Transport provision and the practice of mobilities production

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Abstract
This paper propounds a practised understanding of transport provision. While transport geography tends to focus on the effects of planning, mobilities studies view transport provision as framing backdrops of mobile lives. Neither has fully addressed how transport provision is a derivative of mundane practices that contingently lay transport’s structural foundations. This paper argues that delineating these practices imputes a much-needed ‘liviness’ to transport’s formal production and allows for more congruous conversations between transport provision and use. Through a three-part examination, I foreground what potentially goes on during transport’s planning and operations, and highlight the contingencies of these less-than-unitary processes.

Keywords
contingency, mobilities, operations, planning, practice, production, transport provision

I Introduction
Geographic research has experienced a resurgent interest in transport of late (Cresswell, 2010; Knowles et al., 2008). While scholars have previously criticized the sub-discipline of transport geography for its utilitarian and positivist stance (Hanson, 2003), recent work has proved more nuanced and reflexive, re-understanding transport not simply as a system to overcome space with, but ‘an achievement of people, things and knowledges and a socially produced fact of life’ (Cresswell, 2008: 130). Much of this re-orientation can be attributed to the ‘mobility turn’ (Hannam et al., 2006; Sheller and Urry, 2006), an interdisciplinary paradigm stressing the meaningful relations extant within all movement (Cresswell, 2006a); but research assuming the nomenclature of transport geography has not shied away from injecting the field with a ‘progressive and critical edge’ either (Shaw and Hesse, 2010: 307), ‘closely . . . coevolving with the mobilities turn . . . to generate new understandings’ (Kwan and Schwanen, 2016: 245). As Sheller (2015: 12) writes, ‘[t]here has been a mobilizing of transport studies, so to speak, and a transporting of mobilities studies. At the heart of this transformation is a theoretical shift that seeks to understand spatiality in more relational ways, and to understand the relations enabled by transport in more mobile ways’.

The concurrent drive in transport geography and mobilities studies to revitalize the field has resulted in new foci that have greatly benefited
the discipline. Fixated less on analysing transport systems for their spatial patterns and efficiency, transport geography has adopted a more interventionist style that exposes the effects transport’s organization can have on such disciplinary concerns as social equity, neoliberalization, and sustainability (Banister, 2002, 2005; Hanson, 1995; Levinson, 1998). This has alerted geographers to the need to trace the problematics of our time not just to places and societies, but also to transport and its governance. At the other end of the spectrum, mobilities studies have refreshed the field by re-construing transport as a socio-cultural space (Adey et al., 2007; Binnie et al., 2007; Bissell et al., 2011; Featherstone, 2004). They have drawn out how social lives are contingently spun, lived and experienced, via banal relations between bodies, materials and technologies while on the move (Divall and Revill, 2005). Though possessing different outlooks, both bodies of work expose transport to a more inclusive range of topics. Whereas the former has elucidated the ‘material processes and infrastructure’ that inform transport’s spatialities and functions, the latter has foregrounded ‘the practices and representational schemes surrounding different subject positions of the mobile’ (Prytherch and Cidell, 2015: 27).

Yet, despite the seemingly complementary way transport geography and mobilities studies come together, geographic inquiries still tend to portray transport’s provision as not only ontologically distinct from but also less animated than transport’s use. While the first inhabits a logical world of policies and plans, and evokes broad senses of the macro and the rational, the second locates transport’s consumption in the micro details of visceral and emergent forces. This is not to suggest that no distinction exists between the two (for transport provision and use do entail different purposes). But to perpetuate a schema that foundationally differentiates their approach, and then conversationally marries them, seems to downplay their actual co-existence within a contiguous plane of typologically similar, non-hierarchical processes. One way to circumvent this, I submit, is to delve deeper into the equally consequential practices of those who ‘stage’ transport (Jensen O, 2013) – including planners, regulators, and service operators. Just as every engineering project, say, of cities, policies, and even everyday products, involves a social life in organization (McCann and Ward, 2012; Rydin, 2013; Shove et al., 2007), a similar form of exuberance, or as Bissell (2016) puts it, ‘micro-politics’, likewise suffuses through transport provision. Focusing on these practices provides a common action space for the work of those who formally produce transport to relate with those who use transport; it also promotes greater conversations between the interests of transport geography and mobilities studies.

Pivotal to this argument is the notion that transport is not merely a vehicle fashioned straight from a design blueprint. Despite the apparent smoothness of its formal structuring, transport, as officially conceived, is a culmination of provisional, if unstable and incremental, changes in production. Put alternatively, transport’s government is far from seamless, but a derivative of mundane practices: less-than-unitary, contingent and vulnerable. Here, Cresswell’s (2001: 13) argument that ‘(social) mobility’ – of which transport is part – ‘is a (social) product’ takes on a deeper significance, for movement’s ‘social’ nature is not solely found in its entanglements with society’s concerns, but also, ontologically, in the constitutive social practices that conceive it as ‘mobility’ (Cresswell, 2006b). This interpretation imputes a much-needed ‘livingness’ (Whatmore, 2006: 602) to the production – and not just consumption – of transport, where mobile realities are always emergent out of what Thrift (2004a: 88) calls ‘a practical poetics of everyday life’. In fairness, a burgeoning body of urban-geographical work is beginning to address the complex politics surrounding transport infrastructural projects (Bok, 2015; Schwanen,
2015; Wood, 2015). This article intends to extend their argument, by pinpointing opportunities where a ‘practice turn’ (Schatzki et al., 2001) can be applied more consistently and systematically to the theorization of transport’s formal production. In so doing, it aims to shed new light on how mobilities do not simply come alive during explicit moments of motion, but between transport provision and use.

The remainder of this paper is divided into four sections. First, I survey and evaluate recent preponderant research on transport’s provision and use in transport geography and mobilities studies respectively, before considering how the two corpuses can be brought into greater conversation through a focus on practice. Second, I evince through broader literatures on the practice turn, as well as cognate, more-than-representational theories, how understandings of transport provision and its ‘macro’ policies can be deepened, and related to lived mobilities. In the subsequent three sections, I thread through three leitmotifs that are demonstrative of these practices’ salience: (1) the task of planning, (2) the failure or reversal of plans, and (3) the labour of operations. As neither transport geography nor mobilities studies have robustly addressed these tropes, I will only allude to them by locating potentialities for elaboration in existing research, as well as drawing on my own limited research on, and reflections from working with, the aviation industry. The concluding section contemplates how tracing such practices can train a greater awareness of transport provision’s socio-political becomings, which take shape within a field of practices not unlike or detached from that transport users are immersed in.

II Re-mobilizing transport

With multiple calls to realign transport geography with the rest of the discipline (Goetz, 2006; Shaw and Sidaway, 2011), the study of transport has gained considerable traction in recent years. In Progress in Human Geography, the concurrent commissioning of two series of progress reports on the subject – one by Tim Schwanen, and the other, more tangentially, by Peter Merriman – is testament to the growing prominence of transport in the discipline’s theoretical and empirical engagements. While Schwanen (2016) credits boundary-crossing forays into issues like neoliberal capitalism, climate change and public health for rendering transport studies a (still) relevant field today, Merriman’s (2015, 2016) first two reports on mobilities chart out several new ways of engaging with transport’s (among other movements’) aesthetics and material entanglements. Though by no means exhaustive, these stocktaking pieces echo a general movement in geography to more clearly decipher the internal dynamics of transport, as well as its linkages with a myriad of socio-political issues. Such an orientation has exposed the discipline to a novel set of spaces and relations, tied diversely to lives lived through transport.

Beyond this broad sense of advancement, the two series of reports are telling of another trend in transport research. Running simultaneously but yet separately, they are symptomatic of the twin pathways by which transport has come to be (re)valorized as a research topic – one conduit being attributable to the mobility turn, and the other a ‘reinvention’ (Schwanen, 2016) of conventional transport geography in coincidence with the former’s ‘increasing popularity’ (Shaw and Hesse, 2010: 306; see also Kwan and Schwanen, 2016). As a catalyst for these ‘new’ directions, mobilities research is particularly significant for having impelled an attention to the socio-cultural forces surrounding movement. In contrast to previous interpretations of transport as a clinical or inert activity, a ‘derived demand’ (Cole, 1996) so to speak, mobilities scholars now accent the senses, feelings and experiences that are generated while in-transit (Ashmore, 2013; Bissell, 2010a; Budd, 2011; Thrift, 2004b). More attuned to social relations,
this work has further considered the encounters (and frictions) between co-mobile individuals, bodies and objects (Bissell, 2008, 2009a, 2010b; Symes, 2007), as well as the practices and ‘practical competencies’ (Binnie et al., 2007: 166) that travellers enact to successfully navigate transport’s taskscapes – whether in the private car (Laurier, 2004; Laurier et al., 2008), or on buses, trains, and ferries (Bissell, 2009b, 2014; Jain, 2011; Vannini, 2012; Watts, 2008; Wilson, 2011). Put succinctly, the mobilities literature has carved out a distinctive path in transport research, inspiring a sense that transport is not merely a pragmatic undertaking to overcome space but, in its own right, an eventful mobile milieu.

The rising pre-eminence of mobilities research does not, however, mean that transport geography is locked in a perpetual game of ‘catch up’ (Cresswell, 2010). The sub-discipline has created for itself a different niche that is equally analytically rigorous, and that capitalizes on its strengths in discerning the spatial economies of transport. Moving beyond the micro tracks of travel that mobilities studies tend to fixate on (although see Budd, 2009; Heins, 2005; Martin, 2013, for some discussions on infrastructural moorings and assemblages), transport geography has (re)positioned itself as an authority concerned with the functioning of transport (Prytherch and Cidell, 2015). One way that transport geographers have achieved this is by critically assessing the policies informing transport provision. This has ranged from historical tracings of broad governance paradigms such as privatization, devolution and neoliberalism in transport (Banister, 2002; Docherty et al., 2004; MacKinnon et al., 2008); to considerations of transport’s strategic deployment in urban space production (Hesse, 2015; Knowles, 2007, 2012); to examinations of the financial arrangements of large infrastructural projects (Flyvbjerg et al., 2004; Siemiatycki, 2011); and to interrogations on transport’s environmental control (Banister, 2003, 2005). By delving into the nuts and bolts of the industry, transport geography has offered new frames for appreciating prevailing transport policy trends and ruling mechanisms. It has also critiqued and offered solutions for the choices that decision-makers make in the provision of transport.

With this closer reading of transport’s policy orientations comes a corollary appreciation of its inequities. Besides deploying concepts such as proximities, networks and relations that are more aligned with the rest of geography to explain uneven transport development (Banister and Berechman, 2001; Hall and Jacobs, 2010; Hesse and Rodriguez, 2004; Jacobs et al., 2010; Knowles, 2006), the sub-discipline has acquired a further acuity towards how transport provision is, in many instances, a wilfully asymmetric organizational undertaking. Some scholars underscore the fact that the agglomerative tendencies of transport nodes are not strictly a function of observable spatial advantages or superior network linkages per se. Rather, network concentrations can be a consequence of deliberate government manipulation and/or preferential treatment of certain locales for political and economic reasons (Butler, 2001; Hall, 2004; Lin, 2014; Ng and Gujjar, 2009). To the question of accessibility in urban settings, there has been a similar riposte for planning agencies’ propensity to favour certain social groups at the expense of others, as expressed through differential infrastructural investments in different geographic areas (Blázquez et al. 2010; Graham, 2001; Sultana, 2005). Exacerbated by neoliberal trends prioritizing private responsibility over welfarist redistribution, the outcome is a further ‘splintering’ of urban networks, and the entrenchment of time-space-warping ‘tunnel effects’ that connect (and disconnect) people according to their socioeconomic status, race, ethnicity and other identity markers (Graham and Marvin, 2001: 202).

Against this socially reflexive stance, transport geography would then seem to be able to enter into a complementary relationship with
mobilities studies, concentrating on the broad political contours of transport provision, while leaving the minute ‘interplay of culture [and] power’ in actual travel to the latter (Prytherch and Cidell, 2015: 22). Yet, despite this promising coalescence, closer scrutiny suggests that the two fields draw from quite distinct ontological standpoints and empirical interests. While transport geography is increasingly concerned with delineating structural patterns and policy trends that produce transport, mobilities research finds substance in the more aleatory meanings, energies and impulses that come to life as travel is being consumed. This divergence in approach, pitching structure against post-structure, reason against emergence, macro-forms against micro-interpretations, threatens to curtail what could have been a more robust transport-mobilities nexus. More problematically, it (falsely) depicts transport provision as, somehow, a more intentional or rational act before travel, while mobility, as enacted post-production, is processurally more exuberant. This unsatisfactory dualism demands some ontological conundrums to be disentangled before greater convergence can take place. Expressly, how do the two realities gel, or do they play out in mutually exclusive ways? Do the intentions of ‘transport providers’ really translate into (clear?) actions, while ‘transport users’ act indeterminately? Do the two sides interact at all, and if so, through what avenues? Insofar as transport is ultimately a social achievement, it seems fair to conclude that transport provision must entail a higher degree of practical contingency than currently acknowledged. Present scholarship can benefit from pursuing this direction further.

In this context, I propose placing a stronger emphasis on the equally animated and emergent practices of those who formally ‘stage’ transport, and who contribute, too, to the action space of mobilities-making. This is not to discard current conceptualizations of transport provision based on macro-structural thinking, but to introduce a new vocabulary by which transport’s formal production can be recognized for its more fluid and contingent nature. Central to this manoeuvre is the desire to re-conceptualize transport provision and use as two mutually imbricated social endeavours both occupying actually-existing, and contiguous fields of practices. Such an integrative approach has been alluded to in Bissell’s (2016: 395) reflection on the ‘micropolitics of mobility’, in which he argues that ‘macro political analysis of larger-scaled and seemingly longer-durational social formations . . . must be considered hand-in-hand with the more “micro” events and encounters that take place during [travel]’. Although his focus remains on the transformative powers of commuters’ (mis)demeanours, the implication is that, the equally banal (and micro) conduits by which transport’s producers practically and interactively assemble the macro-structures of transport alongside users require more rigorous exposition. As Ole Jensen (2013: 5) reminds us, ‘mobilities do not just “happen” or simply “take place” [but are] meticulously designed and planned “from above”’. These deeply processual manipulations do not only portend further animations in transport, unfolding along the institutional corridors of planning, regulating and operationalizing; they more crucially encourage an understanding of the producer’s craft as unstably coevolving alongside that of transport users (Watts, 2008), as these different actors wage a constant ‘war’, as it were, to bring mobilities into be(com)ing.

### III Transport provision as practice

Understanding social realities through practice is not new in geography. It has enjoyed enduring conversations in the discipline, and even overlapped with a number of cognate approaches which share similar critical-realist stances repudiating the primacy of human constructivism and representation. While not all of these approaches adopt the nomenclature of ‘practice
theory’, their common valorization of agent-based action over reason constitutes a broad philosophical vein that can precisely aid in recovering and enlivening the emergent practices entailed in staging transport. In Anglo-American scholarship, practice has often been traced to ideas of performativity popularized around the 1990s, particularly after Foucault (1990, 1994, 2008), who inspired ‘new’ ideas about social organization and control through such concepts as governmentality and biopolitics. His work seeks to locate power not in a centre, but in the habits and roles that individuals sub-consciously perform, as they act out their subjectivities in line with the discursive structures and bio-normative ‘truths’ they are produced within. As Butler (1990: 3) exemplifies this through gender, such normativities do not simply regulate, but form, define, and reproduce subject categories like ‘women’ in accordance to the requirements of those structures. A few mobilities scholars have likewise begun considering the remit of governmentality and biopolitics in mobile situations, from aviation to cycling (Adey, 2009; Jensen A, 2013; Spinney, 2016). Though not going so far as to explain the origins of their government, their work hints of the first links between transport provision and use, by identifying the normativities the former often imbue transport experiences with, for the latter.

More recently, in coincidence with the wider more-than-representational movement, practice has also become associated with post-cultural, post-humanist theories such as actor-network theory, non-representational theory, and science and technology studies (Callon, 2001; Latour, 2005; Lorimer, 2005; Thrift and Dewsbury, 2000). These approaches similarly shun essentialist thought, attributing realities to the processural realm of agencies. However, rather than dissecting the subjective practices of the governed, these literatures appeal more open-endedly to the relational ontologies of Deleuze and Spinoza, amongst others, to bring into view a messier world composed by the sensate, the interactive, the more-than-human and the socio-material (Nash, 2000). Acknowledging the salience of practice in these ‘materialist recuperations’, Whatmore (2006: 603, original emphasis) lauds the (greater) ‘shift in analytic focus from discourse to practice’ as one of the critical turning points that have helped ‘work against the grain of the logocentric conception of social agency – “I think therefore I act”’. Not only does this dissociate social ‘truths’ further from a linguistic or representational inevitability, it also ontologically re-traces social structures to their contextual emergences, collisions and (re)territorializations between disparate bodies and elements.

Both interpretations of practice, particularly the latter, mirror what I set out to discover about transport provision: as an event of aleatory happenstance, and also a conduit for power to congeal in relations to transport’s use. In the introduction to their edited volume on the ‘practice turn’ (Schatzki et al., 2001), Schatzki (2001: 2) makes clear that, despite practice theory’s suspicion towards dominant conceptions, it does not mean that its accounts only relate to quotidian pursuits of ‘knowledge, meaning, [and] human activities’ at the social or individual level; indeed, it also invokes larger questions of ‘science, power, language, social institutions, and historical transformation’, which are activated through practice and its attendant network relations. In particular, Schatzki (2001: 5) asserts that ‘order’ is inherently ‘(a) feature(s) of [the] field [of practices]’ and, conversely, ‘components and aspects of the field are responsible for the establishment of order’. Such a reading echoes Foucault’s (and Butler’s) insistence that governmental ‘truths’ are politically sustained through the interpellation of subjects to perform the normative agencies ascribed to them, but it also adds something more by suggesting that orders, of particular inclinations and knowledges, are themselves not outside the indefinite and pre-cognitive realm of
organizational routines (Latour, 2005). This understanding reiterates the need to take transport seriously as a practised order, both of those who are mobile in it and those who stage it. Its manifest (infra)structures do not take ready-made forms, but are a culmination of an even greater diversity of actors – from planners, to operators, to users, to other nonhuman factions – who converge to make and unmake transport within a single field.

Some empirical examples drawn from existing research can help articulate these ideas more clearly. One of the earliest and most sustained bodies of work in geography that allude to such dyadic relationships between production and consumption is found in interrogations on the various forms of staging in retail, food industries and, more generally, the hospitality sector (Crang, 1994, 2003; Edensor, 2001; Wrigley and Lowe, 1996). While focused on a particular kind of practice, and set against a particular moment of value exchange, this work illustrates how the service economy is realized not simply through consumers’ live experience of, or resistance to, it; but also through the practices and displays that producers, or, in this case, service staff, (re)actively perform in ‘collaborative manufacture’ (Crang, 1994: 686). Other examples equally demonstrative of how social orders are established through such collective practices, if further interjected by nonhuman materialities and interferences such as legislations and texts, have included research as diverse as colonial, political and environmental geographies (Death, 2011; Müller, 2008; Ogborn, 2007). At the heart of their contention is the idea that manifest structures – whether of mobilities, the economy, geopolitics, colonialism or environmental governance – are not a priori givens that dispositionally play out. Rather, they are themselves aleatory: emerging, collapsing and re-assembling alongside their practical surrounds.

These less-than-stable territorializations should prompt questions on how, then, we ought to pinpoint power within social realities that no longer sustain a ‘core’ order or purpose. Indeed, the incertitude of any answer is precisely the point of this project, which means to demystify the ‘high’ authority associated with structural formulations, and, in the process, return them to the same plane as the constituents they preside over. To cite Bissell (2016) again, the micro-practices of the everyday cannot be understood as just the playing-out of macro-political forces such as institutional control, not just because they are transformative in their own capacities, but also because the macro is itself impermanent and, if slowly, transformative. Such an idea is elegantly captured in Tim Mitchell’s (2002) work on the ‘rule of experts’, in which he documents the methods and technologies of (post)colonial domination in Egypt. Expressly, he traces power to the context-specific and emergent substance of rule, founded not on global narratives on social structures but practised systems of expertise that [draw] its force by attempting to divert or attach itself to other kinds of energy or logic’ in spontaneous ways (Mitchell, 2002: 29).

Accordingly, the politics of rule is not to produce an order with a pre-determined propensity for government but, on encountering different actually-existing bodies and artefacts, to achieve the most suitable and durable arrangement of power for that time (Winner, 1980). In transport, the goal of attaining control likewise assumes such a tentative tenor. It is within this provisional realm of competing practices, among different organizational factions, their patrons and other actors, that rule takes shape.

IV Practising transport planning

A useful entry point to think about the practices latent within transport provision is to consider the work of transport planning (broadly defined here as conceptualizing, designing, financing, and regulating) and their relations with transport use. These tasks obviously do not complete
themselves, but involve communities of institutional agents dividing up the labour, co-ordinating, collaborating and negotiating with each other to get transport systems going. Without paying attention to the minute processes animating this task, transport geography only touches the outcomes of these activities, and not the way they tenuously create orders and realities. Such abstract understandings of planning obscure what are otherwise more contingent institutional arrangements that structure the mobilities society undertakes and experiences in transport. They risk ‘deadening’ (Thrift and Dewsbury, 2000) an indispensable component of making move, and leave any interrogations on users’ interactions with, or subversion of, the ‘macro’ partial and potentially misdirected.

Reflecting on transport planning from state and urban councils’ perspective readily avails a legion of practices that are constitutive of the ‘macro’. Some existing studies already allude to the criticality of such processes, but perhaps never quite explicitly articulate how these actions inform and alter the meanings of, and practices within, people’s mobilities. Knowles and White (2003) work on London planners’ changing attitudes towards light rail is instructive. What stands out in their work is not simply their tracing of the various political debates surrounding light rail, but the circumstances under which policies on sustainable transport, and the advocacy of certain mobility discourses, are practically arrived at. Interweaving dynamics like parliamentary proceedings, business relations, road lobbies, infrastructural and congestion problems, and commuters’ mobility expectations, London’s light rail – with all its cultural baggage – must be seen as partly concretized by these many planned and unplanned, human and nonhuman convergences. Offering a comparable view, Richmond (2008) intimates how a rail- and non-motor-based transit system in Singapore likewise fructified not through preformed policy rationalities, but particular technological encounters, selective assimilations of ‘prestigious’ international expertise, and politically motivated community outreach. Far from just ‘happening’ (Jensen O, 2013), transport’s staging saw planners engaged in a contingent kind of technological learning from respected ‘experts’ (see also Lagendijk and Boertjes, 2013; Wood, 2014, 2015), while simultaneously persuading the travelling public to embrace the proposed switch to rail. If not for these practical undertakings, the routes, modes, and spatialities of transport in the city-state would have been very different for its commuters, portending other outcomes (e.g. a denser bus network) and mobile experiences.

It is not just transport’s basic frameworks that practices have a role in shaping. Merriman’s (2007) historical work on mid-20th-century automobile cultures in the UK compels a similarly grounded and practical understanding of how particular road norms and popular meanings of road trips were derived. By holding the production and consumption of automobility in tension, his work suggests how the inhabitation of driving spaces in Britain was linked to laborious and fluid state (and non-state) efforts to promote discipline, efficiency, and senses of national belonging among drivers and passengers. Planners, landscape designers and architects conceived of these visions categorically not as a priori, but through convoluted pathways of legislative clashes, aesthetic contests with rivaling states’ systems, contemplations of a unified national identity for a citizenry on the cusp of war, and even deliberations on the motorway’s relationships with nature – another kind of (nonhuman) co-actor. Beyond the state, lobby groups such as the British Road Federation, the County Surveyors’ Society, and oil, motoring and engineering associations also weighed in, applying pressure on the government to hasten road re-construction efforts in a time of austerity. This complex picture suggests that Britain’s road regime emerged not based on any straightforward policy template, but on an ‘institutional thickness’ (Amin and Thrift,
of activities that gradually accreted into, and contributed to, a particular automobile reality for users and citizens. By re-presenting transport orders as artefacts of such formative histories, channels for dialogue between transport providers’ inputs and users’ experiences become possible, on terms that would stretch and intertwine the socio-cultural concerns of mobilities studies with the planning domains and preoccupations of transport geography.

The particular ways in which air and sea transport is being consumed and embraced can likewise be related to practices in institutional planning and production. While Steinberg (2001: 10) has long argued that the ocean is a contrived space of transit ‘shaped by social and physical processes’, aviation scholars are beginning to tune in more to the equally practised nature of aerial production (Budd, 2009; Lin, 2016; Martin, 2010; Nikolaeva, 2012). Personal fieldwork on recent efforts to regulate airspace as a medium in need of environmental checks offers an excellent example of how practical interjections, this time, at the inter-governmental level, are instrumental to changing aeromobilities’ meanings and moral bearings. While most literatures accept carbon cap-and-trade schemes as the most effective means of curbing aviation’s climate externalities (Anger-Kraavi and Köhler, 2013), this manner of responsibilizing air travel, through capping airlines’ allowable carbon emissions, is a result of years of political performances of ‘crisis’, and corresponding practices of calculative ‘science’ that naturalized a particular model of environmental mitigation. These practices not only discipline a (self-imposed) order of policy responsibility among those who rule (cf. Rutherford, 2007), they also, ironically, allow unduly positive narratives of air travel – as efficient, accountable and modern – to flourish, as environmental liability is transferred from transport user to provider (Barr et al., 2014). Partly because of this, a particular culture of high-intensity aeromobility is able to take root among the public, as travellers are indemnified of their desire to be more mobile, through policymakers’ performative sanction.

In delineating how transport planning plays out as a series of practices, this section has explored a few avenues through which the ‘livingness’ (Whatmore, 2006) of transport provision can have a pivotal sway on the structural and discursive shape of mobilities. The crux of the discussion evinces that these practices do not only draw out transport planning into more protracted and convoluted processes; they also place the agencies of decision-makers on the same plane of action as those who eventually inhabit and utilize transport. Indeed, anecdotal history is replete with examples of how micro practices in production can spark new transport paradigms and alter consumption patterns – from the birth of the Boeing 747 (and thus mass air travel market) on a fishing trip between the heads of Boeing and Pan Am (Bowen, 2010: 42), to the launch of Seattle’s council-backed cycling movement, because of municipal officials’ ‘desire to show leadership to the federal government and other cities on the issue of climate change’ (Rice, 2010: 933). In suggesting that these practices foundationally constitute transport’s (infra)structures, I argue that present analyses need to consider transport provision’s processural coming-and-goings, and their unpredictable imprints on mobile cultures more carefully. Only then can the mobilities that users undertake and respond to be set against their proper contexts; and the politics of planning in transport geography be made to converse more integrally with mobilities studies’ micro geographies.

Practising transport failures

Besides the practices that directly support and define transport’s (infra)structures, another productive thread is to consider the practices of those plans that ‘fail’, that do not materialize, or that close down prospective options. It is
customary for transport research in geography and beyond (including mobilities) to focus on phenomena that are manifest, but not all of planning’s activities will feature in transport’s observable forms. As Law (2002: 3) admonishes through the example of the cancelled British military reconnaissance aircraft, TSR-2, objects that appear to have a singular identity are but illusory: they never subsist as consistent wholes, but are made up of overlaps, contradictions and multiplicities – an ‘established disorder’ – where constituents do not always point in the same direction. To the extent that the TSR-2 is demonstrative of the rise and fall of planning processes, one can apply a similar understanding to other transport modes. Such practices that take transport on a circumambulatory course of detours and dead-ends can offer as much insight as those by which decisions are reached. They tell stories of absences, and allow transport experiences that cannot, but almost have been, to be appropriately accounted for. Above all, attending to their geographies provides another inroad for tracing the origins of certain mobile trajectories, transforming the institutional spaces that transport geography is long concerned with into vital sites where mobilities and immobilities are being generated.

Latour’s (1996) semi-fictional account of the death of Aramis – an experimental personal transit system of small automated vehicles running on guide-rails that Paris’s public transport operator, Regie Autonome des Transports Parisiens, purposed but failed to build in the 1970s and 1980s – exemplifies the salience of these obscured practices steering transport outcomes in the negative. Taking an actor-network, science-and-technology-studies approach like Law, Latour begins by asserting the impossibility of reducing the stillbirth of Aramis to any singular logic. Rather, he traces the system’s demise to a barrage of ‘random hazards’ (Latour, 1996: 46), including track issues, elevated accident risks, organizational and design disputes, financing problems and the propensity for (trial) riders to misuse/abuse the system. These faults do not mean that Aramis was unvi-able from the start, but that its abandonment was contingent on the quotidian confluence of the above unfavourable social and technical conditions that its planners failed to anticipate and practically adapt to. Put succinctly, Aramis’s ‘life is a state of uncertainty and risk, of fragile adaptation to a past and present environment that the future cannot judge’ (Latour, 1996: 35). It is the practices of this ‘life’ of planning, in interaction with a myriad of (non)human agencies including prospective users, that determine what gets adopted or jettisoned as mobility systems for consumption.

Delving into those practices that ‘fail’ enables a more realistic, and political, appreciation of how users come to encounter transport in exclusive ways. Consider, for instance, the UK government’s (botched) attempt to revive British rail post-1997. Meaning to re-nationalize the formerly Conservative-privatized rail industry, Labour leaders, split between a reluctant Prime Minister and his more enthusiastic Deputy, John Prescott, gradually relinquished their promise to de-franchise rail services in deference to powerful car and business lobbies (Shaw and Farrington, 2003). If this micro-politics between personalities was not sufficient to derail plans, another kind of agency intervened in 2000 – a train crash that further dimmed rail investment prospects, and weakened the government’s bargaining position. These practical developments led successively to increasing congestion-related delays and overcrowding in over-stretched train resources, framing particular rail experiences for British passengers today (Bissell, 2010b). What is more, there seems to be a repeat of such negative spill-overs from policy corridors to lived mobilities in the more recent shelving of several high-speed rail (HSR) projects in the US. While most research tends to evaluate HSR schemes on rational grounds of cost-benefit analyses (Knowles, 2006; Levinson, 2012), transport geographers need to
answer more pertinent questions concerning what is preventing these projects (and others) from taking off – be it legislative quagmires, infrastructural incompatibility, or technological lock-ins. By seeking an Aramis-style explanation as to who ‘killed’ HSR, analysing and unpacking stalled plans can promote a more considered appreciation of what practically produces or pre-empts transport (infra)structures, and, in the process, precipitates particular irrational or unwanted (im)mobile realities for users.

There are, likewise, subtle links between lapses or misses in planning practices and the eventual ways passengers inhabit the air. Frequently, scholars assume that aeromobility entails particular senses, aesthetics and experiences by default (Adey and Lin, 2014; Bissell, 2015; Budd, 2011); but these ‘natures’ cannot be disassociated from the emergent way structural forces first foreclose certain socio-technical arrangements and espouse others. Concorde’s stunted career is an instructive case. While famed as the only available passenger supersonic transport (SST) globally until its 2003 demise, Concorde never really took off on a large scale in the first place, because of various human and nonhuman interventions impeding it. Outcompeted in the race to build the world’s first SST, US business and political elite had repeatedly sabotaged Anglo-French Concorde plans, taking occasion of the SST’s sonic booms and green activists’ complaints as bases for restricting the aircraft through legislation (Luttwak, 1990). For over four years, disagreements and political wrangling between US and European lawmakers delayed Concorde’s entry into service, with an eventual pact only allowing the jet to serve (coastal) New York and Washington DC – initially on a 16-month trial (Donin, 1976). In Asia, similarly inimical proceedings plagued the aircraft’s forays outside the Western Hemisphere, when Malaysia, and later India, invoked noise issues (again) as an excuse to bar British Airways’ London-to-Singapore Concorde flight over their territories. The dimming of an entire aeromobile product line (and culture) by these resorts not only reinforces the broad ‘technogeopolitical’ nature of aviation (Butler, 2001); it also alludes to the power of aleatory practices – as enacted contingen
tently by rival governments, manufacturers and activists (see also Budd, 2009), in tandem with acoustic phenomena – in (mis)shaping aviation futures. In short, it was not what European planners and designers had rationally premeditated, but what they did not, or could not, carry through that had, as it turned out, set the tone for how passengers were to consume (sub-sonic) aeromobilities today.

Central to these arguments is the idea that transport’s (infra)structures and their subsequent uses are not just imbricated with those planning practices that transpire into something concrete, but also with those that, so to speak, lead ‘nowhere’. In fact, from the perspective of transport provision, the two necessarily inter
depend in inseparable ways, constituting a single, iterative field of experimental effervescences that congeal as particular mobile formations in lieu of others. What is more significant is that understanding the history of transport’s planning in this way – not just in terms of their positive emergences, but also their stoppages, frustrations and erasures – can (re)invigorate transport provision as an institutional practice sullied with untold ‘micro-politics’ (Bissell, 2016) that has implications on consumptive practices down the line. This more contested reading creates another tangent for engagements between transport geography and mobilities studies, by raising questions about the origins (and limits) of planning, as well as the contingent realities, or counterfactual possibilities, that mobile subjects do or could have par
taken in. Though not explored above, another group of actors that could be interrogated for their role in thwarting, annulling, and ‘killing’ transport plans are users themselves, who may further circumscribe travel options by rubbing
against transport providers’ intents. Whether through socio-economic choice that shuns particular modes or by failing to use transport responsibly – hence leading to service withdrawal or curtailment – the complicity of transport users, along with others, in compounding the ‘uncertain’ and ‘risky’ life of transport planning, and the mobilities and immobilities that follow, should never be discounted.

VI Practising transport operations

If previous sections uncovered the emergent and contested practices of transport planning, this section considers the more routine task of transport operations. While extant scholarships are already reticent about the animatedness of transport provision, they have till date afforded even less attention to the daily labours of institutional personnel who help translate transport plans into actual mobilities. Indeed, transport’s staging takes more than grandiose conceptions. It must be activated through service staff, equipment operators, regulatory enforcement and other ‘frontline’ employees, whose performances form a vital part of the practice of transport provision. Though these human actors are not the only agents assigned to operationalize transport (see Bissell, 2008; Jain, 2011, on the agencies of seats and onboard facilities), their ability to respond to exigencies and improvise in the face of unexpected events renders them important and dynamic cogs in the (re)production of mobilities. It must be activated through service staff, equipment operators, regulatory enforcement and other ‘frontline’ employees, whose performances form a vital part of the practice of transport provision. Though these human actors are not the only agents assigned to operationalize transport (see Bissell, 2008; Jain, 2011, on the agencies of seats and onboard facilities), their ability to respond to exigencies and improvise in the face of unexpected events renders them important and dynamic cogs in the (re)production of mobilities. Akin to how maintenance and repair work is necessary to uphold urban functionality ‘[in]-between breakdown and restoration of the practical equilibrium’ (Graham and Thrift, 2007: 3), their acts of servicing, mending and, at times, innovation are likewise instrumental to the making and unmaking of movement, and the forestalling of implementational failures. They offer another middle ground for transport geography’s macro structures to relate with mobilities studies’ minute travel cultures, while signalling the (co)presence of a more diverse range of actors when mobilities are in progress.

Such a proposition brings into view the pertinence of numerous vocations – from drivers to train conductors to security guards – to the everyday production of mobilities, albeit almost none of which have been seriously engaged with in the literature. One exception, however, pertains to flight attendants. Despite their very particular labours, tied to an exclusive mode of transport, studies on flight attendants offer clues to how transport staff’s operational practices crucially maintain a delicate balance between what planners intend and what customers expect. While some authors argue that cabin crew’s emotional labours are what constructs a desirable service and safety image for airlines (Hochschild, 1983; Whitelegg, 2007), others highlight how aeromobile cultures are, at least in part, concocted through these workers’ practical displays – e.g. of femininity or Oriental exoticism – to induce particular comforting experiences for passengers (Lin, 2015; Yano, 2011). Yet others leave space for flight attendants to innovate or alter service scripts, at times involving improvisations to resolve difficult situations or passengers, and, at others, deliberate slip-ups in resistance of management (Bolton and Boyd, 2003). Though context-specific, these practices intimate the presence of a more complex terrain of encounters in transport, where, besides users, operations staff also play a part in sustaining, and transforming, mobilities. Through their ‘live’ practices, they invite, frustrate, and experiment with (new) execution plans, enacting another layer of emergences in transport provision.

Such operational practices need to be opened up and elucidated in other contexts too, to evince how the daily inputs of frontline staff in other transport modes may similarly play a very present role in (re)shaping mobile experiences for users. Consider the regulatory measures urban transit operators put in place to outlaw crimes like fare evasion, theft and
vandalism (Clarke, 1996; Kooi, 2007; Smith and Cornish, 2006), or ‘anti-social behaviours’ like loud talking and boisterousness (Burney, 2009; Moore, 2011). While most research tends to plainly interpret these measures as tools of passenger control, few studies have examined how, or even whether, these governmentalities (Foucault, 1994) are dutifully performed by staff in relations to passengers, as part of transport policing or enforcement. Consider, alternatively, the valorization of public transport as a preferred mode of low-carbon mobility (Schwannen et al., 2012). Despite being an accepted logic, practical questions need to be raised concerning how successfully operators (and urban councils) are meting out these ideals on the road, such as through providing appropriate guidance and support services to ease commuters’ switch to a mode requiring new ‘practical competencies’ (Binnie et al., 2007). Answering such questions at the operational level provides a different perspective as to why policies work better in some places than others. They remind that transport provision is seldom self-fulfilling, but realized through grounded efforts that routinely perform mobile ‘realities’ into being alongside transport users – not unlike how flight attendants make an airline’s service come alive for the aeromobile.

Because these undertakings are contingent on practice, the flipside is that transport operations do often stumble and fall short of their intents, necessitating new rounds of improvisation and restoration (Graham and Thrift, 2007). To revisit Mitchell (2002: 293), expressions of rule may deviate from plan and ‘open up into further territories, draw upon further forces, and channel other powers and desires’. While operations staff themselves constitute one side of these political forces, as flight attendants’ (occasional) acts of defiance show, transport users can also desist from ‘cooperating’, and introduce further interferences to the system. Here, Bissell’s (2016) point ‘that the macropolitics of barely-perceived transitions in power’ returns to the fore. There is ‘power’ in the way mobile subjects affect how transport staff discharge their duties, and these transformative effects on operations, transport provision, and mobilities-making need better explication. These micro-perturbations need not be dramatic, and can range from boisterous interruptions, as Bissell exemplifies, to mundane episodes of (dis)civility among co-travellers (Wilson, 2011), to other antisocial behaviours, such as lodging a piece of gum – itself an agency – between train doors (Tetzlaff, 2007). It is in the unstable way these counter-actions erupt and rub up against, not merely other transport users, but also drivers, conductors and security guards that transport’s production (and consumption) daily undergo deformation. Deciphering how transport operations serve as a space of exchange, where plans get implemented, and returned to the drawing board, can deepen understandings of how transport provision and use complete their recursive loop, between conception, execution, mitigation and, if needed, fortification.

Transport operations are hardly clinical exercises where little goes on in their midst. They should not be mistaken for a stage where plans are simply erected as props, neither a zone where mobile subjects are free to transgress after the rules are set. Rather, operations are the battleground where producer, institution, government meet consumer, user, subject at close range, mediated by an army of personnel who execute orders, fight disruptive elements, improvise strategies when needed and, per-chance, revolt and/or under-perform. As Kitchin and Dodge (2009: 98) reflect through (supposedly) one of the most rigid operations sites in transport, the airport, ‘law’ seldom ‘establishes the spatiality of [travel] in a deterministic way … [or] with universal outcomes’, but is ‘always embodied, the product of people and code’, or, I paraphrase, practices and plans. Without attending to these dialogic processes
between transport provision and use that translate blueprints into practical transits, transport geographers risk disassociating their policy recommendations from what actually transpires on the ground, while mobilities scholars risk missing out on a crucial dynamic of the very micro-milieus they are grasping at. At stake is not just an operational knowledge of transport that has so far been lacking but, more importantly, another opportunity to integrate transport geography and mobilities studies as research agendas concerned with one and the same action field.

VII Conclusion

Geographers have recently taken strides to advance understandings of transport beyond one simply concerned with patterns and efficiency. This is evident in both the mobilities literature, and more ‘progressive and critical’ transport geographical research of late (Shaw and Hesse, 2010). Despite hopes of complementarity between the two (Goetz, 2006; Kwan and Schwanen, 2016; Shaw and Sidaway, 2011), I have, however, problematized in this paper the still rather discontinuous way geographers are approaching transport – as a two-tiered phenomenon split between the broad, (infra)structural contours of policymaking and the minute socio-cultural life of (user) mobilities (Prytherch and Cidell, 2015). I argue that this dualism has prevented a more congruous conversation between both sides, seeing that they come from two divergent ontological positions. While transport geography views its titular subject as an outcome of rational decision-making (which is then critiqued), mobilities studies focus on the generative potentials of movement among the mobile, after – or as if – transport’s staging is ‘finished’. I submit that, if both literatures were to bridge their differences, they need to (re)recognize transport more holistically as ‘a socially produced fact of life’ (Cresswell, 2008) in provision and use, where the practices in one can bleed into, and affect, the other. Geographers should seek to locate where such relationalities lie between these simultaneous processes, and re-animate them as mutually imbricated activities unfolding along a contiguous plane.

One way to speak across this divide is to excavate the neglected practices of those who formally ‘stage’ transport – in (failed) planning and operations – and consider how they impress upon users’ mobilities. While these producers are not normally seen as being on the move, their endeavours are emphatically not static or animation-less. Tracing their practices not only opens up a coterminous field of interventions directly affecting transport’s experiential spaces from an institutional standpoint; it also affords new perspectives on transport provision’s ontological nature as a series of everyday conducts – conceptualizing, designing, regulating, operating – emergent through organizational practices (Schatzki, 2001), as well as micro-interactions with (non)human agencies (Latour, 1996, 2005; Lorimer, 2005; Whatmore, 2006) – including the travellers they serve/govern. By grounding transport provision, as with mobilities, in an ordinary field of minute (re)actions, the orders resulting from it also cease to be abstract regimes exacting some overarching structure on the mobile (cf. Salter, 2013), but that which comes to life (and power) in an aleatory fashion (Mitchell, 2002; Winner, 1980). Such an emphasis on emergences and becomings mirrors understandings that mobilities research already propounds, concerning the actor-mediated incipiencies of ‘practices, qualities, spaces, materials, subjects and events’ (Merriman, 2016: 555) found in transport’s use. Rather than approaching the formal task of making move differently, this article argues for a need to extend a practice optic to transport provision. It can help intertwine the ‘macro’ and the ‘micro’; ‘production’ and ‘consumption’, transport geography and mobilities studies more integrally and recursively, while illuminating how transport’s rulers truly ‘meet’ mobile subjects: in the quotidian interstices of practice.
Geography has much to offer in building up such a practised ontology of transport in toto. Besides the momentum of its current explorations on users’ mobile practices (Binnie et al., 2007), the discipline’s longstanding interest in the performative staging of service-sector spaces (Crang, 1994; Edensor, 2001; Wrigley and Lowe, 1996) can hone new sensitivities towards how transport’s (infra)structuring similarly acquires its tonalities through banal and practical manufacture. These insights can be extrapolated to a wide variety of mobilities beyond transport. Particularly, organized flows and circulations, which ineluctably require planning, operating and providing for, can benefit from such an analytical re-orientation that unveils and re-animates their abstract façades in making move. Among them are tourism mobilities (Sheller and Urry, 2004) and migration (Blunt, 2007), both of which have room for further explorations on their organizational bases and emergences. Getting to know the practices that go into their mobilization, and how these (in)actions interact with those who partake in them, not only aids in returning a stronger focus to the formal production of mobilities (Cresswell, 2001, 2006b). It also helps geographers train a more holistic understanding of moving, as one of the discipline’s greatest concerns.

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