Introduction

Mobilising design: practices, movements, connections

# Justin Spinney, Suzanne Reimer and Philip Pinch

# Introduction

The central contribution of this edited collection is to foreground relationships between individual designed objects and wider systems of mobility. In bringing a design perspective to bear on understandings of mobilities, we seek to better understand the tools, assumptions and processes through which the subjects, practices and spaces of mobility are ‘made up’. At the same time, bringing a mobilities perspective (that mobility is meaningful and powerful) to design enables us to understand how shifts in the fluidity and circulation of people, practices and materials are reshaping design practices. In broad terms *Mobilising design* emphasises the role of design as process, practice and outcome in producing mobility. Together, the book’s contributors develop multi-disciplinary understandings of design, drawing upon diverse literatures including design history, product design, architecture and cultural geography.

It is important to emphasise that design is both verb and noun—process and product (Lawson 2006, 3)—something that we both do and experience as an achievement. Design is about connections: “Actors are such because they interact, shaping relations and being shaped by relations. They gain their identity in the disputes” (Yaneva 2012, 92). Here Yaneva emphasises not simply the role of the material results of design in shaping relations, but the process of design as a key way in which relations are shaped. Accordingly design should not be seen as a ‘cold domain of material relations’ but as a “type of connector” (Yaneva 2009, 273). To understand design processes is of fundamental importance because of the ways in which they act to afford or limit the potential for transformation and alternative visions of the world. Design is a process through which objects are given human intentionality, and thus become moral and political actants.

A key influence on the insights presented in *Mobilising design* has been the substantial body of work dealing with the relations between bodies, environments and designed artefacts, particularly from Science and Technology Studies (STS) scholars and technological anthropologists (Akrich 1992; Ingold 2000, Latour 2008; Michael 2000a, 2000b). We see a need to explore the design process in terms of how artefacts come into being as much as we look at the impacts of design. As Akrich (1992, 222) has suggested: “…technical objects have political strength. They may change social relations, but they also stabilise, naturalise, depoliticise and translate these into other media. After the event, the processes involved in building up technical objects are concealed….There was, or so it seems, never any possibility that it could have been otherwise.”

We also of course owe a significant intellectual debt to the insights of the ‘mobilities paradigm’ and in particular the ground-breaking and influential work of John Urry. Ten years ago, Sheller and Urry (2006, 208) argued that the social sciences had been ‘a-mobile’ – that they ignored the importance of mobility: “Travel has been for the social sciences seen as a black box, a neutral set of technologies and processes predominantly permitting forms of economic, social, and political life that are seen as explained in terms of other, more causally powerful processes”. A primary goal in the development of mobilities scholarship was to study mobility as a force actively assembling societies and subjectivities in particular ways. Particularly important to this ongoing work was Urry’s articulation of ‘automobility’ (2000, 2007): a ‘complex amalgam of interlocking machines, social practices and ways of dwelling’ (Sheller and Urry 2000, 739). The system of automobility was seen to have profound consequences for the spatio-temporal configurations, restructurings and practices of peoples’ everyday lives.

However despite the substantial breadth of ongoing mobilities research (Cresswell 2010; 2012; 2014; Cresswell and Merriman 2011; Adey et al. 2014), specific understandings of design as both artefact and process have been underexplored. As Merriman (2015, 88) has suggested, there is much more to be written on “examining the history of the design, planning, engineering, labouring, consumption and use…” of mobility spaces and artefacts. This is not to say that there has been an absence of engagement between design and mobility. For example, the object of the car—to which the automobility literature was inevitably drawn—became the starting point for examinations of driving in cities (Thrift 2004) and on motorways (Merriman 2004); accounts of the feelings and pleasures cars evoke more generally (Miller 2001; Sheller 2004); and examinations of the car’s importance to concepts of nationhood and national identity (Edensor 2004, Koshar 2004). Further, Urry’s (2000, 14) conceptualisation of the ‘car-driver’ as a complex hybrid of subject and object became centrally important to many subsequent discussions (e.g. Dant 2004; Urry 2006; Merriman 2006). Merriman (2006) also has highlighted the distributed nature of design in the context of a discussion of the car wing mirror. An ensemble of police officers, research scientists and politicians, amongst others, are seen to contribute to the design of the car with the purpose of governing the conduct of the mobile subject.

Further understandings of the design/mobility interface are provided in Levinson’s (2006) work, which traces some of the regulatory and design agency decisions leading to the eventual standardisation of the shipping container. In particular Levinson (2006) highlights relations between different manufacturers, government agencies, international standards, and shipping and haulage firms in producing the shipping container we know today. Similarly, Martin (2016) discusses the design of the container as a discrete object, but also seeks to understand the ways in which it is mobilised for other purposes, charting its shift from distant to more familiar object through re-design and subsequent entanglement in more everyday cultural ventures.

Finally, there have been some engagements with design which have taken a close focus on material spaces ‘of’ mobility; and have sought to understand how these designed spaces shape mobility practices. Bringing together work in mobilities, urban design and urban studies, Jensen has made an important contribution in highlighting how mobilities are staged “by means of very specific design solutions and choices” (2014, 15-16).

The distinctiveness of our focus derives from moving beyond the broader environments that shape mobilities to centrally register the importance of the design process itself. The book thus explores how artefacts become rather than importing them into accounts of mobility as prefigured. For us the emphasis is less on how artefacts are experienced, and more on how the mobility of design professionals and standards shapes material outcomes; and how arrangements of artefacts produce particular mobile practices, subjectivities and identities. We need to think in terms of tracing the emergence of roles and artefacts “…as associations are formed, roles are defined, and divisions are established’’ (Murdoch, 1997, 744).

# Structure of the book

As mobilities scholars we are concerned to explain how mobilities come to take the forms that they do, and the ways these inform and impact upon individual identities, socio-spatial relations and global processes. Providing a satisfactory explanation of mobilities design requires an understanding of the different actors and processes that produce mobilities, the assumptions they make, and the values and qualities they prioritise. The book journeys through a range of objects, materials and processes to explore the role of designers, consumer-facing business functions (such as consumer experience and marketing), and the regulatory, legal and normative frameworks that circumscribe these functions in co-producing relationships between design and mobility. By highlighting often invisible artefacts and associated knowledges and controversies our contributors foreground the taken for granted ways in which everyday mobility is designed. The chapters are grouped into three inter-related themes relating to the production of subjects and practices; the mobility of design knowledge and practices; and the ways in which design practices and artefacts connect (or disconnect) and blur boundaries between users and practitioners.

## Designing mobility: the role of design in making up mobile subjects and practices

If the social as Urry (2007) suggests is ‘mobile’ – then the focus becomes about how movement makes up the social, and hence how design processes make up the social in particular ways. In line with Cresswell (2014) and Spinney et al (2015), and building upon much of the design mobilities work cited thus far, the chapters in this section take seriously the work of mobile artefacts as fundamental in shaping social relations that ‘make up the subject’. In certain cognate literatures such as transport geography, the status of mobility artefacts has remained unquestioned; positioned as already ‘made up’ and acting as neutral nodes in a given network (Ernste et al 2012; Spinney 2010). However, rather than view the mobile subject as ‘finished’ and pre-formed because of their hybridisation with various designed artefacts and environments, chapters in this section demonstrate how designed artefacts make up the subject in less predictable ways because of the ways in which artefacts interact with bodies and spaces in unique ways. Importantly, the authors attempt to excavate and foreground the logics behind the design of both spaces and objects to understand how these produce particular mobile practices and subjectivities.

Working against a broad historical canvas, Guy Julier makes a case for a series of design artefacts that typically lie outside the purview of mobilities studies as helping to usher in a ‘neoliberal sensorium’. Here the design of objects like TV remote controls and computer games intersect to discipline the movements of users toward a new set of calculative ‘micro-practices’. In her study of the design of Amsterdam’s Schiphol airport, Anna Nikolaeva draws upon interviews with airport architects, designers and managers to identify key actors in the design process. In doing so she demonstrates how the needs, desires and capabilities of the mobile subject are ‘made up’ and contested by different stakeholders in the process. Using the example of the ‘Legible London’ wayfinding initiative for walking in London, Spencer Clark, Philip Pinch and Suzanne Reimer show how the decisions taken in the design process attempt to accommodate walking in London as part of a ‘mobility fix’ to ease pressure and congestion on other areas of the transport system, but also as a form of leisurely exploration. What emerges in both cases is that the meanings of walking assumed and reproduced through the decisions of design professionals rely on the prioritisation of walking as a ‘rational’, efficient and purposeful form of mobility. Stepping back in time, Peter Cox provides a historical STS informed analysis of bicycle design in 1920s Germany and 1970s Britain to illustrate how external forces can shape interpretations of cycle design. Cox shows how on the one hand the meanings of existing designs are changed by inserting them into new socio-political contexts, and on the other how the meanings of new designs are changed by inserting them in to existing socio-political context. Both cases illustrate the relations between design and broader worlds of meaning and sense-making, and the ways in the meanings of a mobile practice are transformed. Simon Cook demonstrates how variations of running as a mobile practice are produced through the intersection of different design elements in a train station. In particular he demonstrates the tensions between figurative design cues that attempt to eliminate running, material artefacts such as clothes and shoes that do not afford running, and informational and material cues that encourage running by both increasing and decreasing the information users have regarding the achievement of their goal (boarding a particular train). Finally, Thomas Birtchnell, John Urry and Justin Westgate’s chapter indicates how the movement of design technologies from experts to lay individuals is situated within discourses of empowerment, education and democratisation. Emergent meanings of the 3D printer as an educative and democratising tool are seen to arise precisely because its movement represents a dispersal of production facilities and design practice.

## Mobilising design: the mobility of design knowledge and practice

John Urry’s (2000) landmark mobilities text *Sociology Beyond Societies* emphasises that “sociality and identity are produced through networks of people, ideas and things moving rather than the inhabitation of a shared space such as a region or nation state” (Cresswell 2010b:551). That is, interconnected movements profoundly reshape what we do and how we do it. Within this premise of increased circulation and fluidity, Urry asks us to consider how “…objects are materially produced and symbolically conceived of…” (2000:66). In the language of actor-network theory, rather than ‘black box’ design processes and encouraging them to be viewed as singular and linear entity, Urry (2000) encourages us to unpack design and focus on the ways in which movements, contingencies and multiplicities of design shape both design outcomes and practice.

The chapters in this second section typically understand the design process as an intersection and potentiality where the designed assemblage comes into being through ongoing movement and negotiation amongst multiple stakeholders. As Yaneva (2012, 544) has suggested, designed objects are the outcome of: “…a continuous series of negotiations, struggles and compromises between specific professional circles that have some common agendas to address but pursue different objectives.” Contributors to this section demonstrate the ways in which designed objects (and thus mobilities) are constantly transformed by actors and agents including designers, security personnel, engineers, marketers, advertisers, coders, and users. Despite recognition of the increasingly dispersed and fragmented nature of design practice and production (Julier 2000; Henry, N, Pinch, S. and Russell 1996), the impact of this mobility on design practices has been little explored. The chapters in this section argue for an ontology of the place of design that recognises the powerful ways in which the increasingly shifting, unmoored and dispersed nature of design practice impacts upon its outcomes. Rather than conceptualise design as one side of a producer/consumer boundary, design becomes a set of nodes in a shifting network. Here a design object or project becomes more a ‘complex ecology than a static object’ (Yaneva, 2012:283). This focuses attention on the fluid, unfinished, and uncertain nature of design materials, knowledge’s and practices, and the roles of different actors and actants in producing them as such.

Through an analysis of packaging design, Craig Martin demonstrates how the mobility of various ideas and materials becomes a core determinant of design geographies: from the circulation of ideas in the initial conceptualisation of a design solution; through the global mobilities of raw materials and finished goods; to the mediation of information in consumer culture. Martin Emanuel focuses on the (partial) transition from hand-signalled to mechanized control of urban mobility on the roads of interwar Stockholm. In analysing controversies around the early development of traffic lights Emanuel aims to understand what lights “do” in a Latourian sense, presenting the design of the now taken for granted traffic light as arising from transatlantic circulation of knowledge and technology, and from the connecting together of a diverse set of actors including Swedish technology company AGA, the Swedish Police Force, the US firm General Electric, motoring journalists and the Royal Automobile Club. Philip Pinch and Suzanne Reimer demonstrate the multiple and dislocated nature of design through the example of MotoGP, the premier motorcycle racing world championship. Design is seen to traverse a range of locations, including mechanical engineering, the design of electronic control systems, the regulation of international motorcycle racing and the physical body of the rider. In such a reading the outcomes of design practice are never settled, but rather design continually responds to different riders, racing circuits and rule changes. In a similar vein but focusing on the travels of one influential individual, Kim Kullman demonstrates how discourses of Universal Design are increasingly shaped through mobility. Kullman demonstrates how transnational relations of knowledge as ideas, models and techniques are produced and transformed by the physical travel experiences of Professor Kawauchi. Finally, through a case study of a suburban car park in Aalborg (Denmark) Ole B. Jensen, Ditte Bendix Lanng and Simon Wind illustrate the importance of context in determining the visual and practical affordances of objects and spaces. In doing so they demonstrate the ways in which uses and things are always connected into wider networks conditioning their actual and potential uses.

## Design knowledges: making connections

As we have discussed, design must be understood as a distributed process; the intersection of forms of expertise and values. This highlights the need to understand design as an unstable and dispersed accomplishment which is fundamentally about making connections: design connects us (or not) to the social and physical world; to each other. Design is thus an inherently political practice even if design professionals have been at pains to obscure it. Designed artefacts are the materialisation – and indeed fixing and representation – of particular values, interests and dispositions. As such they tell a particular story, or more accurately they give us the ‘ending’ – the outcome. We cannot tell just by looking at something how it has come to take this shape and not that or why it enables this use but disables that use. As Yaneva suggests, “we cannot understand how a society works without appreciating how design shapes, facilitates, conditions and makes possible everyday sociality […] design helps make the social durable” (2012:280-1).

The chapters in this third and final section explore the ways in which the design process connects or disconnects different fields of users, professionals and forms of representation. Here the chapters highlight the importance of intersections as the borders where translations and distortions occur, where some understandings take precedence over others. Yaneva (2012:282) argues that to tackle design as a type of connector; ‘as a mechanism for setting the world in motion’ we need to go beyond the discourses of designers and inventors, arguing that we also need to attend to the cultures and practices of designers, and to follow “what designers and users do in their daily and routine actions”.. Storni (2012, 89) suggests a focus on “…the process of design, in the becoming of its results and in the relation between process and outcome” to foreground the movements and transformations between product and process. Accordingly chapters in the third section section focus on the ways in which standards, regulations and other virtualised and ‘invisible’ actants of design intersect to shape mobility.

Using the case of the urban quadricycle, Lino Vital García-Verdugo demonstrates how a focus on vehicle design that moves beyond the aesthetics of the showroom highlights the potential for design to connect people and environments in new and more civically progressive ways. In doing so he highlights the fact that for this to happen, car designers must connect with other cognate nodes such as urban design. Margo Annemans, Chantal Van Audenhove, Hilde Vermolen and Ann Heylighen focus on the problem of designing spaces from the view of a particular mobile subject – the hospital patient. Annemans et al are concerned to evaluate which processes and media enable the best representation and translation of differently mobile subjects into design qualities and outcomes. Their findings illuminate the connections between different design outcomes and the mediums through mobility is represented. Jayne Jeffries and Peter Wright bring together insights from mobilities and Human-Computer-Interaction to explore the borders that exist between ‘designers’ and ‘users’. By charting the exchange of skills, perspectives and knowledge’s between research-designers and participant-users, Jeffries and Wright chart a shift from design as a strictly bounded way of knowing and ‘telling’ to design as a porous connector. Emily Falconer provides an alternative reading of the train station as designed space through an affectual analysis of mobility patterns. Her analysis sheds light on how people’s senses and feelings of community are constituted in relation to forms of mobility and waiting. Journeying with commuters as they traverse through the multisensory atmospheres of an early morning train station, a familiar yet silent train carriage and a noisy, neon-lit, smell-ridden and body filled metropolitan station, Falconer reveals how the affordances of space create feelings of connection and separation, belonging and exclusion, community and individualisation. Finally, through an examination of a specific shared street space—New Road in Brighton, Lesley Murray and Susan Robertson explore the potential of drawing as design practice to interrogate the complex connections between the design and mobile practices of street space. In particular Murray and Robertson focus on the ways in which designers attempt to represent the multi-sensory nature of mobility and differential power relations of mobile subjects through such a ‘static; medium. What arises from this is an understanding of the ways in which drawing is central to conceiving and giving meaning to different mobile practices.

Our concluding chapter identifies a range of themes that signpost both the collective contribution of chapters and avenues for further research. In particular, it highlights the importance of understanding designed objects and designers as moral and political actors. We would like to end with a note of thanks to our authors for their continuing interest and support throughout the production of the book. The volume has its origins in a special session at the 2013 Royal Geographical Society/Institute of British Geographers Annual International Conference as well as a one-day workshop, *Designing Mobilities 2015*, held at London South Bank University, 14-15 April 2015. We are grateful to all of the participants at both events for their thoughtful reflections and contributions.

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