

Chapter 5

Who does the Move? Affirmation or De-construction of the Solitary Mobile Subject

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Introduction

Within the discussion of Michel Foucault's oeuvre, the term of *governmentality* has gained much attention in general social science debates (amongst others: Dean 1999; Rose 1999; Lemke 2002) and in mobilities research in particular (Packer 2003; 2008a; Dodge and Kitchin 2006; Böhm et al. 2006b; Bonham 2006; Paterson and Stripple 2010; Bærenholdt 2013). With this term, developed in his lectures at the Collège de France between 1977 and 1979 (Foucault 2007; 2008) Foucault linked his two interests, the genealogy of the state and the genealogy of the subject (cf. Foucault 1983; 1992). The most commonly used definition of governmentality characterises it as 'the conduct of conduct' and thus as a term that ranges from 'governing the self' to 'governing others'. All in all, in his history of governmentality Foucault shows how the modern sovereign state and the autonomous individual co-determine each other's emergence (Lemke 2002, 50f.). The subjectification or the active constitution of the subject, then, means that

the subject constitutes himself in an active fashion, by the practices of the self, [but] these practices are nevertheless not something that the individual invents himself. They are patterns that he finds in his culture and which are proposed, suggested and imposed on him by his culture, his society and his social group. (Foucault, 1987: 122)

The figure of the subject is a radically social as well as modern one in the sense that s/he discursively emerged together with the specific modern socio-political context. The modern subject is further specified as the author of agency, which is framed within the terminology of causality and rationality (Otto 2014, 17f.). Yet, the modern subject is continuing to develop and, as governmentality studies have elaborated for the era of so-called neoliberalism, the last decades have witnessed an even more acute ascription of responsibilities to the subject, along with a resulting

moral necessity for self-management, thereby eclipsing social structuring and embeddings (cf. Dean 1999; Bröckling, Krasmann, and Lemke 2000; P. Miller and Rose 2009).

This idea of a co-evolution and mutual determination of socio-political and spatial formations on the one hand and specific subjects on the other has been applied (with and without reference to Foucault) to the field of mobilities studies, especially to the object of *automobility*, highlighting its centrality within modern Western states and subject formations of the 20th century. Automobility, as Sheller and Urry (2000, 738f.) defined it, consists of six aspects: the *car industry* from which key concepts such as Fordism have emerged and which produces the manufactured *object of the car* as the major item of individual consumption after housing; a *powerful machinic complex* constituted through the car's technical and social interlinkages with other industries and services, ranging from car parts to tourism, leisure activities and suburban home building; a *predominant global form of mobility*; a *dominant culture* that sustains major discourses of what constitutes the good life and which provides powerful literary and artistic images and symbols and, finally, automobility constitutes the main *cause of environmental resource use*. Thus, from a mobilities studies' point of view, automobility is fundamentally interwoven with the modern state formation, the economy, material landscapes, culture and knowledge and social practices. Moreover, in the light of governmentality studies, the automobile subject (in a literal and metaphorical meaning) as the solitary author of decisions and moves, detached and detaching itself from social, material and historical contexts, constitutes an effect of automobility in this broad sense. Concepts of planning, policy making and transportation research, in particular, are part of the production of the very subject they presuppose:¹ These disciplines and institutions tend to model personal mobility – be it residential migration, commuting patterns, transportation mode choice, leisure or tourist travel² – as derived from set demands. The origin of transportation and residential choices is seen in conscious rational decisions of autonomous subjects, taking costs and available options into consideration against the background of their individual demands and preferences (e.g. Bamberg 1996; for an overview: Schwanen and Lucas 2011). This conceptualisation corresponds to the modern understanding of the subject as one that chooses rationally and is equipped with autonomous agency (cf. Reckwitz 2006). The demands, options and activities, however, that make travel necessary – social contacts, work, school, shopping – are treated as givens, external to the analysis of transport behaviour (Van Acker, Van Wee, and Witlox 2010, 230).

¹ In a more differentiated account, Doughty and Murray (2014) distinguish analytically between a technocratic and a right to mobilities strand as well as strands of mobile riskiness, of speedy connectivity and of sustainable mobility pervading more or less powerful institutional mobility discourses.

² I will focus on physical movement in geographic space. However, the argument could also be applied to virtual mobilities.

In the following, I will focus on the subject conceptualisations within mobilities research. In order to strengthen the argument of the co-constitution of social formations and mobile subjectivities, I will highlight the role of automobility in constituting prototypically modern subjectivity. In opposition to the ‘rational subject’ appellation, the works subsumed under the mobilities paradigm outline a theorem of mobility as a relational practice which will be sketched in the second part. This central concept entails a fundamental critique of the autonomous mobile subject and thus the modern rational subject in general. However, there seems to be a cleavage between the theoretical assumptions and the research practice of mobilities scholars, as will be highlighted in the third section. By privileging certain methods and perspectives on what is social, segments of mobilities research implicitly affirm the solitary mobile subject by ignoring conditioning contexts and dependencies. In the conclusion I will then suggest developing further some methods and methodologies that account for a more relational subjectivity and agency.

The automobile subject as paradigmatic for the modern subject

The co-constitution and co-emergence of socio-spatial order and subjectification have been elaborated by numerous mobilities scholars in relation to automobility. On this token, the motorised car cannot be reduced to a mere technological add-on of Western modernity but must be understood as part and parcel of this specific social formation with its specific spatialities – the internally integrated bound nation state, and with its specific regime of accumulation – the capitalist Fordist national economy (cf. Urry 2004; Böhm u. a. 2006a; Paterson 2007). As Rajan (2006, 113f.) elaborated, the car as a principal technology of liberal democratic societies, with its promise of freedom (of choice) and individuality, reinforces the modern teleology by establishing characteristically that which is modern and, by definition, permanently desirable. Thus, automobility constitutes a crucial element of the governance and production of the very subjectivities, desires and lifestyles, within which its legitimisation is grounded. This complex automobile-social formation came about during the 20th century in the Western world and is continuously changing and adapting its organisation.³

Looking back, it often seems that the motor car was simply the most suitable technology to organise the movement of people from home to work within national territories and therefore became the dominant mode of mass transportation. Automobile passenger travel has gained the aura of ‘naturalness’, and ‘[m]any people maintain that cars are the evolutionary epitome of transportation, the ultimate technological extension of free human movement’ (Goodwin 2010, 66; Manderscheid 2014a, 7; cf. Henderson 2009). However, as research into the history of automobility

³ Within the context under discussion, however, what is of interest is not the historical evidence for this claim which has been elaborated more systematically elsewhere (e.g. Rajan 2006; Paterson 2007; Packer 2008a; Seiler 2008), but an understanding of automobility as a technology, as a mode of subjectification.

has shown, many elements used to explain the success of individual motorised transport at a closer look turn out to be an effect of the latter.

At the time of their first appearance in Western cities, automobiles were not seen as the means of future mass transportation but rather the opposite, as something for the affluent bourgeoisie, ‘the motor car provided fantasies of status, freedom and escape from the constraints of a highly disciplined urban, industrial order’ (McShane 1994, 148, quoted in Paterson 2007, 132). Cars were too expensive (and not reliable enough) to be a means of commuting or of far travel for the working class. It was not until the reorganisation of the labour process as part of a new accumulation regime that cars became affordable for the masses, making them ‘the commodity form as such in the twentieth century’ (Ross 1995, 19; cf. Paterson 2007, 107). The Fordist era of capitalist growth has been described as one characterised by the state’s distinctive role in securing full employment in a relatively closed national economy mainly through demand-side management. Social policy with the aim of reproducing labour power had a distinctive welfare orientation, promoting mass consumption, family wages and thereby the integration of the working class into capitalist society (Aglietta 1979, 152; Jessop 1999; Paterson 2007, 111f.). In this context, the car and suburban housing constituted central elements of consumption norms, as Michel Aglietta highlights:

The structure of the consumption norm thus coincides with its conditioning by capitalist relations of production. It is governed by two commodities: the standardized housing that is the privileged site of individual consumption; and the automobile as the means of transportation compatible with the separation of home and workplace. (Aglietta 1979, 159)

What is more, this economic regime and its spatial organisation are inseparably interwoven with the nuclear family and its asymmetric gender relations, which constitute both the precondition for the reproduction of the labour force and the individualising counter-weight to Taylorist discipline and heteronomy (Aglietta 1979, 159f.; Kohlmorgen 2004, 120; cf. Meißner 2011). In this context, the private car, made affordable to most social strata through mass production, can be described as an ‘equaliser’, providing not only the elite with generous amounts of personal space while expanding opportunities (Rajan 2006, 114):

At least on the face of it, automobility appears to have the built-in mechanisms to fulfil contemporary liberal society’s promise of delivering both freedom and equality in several of those places that have embraced capitalist theory and practice. (Rajan 2006, 118)

Yet, this freedom took the form of individualisation as the disembedding of the individual from social collectives such as class, neighbourhood, religious communities and extended families (Beck 1992). During the 20th century and supported by a range of social, cultural, economic and political means, automobility became deeply ingrained in many social practices, lifestyles and living arrangements (cf. Seiler 2008; Henderson 2009). The inclusion of broad social strata into the qualified labour force with rising wages and the expansion of social welfare during the second half

of the 20th century meant also an adoption of formerly socially exclusive consumption and lifestyles by the majority of the population. Thus, within the self-description of Fordist societies, the middle classes with their individualist aspirations, values of self-fulfilment and lifestyles – including a suburban home and a car – played an important part, whereas the cleavage between the working class and the bourgeois capitalist class lost its identificatory and descriptive power for the life realities of the masses. Correspondingly, the promotion of home ownership as well as the provision of infrastructures for private car traffic became central elements within post-war western public policies, constituting a central part of Fordist regulation (Kuhm 1997; Gegner 2007; Seiler 2008). In this view, the Fordist class compromise and the degree of territorial social cohesion to a large part is rooted in individual mobilisation and motorisation of the masses. This constitutes both the precondition and the effect of the individual integration into the system of productive employment (cf. P. Miller und Rose 2009). Yet, this ‘elevator effect’ (Beck 1992) in Western societies came at the price of increasing individual responsibilities and risks, thus forcing people to become solitary authors of their movements, professional careers, life projects and social inclusion. In this context, automobility constitutes a central element within a broader technology of spatial mobilisation and social individualisation. The topographical separation of working and dwelling that makes car driving, and thus car owning, necessary for large parts of the workforce in Western societies did not just ‘naturally’ happen but is itself at the same time cause and effect of the modern spreading of car mobility. As John Urry phrased it,

Automobility divides workplaces from homes, producing lengthy commutes into and across the city. It splits homes and business districts, undermining local retail outlets to which one might have walked or cycled, eroding town-centres, non-car pathways and public spaces. ... Automobility is thus a system that coerces people into an intense flexibility. It forces people to juggle fragments of time so as to deal with the temporal and spatial constraints that it itself generates. (Urry 2004, 28)

This schema suggests that the late modern addressing and performative interpellation of the individual by a regime of automobility is part and parcel of the constitution and embodiment of the modern subject. The governmental formation and privileging of the automobile subject in current Western social formations creates both a social normality and its flip side, several deviant and problematic subjectivities: Whereas up until the late 1960s and early 1970, only a minority of households owned a private car (for Germany, cf. Kuhm 1997, 185), by now, within the old EU-states, on average less than two people share a passenger car, that is more than 500 cars per 1000 inhabitants (Wikipedia 2014; Worldbank 2014). Car owning and driving thus constitutes almost an unquestioned matter of course which is deeply ingrained in the fabric and organisation of the social realm. Paradigmatically, passing the driving test and receiving a drivers license (rather than the right to vote) marks the entry into adulthood as a full member of modern societies (cf. Rajan 2006;

Seiler 2008; Packer 2008b). Thus, against the background of Foucault's understanding of governmentality and subjectification, the argument may be summarised as the constitution of the modern subject as a car-driving or automobile subject, which is aided by the car's supporting institutions – the highway and gasoline delivery infrastructure, traffic rules, parking structures, licensing procedures, and highway patrol officers. Jointly, they serve as 'training wheels' to prepare the individual to become a mature citizen in a material and spatial society (Rajan 2006, 122). Yet, it is not the automobile subject per se but the *economically productive automobile subject* – driving for work or consumption – who deserves full social admission (cf. Manderscheid and Richardson 2011). Looking at workfare policies, the argument works as well the other way round: Being a productive thus employable person involves accepting to commute – by car.

Furthermore, the formation of the automobile subject entails constituting a hierarchy of mobile subject positions, differentiating between good and normal movements and moorings, symbolising socially accepted life organisations on the one side and subordinated, deviant or simply unproductive forms on the other, in other words, uncontrolled leisure traffic in relation to economically relevant commutes of the labour force, private car traffic and subsidised public transport (cf. D. Miller 2001; Seiler 2008). Other mobile subjects – pedestrians, public traffic users, cyclists, passengers – although co-products and derivatives of automobility, are of lower degree of generalisation and recognition. For example, among other state policies, urban and spatial planning assume and plan for automobile subjects and treat 'the others' as a category of problematic deviants, whose needs can only be met as far as public budget restrictions allow (cf. Manderscheid and Richardson 2011). In a way, by taking individual automobility as a normal characteristic of modern subjects, the responsibility for being slow or immobile is assigned individually to the non-automobile subjects.⁴ The moral prompt to be automobile is paradigmatically expressed in a quote attributed to Margaret Thatcher: 'a man who, beyond the age of 26, finds himself on a bus can count himself a failure,' (HM Government 2003; quoted in Doherty and Murray 2014, 7).

The specific modern and automobile subject is continuously affirmed by aggregated social practices and knowledge as well as by policy and scientific discourses. As argued in the introduction, the rational autonomously mobile subject pervades transportation and planning. Yet, as a discordant discourse, the theoretical foundations of the mobility paradigm⁵ challenge this figure by stressing the relational and embedded character of mobility practices and mobile actors together

⁴ This hypothesis runs parallel to the diagnose of governmentality studies which observe a process of de-socialisation and conceptualisation of the individual as an active and responsible subject. As Nikolas Rose has argued in regards to unemployment, 'each individual is solicited as an ally of economy success through ensuring that they invest in the management, presentation, promotion and enhancement of their own economic capital as a capacity of their selves and as a lifelong project' (Rose 1996, 339).

⁵ Of course, the theoretical foundations of mobilities research are broad and rooted in heterogeneous strands of social theory. However, the claim of constituting a 'new paradigm' (Sheller and Urry 2006) comes with the assumption of some degree of common theoretical claims, especially some fundamental breaks with 'traditional' social theory.

with the relational character of the social in general. However, as I will show in more detail in the remainder of the paper, there seems to be a gap between these epistemological claims and research practices within mobilities studies, which run the risk of re-producing or affirming the solitary mobile subject through their research designs and methodologies.

In order to elaborate this hypothesis further, I will now turn to the relational understanding of mobility that is a central epistemic axiom of mobilities research.

Mobilities as a Relational Practice – Mobile Subjects as Embedded Agents

One of the fundamental breaks of the mobilities paradigm from 'traditional' social theory consists in the focus on movement and fluidity rather than on territorially fixed social units (Sheller and Urry 2006; Hannam, Sheller, and Urry 2006) which

... challenges the ways in which much social science research has been “a-mobile”. Even while it has increasingly introduced spatial analysis the social sciences have still failed to examine how the spatialities of social life presuppose (and frequently involve conflict over) both the actual and the imagined movement of people from place to place, person to person, event to event. (Sheller and Urry 2006, 208)

In this view, people, objects and symbols are understood as travelling virtually, physically and imaginatively in multiple ways. *Mobility*⁶ encompasses a wide range of movements that can be seen as a continuum, ranging from the daily routine movements around the home at one end of the spectrum to long-distance migration and virtual mobility at the other end (Pooley et al. 2005, 5). Persons thus move physically on a frequent and regular basis in their everyday life and, maybe once or twice a year for holidays; they relocate permanently or temporally to new dwellings, and they move virtually by communicating and connecting through the internet and mobile phones etc. These different forms of movement require a broad range of technical artefacts and infrastructures, norms and regulations. Correspondingly, movement or mobility can only be understood in relation to its material foundation. Thus, movement as a practice has to be *contextualised within specific material, geographical and broader spatial environments*. As Urry (2000, 78) states,

[t]he human and the material intersect in various combinations and networks, which in turn vary greatly in their degree of stabilisation over time and across space. ... In such an account the human is highly decentred and is not to be seen as separate from the non-human.

Maybe these statements on the hybrid character of mobile agents are where the difference and opposition to the modern conceptualisation of an autonomous rational subject become most visible. On this token, Büscher and Urry (2009, 100) consider the analysis of mobilities as ‘an example of *post-human* analysis’ (emphasis K.M.). More specifically, they presume ‘that the powers of

⁶ Of course, considering the question of what constitutes movement and what is labelled 'immobility', the object 'mobility' is itself the effect of social constructions and contestations (cf. Mincke this volume; Frello 2008). Yet, I am abstracting from this here, since my interest is to contrast the (implicit) ontologies of the mobilities paradigm with traditional social theory and transportation research.

“humans” are co-constituted by various material agencies, of clothing, tools, objects, paths, buildings, machines, paper, and so on’ (Büscher and Urry 2009, 100).

In addition, the common disregard of *location-specific spatial*, especially *infrastructural inequalities* on different scales assumes and thus corroborates the ideologically infused ideal of equal chances and restraints to being mobile across territorial and social spaces like national societies, thereby affirming equally motile subjects. However, this assumption no longer (if ever) holds true for most western countries in which, starting at different levels of spatial homogeneity and integration, processes of spatial and infrastructural differentiation and splintering are taking place (Graham and Marvin 2001). Spatial differentiation can be observed at the global, national, regional and urban scale, which means that, depending on the analytical interest, movement has to be contextualised within the matching scale(s). Yet, the infrastructure equipment of places should not be seen as meaningful or ‘equalising’ per se, even though its effect on people's lives depends on their life-geographies and the spatial extent of personal networks (cf. Urry 2003; Cass, Shove, and Urry 2005; Larsen and Jacobsen 2009; Frei, Axhausen, and Ohnmacht 2009): Not everyone needs to move physically in order to be socially integrated and not everyone's social ties are at a far distance. What is more, the degree to which people can compensate for a lack of publicly provided access to services and infrastructures depends on their economic, cultural or social capital (Bourdieu 1986) or their network capital (Urry 2007, 194ff.). Thus, together with the material context, the *individual's networks* and *socio-spatial positionality* should also be taken into consideration.

Furthermore, movements take place within a *spatially and historically defined socio-cultural context*. Mobility, infrastructures and spaces are being constructed and made meaningful through a range of symbols, representations and discourses. The collective meaning of mobility as well as the knowledge and representation of possible destinations and, more broadly speaking, of mobility practices, vary multidimensionally with one's position in time, space and society. Yet, in the course of historical sedimentation and collective habitualisation, the social origin of the extensions and limitations of the realm of movement practices tend to become invisible, gradually being considered as a natural matter of course both by the actors within these contexts and by scientific analysis. Yet, against this background, individual and collective mobility choices, such as modes of transportation, destinations, speed and their absence cannot be attributed sufficiently to conscious and informed individual decisions. Rather, mobilities are pervaded by preconscious and incorporated cultural discourses and knowledge (e.g. Freudendal-Pedersen 2007), infused with supra-subjective meanings and hierarchies. The moves and fixes thinkable, choose-able and ‘do-able’ by individuals, groups and larger social formations are thus prescribed by discursive formations at a given space and time (cf. Foucault 2002).

Moreover, movements also take place in specific *social contexts* within which these practices as broader mobility strategies involve further *rectified or alternative, dependant and relational forms of movement, mooring and stillness* (e.g. Schneider, Limmer, and Ruckdeschel 2002; Hannam, Sheller, and Urry 2006). Thus, moves are rarely decisions taken in complete social isolation but should be conceptualised as negotiated more or less directly within personal networks of relations. For example residential mobility affects and matters within personal relationships, families and other social networks (e.g. Schneider, Limmer, and Ruckdeschel 2002; Larsen, Axhausen, and Urry 2006, 74f.). Thus, the latter have an impact, one way or another, on residential choices. Other forms of travel also go hand in hand with dependent social immobilities: At starting, resting and end points of travel are places with people attached to them – families, lovers, work colleagues and partners, services, maintenance – which form the immobile social prerequisite for travel. The relation between moving and immobile people and bodies is intrinsically linked with power relations of class, ethnicity and gender (e.g. Malkki 1992; Wolff 1993; Weiss 2005).

Against this background, mobility practices emerge in specific social, cultural, material and geographic situations within collectively and personally shaped spatial relations. Elsewhere (Manderscheid 2012; 2014b) I suggest referring to this trans-individual background of practices as the ‘mobility dispositif’, and other authors refer to it as ‘larger material and symbolic regimes’ (D’Andrea, Ciolfi, and Gray 2011, 158) or ‘socio-technical systems’ (Urry 2004). Yet, what is of interest here are the methodological consequences of these outlined axioms of mobilities research, especially the conceptualisation and methodical operationalisation of mobile agency.

Having outlined the relevant ontological foundation of the mobilities paradigm, I will now turn to the practice of mobilities research. As an empirical base, I analysed the articles that appeared in *Mobilities* in 2013 as a sample of present contributions to mobilities studies. The analysis focused on the scale of the research object, the methods used and, if applicable, the conceptualisation of agency. The sample can be seen as representing state-of-the-art mobilities research, published in its central journal. The aim of this study was to underpin and illustrate rather general observations empirically.

Performing Mobilities – Missing Links between Theory and Methods

Methods and methodologies, drawing on antipositivist, performative and holistic understandings of science, extend theoretical axioms into the empirical world (cf. Kuhn 1962; Diaz-Bone 2010). In this view, methods and scientific techniques are not understood as neutral instruments to be used and applied in order to analyse pre-existing social entities, but rather as carriers of theoretical assumptions and trimmed models of the empirical world. Thus, rather than merely illuminating a world that exists independently, methods (co-)constitute their object of research. This performative

view on methods and research plays a prominent role in French Epistemology, which is rooted in the works of Gaston Bachelard (2002) and can be found in the works of, among others, Roland Barthes, Georges Canguilhem and Michel Foucault. The latter states this holistic and performative role of knowledge and discourses in general, which he sees not ‘as groups of signs (...) signifying elements referring to concepts or representation (...) but as practices that systematically form the objects of which they speak’ (Foucault 1972, 49). Or, as John Law and John Urry phrased it outside the French discussion, social research practices are performative, ‘they enact realities and they can help to bring into being what they also discover’ (Law and Urry 2004, 393).

From the very beginning, mobilities studies contained a strand on methods – referred to as *mobile methods* and *methods for mobilities research* (e.g. Büscher and Urry 2009; Ahas 2011; Fincham, McGuinness, and Murray 2010; Büscher, Urry, and Witchger 2011a; Merriman 2013). In a Kuhnian view (Kuhn 1962), the development of new theoretical approaches, terminologies and methods marks the emergence of a new scientific paradigm, an idea that has been actively employed by mobility scholars in speaking of a ‘mobilities paradigm’ (e.g. Urry 2007, 39). On this token, Urry argues that ‘research methods also need to be “on the move”, in effect to simulate in various ways the many and interdependent forms of intermittent movement of people, images, information and objects’ (ibid). His emphasis on the ability of methods to follow people, images, information and objects constitutes an opposition to the assumption of fixity and sedentarism of ‘traditional’ social science research methods, which typically locate people through their residential address and more or less explicitly assume spatially fixed lives, social integration based on geographic proximity and spatial co-presence. These sedentary assumptions are reflected many ways in social science data and the classifications used, as, amongst others, the discussion of analytical consequences of territorialising concepts of identity (e.g. Malkki 1992) or research on multi-local forms of dwelling (e.g. Hilti 2009) has brought to the fore. Traditionally, the social facet is conceptualised as contained within territorial units – the neighbourhood, the city, the region, the nation state, which then figure as sampling units for social science data collections. Mobile methods, on the other hand, aim at tracking the multiple movements of people, information and objects (Büscher and Urry 2009, 103ff.), thereby turning the very spatialities of the social into an object of empirical research. The suggested methods encompass a range of qualitative, partly technologically supported means of collecting data on moving systems (Büscher, Urry, and Witchger 2011b, 7ff.; cf. Büscher, Urry, and Witchger 2011a; Fincham, McGuinness, and Murray 2010) aiming at overcoming the sedentary bias.

Yet, constructing principally mobile rather than sedentary research units through social science methods is only one of the methodological issues raised by mobilities theoretical concepts. As outlined in the previous section, further elements comprise the *hybrid character of moving entities* –

consisting of human-technical networks – and their *embedding* into *geographic* and *infrastructure contexts*, into *networks of social ties and obligations* as well as their *position within a historically and culturally specific field of knowledge*. Although these issues form a prominent part of mobilities thinking, until now they hardly seem to be addressed by the suggested mobile methods. What is more, the performed ontologies of mobility research applying the idea of ‘following the thing’ (e.g. Adey 2010, 53) take the mobile thing's existence – be it a mobile human or an object – as a fact *a priori* which is defined by its movement: ‘Subjectivities are mobilised prior to empirical investigation through this act of paradigmatic naming’ (Bissell 2010, 55). Thus, what is other than mobile is regarded ‘immobile’ or ‘moored’. The other only exists in relation to the moving things (ibid), while the nature of its existence is always already predefined. This a priori existing mobile thing followed by mobilities scholars most often tends to be either an object of the material world or a human being. Thus, the theorem of hybrid socio-technical formations gets lost in large parts of the discussion and application of these mobile methods. What is still less developed are methods ‘to examine the many ways in which objects and people are assembled and reassembled through time-space’ (Urry 2007, 50).

The analysis of all papers published in *Mobilities* in 2013 reveals that only 5 of 33 papers focused (more or less systematically) the interaction between people and material objects, yet none questioned the ontology of its research object. This contributes to the observation that research designs and methods used in mobilities studies do not reflect systematically the idea of socio-technical hybrids constituting and constituted through movement. Rather, as Savage et al. (2010, 6) observe, mobilities research practice shows an elective affinity with theoretically humanist methods like face-to-face conversations, moving with the research subject, ethnographic methods and participation in virtual interactions. These methods, stemming from qualitative understanding and phenomenological sociological traditions, tend to over-emphasise the agency of humans while the material and technological foundation of the various forms of mobility, their productivity and performativity as well as their interaction with and embodiment by mobile humans is not reflected within these methods and most research designs, thus, they remain largely unobserved (Schad and Duchêne-Lacroix 2013, 364).

In addition, there is the issue of contextualising the mobile things. As elaborated elsewhere (cf. D’Andrea, Ciolfi, and Gray 2011; Manderscheid 2014b), the empirical focus of most mobilities research tends to be either the micro level of experiences, practices and motives or the macro level of flows and movements, their technological and material preconditions, past developments, political economies and potential futures as well as links to specific constitutions of discourses and knowledge. Both methodological approaches undoubtedly have been of high value for the development of mobilities studies. However, whereas macro approaches run the risk of reading

‘social life off external social forms – flows, circuits, circulations of people, capital and culture – without any model of subjective mediation’ (Povinelli and Chauncey 1999, 7, quoted in D’Andrea, Ciolfi, and Gray 2011, 156), micro sociological approaches try to excavate these subjective elements especially without systematic consideration of their positionality in space, time and the social realm. The analysis of the sample of *Mobilities* papers shows that less than a third of the papers apply a dual-focus of practices and experiences at the micro level, of social and spatial structures of movement at the macro level. Amongst these papers, only one analysis explicitly highlighted the need to correct subjective statements by structural context information. Thus, it appears that to a large extent, mobility research analyses these two sides separately – either the experience and mobility practices or their discursive, spatial or structural foundation.

Furthermore, especially by applying narrative methods, a significant part of mobilities research implicitly re-constructs and affirms the actor of movement as a conscious, active and to some degree autonomous subject. Amongst the 33 *Mobilities* papers, 10 used interview material and 5 worked with ethnographic methods of participating observation which includes communication with the researched subject. As Bissell (2010, 57) elaborated, the use of narration ‘tends to privilege the active dimension of corporeal experience: *I walked, I ran, I watched, I talked, I remembered*’. These ‘performative renderings of mobile subjects ..., might have the effect of generating an *overanimated* mobile subject. This potential for movement and connection ... privileges the body-in-action, as active and agentive.’ What slips from this empirical focus are other, less conscious, less active and less reportable bodily experiences. Together with the point made before, especially the de-contextualised focus on the micro-level of subjective representations of movements, using solely interview-generated textual material runs the risk of overstating the role of conscious reasoning by individuals while at the same time eclipsing pre- and unconscious habitual and structurally shaped factors (cf. Bourdieu 2000).

Overall, the papers analysed display a peculiar tendency to abstract from social and spatial contexts in which mobility decisions and practices take place and to privilege the subjective view onto the social world. Very often without further consideration, within empirical mobilities research, the individual person is represented as the sole author of mobility practices. What is more, concepts and classifications used in mobilities (as well as other sociological) research carry highly normative assumptions on ‘*the good mobile subject*’. Beyond the analysed sample, this also becomes evident with research on children's mobility practices and usage of urban spaces, which tends to treat as a problem the decrease of public spaces in towns and cities where children can play as well as the increase of children transported by car to places of leisure and activities spread all over the town or the city. This line of argument can be traced back through the history of urban studies and is found in the writings of Mumford, Jacobs, and also in the psychological writings of

Piaget, Fromm etc. The more or less explicit ideal of a child's socialisation is seen in '*independent mobility*' (cf. Zeiher 1990; Katz 1994; O'Brian et al. 2000; Shaw et al. 2013), which is commonly defined as the 'freedom [of children] to travel around their own neighbourhood or city without adult supervision' (Shaw et al. 2013, 35). The purpose of these travels may be leisure, school or play. Researchers of children's mobilities as well as children's health and development policies agree on the mental and physical benefits of their independent mobility, which, on the other side, is limited by traffic landscape designs as well as by parental judgements, restrictions and 'licenses'. Yet, as Mikkelsen et al. (2009, 41) state in their critical review of the concept,

the idea of children's independent mobility reflects a cultural and adult-centred focus on individual agency seeing independent mobility as a natural step in children. ... In this understanding, childhood emerges as a phase in life in which children progressively grow up, and literally move out of the dependence of adults into independence. The cultural ideal is that children should be brought up to become an individual actor as opposed to a collective one.

Independence in this context is strongly biased to the absence of adults during journeys and outdoor movements. Other types of dependence affecting children's mobilities that arise from economic, political, material, cultural or other social relationships remain underexposed. Thus, the enmeshment of children's mobility practices with peer activities and their norms and rules (e.g. Mikkelsen and Christensen 2009; Goodman et al. 2013), is hidden behind this focus on accompanying adults. Furthermore, one may question whether it makes sense to talk about dependence or independence as a fixed status or if these concepts should be seen as part of social relations which are constituted through reciprocal actions (Mikkelsen and Christensen 2009, 41). Finally, independent mobility is often equalised to walking and cycling as forms of self-driven movement (Goodman et al. 2013, 276) whereas procedures of being moved – by public transportation as well as car-passenger – are framed as inferior and less autonomous. Taken together, the concept of independent children's mobility and its common application in urban studies and social science research reflects the modern ideal of autonomous, independent mobility that finds its mature adult form in the solitary car-driver. The process of learning 'truly self-determined mobility' then, is seen as initially requiring 'the company of peers' (Goodman et al. 2013, 288) as a necessary but immature stage within the process of becoming truly independently mobile.

The concept of children's independent mobility is currently undergoing some critique (e.g. Mikkelsen and Chistensen 2009; Goodman et al. 2013), which highlights the importance of mutual dependence on and relations with other travelling peers as well as the cultural bias within the concept. Yet, the connected idealisation of adult independent mobility – especially by car – remains largely untouched. However, as I highlighted in the previous sections, the automobile subject should be understood as a powerful construction and abstraction, which emphasises the autonomous

and rational characteristics by eclipsing dependence on infrastructure-material, spatial and social contexts, the pre-conscious and historically embodied desires, values and preferences and thus the socio-discursive nature of the mobility order.

This cuspidal outline of methodological and conceptual issues within mobilities research practice relegates it to a gap between theoretical foundations and their performative extension into the empirical. By drawing mainly on qualitative methods centred on humans, this research practice implicitly affirms the autonomous mobile subject that emerged together with western modernity and whose embedding in, dependence on and interaction with social, spatial, material, cultural and historical contexts tend to be obscured. Therefore, in a way, although mobilities research theoretically intends to criticise and de-construct a broader governmental invocation and formation of a figure, it is nevertheless an essential part of it. As Foucault pointed out prominently throughout his oeuvre, the production of knowledge is inseparably infused and interwoven with power relations. Thus, neither theory nor methods can be regarded as neutral tools applied to the search for the truth. Rather, they are part and parcel of social power relations, shaped by and themselves shaping social realities. The emergence of a concept such as the modern subject as an autonomous and rationally thinking independent mind does not simply constitute a description of modern humans in contrast to the collectively embedded pre-modern person, but also expresses a gendered and desocialised pre-scripted of modern subjectivities as cultural forms, suggestions, expectations, normalities and constraints on which empirical individuals have to act.

Politics of Methods – Searching for Alternatives

The claim of forming a new paradigm entails the development of appropriate theories, terminologies and methods. Furthermore, the key texts of mobilities research contain a more or less explicit critical stance on the social world by, to mention only a few critical topic examples, directing the focus on the socio-cultural embedding and governing of movement practices and the rise in motorised mobilities, thus criticising the one-dimensional approaches of transport studies and traffic policies which simply focus on individual behaviour modelled as rational choices. Against this background, the critique of concepts, terminologies and methods – such as the implicit affirmation of the 'rational autonomous mobile subject' manifest as the automobile subject (together with individualising governance in regard to social as well as environmental issues (cf. Paterson and Strippel 2010) and the search for technological quick fixes for ecological and transportation problems) – becomes a political strategy within the contestation of hegemonic views of the world and within the critique of the present mobility order. In this light, it seems crucial to develop and discover new methods and methodologies that are not only co-mobile with their object of research, but which frame and perform the empirical object differently and in accordance to the outlined

claims of its relational and hybrid character. Mobilities research would thereby constitute and signify a new reality of empirical objects in a more coherent manner.

Turning the outlined points of critique into points of departure for this search, I see some – although not yet fleshed out – sources of inspiration. Firstly, the *decentring of the subject in relation to its material environment* should be taken seriously, by working with post-human methods. Points of contact are the so called ‘material turn’ (e.g. Kazig and Weichhart 2009; Bennett and Joyce 2013) and, of course, Actor-Network Theory (ANT) (cf. Law 2002; Latour 2005). In particular, ANT focuses explicitly on the processual interaction between human and non-human actants. Thus, ANT represents a non-humanist perspective, decentring the human subject. As an ecological theory, ANT rejects the sociological approach that sees the non-human world either as the material condition of our existence or as no more than a set of symbols forming the basis for human activities (Murdoch 2001, 116f.). The approach is based on an understanding of practices as effecting change rather than as an intentional action of a human subject. Within a temporally stabilised network, human feelings, ideas and intentions as well as non-human entities like artefacts, machines, plants, animals etc. are thus thought to have their own agency or practice potential. For example, transportation infrastructures, settlement structures, information and communication technology devices as well as legal documents (passports, driving licence, rail card) contain formative potential as a pre-scription, which can take the form of permissions and grants (cf. Akrich and Latour 1992). The extent of these actor-networks, and thereby the research object, cannot be defined *ex ante* but constitutes one result of the empirical analysis. Furthermore, the empirical contributions of the actors involved in a specific mobile practice also constitute objects of a ‘description’.

However, even ANT-research practice also draws mainly on qualitative-ethnographic methods, thus privileging actors capable of speaking (humans) compared to un-animated objects and thereby only insufficiently capturing the stated symmetry between human and material actors (Schad and Duchêne-Lacroix 2013, 269; Murdoch 2001). Recently, the methodological approach of ‘technography’ (cf. Rammert and Schubert 2006; Kien 2008; Jansen and Vellema 2011) has gained some attention within the STS and ANT related discussion on how to integrate technological and social aspects more symmetrically. In this context, technology is understood as the use of skills, tools, knowledge and techniques to accomplish certain ends (Jansen and Vellema 2011, 169).⁷ Rather than describing the elements of a network or array, the specific focus of technography is placed on the relationships themselves (Kien 2008). Or, as Vannini and Vannini (2008, 1299) phrased it, ‘technography is the study and the writing of technical structures of communication

⁷ The ends to be accomplished are themselves discursively produced and should not be seen as natural givens. Furthermore, it appears necessary to differentiate between seemingly obvious intentions, strategies and un-intended effects of technologies.

processes, both in their material and symbolic substance, and their potential for shaping social outcomes.’ The approach has been described as consisting of three steps: First, the study of ‘performance’, which consists of a description of the material and social circumstances of technological practices and their interrelationships, thus, of the processual technology-in-use (Jansen and Vellema 2011, 170f.). The second step analyses the task-related knowledge transmitted in a network, thus how the knowledge and skills of the different actors are mobilised and coordinated and how bearers of skills and knowledge are included or excluded from the performance or practice (Jansen and Vellema 2011, 171f.). Finally, the third step tries to excavate the rules, protocols, routines and rituals shape the specific practices, their organisation and the inclusion of actors (Jansen and Vellema 2011, 172f.). Ideally, the descriptions are empirically grounded mainly in observations rather than interviews with human actors, thus placing emphasis on the organisation of the networks and practices rather than their human rationalisation (Jansen and Vellema 2011, 174). Although up until now, only few technographic studies exist in relation to mobilities research (Schad and Duchêne-Lacroix 2013; Vannini and Vannini 2008), this approach seems to hold some potential for the performance of the post-human claim of mobilities research through empirical studies. For example, in relation to car mobility, it suggests an empirical take on the mobile body as an assemblage of social practices, embodied dispositions and skills as well as technological potential and affordances that are commonly taken for granted and treated as unremarkable (Dant 2004, 74; Jensen, Sheller, and Wind 2014, 3).⁸ This would substantiate an alternative view on automobility and agency regarding transportation and foster a more political understanding of technology and infrastructure policies.

The second shortcoming of mobilities research practice was seen in a lack of contextualisation of the mobile subjects and the lack of studies linking the micro level of experiences and rationalities with the macro level of discourses, infrastructures and social order. As D’Andrea et al. (2011, 155f.) stated, a ‘significant challenge for mobilities studies is the systematic unbundling and formalisation of research protocols, methods and analyses that can integrate macro and micro components, rather than allowing these to continue developing separately.’ As one strategy, the qualitative data collected on the micro level may be contrasted with information on the contextual structures. Elsewhere (Manderscheid 2014b; similarly: Taipale 2014) I suggested to use the statistical technique of multiple correspondence analysis to search for structuring dimensions underlying patterns of practices. Similarly, as one case within the sample of papers, Huete et al. (2013) argue that the subjective assessments of individuals may be skewed and are not sufficient as the sole analytical framework. Analysing the research differentiation between lifestyle and labour migration,

⁸ Another interesting approach on the material side of the mobile social world consists in the concept of ‘interactive metal fatigue’ (Pel 2014).

the authors excavate an underlying ethnic-national elitism in the self-classifications of migrants from the UK and Northern countries to Spain who are claiming primarily non-economic factors as motivations for their residential mobility. However, a quantitative comparison of their residential mobility patterns over time brings the dependence on economic factors to the fore, rendering their mobility patterns strikingly similar to those of the so called labour migrants. Thus, using multilevel data can help correct for blind spots, pre-conscious knowledge, biased accounts or assumptions of one-dimensional effects on one level.

On this token, another interesting analysis technique could be social network analysis extended by a spatial dimension, applied to micro data as well as survey data. Larsen et al. (Larsen, Urry, and Axhausen 2006), for example, outline a form of qualitative spatial network analysis for individual cases, whereas the works of Axhausen et al. (Axhausen 2007; Frei, Axhausen, and Ohnmacht 2009) are pioneering in the field of visualisation and analysis of social network geographies based on standardised survey data. They suggest some analytical techniques in order to compare network geographies between different social groups that form the backdrop for their differing mobility practices. These methods of spatial network analysis appear as promising tools to account more systematically for the socio-spatial embedding of mobile actors and the network effects of mobile practices.

These few suggestions may suffice to show, that, besides the development of further qualitative methods for mobilities research, it may also be worthwhile to re-discover standardised techniques that are suitable to contextualise mobility practices and thus re-embed the solitary mobile subjects into spatial and social structures in a non-deterministic way.⁹ Taken together, the suggested advancements within this discussion of mobile methods and methods for mobilities research may contribute to the discursive deconstruction of the modern auto-mobile subject.

Conclusion

Drawing on the Foucauldian understanding of governmentality and subjectification, automobility may be understood as a principal 'technology of contemporary liberalism' (Rajan 2006, 114), producing the very subjects it requires. The modern subject is characterised as an autonomously deciding rational actor, detached and detaching itself from social and spatial ties. Yet, realities do not exist independently of their representation and this representation of the social world is highly contested and continuously changing. Taking mobilities studies as a standpoint within the contestation of the mobile social order, my contribution has focused particularly on the construction and critique of this solitary mobile subject. From its very beginnings, the mobilities paradigm

⁹ As the ongoing debate in human geography has shown, criticisms of quantitative methods very often conflate these unwarrantedly with positivist methodologies and epistemologies (cf. Sheppard 2001; Barnes 2004; Ellis 2009; Schwanen and Kwan 2009).

questioned and challenged this conception, which also pervades social sciences in general as well as transportation studies and policy making in particular. Taking the order of knowledge – to which scientific discourses continuously contribute – as a cultural space of definitions and productions of specific subjectivities (Reckwitz 2008, 26ff.), research practices should be understood not only as descriptors of empirical realities but also as techniques to effect and co-produce these very realities.

Against this background, I have analysed the methodological performance of mobilities studies, which show some incoherence in regard to some of the founding theoretical claims of the mobilities paradigm: By drawing mainly on narrative qualitative methods and by focussing mainly on the micro level of practices and experiences, segments of mobilities research risk implicitly affirming the mobile rational subject as a dis-embedded solitary figure by abstracting from his/her dependence on material, infrastructure, social, cultural and historic conditions. As sources for further development of methods for mobilities research I suggest to look more closely at the tool boxes of ANT and STS research, especially technography, as well as selected multilevel statistics that allow individual practices to be contextualised within broader structural backgrounds.

However, I am not claiming that mobilities research can change mobility realities simply by broadening their methodologies and analytical techniques. Socio-cultural discourses and fields of knowledge suggest and impose specific patterns and subjectivities, even though they do not determine the empirical individual, who is always faced with multiple and contradicting expectations, forces and patterns. Yet, as part of the social struggle for the 'true' view on the social, mobilities studies contribute to the way we conceive mobility and, thus may contribute to changing mobility itself.

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