particular transport modes can become topicalised as potentially performative (or even constitutive) of identity. In the case of Cambridge, predominantly car-driving commuters nonetheless proclaimed their commitment to cycling as the “typical” mode of transport in their town (Aldred, 2010; Guell et al., 2012). The included studies also reported several examples of gendered identities as being performed, ambiguous or seeming out of place in relation to mobility, and several of the index papers related mobility practices – of cycling, walking, taking a bus, driving – to dispositions of social groups. This was most explicitly conceptualised in Steinbach et al.’s paper (2011, p.1123) that set out to explore “why the meanings of cycling might resonate differently across urban, gendered, ethnic and class identities.” It is this intersection of context and social structure that was highlighted in the paper, positing that being a particular “kind” of Londoner may entail a habitus in which cycling is more or less likely. Steinbach et al. (2011) discussed how cycling in London can provide a repertoire of alternative and resistant gendered performances, such as those of women explicitly citing their cycling as disrupting dominant discourses on femininity around presumed worries about hair or fashionable outfits.

3.2. Local mobility practices are shaped, but not determined, by material infrastructures and social structures

The second of our third order constructs folds the “structural” back into practice theory, shifting the lens from individuals to the social and material relations which pattern dispositions and habitus. What makes cycling a relatively normalised practice in a “cycle city” like Cambridge or an “accomplishment” in London? Social fields are enacted within local and global economies that shape how and which practices are socio-culturally valued. For instance, Green et al. (2018) point to the ways in which young adults in rural areas are expected to contribute to local transport economies as car drivers, and (Steinbach et al., 2011, p. 1124) point to the importance of understanding Londoners’ cycling practices within the context of a “cycle un-friendly” city, despite political will to raise levels of cycling and support a comprehensive public transport system. They question “what conditions make possible ‘the system’ (policy or training institutions, equipment vendors, trainers, etc.) that arises to enable (say) cycling to be seen as a field of practice in itself?” (Steinbach et al., 2011, p. 1124).

As the physical and material conditions present in different places are largely driven by political structures valuing different transport modes in different ways, more or less supportive transport systems, in turn, shape the visibility of practices. As Nettleton and Green (2014, p. 245) note: “It is not that social class (or indeed ethnicity or other social categories) explains or in itself predicts their differing likelihood of cycling - but that these ethnic and social parameters constitute the conditions of what is possible and normal, on the one hand, or unusual or idiosyncratic, on the other.” Similarly, Green et al. (2014, p. 278) argue that young Londoners quickly adopted bus travel because of the universality of the scheme with its “emergent properties [that] include shifting travel norms by establishing bus travel as the default, lowest common denominator mode for group travel; and the increased mobility

options that young people enjoy when both they and, crucially, (almost) all of their friends have free travel.”

Yet most of the studies point to important nuance in how these shape actual practices that could be best understood in terms of the symbolic capital that is (re-)produced but also resisted or questioned. Beyond more logistical reasons, commuters in Cambridge explicitly explained that cycling may well be their main form of transport and safer than in other UK cities, yet they thought it was nonetheless quite unsafe or not accessible to all and were “keen to make a political statement about the adversity of active commuting in their setting. They stressed that ‘something needs to be done’ to encourage active travel and reduce traffic congestion” (Guell et al., 2013, p. 7). Here, high symbolic capital and a strong disposition for cycling might allow for relatively little institutional commitment towards sustained economic capital invested into the field. In Northern Ireland, young people did not necessarily buy into the car as a status symbol or as affording them with automatic independence and freedom. On the contrary, “[d]riving was positioned as a contribution to inter-dependent shared local transport economies; a practice that entailed considerable collaborative risk work; and as an achievement that often required financial collaboration.” (Green et al., 2018, p. 25).

3.3. Change in actors’ mobility practices occurs at different scales and temporalities

In line with their public health applied orientation, all our index papers attended to how practices *change*, as well as how they persist and are reproduced. The conditions under which practices change has its strongest conceptualisation in Nettleton and Green (2014) paper, which aimed explicitly to explore modes of transformations in practice, and identified specific cases where change was “unthinkable”, when it was anticipated but “thwarted” and when attempts to change practice was “resisted”. Such changes depended on practices being out of question, out of place or aligned with habitus and fields, and on fields being “malleable”, that is capable of being changed (Nettleton and Green, 2014). Reading the studies into each other entailed organising change as resulting from changes in fields and changes in recruitment/defection to practice, often as actors change fields. We also attended to different *qualities of mobility practice change* across these types. These included scale (minor changes to routines; major changes with consequences for habitus across numerous fields); temporalities of pace and duration (experienced suddenly or as gradual social change; swiftly routinised or slowly developing); and agentic positioning (whether change was sought, embraced, unwelcome).

Practices change *when the field itself changes*. This can be as a result of “pedagogy” (Yang, 2014), such as policy interventions that explicitly aim to shift the boundaries or affordances of a field, such as through offering free bus travel for young people (Goodman et al., 2014), introducing congestion charging for cars, making it less appealing to drive (Nettleton and Green, 2014), or providing a new busway to offer new routes and spaces in which to “do” commuting (Guell et al., 2012; Kesten et al., 2015). But fields are also malleable as a consequence of less overtly strategic processes, such as longer-term developments of technologies or social structures that shape fields. In Glasgow neighbourhoods affected by a new motorway, residents experienced severance from people and facilities against the backdrop of wider social change: for example, a decline in local grocery shops and an upsurge in betting shops, takeaways and money lenders that amplified the experience of dislocation (Nimegeer et al., 2018). Bourdieu imagined social and generational change to affect fields that then require habitus to adapt to it – or conversely, to require habitus to change and fields to be malleable to such change. Yet, in his concept of the “hysteresis effect”, Bourdieu (1977, p. 83; Yang, 2014) pointed to the “structural lag” times of such adaptations and reconfigurations that then expose these misalignments. The hysteresis effect might be a useful concept in understanding how candidate transport modes in London have been starting to realign

towards cycling as the healthier, more sustainable way of transport, with “driving as the new smoking”, a practice that increasingly requires defending (Green et al., 2012); or, conversely, how cycling might become an increasing marker of affluence where one needs to be able to afford house prices within cycling distance of work (Goodman et al., 2012).

Mobility practices also change *as actors move into different fields, accrue or lose capital*, from the cycles and disruptions across individual life courses. People start careers and families, change jobs (and their children change schools), move house, retire, or experience divorce or illness; all of these often result in changes in mobility. A change in mobility practices due to ageing might thwart the joy of cycle commuting (Guell et al., 2012) or fell running (Nettleton and Green, 2014). A change in jobs and resulting relocation to a car-centric environment might also thwart an avid cyclist’s favourite transport mode. Bourdieu (1980) suggested that habitus affords us with the internalised disposition to respond suitably to such circumstances as changes within fields of employment, family, etc., yet changes might mean a move between fields or losing capital,¹ and open up the actor to social sanctioning when dispositions are “ill-adjusted” to such changes. While such life course changes have been discussed as potential intervention points for “breaking” unhealthy habits (Verplanken et al., 1997), such changes are “deeply embedded in our social lives and reflects the multiplicity and messiness of everyday life” (Guell et al., 2012, p. 238) that might not afford change into the “right” (healthy/sustainable) direction.

Many such life course changes entail deliberate changes in and to other fields (e.g. employment) but cause incidental changes to mobility itself. Across the studies, authors also attended to agency, in the form of deliberate, resistant practices, “counter-narratives” on the part of actors, and from deliberate pedagogy (Yang, 2014) as a strategy of effecting change, either on the part of authorities (through, for instance, introducing a busway, or free travel), or of individual actors, who reported on occasion “modelling” the normative changes they wanted others to adopt (Steinbach et al., 2011). What appeared to be resistant or marginal mobility practices in the transport field could be congruent with other fields. In Cambridge, for example, participants explained why they preferred driving or taking the bus over cycling, or why the fastest possible commute is in fact not always wanted because being stuck in traffic could add to their wellbeing through “me-time” or a lengthy bus journey could enable social connections (Guell et al., 2012). Commuters here countered “public scripts”, just as some cyclists in London embraced the relative “strangeness” of cycling (Steinbach et al., 2011).

These examples point to the temporality of changes. While fields might change slowly over time, a suddenly introduced new bus pass for young people in London can lead to an equally sudden increase in their freedom and independence of travel and a swift “acquisition of ... additional capabilities” (Goodman et al., 2014, p. 278), or a sudden illness bring an immediate halt to ambitions to cycle (Guell et al., 2012). Smaller scale and rapidly experienced changes – the free bus pass, the new bus service – might have less wide-reaching influence on habitus, yet still require a shift in understanding rules in those who inhabit the field or are enticed to move into this field. These might require “fledgling efforts” of acquiring new skills ... to accomplish a move from novice to practitioner ... (Nettleton and Green, 2014, p. 245), or the slow planning and trialling of a new practice (Kesten et al., 2015).

¹ Capital can be economic, but also social (status or social position), cultural (understanding the right mannerisms, tastes and aesthetic), or symbolic (“the form that the various species of capital assume when they are perceived and recognized as legitimate” and prestigious. Bourdieu (1989). *Social Space and Symbolic Power. Sociological Theory*, 7(1), 14–25. <https://doi.org/10.2307/202060>) Bourdieu (1980). *The Logic of Practice*. Stanford University Press.

4. Discussion: A storyline of practice change

Drawing on diverse studies, but all from the UK, our meta-ethnographic analysis points to three key findings about mobility practices. First, they result from habitus embedded in diverse fields, including those beyond transport such as commuting, sociability or sport. Second, social and material infrastructures are important, but they do not determine change. That is, actors in fields exercise agency in relation to change, but they do so in the context of wider structural determinants that shape whether changes in mobility practices are likely to be feasible, thinkable, thwarted or unthinkable. Third, change happens as actors change fields, and/or acquire or lose capital, and as social fields themselves change; this happens across a number of scales and temporalities. That is, practices can be malleable.

To synthesise these third order constructs derived from the case studies, our own “storyline” (Noblit, 2016) was orientated to understanding what the conditions for change in mobility practices, for example as outcomes of public health interventions, might be. We suggest, first, that mobility systems are clearly complex, in two senses. First, they are complex in that context shapes both how systems and actors within those systems “behave” at the local level. While this is inevitably a rather routine finding of any qualitative enquiry (or in fact any complexity-informed analysis), the second aspect of complexity is more pertinent. Mobility systems are complex in that outcomes from interventions are neither unilinear nor necessarily predictable from aggregations of individual practice changes. However, this does not mean that there are not transferable findings that can be applied to how systems (rather than individuals) behave. Here, our storyline might be expressed as: moving towards “healthier” states requires changing habitus such that “healthier” practices align with fields, and that interventions take sufficient account of the various “capitals” of actors in the field, including material, infrastructural and social capitals.

A necessary condition might therefore be material contexts. Promoting cycling or public transport requires that bicycles or buses exist and are accessible; safer cycling infrastructure or affordable public transport might be necessary conditions for achieving wider population uptake of non-motorised transport. However, these are not sufficient conditions. Using cycle routes, taking up walking, or reducing car travel do not happen because infrastructure is provided, but because the new fields this infrastructure opens up are resonant with the habitus of new recruits to the field. As Goodman et al. (2014) pointed out, it was the universality of free bus travel that changed young Londoners’ mobility so quickly. In this example, the rules of the game changed to act as a “tipping point” to shift symbolic capital and made buses attractive, because it was congruent with other fields (sociability, which prioritised modes that enabled young people to travel together) and (by being universal) avoided the negative symbolic value that might attach to subsidised transport. In this example, changed rules of the game provided a rapid “tipping point” to shift symbolic capital and made buses attractive. A recent systematic review of travel studies across Africa reiterated the importance of considering how interlinked dimensions of power act as determinants of mobility practices. These include the legacy of colonial structures (e.g. Ghana) and apartheid (e.g. South Africa) that still underpin social inequalities and differential economic, ethnic and gendered access to mobility (Foley et al., 2022). The specificities of power relations will be context dependent: what is generalisable is that these need to be considered.

These power relations change not only the conditions for practice change, but also the health effects of practices. Shifting transport systems to favour more active modes without investing in public transport, for instance, can merely exacerbate the transport advantage of those already socially advantaged (see e.g. (Sheller, 2015) on the racialised impact of active travel policies in Philadelphia). Health effects might accrue not from the behaviour itself (such as walking) but from the practice and its meanings in context. Thus, cycling may be health promoting for affluent commuters in high income countries, yet in lower

income settings, cycling is often more dangerous, and marks the inaccessibility of motorised transport (Le Gouais et al., 2020). Similarly, in a rich but highly socially inequitable country like the UK, walking can be health damaging rather than salutogenic when it is the only option, putting non-car drivers at a disadvantage for accessing services and livelihoods, causing stress, and symbolically underscoring marginalised lives (Bostock, 2001).

These examples suggest something of the complexity of shifting transport systems towards healthier states, but also some underlying principle issues that may be transferable across context. That is, both mobility practices and their likely health effects in any particular place need to be “not merely deduced from either habitus or field, but from the interaction of capital, habitus and field” (Yang, 2014, p. 1523). Close attention to how these interact might suggest points at which interventions can change fields, or change actors’ engagement with fields.

4.1. Strengths and limitations

Several limitations need to be acknowledged in our synthesis, which are typical of meta-ethnography. We adopted the original meta-ethnographic approach developed by Noblit and Hare (1988), which synthesised conceptual insights across several (of their own) qualitative studies, rather than conducting systematic reviews of comprehensively searched bodies of evidence. This results in a purposively sampled dataset of studies largely conducted with our own involvement, using a similar theoretical lens, and including a limited range of settings, all from the UK. Drawing on index cases that were largely co-authored by the team has advantages in that we were familiar with the data quality, contexts and nuances, but also limitations in that familiarity may have undercut analytical distance. This was offset through combining studies familiar to only one or two of the author team, and checking the comprehensiveness and credibility of our interpretations with the wider ACTS Study’s set of publications. However, focusing on a small and selective corpus of work, as meta-ethnography does, risks simply generating the same credibility challenges as those posed by single ethnographies, namely that potential evidence users might be concerned about the limits to transferability and context-dependency of theoretical insights.

Noblit (2016) has suggested potential responses to critiques of the often non-exhaustive nature of meta-ethnographic synthesis that retain the strength of its qualitative, interpretive and critical nature. In the spirit of an “extended case method”, this could include extrapolating insights to broader societal context. “For meta-ethnography we could adapt this logic and give up the search for ‘like cases’ in favour of ones that are nested in others (a health practice, nested in professions, organizations, health policies, social understandings of health, economies, etc.)” (Noblit, 2016, p.16) In our own study, this could entail considering in what way our storyline of practice change fits within transport policy, city planning or broader social studies about mobility and youth, race or gender, or testing the storyline against examples from deliberately chosen contrasting settings, for example of transport practices in lower and middle-income country settings.

4.2. Implications

We have used a worked example to show how meta-ethnography can help provide transferable theory in that “sweet spot” that both accounts for complexity, context-dependence and contingency, and has tractable implications for selecting or developing policies that can move transport systems to healthier states. We have shown how cycling, walking, driving or taking the bus are more than “individual behaviour” but reflect an internalised system or rules of a game (habitus), which operate differently in different contexts, and this helps to understand why behaviour change requires more than psychological incentives (Arnott et al., 2014; Panter et al., 2017, 2019). The practices might be embedded in a transport system, but also within a youth culture of sociability, or in

leisure and sport (fields), which need to be addressed for different population groups or geographical contexts. Finally, the material infrastructure (capitals) that constitute the transport environment is a necessary condition for supporting change to healthier, more sustainable modes of transport. This is increasingly acknowledged in policy (Active Travel England, 2023), but we argue that the interplay between habitus, fields and capitals in particular needs to be taken more seriously into account in the planning and delivery of effective population-wide intervention strategies.

We note that the selective choice of UK studies in our sample shaped an implicit assumption that “healthier” equated to systems which supported more active travel, rather than ones which (for instance) might produce more equitable transport access. With this clarification, we can highlight examples that illustrate the kinds of interventions that do take sufficient account of the various “capitals” of actors in the field, including material, infrastructural and social capitals, to maximise the likelihood that practices can change in alignment with fields. An example from the UK would be Transport for London’s goal of “de-Lycra-fying” cycling “to normalise the image of cycling” (Goodman et al., 2014, p. 5). In the context of providing enhanced infrastructure for cycling, including hire bikes and safer cycle routes, this explicit attempt by the Mayor of London successfully shifted the symbolic associations of cycling, reducing the social capital needed to adopt the practice, and increasing cycling rates (Greater London Authority, 2013). Another example is the quote used by the Delhi High Court in judgement in favour of the development of a rapid bus transit system, that “[a] developed country is not one where the poor own cars. It is one where the rich use public transport.” (PUDR, 2012). Here is an explicit attempt to not only provide necessary infrastructure, but also to shift the “class” associations of public transport in urban centres and reduce the health harms of rising private car dependence.

5. Conclusion

Meta-ethnography served to identify transferable insights from a range of small-scale empirical studies to inform interventions for changing mobility practices. Our synthesis allowed us to test insights from individual studies against other contexts, for example to interrogate what makes cycling a normalised practice in a “cycling city” like Cambridge or an “accomplishment” in London, and for whom. Driven by our selected index papers, we used a Bourdieusian framing around configurations of habitus, capital and fields to understand how particular mobility practices might be common, desired, changeable or unthinkable, within particular material and social structural contexts. We have suggested that although public health interventions are directed at complex systems, where outcomes (in terms of both practice change and health) are likely to be nonlinear, our meta-ethnography generated some transferable findings that can be of practical use in planning for public health to operationalise this complexity. First, a necessary condition is the material infrastructure required for the desired population change. Second, considering how population groups are likely to shift how they travel involves considering the overlapping fields (transport, leisure, sociability etc.) in which their mobility happens, and the practices within them. Third, it is important that policy attends to the interplay of habitus, field and capitals. When interventions are evaluated for health and health equity gains, it is vital to ask what sort of change takes place (of fields or actors), and what underlying power relations these expose (for example, whether unequal policy solutions around sustainability and public health and their fields are structured by middle-class habitus). Whilst specific interventions have to be planned in the light of local contexts, we have shown that insights derived from meta-ethnography can elicit underlying principles that can support shifting systems to healthier states.

Funding

This project is funded by the Academy of Medical Sciences and the Wellcome Trust (Springboard - Health of the Public, 2040 [HOP001 \1051]). JG and CG are supported by Wellcome Trust (WT203109/Z/16/Z). DO is supported by the Medical Research Council (Unit programme numbers MC_UU_12,015/6, MC_UU_00006/7). For the purpose of open access, the authors have applied a CC BY public copyright licence to any Author Accepted Manuscript version arising from this submission.

Credit author statement

Cornelia Guell: Funding acquisition, Conceptualisation, Methodology, Formal analysis, Writing – original draft, Writing – review & editing. David Ogilvie: Funding acquisition, Conceptualisation, Writing – review & editing. Judith Green: Funding acquisition, Conceptualisation, Methodology, Formal analysis, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The meta-ethnography draws on published papers co-authored by the authors. There are no other potential conflict of interest.

Data availability

This study did not generate any new data.

Acknowledgements

We would like to thank the collaborators on this Academy of Medical Sciences Springboard award who helped to conceive of the study: Mike Kelly at the University of Cambridge, and Ruth Garside and Emily Haynes at the University of Exeter. We would also like to thank all funders, primary investigators and primary qualitative researchers of the following included studies. Commuting and Health in Cambridge: National Institute for Health Research (NIHR) Public Health Research programme [project number 09/3001/06]; primary qualitative researchers Joanna May Kesten and Caroline Croxson (nee Jones). Traffic and Health in Glasgow study: NIHR PHR [11/3005/07]; primary qualitative researcher Amy Nimegeer. Graduated Drivers Licence study: NIHR PHR [14/232/01]; co-PIs Nicola Christie and Lindsay Prior; primary qualitative researchers Rebecca Steinbach, Patricia Mullan and Emma Garnett. On the Buses: NIHR PHR [09/3001/13]; primary qualitative researchers Alasdair Jones, Anna Goodman, Helen Roberts and Rebecca Steinbach. Cycling in London: NHS Camden and Transport for London; primary qualitative researchers Rebecca Steinbach and Jessica Datta.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2023.116253>.

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