

Changing mobility practices – can we learn from crises?

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Zusammenfassung: Die moderne Gesellschaft und ihre Mobilitätssysteme sind auf komplexe Art und Weise miteinander verwoben. Materielle Infrastrukturen, Ressourcenflüsse und Artefakte interagieren mit den sozial ausdifferenzierten Systemen des Alltagslebens. Diese können als Bündel von Alltagspraktiken verstanden werden, wobei Alltagspraktiken selbst sozialen Mustern, Normen und Erwartungen unterliegen. Praxistheorien eröffnen eine konzeptionelle Perspektive auf die Muster geteilter und sozial geformter Verpflichtungen, Routinen und Lebensweisen. Aufgrund der komplexen Verwobenheit von Materialitäten, Zeitlichkeiten und Sozialverhältnissen zählen viele qualitativ unterschiedliche Ereignisse und Situationen als Krisen, Störungen oder Notfälle, die Mobilitätspraktiken beeinflussen sowie die mit ihnen in Raum und Zeit verbundenen Praktiken. Die Klimakrise, die Covid Pandemie und Krise der Lebenshaltungskosten sind gegenwärtige Beispiele, die vor diesem Hintergrund reflektiert werden können. Anhand des Beispiels der Veränderung von Mobilitätspraktiken und anderen Praktiken aufgrund der Covid-19 Pandemie stellen wir konzeptionelle Überlegungen zu einem praxistheoretischen Verständnis von des Wandels von (Mobilitäts-)praktiken an und werfen dabei drei kritische Punkte auf. Diese betreffen das Definieren und Sprechen von Krisen, den Wandel von Mobilitätspraktiken und die politische „Steuerung“ des Wandels von Praktiken.

Abstract: Modern society and its mobility systems interweave in complex ways. Material infrastructures, resource flows and devices interact with socially differentiated systems of everyday life. These are bundles of common everyday practices, themselves subject to social patterning, norms and expectations. Practice theories provide a way of thinking about this level of patterning, of shared and socially shaped obligations, routines, and ways of living. Because of this complexity of interweaving of materiality, temporality, spatiality and sociality, many qualitatively different events and situations can count as crises, as disruptions or emergencies, which affect mobility practices and the practices they connect in time and space. The climate crisis, the Covid pandemic, and the cost-of-living crisis are contemporary examples on which we can reflect. We reflect on how mobility and other practices have changed in response to Covid as the basis of a conceptual reflection on practice theory's understanding of mobility practices and practice change, and conclude with three critical perspectives. These are on defining and talking in terms of crises; on change in mobility practices; and on policy 'steering' of practice change.

Introduction

This paper was written at the invitation of the special issue editors as a conceptual reflection on the question of ‘*how to understand the role of crises in changing mobility practices*’. By way of introduction, we want to highlight to the reader that this is not an empirical research paper, although in order to ground our conceptual reflections, we draw on a UK empirical research project, *Transas1* (Anable et al. 2022, Anable/Marsden 2021), with which we are most familiar. The paper is therefore structured differently to a research paper, in a way which iteratively develops a conceptual argument, as follows.

We first briefly interrogate the concept of crises, and the related framing of disruptions, as ways of thinking about processes and events that change how people move, more or less suddenly or gradually. We propose that what is more interesting, conceptually and theoretically, than the surface-level ‘traces’ of disrupted travel behaviours, are the wider shifts in mobility practices, because what crises and disruptions disrupt are the coordination of activities and expectations across society.

We then use this insight to focus on understanding changes in mobility *practices*. We argue that mobility practices are central to understanding the changes observed during and after crises and disruptions because the perspective of collective coordination means paying attention to the aggregated performances of ‘being mobile’ rather than the individual scale. What this means is explored theoretically using a particular framework of social practice theory (SPT) applied to mobility.

We then explain our settling on Covid as an obvious and contemporary example of what we are reflecting on, pointing out that it was interwoven with other, slower ‘crises’, and briefly summarising the headline changes in travel behaviours that were seen in the UK, during, and beyond lockdowns.

Combining the mobility practice theoretical approach

with this empirical case, we then explore what the traces of changed behaviours, in the UK through Covid, mean in terms of changed mobility practices. Specifically, we apply Vollmer’s (2013) insight that what changes in crises or disruptions is the ‘coordination of activities and expectations’ – key elements of a social practice theory of social action. We focus on two practices, online shopping and working from home, which are highlighted as being crucial for crisis-triggered travel changes, and with which the authors have some previous experiences.

The Discussion then reflects on whether the application of framings of travel behaviour changes as a) crises/disruptions and b) mobility practices is productive of insights about social (and specifically, mobility) change. The Conclusions reinforce these productive insights, but also refashion them as critiques, of ‘crises’ as discrete and unique social entities, of their desirability as models for precipitating change, and of the very idea of intervening rather than steering change.

Understanding Crises

It is necessary to start with our understanding of crises and why we might use them as a lens. Bures (2020: 6) problematizes the term crisis, reflecting that “modernity is an ‘age of crisis’” where crises in domestic politics, health care systems, environmental processes, economics, culture and international affairs are all simultaneously unfolding. As such, if everything is ‘in crisis’ then crisis is in fact a normal state and so, in an abstract sense, nothing is in crisis if we identify a crisis as something exceptional. Bures (2020) also points out that the invocation of crisis is, itself, a matter of interpretation. For example, the Icelandic Ash Cloud event in 2011 was interpreted as a crisis in some quarters, exposing the growth of aeromobility and the increasing risks in social patterning (Birtchnel/Büscher 2011). However, only around 11% of the world’s population flies and so, for the overwhelming majority of people (even in the countries affected), it could be seen as a case of ‘Crisis? What crisis?’. Rather than seeking commonality in the cau-

1 <https://covid19transas.org/>

ses of ‘crises’ Bures (2020: 13) suggests that a common theme is a crisis being understood as a call to action. If we look across the range of different ‘popular’ crises such as the cost-of-living crisis, climate crisis or Covid it is possible to see interdependencies but also to recognise very different geographical and historical origins to the issues and to understand quite differently the impacts of each on society, the political system, technological change and wider social practices.

So, crisis and crises are difficult terms to work with. More recently, there has been a growth in the study of ‘disruptions’. Here, the literature is more likely to refer to more episodic events (e.g. flooding of an area or the pandemic) than it is to longer-term changes such as e.g. the increased precarity of low-income communities as a result of the retrenchment of the welfare state. Marsden (2024) reviews the literature on the study of disruptions and finds that this too is subject to a lack of definitional clarity, issues of scale, and a failure to consider how to reference change against some notion of normal. There are also different traditions in those who manage and operate infrastructure compared with those who study how infrastructure affords opportunities for mobility, which all make the field quite disparate and difficult to summarise. For this chapter, however, there are some important strands of the work which explain why examining mobility through a practice lens is helpful.

First, Graham and Thrift (2007) identify the importance that moments of breakdown have in revealing how things really work. More than this though, they argue that innovation and learning happen during these points of breakdown and it is the processes of “repair and maintenance” (Graham/Thrift: 3) which reveal insights into how everyday life works and how change happens. This framing of constant disruptions and ongoing change through repair as being a normal part of everyday life challenges dominant ideas of equilibrium and understanding change from some fixed perspective of a benchmark of normality. If we accept that social change is always an on-going process then disruptions must be part of that and,

equally, the nature of the response to such events must be conditioned by wider processes of social change. Marsden (2023) argues for example that one response to Covid (the jump in on-line shopping) was only possible because of an on-going transition to on-line shopping; had the pandemic hit 20 years earlier, this would have been impossible to achieve. Alternative provisioning models would have been deployed. Vollmer (2013: 2), studying a wide range of social disruptions well beyond the transport domain, similarly concludes that in periods of disruptions, what is disrupted is the “coordination of activities and expectations” within a collective entity. This framing enables a wide range of different impacts to be considered. Both transport failures and wider impacts (such as the knock-on impacts of the Ukraine-Russia conflict and Covid) can impact on the coordination of activities and also on what is expected from people. Covid showed just how much emphasis can be placed on changing expectations about what is possible and how society can be organised.

In summary, crises are continual, to the point that they are no longer crises; disruptions are more discrete, may reveal repair and maintenance and the acceleration of continual and ongoing social changes; and what is disrupted is the coordination of activities and expectations. The latter ties very strongly to the role of practice theory in understanding change.

Understanding Changes in Mobility Practices

Theories of practice offer a unique ontology of social organisation and epistemology of research, which differs in important respects from traditional transport research. We suggest reflection on these differences to ascertain how to study, recognise, and potentially shape change in mobility (or any other) practices.

Practices, time and space

Practices, especially as understood by e.g. Elizabeth Shove and colleagues, (Rinkinen et al. 2020; Shove et al. 2012; Shove/Walker 2014; Watson/Shove 2022),

and particularly as applying to mobility (Watson 2012, 2013) are thought of as theoretical *entities* that are ontologically different from the individual and aggregated *performances* that researchers can empirically access, quantify, and/or explore through research. Or rather, these are two ‘sides’ of a practice, like the two sides of a coin, linked through recursive relations: practice entities are only identifiable through the common elements of most performances, and performances only make sense as instances of a practice with reference to the entity. As Reckwitz (Reckwitz 2002: 249-50) classically explains the distinction, a practice:

“is a routinized type of behaviour which consists of several elements ... a pattern which can be filled out by a multitude of single and often unique actions reproducing the practice”

Different attempts have been made to outline what the elements of such practice entities are: that is, what it is necessary to incorporate into a performance for it to be a successful/proper example. Gram-Hanssen (2009: 154) outlines how the concepts of a number of key theorists’ texts (Reckwitz 2002, Schatzki 2002, Shove/Pantzar 2007, Warde 2005) generally overlap and can be reduced to a ‘three-elements’ model which has become a popular shorthand for operationalising practice theoretical analysis. These elements (adopting Shove et al.’s (2012) terms) are *materials*, *competences*, and *meanings*. In addition, the essential nature of practices as *routines* requires attention to temporalities and rhythms (Blue 2019, Lefebvre 2004). Practices have temporal qualities such as proper duration, timing, regularity and frequency, and also often necessarily fit into sequences and other temporal patterns with each other and with the temporal rhythms of institutions and society (Blue 2019, Zerubavel 1979). Finally, practices take place in specific places, or (especially in the case of mobility practices) along particular paths (Hui/Walker 2018, Schatzki 2002), meaning that practices take place in, and constitute, social space or societal time-spaces

(Schatzki 1991: 653); “social space is in social reality”. What has been called the ‘flat ontology’ of particularly Schatzki’s (2016) practice theory asserts that social reality and social life consists of nothing but a ‘plenum’ of interwoven social practices with temporalities and spatialities proper to their performance.

Practice change?

Shove et al. (2012) suggest that the dual nature of practice as entity/performance means that practice change is a matter of enough performances of a practice changing in a substantial enough way to be recognisable as a change in how it is ‘normal’ to perform the practice. This definition leans on both meanings of normal; statistical and normative. Subsequent performances will be steered by new shared understandings of how it is ‘proper’ to perform the practice. This raises the rather ‘chicken-and-egg’ nature of practice change. Performers follow to a greater or lesser degree the shared understandings and rules of proper practice, but the shared understandings change as a result of changed performances: the recursive essence of ideas of structuration (Giddens 1984), if for a moment we imagine practices as the ontological mediation between structure and agency.

In fact, practice theorists have dedicated at least a decade of thought to how practices change in theory and practice (Bissell 2014, Cass/Shove 2017a, Greene 2018, Shove et al. 2012, Sonnberger/Gross 2018, Welch/Yates 2018). Rather than review these complex mechanisms at length, we draw attention to the fact that practices can change through incorporating *dispersed* practices, or though the ways in which they are *bundled* with other practices. Both have specific relevance to mobility practices and are worth explaining to frame the discussion below. Dispersed practices are a concept Schatzki (1996) uses to describe ways of acting and talking that are shared across different ‘integrative practices’: writing, for example, is required in a host of specific other practices. It only makes sense as practice ‘proper’ when integrated into

novel-writing, report-writing, academic-paper-writing etc. A new practice of technologically-enabled-commute-working by train emerged when using laptops and mobile phones became integrated with train-commuting. Other practices have been incorporated within mobility practices, including laptop-working, but also entertainment, self-monitoring etc. (Cass/Faulconbridge 2017). It is worth noting that these are differently possible with different travel modes, although a common feature is that digitally-based practices are spreading ubiquitously into most.

Bundling of practices is a loose term used by Shove et al. (2012) to describe a number of ways in which different practices can be more or less tightly drawn together through their performances. These bundlings may, for example, be due to sharing material elements or ‘doing-places’; kitchens and bathrooms are classic examples of sites that bundle a collection of specific practices. Regarding mobility practices, so are footpaths, roads, motorways, and service stations. Changes particularly in materials and doing-places may thus transform what practices take place where and when, and with which others. The fact that practice temporalities include sequences, rhythms, and particularly institutionalised schedules, also mean that practices might become necessarily bundled in time, with huge implications for mobility practices and how they can be performed (Cass/Faulconbridge 2016).

Changing mobility practices?

Both examples raise the issue of further defining what a specifically ‘mobility practice’ is. Driving or cycling are mode-specific mobility practices which can be pursued purely for their own sake – as Schatzki would say, the use of the mode itself could be its *teleo-affective structuring*, where the end-in-itself and pleasure of driving, cycling, or roller-skating is the only motivation for undertaking it. However, mode use more commonly functions as a *dispersed* practice integrated into accomplishing specific trip purposes such as ‘commuting’ or ‘going shopping’; the reason

why traditional transport research describes travel as ‘derived demand’ (McNally/Rindt 2008, Mokhtarian/Salomon 2001). These are in themselves therefore fully integrative mobile practices, but given the variety of ways of achieving e.g. commuting by different modes, it then becomes unclear that ‘commuting’ is itself a distinct practice, as it always requires mobility, rather than a collection of mode-specific commuting practices: pedestrian-commuting, car-commuting, cycle-commuting etc. This suggests a typology of mobility practices as either (purely) modal, or mode+purpose (Cass/Faulconbridge 2016), or as mode and activity practices (Kent 2021).

This means that in analysing changes in mobility practices, at the broadest level, we can look for a number of things. Have entirely new mobility practices emerged? These might be travel by new modes of transport, or for entirely new purposes. Have the frequency or timing (rhythms) of physical journeys changed? Have mode+purpose practices changed? Have individual *elements* of mobility practices (materials, competences or meanings) changed? Have there been changes in practice co-ordination and bundling, either of dispersed or integrative practices? Remembering the comments on Vollmer’s (2013) highlighting of changing activity *coordination* and *expectations* in crises, we might also expect that these aspects of mobility practice change are particularly relevant when looking at changes precipitated, consolidated or accelerated by ‘crises’ – understood as shorter-term disruptions which highlight aspects of longer-term ongoing social and environmental changes.

Focusing on Covid

In thinking about multiple ‘crises’ affecting everyday life and particularly mobility practices, different alternatives are available for consideration. In the Discussion below we offer some critical thoughts about the diversity of crises, the qualitative differences between them, and the utility or not of considering them together as the same sort of things. It is enough here to point out that the climate crisis has begun, is

ongoing, and may increase in severity, although its impacts on everyday practices and lives are (especially socially) differentiated. The cost-of-living crisis is similar, but its impacts have erupted (again) and been felt on shorter timescales, but again, with socially differentiated impacts. Our aim in this paper is to interpret the impacts of Covid as part of the on-going process of social change, drawing particularly on longitudinal research with which we are familiar. The ontology of practice theory (in which practice entities can only be seen to have changed in retrospect) to some degree requires a more longitudinal and historical epistemology.

The Transas project (Anable et al. 2022, Anable/Marsden 2022) on which we draw, like many established in the Covid lockdowns, was responsive, and sought to capture change both longitudinally and ‘on-the-hoof’. It was in a sense ‘mobile research’ (Büscher/Urry, 2009) on mobility. Although using large-scale quantitative surveys as its main method, and in parallel with dominant paradigms of transport research, it was primarily concerned with uses of transport modes and modal shift, it involved a hybrid of travel behaviour change and practice change (and at times the changing of mobility practices) research, across several lockdowns and beyond, in the UK. When the research began, it was taking advantage of a ‘crisis’ that immediately disrupted almost all forms of mobility (except for ‘virtual mobility’ (Larsen/Urry 2016, Urry 2002)), and the 6 waves of large scale longitudinal (quasi-panel) surveys allow in-depth analysis of short and longer-terms impacts of the pandemic on travel behaviour and, in aggregate, practices.

In March 2022 the project’s report on ‘changing travel in a post-pandemic society’ (Anable et al. 2022) highlighted amongst other things that:

”many people sustained changes after the lifting of lockdowns; car traffic, particularly in the week and at peak times, stabilised at 10% below pre-pandemic levels; increased working from home played a role in reducing commutes; car ownership fell; shopping shifted slightly from shops to online; and many more people walked more often.“ (Anable et al. 2022: 3)

As of December 2022, the longer-terms shifts in mode use practices were clearer. Regular (3 days a week) car use remained at 88% of pre-Covid levels. Public transport patronage was lower still, with frequent (more than three times a week) train use at just over half, and bus use at around two thirds, of early 2020 levels. Walking levels have remained on average stable; however, in some locations there is a continued increase in the amount of people regularly walking, including to shop at large supermarkets.

Household multiple car ownership dropped: 17.5% of 2+ car households went down to 1 car only. There are interactions here between adaptations made during Covid and because of Covid (according to participants) and those which resulted from the cost-of-living ‘crisis’. Fuel price rises reportedly impacted 15% of switches, more than working from home (3-7%). The cost-of-living crisis was also identified by respondents as important to replacing some car journeys by public transport (20%) or walking and cycling (28%) and the abandonment of some journeys (38%). This represents evidence of combined effects of multiple disruptions and changes.

Working from home (WFH) is frequently cited as a major change in practice since the pandemic, and therefore in mobility practices. First, we observe that around half of the working sample do not have and never had *any* option of home working. Of those that worked from home 100% of the time Transas found that they now travel less across all journey purposes, and have reduced their overall travel more than all other workers. The impacts are not just, therefore, about the commute but about where people spend their time and what transport resources they need to complete activities. It is notable that the temporal shifts have been accompanied by significant reductions in season ticket holding for public transport and parking permits which reflect a shift in the perceived need for physical synchronisation amongst a part of the working population.

Applying the theory to the empirical case

Changes in mobility practices?

Can we say that the pandemic has affected mobility practices? There do not appear to have been entirely new mobility practices generated by Covid, in the same way that technological responses to the climate emergency can arguably be said to have led to (or massively increased) ‘electric vehicle driving/riding’, with its novel fuelling/charging (dispersed) practices. Rather, some existing specific dispersed practices have risen in importance, particularly those enabled by ubiquitous digital technology; such as the practices that massively replaced physical co-proximity (virtual meetings, teleworking, distance learning, online shopping) during the pandemic. The nature of those services has evolved too, such that teleworking is a different experience and more of the population are competent at it. Similarly, a shift in the range of shopping and service opportunities available through on-line platforms emerged such that more practices became realisable at home. These have had a knock-on effect on mobilities. Some of them have continued to maintain an increased ‘share’ of the plenum of practice performances across society. This is a genuine change in ‘normal’ practice, in SPT’s terms. But is it a change in *mobility* practices? Not in terms of the emergence of entirely new practices, or even of new mode+purpose practices.

However, another form of practice change predicted by the theory is of changes in *practice elements* and their availability. The most notable changes to *material* elements of mobility practices (or material arrangements - (Schatzki 2011)) during the pandemic were the introduction of new cycle lanes, with cones or bollards segregating the increased number of cyclists from vehicle traffic while traffic levels were low. Similar infrastructural measures already in use, that were accelerated by the pandemic, include Low Traffic Neighbourhoods (LTNs) (Aldred/Goodman 2020) where barriers restrict cars from areas, and contraflow cycling (Tait et al. 2022, 2023). However, rela-

tive to the total scale of infrastructure people experience, the change for most people in the population would be negligible and some of what was introduced has been removed (Tait et al. 2022).

The most obvious changes in the *meanings* of mobility practice during the pandemic were the buttressing of the car’s understanding as a safe, domestic ‘cocoon’ (Wells/Xenias 2015), driven by the perceptual transformation of public transport into a risky space (Helfers et al. 2022). Public transport usage is still severely reduced in the UK, although in other countries a culture of use appears to have enabled a quicker rebound (Greene et al. 2022). Other broader social changes (e.g. fewer service jobs in city centres) are also relevant.

Changes in practice co-ordination and bundling

These practice *element* changes could be explained and understood largely in terms of traditional transport research. Our discussion of the more interesting and genuinely transitional changes prompted by the pandemic here highlights that changes in mobility practices are not isolated from the plenum of practice. Changes that have persisted and that represent a ‘new normal’ are ones that built on processes of (technical and social) change that were ongoing before Covid but which were not so prominent or, for many, seen as ‘the norm’. The changes precipitated by Covid restrictions were ‘pushing on an open door’ of practice change. These were significantly but not exclusively related to the affordances of ubiquitous virtual and mobile technologies, the ways that these have fragmented and detethered practices in time and space, and the ways in which surrounding systemic features of practice were able to smoothly accelerate change to absorb the pandemic’s impacts and transform it into transition. These systemic features include e.g. systems of goods provision or employment conditions. We have selected two empirical examples (with which we have some research experience) of apparently genuine Covid-accelerated practice change with impacts on mobility to demonstrate SPT

insights on how they represent changing ‘coordination of activities and expectations’.

Food (and other online) shopping

Food shopping is known to be a particularly car-dependent practice (Mattioli/Anable 2017), with the latter study focussing on a ~20% subsample “of ‘gross polluters’ for food shopping travel”, whose weekly car-shopping trips were “responsible for 70.4% of car driver distance and 65% of CO2 emissions for food shopping travel” – across all forms of geography. Thus, our data showing people are visiting bricks and mortar stores less frequently than pre-pandemic – with a 20% reduction in large supermarket trips – represents a major shift in mobility-shopping practice bundling, with significant carbon reduction potential. Some of this change consolidates a slow but long-established shift to smaller, more local food shops, and some is due to a Covid-triggered increase in internet-enabled home delivery which has persisted across a range of goods. The modal share of large supermarket visits has not itself shifted majorly, with car-shoppers largely continuing with this dominant practice.

The changes to virtual ordering and store-provided delivery represent an acceleration of already-existing trends in retail and shopping in general. An SPT understanding and analysis (Cass/Shove 2017b) sees these as changes in different ‘modes’ of shopping – linked systems and practices of provision and consumption which have distinctive and linked spatialities (sizes and locations of shops, provision of storage and display space in-store, and supply chains of different lengths, requiring spaces for deliveries) and temporalities (duration of shopping experience, its regularity or routinization versus spontaneity, periodicity and timing). The Covid restrictions impacted the times and spaces of shopping in ways which enabled the technological affordances of already-growing ‘virtual/online’ shopping to trigger hugely-accelerated demand for home deliveries. This transformed the practices of consumers and of retailers, distri-

butors and producers alike. Dispersed practices of browsing, choosing, and ordering were fragmented and detethered from shops, whilst the mobilities of delivery practices were consolidated and shifted to providers.

We could argue that what we saw - with a strong peak in on-line and then a drop back, but to well above pre-pandemic trends - tells us that how we provisioning has changed. This is not just a matter of individual choice (i.e. the usual focus of transport research on shopping as travel *behaviour*) but of: businesses re-purposing during the pandemic to have a greater or new on-line presence (i.e. changing material arrangements of provisioning practices), greater skills in accessing things on-line (i.e. the competence of online shopping as a practice), and the supply chain changing to acclimatise to higher demand, which in turn impacts the nature of the high street. All of this plays out over time, but we can observe clear current changes in how provisioning is done, with implications for changing mobilities required for key domestic practices of e.g. cooking and general provisioning.

Working from home (WFH)

Similarly to online shopping increases, WFH is a trend which had already been growing slowly, since “the predictions of the 1970s and 1980s ... that swathes of us would be working from rose-covered “telecottages” by about now” (Reeves 2002). Those predictions were enabled again by the spread of ubiquitous ICT as *materials* requiring specific *competences* of working practice. WFH emerged primarily, at first, for managers, then Technology, Media and Telecommunications sectors, and then out into broader office work. Although technologically dependent, the new working practice was also linked to shifts to flexible, agile and mobile working practices (Cass 2016). However, the apparent large potential for home- or tele-working (Javaid et al. 2020, Lyons et al. 2008, Marsden/Docherty 2013) remained largely latent until the pandemic. The technological affordances were necessary, but insufficient, for large-scale practice

change. At first, practice *meanings* e.g. of work/life balance and priorities, might shift, but this also had to be supported by changing norms in workplaces and their cultures, which were slowly being more institutionalised in 2019. These include changing norms about the importance of the *co-presence* of employees in offices and other workplaces, and about the possibility for distributed workplaces and collaboration to be as *productive* as in-office work. These were based on changes in organisations (“less hierarchical in structure and decision authority, less likely to provide lifelong careers and job security, continually reorganising to maintain or gain competitive advantage”) and the nature of work itself (as more “cognitively complex, team based and collaborative, dependent upon social skills, dependent upon technological competence, time pressured [and] mobile” (Ramidus 2015: 24)). Such changes were already anticipated to converge and to affect commuting practices:

“technology and flexible working are changing the way we work ... by creating modern workplaces ... to give staff a better work/life balance. This means greater productivity and efficiencies for employers [and involves] commuter hubs to reduce the need and expense of long journeys” (Cabinet Office 2015).

More prosaically, of course, the practice had to be permitted by changes in terms of contracts, and the degree of flexibility that workplaces gave to workers – the change in expectations we identify as being critical to understanding disruptions. This is one of the key ‘crisis’ related changes which we can clearly identify. Millions of workers overnight went from having roles that must not be worked from home to roles which must. New competences were required, new assemblages of materials and working practices were developed and these cannot be unlearned, even if they cannot be presumed to all continue. A nascent and niche WFH practice was enforced on many new practitioners, and through their persistent, ‘contingently effective’ (Watson 2012) and affectively satisfying (Cass/Faulconbridge 2017) re-performances, a newly

strengthened set of links between practice elements hardened and institutionalised into a normalised social practice; one with (albeit still uncertain) impacts on mobility (Caldarola/Sorrell 2022, Anable/Marsden 2022).

Was the pandemic responsible for this ‘transition’? In 2013, the Work Foundation reported that “the labour market is not changing as much have some might think ... the share of employees reporting formalised flexible working arrangements has also shown little advance over the past 15 years” (Brinkley 2013: 16), but in 2016, they declared the arrival of a ‘tipping point’, with up to 30% of the labour force working remotely at some point (Work Foundation 2016: 5). In 2021, they reported “a surge in remote and hybrid working, increasing from 5.7% of workers in February 2020 to a UK average of 31.5% during the first national lockdown. This remained high into 2021, with an estimated 30% of workers nationwide working from home in December”². Our Transas data suggest that the average number of days worked from home has significantly increased since pre-pandemic times, by ~200% (London, Manchester) to ~700% (Glasgow), across the UK. Although 44% have decreased the amount they WFH since the initial lockdown (which could be expected), 6% of our sample have increased the amount they WFH – the data here as in mode change reveals a dynamic picture of ‘churn’ in different directions. In the 12 months to June 2022, the greatest ‘churn’ in the WFH figures is in those who were 100% WFH under Covid restrictions, 29% of whom shifted to ‘majority (i.e. 50%<x<100%) WFH. This reveals significant shifts in working patterns that are likely enabled by institutional acceptance and/or promotion, to which the Government have responded with a consultation, with the intention to extend rights to flexible working (Department for Business 2022).

In terms of mobility, our analysis shows that WFH is correlated to less travel overall; those who in 2022 were 100% WFH had fewer reported trips (excluding walking, and using wheelchairs, mobility scooters

2 <https://www.lancaster.ac.uk/work-foundation/publications/unlocking-flexible-working>

and stand-up electric scooters), and reduced trip numbers more than other groups. Although all groups showed some decline in travel, the least amount of change was seen in those who do not WFH. Specifically referring to car use the same correlations were apparent, and although the greatest reduction in public transport use was also seen in 100% WFHers, the findings support those of the Department for Transport in 2021: that those who do not WFH are more car dependent for their commute. WFH therefore figures as a genuine practice change (Holmes et al. 2022: 1050) with significant mobility aspects.

Discussion

In the above, a number of key questions have been addressed, and it is worth summarising what we believe we have shown to be potentially convincing answers, whilst also raising some concerns and warnings. The discussion offers these summarising thoughts below the headings of the respective questions.

Is it useful to think in terms of mobility practices when looking at how crises or disruptions affect mobility?

This question was approached at length in thinking through how a particular formulation of practice theory conceptualises mobility practices in particular, and then how the Covid crisis and the more backgrounded climate and sustainability crises have also affected mobility practices. If nothing else, the discussion usefully highlights how applying SPT to empirical examples (albeit in a ‘zoomed out’ overview (Nicolini, 2009)) results in troubling its central ontology and epistemology. It is easier to raise more questions about what constitutes practice entities, dispersed or integrated practices, elements and so on, than it is to draw useful conclusions. Even when changes are apparent (such as in the struggle for public transport to recover modal share, or the shifts to online shopping and working from home), it is unclear how these are best described in SPT terms. It is however

clear that the most significant changes from Covid were not in the modal practices of mobility themselves (driving, cycling etc.), but in the coordination and (un)bundling of different practices *through* mobility: that is to say, in the ways in which everyday life was configured in time and space. New *competences* were deployed and extended, especially those relating to digitalisation and virtualisation. *Meanings* of safety and health became paramount, and it is fair to say that for many, such meaning shifts in priority have also been mirrored in reprioritising travel time, work/life balance, family time and so forth. In other words, what may have changed more permanently is the *teleo-affective* structuring of everyday life in time and space: a supra-practice change.

At the same time, we should be wary of this being an elite narrative. For those who are not ‘knowledge workers’ and symbol manipulators, compulsions to proximity (Urry 2002) have been maintained or intensified. Deliveroo riders must appear at the doors of home-workers at their bidding, nurses and ambulance workers attend wards and the locations of the sick or injured, rail workers have to run services for others. The ‘doing-places’ and ‘doing-paths’ of their daily practices are exogenously determined, along with their rhythms and sequences. If we step back and reflect on the pandemic, in the short-run the only significant transport *system* changes have been a small acceleration in cycle infrastructure in some places, changes in information on bus and rail loading levels and some changes in service provision. Very little change to the material transport network or service patterns is observed. By contrast the changes to societal *expectations* of *coordination* and to the ways that these then feature in the rhythms of everyday life and transport’s role within them changed profoundly. It is, then, in the consideration of *practice* change that the answers to why travel behaviour outcomes have changed can be found.

Is it useful to think in terms of crises? What are crises? Which crises?

The 'boiling frog' metaphor is a commonplace that reminds us that all crises are not the same in temporal terms. Covid appeared, or in political and governance terms was constructed, as a short-term 'intervention' in everyday life and therefore society. Rather like the way in which 'traditional' transport (policy) research has often preferred to focus on short-run interventions where before and after states can be boxed off and the effects of specific changes (artificially) isolated, it seems simple to box off Covid and derive short-run changes. The longer-term effects (e.g. of public transport delegitimisation through meaning changes) are as hard to ascertain as the ever-increasing rings of more indirect rebound effects: a problem of issue framing and boundary work common to environmental studies (Metze 2017). Crises are also differentiated in their systemic and social impacts. The cost-of-living crisis is slower moving than Covid and in important ways similarly (infra)structural and systemic to the climate crisis. Crises, in common and in combination, have vastly socially differentiated effects which are often cumulative for the most vulnerable (Sultana 2021). In the meantime, weather-related *disruptions* are likely to increase as localised but significant disruptions to mobility that result in complex responses and longer-term re-adjustments, even when a 'return to normal' is achieved to some degree. In important ways these 'crises' are of different natures in temporal, and systemic terms, but also in terms of where their boundaries of effect can be drawn. Covid may have legitimised Low Traffic Neighbourhoods through experience, the climate crisis may increasingly legitimise electric micromobility. Effect, response, and adaptation are moving targets in constantly evolving systems. So, the crisis monitor is not so helpful beyond thinking through the severity, scale, timing and nature of the more profound issues which are being invoked. We see more commonality in Bures' (2020) view that crises are more commonly invoked as a call to action than as a co-

herent field through which learning about changing mobility practices has yet been achieved. Has there been significant change in mobility practices as a result of multiple crises?

Many changes of different types have been highlighted above, but which are or will be significant? We have stated that the most significant changes are probably those to *connections* between mobility practices and the other practices they connect in time and space. A lot of that is to do with how the linked/bundled/adjacent practices themselves are changing, which can be usefully thought of in terms of recursive relationships between systems and practices of e.g.: provision and of consumption; of work and home; work and leisure.

There are however identifiable trends in *how* things are changing, where they are changing. Changes in practice that have stuck have largely built on change that was already under way. For example, digitalisation has enabled increasing flexibilities in time and space due, linked to the ability (of providers and consumers of goods or services) to splinter practices into component parts, and untether them (in both time and space). The historical seeds of practice change are, in some senses entirely expected. However, in policy terms the search for change versus normality has significantly overlooked that many of the answers were already there, at least in some communities and some practices. It is not that no innovation in practices occurred, but the dominant response was the spreading and acceleration of existing means of doing. This in turn offers insight into where responses to other policy problems may be found.

Are these/any such changes 'positive', in terms of e.g. sustainability?

There are multiple practice changes on-going which are complex and interact with each other. Understanding if e.g. more WFH is a sustainability gain requires also understanding whether fewer people commuting makes the public transport system more or less viable for example. We have seen quite a lot of volatility in responses during the Covid period and this

reinforces the need to understand these changes over time and to track shifts in the longer-run. Current research gives a series of sharp images of small fields, which convey very little information with great clarity, and blurry images of a much wider picture, which give an impressionistic account of the general direction of travel. The largely historical epistemology of SPT relies to a large extent on such impressionistic, retrospective analysis, which can be supplemented by designing longitudinal research with a SPT framing.

The dominance of the policy desire to “return to normal” closes off considerations of the potential to steer the changes observed towards more sustainable outcomes. If such changes were embraced more as a part of how society is shifting, then different tools to steer these changes would be deployed. Similarly, focussing on the transport outcomes rather than the changing practices which are shaping those outcomes leads to discussion on subsidies and service level cuts rather than on what (changing) patterns of mobility demand need to be served in the future. Whilst the reality is somewhat less binary than painted here, there are clear opportunities for practice theory to inform policy design.

Conclusions

If one takes the perspective that disruptions are part of everyday life then there are opportunities to capture insights from them such as experiences of flexibility, of experiment, of habit discontinuity, and possibly simply of different ways of travelling (as well as different ways of doing education, shopping, leisure, work etc.). Change might also have the effect of altering affordances for more sustainable mobility, sometimes in the material environment (new bike lanes, LTNs), but also in changed resilience and flexibility at the individual and collective level (in competences and understandings, in SPT terms). The tyranny of automobility is known to be one of lock-in and path dependency. Both are weakened by journeys down other possible routes, no matter how tentative

and short in duration; mobility practice change rests on sufficient changes in enough individual performances of mobility.

To borrow some motivational thinking of dubious provenance, ‘Paths are made by walking them’ (Kafka) and ‘There is no way, the way is made by going’ (Antonio Machado). More specifically relating to transport planning, ‘You don’t justify building a bridge by counting the people swimming the river’ (Brent Toderian). Latent travel demand, like the importance of underappreciated infrastructure, is revealed in disruptions and breaches. Habit discontinuity leads to cognitive focus on, and potential shifts in, the taken-for-granted. We should recognise both that people anyway do different things in different ways at least some of the time, and that being forced to may increase the availability of competences, materials and meanings of flexibility, resilience, multi-modality and flexi-mobility. Every crisis potentially enables more future change and understanding how we can better steer a path through this seems valuable.

However, our analysis has also drawn out some critiques of the concepts at play. Perhaps more ontologically, we need to recognise that crises (just like specific policy interventions, and even ‘transport policy/planning’ itself) are not ‘independent’ events. They are major reconfigurations of always and everywhere changing bundles, configurations and constellations of a vast plenum of practices, that themselves are subtly shifting in their internal coordination and the contents of their constituent elements and integrated dispersed practices. Only apparently bounded in time and space, crises’ effects on practice are as complex, ongoing, and, to an extent, unsteerable as the already unfolding changes that theories of social practice mostly manage to grasp in the rear-view mirror of retrospective studies.

To this ontological critique of ‘crises’ we can add a normative objection. Crisis framings might be bad for democracy and discussion because “while the arguments of urgency from activists and scientists are based on democratising climate change politics, urgency and emergency could be detrimental to de-

mocracy, debate, and dissent”³. Harstaad and colleagues (2023: 2) similarly ask “What does it mean politically to construct climate change as a matter of urgency? How do we accommodate concerns that are undermined by the politics of urgency, such as participation and justice?”. Crises are classic ‘states of exception’ (Agamben 2008) wherein governments feel legitimised to consolidate previously illegitimate agendas.

A complex answer to the question of whether crises will have a positive or negative effect on sustainability is probably ‘Both’. This more honest answer may be seen as unhelpful, but a more interesting focus is perhaps how the inequalities involved in being able to respond or adapt are structured unfairly. We should be wary of totalising narratives that state that e.g. anyone can work from home, or everyone is shopping from home, or everyone is moving to take advantage of flexible working practices. One thing that can be stated with some certainty is that everything is always on the move, and still evolving. Many workplaces are still only just making WFH policies to catch up with reality. Trends that people expected often have not materialised yet, and other things change along the way. In other words, regarding social change, but especially mobility, ‘steering’ is rather more like sailing than driving – reflexively responding to ever-shifting winds and currents. This chapter asked whether it is possible to learn from studying crises. Despite the limitations in the question and the problems with the crisis framing the answer is unequivocally ‘yes’. However, whether key stakeholders in steering social change and sustainability transitions will learn is complicated by the dominant policy framing which sees policy as solving crises and putting things back to where they were. Only once it is accepted that where things were was already on the move, and that learning is about using crises as opportunities to consolidate shifted courses such that society is less vulnerable to future events, can such learning

hope to steer social change away from unsustainable travel practices and their intrinsic mobility injustices (Cass/Manderscheid 2018).

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