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The movement problem, the car and future mobility regimes: Automobility as dispositif and mode of regulation.

Abstract

Applying Foucault's thinking to automobility, I argue that the notion of "mobility as dispositif" facilitates traversing and tracing different narratives about mobilities, which in turn foreground the interweavings of discursive knowledge, material structures, social practices and subjectifications. Specific value of the dispositif concept consists in analysing multifaceted, but decentral power relations effecting inequalities in relation to mobilities at different scales, shown by way of existing studies of automobility. Thereby, the co-constitution of social order, space and hegemonic mobilities regimes moves to the fore. Yet, what is missing in this Foucauldian genealogy of mobility dispositifs is a broader conceptualisation of stabilising material conditions. Accordingly I use elements of regulation theory as a complementary and framing social theory to understand the dispositifs of mobility as embedded in and stabilised through (but not as a simple function of) specific modes of regulation and regimes of accumulation. Finally, I consider the current automobility dispositif and conclude by sketching some signs of its decline.

Introduction

Today, people, things, capital, information and ideas seem to be 'on the move' as never before in history (Urry 2007, 3; Elliot and Urry 2010, ix). Mobilities in this context include physical, human travel and the movement of material objects as well as imaginative, or virtual, communicative travel through a variety of new and old media(Urry 2007, 47). Taking this observation as a point of departure, the New Mobilities Paradigm (Sheller and Urry 2006) has challenged contemporary sociology by highlighting that movements rather than stasis are foundational to all social formations (e.g. Urry 2007, 6, 46). At present, associated with developments commonly framed as "globalisation" or "post-Fordism", combined with technological advances, the order of movement itself appears to be in fundamental transition, entailing changed social formations beyond the nation state (Urry 2000).

Although speed/mobilities are increasing, not everybody and everything[1] is on the move at the same speed, with the same resources and with the same room for manoeuvre. Furthermore, not everybody is on the move at their own will. Zygmunt Bauman (Bauman 2000, 120) describes this complex interweaving of movement, power and inequality as follows:

> „People who move and act faster, who come nearest to the momentariness of movement, are now the people who rule. And it is the people who cannot move as quickly, and more conspicuously yet the category of people who cannot at will leave their place at all, who are ruled. Domination consists in one's own capacity to escape, to disengage, to 'be elsewhere', and the right to decide the speed with which all that is done – while simultaneously stripping the people on the dominated side of their ability to arrest or constrain their moves or slow them down." (Bauman

2000: 120)

Mobilities research has in the last two decades highlighted the doing and experiencing of mobilities especially as a conscious and active practice (Bissell 2010; Merriman 2013). Yet, it has been argued recently within this journal, that an agent-centric approach may run the risk of neglecting underlying questions of the geopolitical order, political governance and socio-economic preconditions and their ongoing changes (Adey and Bissell 2010, 3; D'Andrea, Ciolfi, and Gray 2011, 155f.; Bærenholdt 2013, 22; Manderscheid 2013; Salter 2013, 7f.). Thus, it appears valuable to empirically analyse which forces at which scales are relevant for the production and shaping of "mobility regimes"[2] and their multidimensional impact on relations of social inequality.

Having these desiderata in mind, in the following I suggest making use of the Foucauldian notion of '*dispositif*' in order to come to terms with the interrelatedness of mobilities and power/inequalities within distinct, but highly interrelating dimensions. Thereby, the co-constitution of social order, space and hegemonic mobilities regimes move to the fore. Yet, in order to better understand not only the emergence, but also the endurance of specific regimes, I will further suggest to complement dispositif analysis with ideas from studies of cultural political economy and regulation theory.

The use of the dispositif-concept provides a tool which allows traversing and tracing different narratives about mobilities. Furthermore, the dispositif allows for a multidimensional view on these different manifestations of mobile socialities, bringing patterns of power structuration to the fore which otherwise remain hidden. Specific value of the dispositif concept consists in the ability to analyse multifaceted, but decentral power relations effecting inequalities in relation to mobilities at different scales. Correspondingly, dispositif analysis reveals and also addresses ruptures and contradictions.

Applying this dispositif-analytical approach to automobility, I will build on existing analyses and insights, pulling together aspects hitherto analysed only separately, in order to reveal power relations around the mobility/inequality nexus. In addition, by linking the emergence as well as the ongoing changes of the mobility dispositif back to a broader socio-economic context, its characteristic of a "contingent necessity" (Jessop 2009), its embeddedness within existing capitalist social formations, is foregrounded.

Mobile inequalities and mobility dispositifs

One of the premises of the new mobilities paradigm is that people's mobility practices are embedded in their spatial, cultural, political, economical, social and personal context. As Anthony D'Andrea et al. (2011: 158) put it

> "(...) as subjects and objects move across spatial, social and cultural settings, they are not doing so independently of the political and economic structures that shape subjectivity, locality and mobility, but are actually embodying, recoding and updating larger material and symbolic regimes."

These assumptions of the relationality and embeddedness of mobility practices entail an approach that goes beyond the focus on covered distances and the used means of transportation. Rather, mobilities research brings movement as a social practice to the fore and directs attention to the personal and collective experiences, meanings and motives to move, as well as onto the constitution of the surrounding discourses and knowledge fields.

Although reflections on methodological implications and research practices of relational conceptualisation have recently gathered increasing attention (Büscher and Urry 2009; Fincham, McGuinness, and Murray 2010; Büscher, Urry, and Witchger 2011; Merriman 2013; Manderscheid 2013), the implications of the relational conceptualisation of mobilities with respect to *social inequalities* remain to be explored systematically. Up until now, most theoretical concepts and empirical studies remain one-dimensional, focusing on one aspect of mobile inequalities only. For example, the influential concept of *network capital* suggested by John Urry (2007: 197) refers to "the capacity to engender and sustain social relations with those people who are not necessarily proximate". Network capital thus comprises several unequally available elements like access to communication technologies, affordable and well-connected transport, appropriate meeting places and caring significant others that offer their company and hospitality. These elements then produce in their combination a distinctly stratified order (Urry 2007: 197). However, while highlighting the complex preconditions for being mobile, the discussion of network capital neglects the structural complementarity of individual access to co-presence and the "doing of connections" (Bærenholdt 2008, 2) consisting in the particular social and geographic context. As argued by Larsen and Jacobsen (2009, 87f.), although there seems to be a general trend towards geographically dispersed networks, not everyone has network ties predominately at a distance. Thus, the resources and ability to be mobile are obviously of more value to some groups – like academics faced with an international job market or migrants maintaining social networks in two or more countries – than others – like individuals living over generations embedded in local networks. Moreover, *personal* access to means of transportation as an element of network capital impact social inclusion differently, depending on available *public* alternatives and thus on the political-geographical positioning. This is illustrated by the empirical finding that having *no car* at ones disposition is almost uncorrelated with social chances in Switzerland[3] but appears to be associated significantly with low social status in the UK and elsewhere (Manderscheid 2010, 42ff.; Lucas 2011; Manderscheid 2013). Unequal access to a car, thus, does not by itself imply unequal social chances, but only within the context of geographically dispersed significant places and lacking alternative means of transportation. These two illustrations suggest that the analyses of mobility practices and potentials should be linked more systematically to and valued against the specific background of social and spatial structures.

What is more, research focusing on the structural side of the mobility/inequality nexus tends to under-theorise the link to mobility practices. Especially the ongoing polarisation and "splintering" of infrastructures and spaces have gained a lot of research attention from various angles (e.g. Sassen 2001; Graham and Marvin 2001; Castells 2005), highlighting the increasingly unequal spatial distribution of infrastructural mobility options. By remaining on the structural level of analysis, based commonly on aggregated data, these studies 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 Chancey 1999, quoted in D'Andrea, Ciolfi, and Gray 2011: 156). Here, it is the links between material structures on a global scale, mediating structures on national or local scales, their representation in public and everyday discourses and knowledges, their collective and individual experience and their impact on mobility and other social practices, which should be more explicitly conceptualised.

As a way to deal with the multi-faceted links between the several dimensions of the mobility/inequality nexus, I propose conceptualising mobility as a *dispositif*[4]. That will be helpful in understanding the links as well as the power relations between spatial structures, social embeddings, mobility practices, individual and collective desires and available means of

transport.

Michel Foucault explained the *dispositif* as follows:

> "What I'm trying to pick out with this term is, firstly, a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the system of relations that can be established between these elements." (Foucault 1980, 194f.)

Understanding *mobility as a productive dispositif of modernity*, then, means focussing on the constitution, ordering and governing of mobile bodies and their corresponding spatialities. The notion of the dispositif also facilitates search searching for inconsistencies, contradictions and antagonisms within and between its elements.[5] It directs focus onto the multiple interrelations between hegemonic and counter-hegemonic discourses and meanings, social structures and spatial materialities and practices, as well as the formation of mobile subjects and empirical identities: *Discourses* constitute mobilities as an object of knowledge, defining movement and stasis and attribute specific meanings and values to these social facts. Material and immaterial *objectivities* consist of infrastructures and technologies as well as of laws, traffic regulations and social institutions which continuously shape and reshape the landscape, settlements and cities. Observable *practices* of movement and stillness enact themselves and take place through spaces and discourses.[6] Finally, the mobility dispositif shapes specific mobile *subjectivities*. Furthermore, Foucault's idea of power being dispersed implicates that the mobility dispositif as a whole is not (and cannot be) centrally, or hierarchically organised or managed but may be better characterised as rhizomatic (cf. Deleuze and Guattari 1987) and disaggregated in the sense that its elements and parts are working according to their own dynamics (Salter 2013, 13ff.).[7] Therefore, power structurations, social inequalities and mobilities have to be analysed in their specific context and relationalities.

What is more, mobility dispositifs do not describe a monolithic and fixed system that just happened to come into existence. Rather, as Foucault carries on in his definition, they emerge as a response to an "*urgence*", a historically "urgent need":

> "(...) I understand by the term "apparatus" a sort of – shall we say – formation which has as its major function at a given historical moment that of responding to an *urgent need*. The apparatus thus has a dominant strategic function. This may have been, for example, the assimilation of a floating population found to be burdensome for an essentially mercantilist economy: there was a strategic imperative acting here as the matrix for an apparatus which gradually undertook the control or subjection of madness, sexual illness and neurosis." (Foucault 1980, 195)

In the remainder of the paper I will flesh out the concept of mobility dispositifs by focussing on the car and automobility as the hegemonic mobility dispositif in the second half of the 20th century. The concept of *automobility* encompasses more than the car as an artefact. Rather,

> "automobility is one of the principal socio-technical institutions through which modernity is organized. It is a set of political institutions and practices that seek to organize, accelerate and shape the spatial movements and impacts of automobiles, whilst simultaneously regulating their many consequences. It is also a (...) discursive

formation, embodying ideals of freedom, privacy, movement, progress and autonomy, motifs through which automobility is represented in (…) discourses (…), and through which its principal technical artefacts – roads, cars etc. - are legitimized. Finally, it entails a phenomenology, a set of ways of experiencing the world (…)." (Böhm et al. 2006, 2)

Likewise, John Urry (2004, 25f.) described automobility as a global system, comprising the industrially manufactured object of the car, its social meaning as one major item of consumption, its economic meaning within the involved industries, services and patterns of dwelling, its dominating position in regards to other modes of movement and transportation, its cultural associations as well as its ecological impacts. In a similar vein, understanding *automobility as a dispositif* brings its multi-faceted character to the fore which consists of automobile landscapes, discourses, formation and governance of specific subjectivities and mobility practices. Adding to the discussion, the dispositif terminology directs focus onto the power relations and interweaving of the elements which together produce the hegemony of the car. Thereby, this approach explicitly highlights the constitution of the space of allowed and forbidden movements, of possible and visible as well as of unthinkable and counter-cultural mobility landscapes and of normal, deviant and impossible mobile subjects which are structured and structuring social power struggles at different scales. The automobility dispositif effects an ongoing process of producing, building, knowing, governing, performing and resisting car-based social formations. This also means that the mobility dispositif on all levels locates objects, individuals, collectives and places within a power structurated network of relations. Thus, the resulting social formations are characterised by very particular relations of social and spatial inequalities, a point which underlines the argument of mobilities being co-constitutive of social and spatial structurations (cf. Manderscheid 2009). It is these multidimensional relations of inequalities which are of central concern.

As historical research has shown, automobility, once stabilised to a certain degree, proved able to adapt and integrate changing conditions like new technologies, policies and different requirements of the consumers. Thus, for example Urry (2004, 27) describes automobility as a self-organising, self-expanding autopoietic system. At present, it is especially interesting whether - and if, then how - automobility is able to keep its hegemonic position faced with challenges like peak oil, policies fostering alternative modes of mobilities as a response to climate change, and the increasing contestated occupation of city space by cars. Therefore, the search for stabilising as well as for ambivalences, contradictions and ruptures within the automobile dispositif are of particular interest. Furthermore, it appears helpful to understand the historic "urgence" to which the mobility dispositif gave a historically specific answer. The genealogical approach helps, then, to excavate the conditions of possibility without harking back to transhistorical causes or laws (Foucault 1977, 142). Yet, in order to better understand not only the emergence, but also the stabilising forces, the dispositif concept will be grounded in cultural political economy. With these two points in mind, in the following, I will shortly sketch the "movement problem" and then suggest to complement Foucauldian dispositif-analysis with regulation theory.

The movement problem of modernity

The positive valuation of mobility seems to be a historical characteristic of modernity, the former also implying progress and future orientation (cf. Rammler 2008; Goodwin 2010, 72ff.). Even more, mobility and circulation as objects of knowledge seem to have emerged at a certain

point in history. This leads to the question: "What happened and what changed so that mobility as an object of knowledge and a practice to be governed moved to the fore? What are mobility dispositifs a solution to?[8]

In his lectures on governmentality (Foucault 2007; 2008) Foucault placed "the genesis of a political knowledge that put the notion of population and the mechanisms for ensuring its regulation at the centre of its concerns" (Foucault 2007, 319). The interest of Foucault's late work can thus be understood as an analysis of the conditions of the possibilities of capitalist social formations (Donzelot et al. 1994, 8ff.). *Governmentality*[9] is, as Thomas Lemke argues,

> "introduced by Foucault to study the 'autonomous' individual's capacity for self-control and how this is linked to forms of political rule and economic exploitation."(Lemke 2002, 52)

Foucault locates the emergence of the *population* as an object of governance within the context of mercantilist political economic rationalities at the beginning of the 17th century:

> "The population can only be the basis of the state's wealth and power in this way on condition, of course, that it is framed by a regulatory apparatus (appareil) that *prevents emigration, calls for immigrants*, and promotes the birth rate, a regulatory apparatus that also defines useful and *exportable products*, fixes the objects to be produced, the means of their production, as well as wages, and which prevents idleness and *vagrancy*. In short, it requires an apparatus that will ensure that the population, which is seen as the source and the root, as it were, of the state's power and wealth, will work properly, *in the right place*, and on the right objects. In other words, mercantilism was concerned with the population as a productive force, in the strict sense of the term (…)." (Foucault 2007, 97, emphasis K.M.)

Furthermore, as Stuart Elden (Elden 2007; Elden 2010) has argued, the birth of the population as an object of knowledge and government was accompanied by the emergence of *territory* in its modern sense. And finally, as Giovanna Procacci (1991) has elaborated, the emergence of the new discourse, political economy, is accompanied by its counterpart, *social policy*. With the decline of feudalism and its local regulation of mobility, a large class of "masterless men" arose threatening the local social order (Cresswell 2010, 27; cf. Groebner 2007). The historically surrounding discourses and knowledges centre on pauperism constituting "the other" to economic prosperity. Pauperism also represents uncontrolled mobility, "it personifies the residue of a more fluid, elusive sociality, impossible either to control or to utilize: vagabondage, order's itinerant nightmare, becomes the archetype of disorder and the antisocial" (Procacci 1991, 161). Thus, the emergence of a population together with the co-constituted civil society and its accompanying parts of political economy, social policy and the territoriality of modern states, together create the "urgence" of ensuring, controlling and governing mobility for the purposes of establishing social order. On a similar token, Matthew Paterson argues that the modern state is rooted in a specific regime of regularising motion to prevent disorder and to promote productive movement (Paterson 2007, 127).

The so called "movement problem" (also Usher in this volume) then appears to be a shared feature of population, territory, political economy and social policy, which Foucault describes as follows:

> "Now it seems to me that (…) we see the emergence of a completely different problem that is no longer that of fixing and demarcating the territory, but of

allowing circulations to take place, of controlling them, sifting the good and the bad, ensuring that things are always in movement, constantly moving around, continually going from one point to another, but in such a way that the inherent dangers of this circulation are cancelled out. No longer the safety (sûreté) of the prince and his territory, but the security (sécurité) of the population and, consequently, of those who govern it. I think this is another very important change." (Foucault 2007, 93)

Yet, movement and its government means different things within separate spheres. Whereas economic production relies on the organised flow of things, goods and labour, national states and territorially situated societies depend on securing borders between inside and outside, citizenship and migrants:

"Because these states are not self-contained, their existence as discrete political unities depends both on the maintenance of boundaries between them and on the continuing movement of people, ideas, goods and services across those boundaries." (Hindess 2000, 1488)

The mobility dispositif in a broad sense, containing a repressive and a productive side, does not determine certain outcomes but creates structures of facilitation and incarceration through processes of identification, authorisation and examination (Salter 2013, 10). And it is especially within this ambivalence of the mobility dispositif where Foucault locates the term of freedom:

"I think it is this freedom of circulation, in the broad sense of the term, it is in terms of this option of circulation, that we should understand the word freedom, and understand it as one of the facets, aspects, or dimensions of the deployment of apparatuses of security." (Foucault 2007, 71)

The automobility dispositif

Summarising the above, the emergence of the mobility dispositif appears to be the flip side of modern capitalist nation states.[10] With the breaking up of the small integrated village communities and the lengthening of chains of interdependencies (Elias 1999; Rammler 2008), people as well as goods and ideas increasingly moved over lengthening geographical distances. More specifically the context of population growth, industrialisation and urbanisation, the major "urgence" to transport large numbers of people evolved. During the early stages of western industrialisation, the steam train paradigmatically represented a technical and economical development and progress. Within cities, since the late 19th century, horse and later electricity driven trams constituted the dominant mode of transportation. Yet, the argument also works the other way round: industrialisation and urbanisation would not have been possible without means of mass transportation. Avoiding economic determinisms, it seems that political economy, mobility dispositifs and the political organisations are co-constitutive rather than simple effects of one field of social power.

Looking back, it often seems that the motor car was simply the most suitable technology to organise the productive movement of people within national territories and therefore became the dominant mode of mass transportation. As a positive effect, it fostered economic growth at the same time. Along these lines, automobile passenger travel has succeeded in gaining an 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; cf. Henderson 2009). Accordingly, the story of the car is very often told as a linear success story of the technical inventions of some gifted engineers like Carl Benz, Gottlieb Daimler and Wilhelm Maybach followed by "the combined choices of millions of individuals to purchase and use cars, move to the suburbs and so on" (Paterson 2007, 91). Yet, research on the history of the car has shown that in the beginning it was far from likely that the automobile would become broadly socially accepted and usable (cf. Kuhm 1997; Paterson 2007; Norton 2008; Dennis and Urry 2009).At its first appearance, the motorised car was by no means suitable to move the productive masses. Rather, it was introduced carrying an elitist promise to escape the industrialised world (Kuhm 1995), functioning first of all as a bourgeois leisure vehicle, thereby working as a means of social distinction. Most obviously, its high financial price moved the first cars completely out of reach for the majority of the population (Gartman 2004).

Thus, rather than constituting simply engineers' technologically superior answer to some generic human desire or being some sort of historically inevitable development, the historic triumph of automobility is rooted in a whole range of social struggles, political interventions and scientific discourses and economic interests – and took place in a non-aggregrate way in different settings. In order to illuminate these power struggles involving political agency and power strategies, in the following, I will sketch an understanding of automobility as a dispositif[11] (more detailed in Manderscheid 2012a). What is more, with this perspective on automobility, some of its effects on relations of social and spatial inequalities are rendered visible as integral to, rather than potentially removable effects of this mode of governance.[12] This sketch builds on existing mobilities analyses and, as a conceptual framework, suggests trajectories for future research on the mobility/inequality nexus.

Crucial for the naturalisation of automobility is the dimension of *knowledge and discourses*. This element of the dispositif attaches sense and meaning to practices of movement and mobile bodies, turning them into a social phenomenon (Cresswell 2006, 4; Frello 2008). As Jennifer Bonham (2006) has elaborated, the emergence of the modern understanding of travel and transport formed the actual precondition for the governance and political institutionalisation of transportation and spatial planning policies. Within this context, the purpose of streets was redefined from a public place to which everybody had equal access to a means of transit, privileging motorised vehicles over pedestrians (cf. Norton 2008). It appears that this knowledge necessarily entails classifications and hierarchy forming practices, landscapes and individuals:

> „The (…) way in thinking about travel is that of transport: movement from one point to another in order to participate in the activities at the ‚trip destination' (…). This innovation, more significant than the train, tram or automobile, has made it possible to objectify travel practices and create knowledge about the efficient completion of the journey. The production of transport knowledge has involved separating out, classifying, and ordering travel practices in relation to their efficiency. This ordering of travel establishes a hierarchy which not only values some travel practices (…) over others but also enables their prioritization in public space." (Bonham 2006: 58)

Representations of and discourses on the car and automobility, however, are not limited to policies, planning and traffic. Rather, especially in association with such nebulous terms as progress, freedom, autonomy and safety, automobility pervade films, literature and the lyrics of many popular cultural songs, which are in turn used and co-produced by car advertisements

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and marketing strategies (e.g. Paterson 2007, 144ff.; Pearce 2012). On the other hand, public transport tends to be associated with inflexibility, impunctuality, slowness and poverty, or, as it were, highly *negative* social values within modern, progressive and neoliberal thinking.[13]

This discursively produced hierarchy of different forms of transportation associates automobility with "normality" and public transport as well as bicycle traffic and pedestrians as additional or deviant cases (Böhm et al. 2006, 8; Gegner 2007). This way of thinking, then, prestructures spatial and transport policies and planning, perpetuating the bases of power upon which they build. Yet, the link between knowledge and materialisation entails more than one-dimensional realisations of concepts and plans, but rather consists itself of constant power struggles between different stakeholders and existing landscapes (cf. Flyvbjerg 1998; Richardson and Jensen 2003). *Mobility landscapes* as sedimented knowledge and power thus constitute a powerful force within current discursive struggles. In this vein, the "sunk investments in infrastructures [and] machines" (Kemp, Geels, and Dudley 2012, 13) tend to stabilise and perpetuate the automobile socio-spatial order:

> "The 'structure of auto space' forces people to orchestrate in complex and heterogeneous ways their mobilities and socialities across very significant distances. The urban environment, built during the latter half of the twentieth century for the convenience of the car, has 'unbundled' territorialities of home, work, business, and leisure that had historically been closely integrated and fragmented social practices that occurred in shared public spaces (Sassen, 1996). Automobility divides workplaces from homes, so 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, thereby eroding town-centres, non-car pathways, and public spaces. It also separates homes and various kinds of leisure sites, which are often only available by motorized transport." (Urry 2006, 19)

In this vein, objectified automobility – as in urban and rural geographies as well as regulations, institutions and laws – prescribes directions and ways of movement (as well as dwelling) and impacts (and most often subordinates) the landscapes of other modes of transportation, like pavements, bicycle lanes, tram lines etc. However, this prescription and perpetuation of automobile movements through landscapes find their limits in a fundamental antagonism: the impossibility of universalised automobile movements, since it then turns into its opposite, collective immobility (Böhm et al. 2006, 9). At least during rush hours, in many European cities, the material structure no longer privileges car travel. Rather, less street bound modes of transportation like cycling or subways provide fast movement bypassing congested streets. This may be interpreted as foreshadowing limits of automobility and a jittering temporal reversed hegemonic order.

During the second half of the 20th century of Western welfare states, national spatial planning was dominated by the "infrastructural ideal", aiming at the ubiquitous provision of normalised and standardised infrastructure networks across national territories (Graham and Marvin 2001). Within this broader context of social policies and nation building the car became, arguably, "a social equalizer" (Rajan 2006, 114). Western societies in the post-WWII era experienced – to different degrees – a decrease of geographical inequalities, making opportunities more easily easier accessible from everywhere by car. Yet, with the normalisation of automobility and the resulting compulsion to be automobile, as well as the environmental impacts of motorised traffic, new inequalities emerged in relation to people's spatial and social "positionality" (Sheppard 2002), positioning people as well as regions, places and countries

within a relational-hierarchical space: This socio-spatial order is defined by automobile accessibility and resulting central or peripheral positioning. Cars and roads are then the links between places and people. Although car ownership continuously increased,[14] some people – due to physical limitations (e.g. age or health issues) and often correlated with economic poverty and female gender (cf. for the UK: Lucas 2011) – do not participate in this trend. Yet, this dimension is mediated to different extents by other landscapes of transportation, e.g. public transport, walking or cycling with their respective accessibilities and positionings. What is more, negative impacts of motorised traffic, like poor air quality, noise and health impacts also tend to affect poor people in disadvantaged communities in particular (Martin 2009, 223f.).

Mobility landscapes and available transport together with reflexive knowledges and internalised habitus order the space for individuals to establish and sustain social connections based on movements. However, these *mobility practices* cannot be deduced from available options or seen as a simple effect of discourses,[15] but emerge at the interface of interweaving structural and individual conditions and dynamics and should be researched empirically, since the ends of movements are constituted by individual, geographical and social contexts. The latter, often only partially conscious but rather incorporated and habitualised, links knowledge and discourses about space and potential mobilities with everyday practices. Collectively shared mobility discourses have been presented by Malene Freudendal-Pedersen as "structural stories" (Freudendal-Pedersen 2007), which tend to be dominated by the "car in the head" (Canzler 2000). Yet, it is to be assumed although research is lacking that this everyday knowledge, although to a large degree collectively shared, varies together with the socially (and spatially) structured habitus (Bourdieu 2000). What is more, automobility is deeply ingrained in many practices, lifestyles and living arrangements which are socially differentiated, hierarchised and relational: Within middle class suburban family settings, the long distance commute of one member of the household typically assigns household and childcare to the other or external services. Thus, automobility practices are structured by and structure gendered labour distribution (Seiler 2008; Manderscheid 2012b; Scheiner and Holz-Rau 2012). Henderson, in a U.S. context, describes "distinctive politics of secessionist automobility", of the American middle and upper classes who are seeking "to distance themselves from poor schools, urban crime, racial diversity, or any other perceived urban blight (…), to secede from spaces where these 'problems' exist" (Henderson 2009, 152), thereby performing and securing socio-spatial and, in this case, racial inequalities.[16] Thus, in this broader perspective, automobile practices continuously enact and perform a socio-spatial differentiation, distantiation, subordination and exclusion. The multiple associations around automobility together with the plurality of car models also allow for car ownership to function as a means of distinction, expressing one's lifestyle, ethics and values – be it the SUVs as a celebration of wealth, security, and rugged individualism or the more recent hybrid vehicles, associated with postmaterial values like sustainability and concern of the climate (Goodwin 2010, 64; cf. Bourdieu 2000). In this sense, car driving continuously reproduces automobile spaces and can be seen as a way of "doing space" as well as "doing social order",[17] which in turn appear to be crisscrossed by class and lifestlyle, gender and race relations.

Finally, as Paterson argues, "the car is partly constitutive of who it is to be us, not something externally imposed on us through deceit" (Paterson 2007, 123). In this line, the dispositif dimension of *subjectification* focuses on the formation and control of mobile individuals and collectives through the exercise of power by institutions, procedures, analyses and reflections, directed at the human body, the conduct of life, the ways of thinking and behaving and ways of

socialising and formation of the social (Foucault 2007, 144, 167). As Bærenholdt (2013) argues, mobility, being fundamental in making and binding together societies, nations, cities and regions, is always governed, but it is first and foremost a way of governing, a political technology. Automobilisation, then, may be understood as a historically specific governmental effect individually mobilising the subject within modern capitalist social formations.

The socialisation into automobile society and the constitution of automobile subjects and the embodiment of an automobile disposition starts, as Mimi Sheller (2004, 227) has described it, in the earliest childhood. Then, traffic education – the acquirement of "safe" behaviour on the streets, subordinating children through the control of their movements to the dynamics of the flow of cars – is part of state schooling in most countries (cf. Collins, Bean, and Kearns 2009). And finally, the passing of the driving test and the receipt of the license marks the entry into adulthood, being a full member of the automobile society (cf. Rajan 2006; Seiler 2008; Packer 2008).

However, it is not only the automobile subject per se but the economically productive automobile subject – driving for work or consumption reasons – which deserves full social admission. Other mobile subjects – pedestrians, public traffic users, cyclists, passengers – although co-products and extensions of automobility, are of a lower degree of generalisation and recognition. Thus, the formation of the automobile subject is part and parcel of constituting a hierarchy of mobile subject positions, differentiating between good and normal movements and moorings on the one side and subordinated, deviant or simply unproductive forms on the other side, e.g. uncontrolled leisure traffic in relation to economically relevant commutes of the labour force, money spending tourists in opposition to new age travellers, private car traffic and subsidised public transport. What is more, being automobile is an important characteristic of many other subject positions: for example responsible parenthood includes transporting one's children from school to leisure activities etc. by car. Being part of the US suburban middle classes involves driving a car, most likely an SUV. Or being an employable person involves, according to many workfare regimes, being willing to accept long commutes by car.

These mobile subjects are constituted and governed by not only planning and policy making, but by media, advertisement, educational institutions, laws, regulations, and collectively shared ideals of "the good life" etc. They are to be understood as a "normative real-fiction" (Graefe 2010) impacting but not determining real existing individuals and their practices. Thus, the ways individuals appropriate, resist or change these externally prefigured subject positions – amongst which the automobile subject is only one – through their practices and identity formations, remains an empirical question (Bührmann and Schneider 2010, 274ff.).

All elements of the automobile dispositif entail inequalities: in relation to geographical or social structure and knowledges, in regards to practices and subjectifications. Yet, it is especially the interplay between the outlined elements of the automobile dispositif, which constitute a complex web of mobility inequalities and social hierarchies. I have pointed to some of these links, but further research is needed to better understand the effects, dynamics and groundings of these aspects on social inequalities and power relations.

Endurance of automobility or an emerging new mobility dispositif?

Researching automobility, however, has gained much public and scientific attention because it

has become a multifaceted problem: peak oil, climate change, air pollution, noise, traffic jams and usage of urban space, declining quality of urban spaces etc., are soe of the negative impacts of the hegemony of the car. Thus, the question of if and how automobility could give way to a more sustainable system of transportation is a pressing question, increasingly gaining sociological attention (Dennis and Urry 2009; Conley and McLaren 2009; Cass and Manderscheid 2010; Goodwin 2010; Sheller 2011; Geels et al. 2012). Differently phrased, it is the search for potentials of alternative mobility regimes as well as the understanding of stabilising factors of the current automobile dispositif which are of interest.

The particular strength of the dispositif-analytical approach consists, then, in tracing the emergence of the hegemony of automobility through the principally contingent, but potentially mutually reinforcing interplay of the elements discussed. What is more, the concept of dispositif can elucidate the reality producing power of this interplay of different forms of knowledge and their materialisation. Yet, this interplay also appears to entail several contradictions and ruptures. Indeed, the automobility dispositif does not constitute a stable, well working machinery but is inherently fragile. Especially against the background of automobility's inbuilt antagonisms and impossibilities (Böhm et al. 2006, 9ff), its limitations through congestion, environmental degradation, declining oil resources and as a threat to human lives, the assertion of mass automobility and its ongoing stabilisation requires further explanation.

With this in mind, in the following, I will elaborate my argument that automobility in particular and mobility regimes in general should be understood as a constitutive element of capitalist societies. Furthermore, an understanding of the stabilisation through the connection of automobility with other powerful forces, especially economic (and geopolitical, cf. Böhm et al. 2006: 10) seems crucial when addressing these issues.

Dispositifs – in contrast to closed systems – have been characterised as being rhizomatic (cf. Deleuze and Guattari 1987, 7, 25), pervading different fields of the social from which they may be stabilised or weakened. In the case of automobility, this dispositif cannot be reduced to transportation, cultural representation or subjectification alone, but constitutes a driving force in Western industrial production since the middle of the 20th century. Furthermore, the rise of automobility is equally rooted in the resource of oil, as John Urry recently pointed out (Urry 2010) and also stated in an interview with Adey and Bissell:

> "So the resource bases of mobilities is undoubtedly significant. [...] I've now
> developed a view that the 20th century is possibly a blip in human history made
> possible by a very peculiar thing: namely, the discovery of oil, first in 1859. [...] So
> this mass-machine-based movement really generated the 20th century. This
> progressively mobile century was based on this very peculiar resource of mobile oil."
> (Adey and Bissell 2010, 4)

This dependence on oil, the most important single fossil resource for present industrial production, also connects automobility to some global geopolitical problems (Böhm et al. 2006, 10) and inequalities in the global economic and political system.

Moreover and as another condition of possibility, automobility as a means of mass transportation is rooted in a specific mode of production, that is standardised mass-production based on Taylorist work division and rationalisation which was the prerequisite of mass consumption. It was this new organisation of the labour process together with Ford's business

policy which made cars affordable for more social strata and thereby a vehicle for the masses. Highlighting the car's centrality to this reorganisation of labour and consumption, this "regime of accumulation" has been termed "Fordism". Thus, large parts of the stabilisation of the automobile dispositif results from its embedding within a specific accumulation regime (Schipper 2012, 207).

In contrast to "pure" economic theories as well as classical Marxist approaches, regulation theory (Aglietta 1979; Lipitz 1985; Krätke 1996; Jessop, Röttger, and Diaz 2007; Boyer 2011) emphasises the co-constitution of capital accumulation, the historically specific regime in which surplus value is extracted and realised over a longish period, and the particular modes of regulation which secure and stabilise conditions of profitable private business, as well as the reproduction of labour through socio-political institutions, policies, norms and cultures of consumption and governance philosophies (Paterson 2007, 105; cf. Jessop 1999; Aglietta 1979; 1998). In basic terms, the economy always relies on extra-economic conditions which the system cannot provide itself.

The Western Fordist era has been described as 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 (Jessop 1999; Aglietta 1979, 152; Paterson 2007, 111f.). High wages for broad parts of the labour force constituted the precondition of economic growth and therefore did not form a contradiction to capital's interest. In this context, the car and suburban housing constituted central elements of conumption 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)

The private car, made affordable to most social strata through mass production, can also be described as an "equalizer", providing not only the elite with generous amounts of personal space while expanding opportunities (Rajan 2006, 114). Together with increasing levels of social security, the specific spatial organisation and mass automobility formed an important foundation of what Ulrich Beck (1992) has termed "individualisation" and "risk society" and Nicolas Rose (Rose 1999; Miller and Rose 2009) calls a specific conceptualisation of freedom and personhood. Besides theoretical differences, these works are highlighting specific modes of self-governance and -responsibility emerging in the last quarter of the 20th century, promoting individualised experiences of social structuration and inequality, largely at the expense of the binding powers of collective organisations like trade unions and political parties, and other traditional ties.

Yet, regulation theory tends to neglect the ways through which these consumption norms are turned into accordingly behaving people, thereby ignoring the relative autonomy of social actors but implicitly deducing social practices and dynamics of identification from economic conditions (cf. Noel 1987; Mahnkopf 1988; Demirović 1992). What is more, left out of the picture are also the links between the particular spatial organisation effected by these consumption norms as well as the resulting feedback loop it has on automobility (an exception

13

is Paterson 2007). It is here that a dispositif-analysis can be a useful tool for foregrounding power relations and technologies on the social meso- and micro scales which make automobility possible, thereby avoiding implicit or explicit economic determinism. In this sense, dispositifs are located between and linking modes of regulation through the analysis of knowledge production, material landscapes, subjectifications and individual practices.

The politically motivated deregulation of finance markets, the internationalisation of economic trade and growing unemployment in Western economies meant increasing pressure on public budgets and, given its dependence on taxing wage labour, declining power of national welfare institutions and severe limits to the range of state action (André 2002, 99f.). The emerging new regulation regimes appear to be characterised by increasing competitiveness, the expansion of workfare policies and the enforcing of the self-responsible entrepreneurial and highly flexible subject (Alnasseri et al. 2001, 35ff.; Bührmann 2004; Miller and Rose 2009; Lemke 2002). These developments seem to affect some important elements of the hegemony of automobility.Firstly, especially in Europe, on the discursive level, the formerly undisputed hegemony of automobility and its association with progress, wealth and freedom has come under attack not only from environmental activists, but also in connection with the rediscovery of the city and of urban spaces by affluent social groups. More generally, for the ageing population as well as for the so called "creative class", especially the car based life-models in suburbia have lost its attraction to urban networked lifestyles (Institut für Mobilitätsforschung (ifmo) 2011; Dowling and Simpson 2013). In the field of urban planning, these shifts are reflected in the discussion of less car-based urban developments and alternative "smart" modes of mobility (cf. Glotz-Richter, Loose, and Nobis 2007; Sheller 2011). However, besides these exited new discourses, automobile politics continue to run through policy making as well as transport and spatial planning.

Secondly, on the level of landscapes, there are ongoing processes of deepening intranational geographical and infrastructural inequalities, to which Stephen Graham and Simon Marvin (Graham and Marvin 2001) refer as "Splintering Urbanism". The decline of the infrastructural ideal as a means of territorial integration gives way to an understanding of state intervention and planning as locational policy and the primacy of economic competition (Jessop and Sum 2006, 109; Manderscheid and Richardson 2011). Furthermore, new spatialities and infrastructures of transnational economic connectivity – spaces of flow (Castells 2005), global city-networks (Sassen 2000) and European interurban networks (Leitner and Sheppard 2002) – overlay the spatialities of regionally bound populations. New developments like electric cars are not yet able to cover distances of the same magnitude as vehicles powered by compustion engines.

Thirdly, in connection with these developments, there seems to be a rise of multi-modal and networked mobility practices, linking train rides through mobile devices with car sharing and communication on the go (Dennis and Urry 2009, 111ff.; Sheller 2011, 295ff.; Dowling and Simpson 2013, 428ff.). Especially amongst the highly mobile younger generations living in urban areas, a decline of car ownership and car travel can be observed, currently discussed under the label of "peak car" (cf. Kuhnimhof, Zumkeller, and Chlond 2013; Metz 2013). Thus, as a corresponding fourth change, the car seems to lose its impact on subjectification and identity formation. Instead of the automobile national citizen, the creative and cosmopolitan nomad seems to become the leading figure of the presence (Braidotti 1994; Cresswell 2011). Yet, these post-automobile mobility subjects and practices depend on specific

infrastructures and are therefore tied to cities and inter-city connections and on a specific form of network capital (Urry 2007, 197), making them at present options for the urban elites and so called creative class only. The flip side of these networked geographies consists of peripheral regions, disconnected from high-speed transportation systems where these processes appear to strengthen the dependence on traditional automobility.

Conclusion

Within the literature of the mobilities paradigm, there is a growing body of research on the decline of automobility and possible new mobility regimes (Urry 2008; Dennis and Urry 2009; Henderson 2009; Goodwin 2010; Geels et al. 2012; Manderscheid 2012a; Dowling and Simpson 2013). In this context, the presented framework of dispositif-analysis and regulation theory implies to foreground the multiplicity of stabilising and weakening forces within these developments taking place at several spatial scales. Correspondingly, the dispositif concept facilitates traversing and tracing different narratives about automobilities and helps foregrounding the interweavings of its elements, which comprise discourses and knowledges about cars, objectified automobile landscapes, practices of movement and transport and the formation of automobile subjects. These elements and their interplay are understood as a generative assemblage for socio-spatial order and hierarchies, entailing powerful and less powerful positionalities and subjectivities, which are continuously performed and enacted by moving and immobile bodies. The value and gain of this rather complex multidimensional approach consists in foregrounding relations of power and inequalities within and between the analytically separate dimensions of mobility regimes, which otherwise remain hidden or appear messy and unstructured.

In this line of argument, by extending the Foucauldian dispositif-approach with regulation theoretical ideas, I claimed that automobility is rooted not only in socio-spatial, behavioural and cultural dimensions, like norms of consumption, lifestyles and spatially dispersed networks, but also within a range of material constraints, political strategies and economic forces. Within this grounding in political economy, the automobility dispositif is located between regimes of accumulation and modes of regulation, linking it through knowledge and discourses, their sedimentation in material landscapes, institutions and laws to governmentalities, subject formations and empirical practices. In this view, the form of mobility dispositifs cannot be deduced from a specific mode of accumulation or a specific level of capitalist development: empirical research is required. What is more, the suggested understanding of decentral heterogeneous mobility dispositifs as elements of socio-political regulation broadens the understanding of relations of inequality, which mainstream research has largely reduced to effects of economic developments. The dispositif-analytical approach, however, also allows a reverse perspective, focusing on the effects of mobility regimes on capitalist accumulation, spatial formation and modes of regulation. Thereby, the co-emergence and power structuration of the economy, the political sphere, social structuration and stratification, space and movement can be conceptualised and researched.

With the given developments on the spatial, political and economic spheres, increasing polarisations are to be expected between urban multi-modally connected and rural automobile spaces, between affluent gentrifiers and precariously surviving households, between cosmopolitan elites and regionally sedentary lifestyles, between flexibly moving male creative nomads and moored, female reproductive labourers. Thus, a lot of empirical research is needed on these dark sides of future mobility regimes in order to develop a critical understanding of

automobility, its persistence and transition. In this critical vein, the ongoing search for new ways to organise transportation may also be seen as renegotiating the governance of mobilities in a broader sense, which has been elaborated as part and parcel of social order and political economies. Or, as Dennis Soron phrased it:

> "the critique of automobility is most promising when it moves beyond simply reorienting our personal relationship to a particular object, and begins to sharpen our resistance to the broader socio-economic system that conditions and presupposes the car's use. To this extent, the critique of automobility can become an entry-point into envisioning a post-consumerist future in which the expression of our needs is less distorted by capitalist imperatives, and our everyday lives are more democratically organized, personally fulfilling and attuned to natural limits." (Soron 2009, 195)

Finally, future research would beneficially expand its focus beyond the Global North in order to include the huge growth of automobility, along with the reconfiguration of socio-spatial and political power relations and inequalities.

1   In the remainder of the text, I will focus on people rather than artifacts. Yet, the power to mobilise as well as to immobilise things, knowledge, symbols and information constitute another field of research with respect to mobilities and social inequalities.

2   The notion of a "mobility regime" highlights the social and material structuring of movement, thus pointing at questions of power and governance (e.g. Kesselring 2012: 85). Similarly, Böhm et al. (2006, 6) suggest using the term "regime" in relation to automobility in order to avoid the sense of closure in the notion of a "system", thus engaging in a critical discussion of automobility.

3   Based on the Swiss Household Panel 2005, I found a small correlation of having no car and household income in Switzerland, indicating that people with higher social positions are slightly less likely than the average to have a car in Switzerland (Manderscheid 2010, 42f.).

4   The term "dispositif" is quite common in French, but is most often translated into English as "apparatus" which has a strong technical association. Therefore, I use the original although in English less common term "dispositif".

5   Böhm et al. (2006, 5) argue that the notion of system in regards to mobility works well as a metaphorical description but tends to underplay political agency in its production and shaping.

6   Yet, it remains an empirical question to define the knowledges and geographies relevant for the mobility practices in question.

7   Highlighting the possibility of rather centralised steering of one dispositif-dimension in regards to the heterogenuous interplay amongst a range of dimensions, recent developments of the internet show that single dimensions like the material foundations of cyberspace, can of course be controlled by respective owners, like Google, Facebook and Amazon. I want to thank Martin Pedersen for providing this helpful example.

8   Of course I do not claim to present a general history of mobility here or search for the cause and origin of humans movement. Rather, I want to outline some historical constellations, some external conditions, which are underlying the political preoccupation with governing moving bodies and things and also created the conditions of possibility for automobility to become the hegemonic mode of transportation as well as a constituting force of modern Western societies. I will do this by drawing on Foucault's lectures on governmentality as well as relevant works of some of his scholars. These arguments need to be developed in more detail and be grounded in thorough historical research.

9   For Foucault, governmentality refers not simply to government in the common political sense but also to self-control, guidance for the family and for children, management of the household, directing the soul, etc. This is what is often summed up as the "conduct of conduct" (cf. Lemke 2002, 50f.).

10 Through history, the manifestations of this dispositif changed and comprised several rather independent assemblages or regimes, like, with regards to the movement of people, citizenship and migration policies (Lenz 2010; Schwiertz 2011; Glick Schiller and Salazar 2013; Hindess 2000), tourism and the organisation of traffic and transport. Each of these could be subjected to a dispositif-analysis, focusing on the geographically and historically specific interplay of infrastructures, the built environment and institutions, knowledge and discourses, subjectifications and empirically observable practices. Yet, I will continue with the focus on the car being still the hegemonic mode of transportation in the Western world.

11 Also inspired by Foucault's ideas of assemblage, apparatus and governance, Matthew Paterson (2007), Cotton Seiler (2008) and Jeremy Packer (2008) have analysed automobility. Embracing their work, my own focus lies explicitly on social inequalities and structuration as an effect of the automobile dispositif.

12 The observations underlying the following represent a rather Western and European perspective, acknowledging that the situation looks different elsewhere.

13 Sometimes public transport appears racialised (Henderson 2009, 151) and genderised (Murray 2008).

14 The number of cars, in 2010, in the UK reached 457, in Germany 517, in Switzerland 521 and in Denmark 390 per 1000 inhabitants (The World Bank 2013).

15 Typically, Foucauldian discourse analyses and governmentality studies neglect this link to emprical practices.

16 Yet, the resistance to public transport finds its limits in the capital demand for cheap labour (Henderson 2009, 158).

17 "Doing space" can be understood in analogy to "doing gender" (West and Zimmerman 1987) and emphasises the mutual constitution of spatial and social structures through people's practices.

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