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Narratives of urban mobility in Germany: on the threshold of a departure from the car-centered city?

Theresa Kallenbach

Institute for Advanced Sustainability Studies, Potsdam, Germany

ABSTRACT

The mobility sector poses multiple challenges for sustainable development. Its large contribution to climate change, its impacts on the local environment through noise, pollutants, and land consumption, and its ambiguous role as both a facilitator of social participation and a potential multiplier of social inequalities reveal the necessity for structural transformation. In order to gain a better understanding of the mobility transitions to come, this article takes the capability of language to construct perceptions of reality as a starting point. Building on the mobility culture framework, it employs narrative analysis to understand not only how the current mobility sector is perceived, but also what kind of future changes are envisioned in discourses on urban mobility. It does so by comparatively analyzing German daily newspapers and public events on mobility over the course of one year to illustrate that the car-centered city may be a persistent guiding principle, but transformational urban mobility narratives are increasingly emerging in public debates. These transformational narratives could ultimately lead not only to a change of discursive structures and constructed meanings, but a transformation of urban mobility culture itself.

Introduction

The mobility sector poses multiple challenges for sustainable development. Its large contribution to climate change, its impacts on the local environment through noise, pollutants, and land consumption, and its ambiguous role as both a facilitator of social participation and a potential multiplier of social inequalities reveal the necessity for structural transformation toward a sustainable configuration of urban mobility.[1] From a mobility culture framework (Deffner et al. 2012), mobility transitions can only be understood if we take discourses into account to explain how mobility cultures are influenced – in addition to political regulation, urban planning, design of built urban space, location-specific socioeconomic situation, and present lifestyles. Considering discourses as a crucial component in mobility transitions supplements an often technological or structural approach with the "human dimensions" of an ecological and social problem (Crandall et al. 2018, 6). As Peter Adey notes, "mobility is frequently *ideological*, embedded within the most overt political discourses" (Adey 2010, 84, emphasis in the original). This article analyzes discourses on urban mobility in Germany to explore the extent that they uphold or depart from what has been an automobility culture for the past several decades. This question will be answered by applying pentadic narrative analysis that has been developed to analyze discourses of sustainable development (SD) (Rivera and Nanz 2018) and can reveal recurring content and structural patterns.

Automobility became the "dominant culture" (Urry 2007, 117) of mobility during the twentieth century in Germany and many other countries around the world.[2] Over the course of a few decades, car ownership and usage increased dramatically, cities were redesigned to enable seamless car journeys, and the automobile took center stage in government policies (Sheller and Urry 2000; Hickman and Banister 2014). The car enabled and demanded the segregation of urban environments, where work, home, and leisure were separated, and it is this functional segregation that still feeds many people's dependence on the car (Sheller and Urry 2000). At the same time, other modes of transport were hampered – by a lack of actually planning for them (Hickman and Banister 2014), but also by actively stripping down infrastructure to accommodate more cars on the roads. Within this automobility culture, its negative impacts often seem to be either taken

for granted as a necessary evil or addressed from a purely technological perspective that accepts the car as the center of mobility and simply replaces combustion engines with electric engines or privately owned cars with shared cars (Hickman and Banister 2014; Gössling and Cohen 2014).

For Germany, a mobility transition is more urgent than ever: The country's *Climate Action Plan 2050* dictates a decrease of greenhouse-gas (GHG) emissions in the transportation sector by up to 42% by 2030 compared to 1990 to at least limit the global climate crisis to below $2\,°C$, as agreed in the Paris Agreement (BMUB 2016). In the light of rising GHG emissions in this sector in recent years, and only a slight drop for 2018 by 0.6 percent compared to 1990 (UBA 2019a), this goal seems more elusive than ever. Moreover, nitrogen oxide (NO_x) emissions increase the incidence of respiratory diseases, diabetes, and cardiovascular diseases, and lead to premature deaths (WHO 2017). The European Union's thresholds for NO_x were exceeded in 65 German cities in 2017 and in 57 cities in 2018 (UBA 2019b), putting urban mobility on the public agenda. Other factors that point to the need for a mobility transition in German cities are hours spent in congestion, particulate matter and noise emissions, road fatalities, and competition for scarce urban spaces. The broad recognition that these conditions are untenable has led to calls by various political, civil society, economic, and scientific actors for more cyclist- and pedestrian-friendly infrastructure, sustainable mobility concepts, departures from the car-centered city, expansion of public transport, facilitation of intermodality, and digitalization for "smart" traffic routing. Even the current conservative, Christian Democratic Chancellor Angela Merkel, has demanded "a radical shift" (Reuters 2019).

Based on the mobility culture framework (Deffner et al. 2012), this article argues that reconstruction of the narratives on urban mobility can be useful to understand current perceptions and future visions of urban mobility. It comparatively analyzes both German daily newspapers over the course of one year and public events on mobility that took place in Berlin to illustrate that the car-centered city may be a persistent guiding principle, but transformational urban mobility narratives are emerging, especially in public debates. These transformational narratives could ultimately lead not only to a change of discursive structures and constructed meanings, but a transformation of urban mobility culture itself.

To do so, the article first lays down its theoretical framework by explaining the mobility culture framework's basic assumptions, and by defining central terms such as "narrative". The subsequent section then illustrates the methodological approach, how the analyzed data were collected and how narrative structures were analyzed. The narratives identified in the media analysis and in the analysis of the events are then successively depicted and finally discussed regarding the question to which extent they uphold or depart from the guiding principle of the car-centered city, and what this means for a possible transformation of Germany's mobility culture.

Theoretical framework

While the term "mobility" can also refer to the spread of ideas, to social mobility denoting a shift of people's socioeconomic standing, or to freight, in this article it pertains to the spatial movement of people (Götz 2011).[3] Modes of mobility are subject not only to individual decision making as to which means of transport to choose or which destination, but also to structural and material facts that allow for certain modes of mobility and prevent others, thus setting the scene for potential individual choices in the first place (Hunecke et al. 2007). Mobility is thus a political field: collective decision-making processes and their results lay the foundation for how people can and do choose to commute to work (be it paid or unpaid), to access education and healthcare, to run errands, and to visit friends.

How can mobility structures be designed to make them more conducive to sustainability? While proponents of a technological fix might claim that fostering efficiency and technical innovations are sufficient to overcome the problems of the mobility sector (Gössling and Cohen 2014; Hickman and Banister 2014), the often-described rebound effect partially offsets, or negates altogether, possible improvements (Sonnberger and Gross 2018; Walnum, Aall, and Løkke 2014). An approach that goes beyond trust in technology-based measures and incorporates other dimensions of transition is the mobility culture framework (Deffner et al. 2012). It takes the sociocultural dimensions of change into account by acknowledging that a mobility culture – understood as a combination of material facts created by society and their symbolic meanings – is influenced by various factors, such as politics, urban planning, built urban space, and socioeconomic conditions of the city, as well as communication and discourses. By incorporating the role of discourse in "shifting meanings" (Deffner et al. 2012, 6) and recognizing that such meaning is decisive when it comes to people's perceptions of material artifacts, the authors of the mobility culture framework align themselves with social constructivist approaches that analyze the "social construction of reality" (Berger and Luckmann 1966). Regarding the field of

mobility, Deffner et al. (2012, 6) observe that "the built environment, means of transport, roads and railway infrastructure do not just exist as such, they are also symbols and subjects of discourse." Thus, assessing these discourses of mobility can help us to better understand the construction of mobility cultures and their transitions. The mobility culture framework assumes that the different factors contributing to mobility culture are also closely interrelated and affect each other (Götz and Deffner 2009; Klinger and Lanzendorf 2016), since politics affects urban planning, the built urban space influences the travel behavior of people, and discourses have bearing on politics. This article analyzes discourses from the point of view that they are fundamental to understanding political decision making in the mobility sector because public discourses are not only places where problems and solutions are discussed, but also where perceptions of mobility are shaped.

Clearly, the term "discourse" is contested, which is why the mobility culture framework's brief mention of it requires more theoretical clarification. "Discourse" can be understood in various ways based on different theoretical approaches and applied in different methodological strategies (Kerchner 2006), such as Jürgen Habermas' (1983, 1991) discourse ethics, Michel Foucault's (1972 [1969]) genealogical approach, or a pragmatic approach such as advanced by speech act theory as developed by John Austin and John Searle (Austin 1975; Searle 1969). It is to be regarded here in accordance with Michel Foucault's post-structuralist understanding of the term "discourse" as "the group of statements that belong to a single system of formation" (1972 [1969], 107), which does not merely signify the objects they speak of, but actually produce them by creating and changing their meaning through the formation of relations between objects. In other words, the object "does not pre-exist itself … It exists under the positive conditions of a complex group of relations" (1972 [1969], 45).

Narratives, by contrast, can be understood as structures of discourse (Viehöver 2001) – or as a "discursive order" (Hajer 1997, 11). Rooted in literary theory, the analysis of narrative has found its way out of the realm of fiction and into scientific disciplines dealing with factual matter in fields as diverse as historiography, cultural studies, psychology, philosophy, and political science. In a post-structuralist understanding, narratives shape and change the relationship between signs (Biegoń and Nullmeier 2014), and thereby their otherwise arbitrary meaning (de Saussure 2011 [1916]). I argue that relations between signs are changed by narratives because it is narratives that determine *which*

kind of relations are established between signs, be it "relations of resemblance, proximity, distance, difference" (Foucault 1972 [1969], 44). By involving characters with mutual or conflicting interests, guided by certain values and acting in certain ways to avert a presumed crisis or to achieve an aspired goal, narratives order the relations between objects of the social world that are contingent in meaning and thereby construct and reconstruct the social world itself. Narrativity is thus a concept of "social ontology" (Somers 1994, 606) that seeks to disclose how the social world comes into being and how it is changing over time.

This general constructiveness of narratives also holds true for narratives of SD. They engage in the world they describe, can be more or less "convincing," and thus serve as a fruitful object of analysis (Rivera and Nanz 2018). Since the very concept of sustainability is a normative one, it seems feasible to assume that narratives of SD also refer to certain values. Based on Carolin Schwegler's (2018) analysis of normative references in SD discourses and Shalom Schwartz's (2012) work on basic human values, we can assume that the value references that narratives of SD make could reasonably be clustered into the values of "stability/conservation,"[4] "justice," and "innovation." Schwegler's analysis of SD discourses and their normative references reveal that these discourses refer to "security," "protection," and "justice" (2018, 237–341) and that innovation as a discourse is "interlocked" with sustainability (2018, 164–165). A similar systematization of values can be found in Schwartz' theory of basic human values, that the author clusters into four general categories: "conservation," "self-transcendence" (which has connotations of justice), "openness to change" (which has connotations of innovation), and "self-enhancement" (2012, 9).[5]

In this article, I claim that discourses on urban mobility are structured by recurring narratives that different actors have recourse to and are able to open – or, for that matter, close – possibility spaces for political transformations of the mobility sector. An analysis of these narratives can therefore not only shed light on how the mobility sector is perceived in the present, but also on how its possible futures are imagined.

Methods

These general assumptions regarding the role of narratives pose the question as to where these narratives can be found and how one can analyze them. I argue that in concrete utterances such as verbal speeches or written texts, whenever a deed is described, this concrete textual section contains a

narrative. Following previous published work (Gürtler and Rivera 2019; Schmidt and Rivera 2020), I call these narratives on the text level "micro-narratives" and assume that these micro-narratives aggregate to form cross-text narratives that structure the discourse. Narratives can be assessed using different methodological approaches such as plot analysis based on Hayden White's (1975) *Metahistory* and actant analysis following semiotician Algirdas Greimas' (1983) work on the structures of meaning. In the context of the study of SD discourses, the "pentadic approach" based on Kenneth Burke's (1969, 1978) writings has been developed to analyze narratives (Rivera and Nanz 2018; Gürtler and Rivera 2019). A pentad is a structure of five elements that can potentially underlie a micro-narrative: a character ("agent"), their action ("act"), the means they employ ("agency"), their aim ("purpose") and the action's context ("scene").

Apart from merely identifying these elements, the pentadic approach also allows us to identify recurring, cross-text configurations of pentadic elements on the level of micro-narratives, thus making it possible to interpret these as the narratives of a discourse. A narrative may not always contain all five elements. Whenever an element is not realized, it can be coded as "missing" to account for the completeness of narratives – a characteristic that might play a role in their rhetorical effectiveness (Gürtler and Rivera 2019; Schmidt and Rivera 2020). Recurring narratives can, moreover, be clustered according to the basic value that they refer to; as described above, one can assume that these are the values *stability/conservation*, *justice*, and *innovation*. Yet, this assumption should always be treated with care during the analysis and the door always left open for other value references to be discovered. Within the pentadic structure, the element of *purpose* can very often be related to one of the above-mentioned values. Incorporating a value perspective into the analysis of narratives of urban mobility allows us to classify them according to these values and to determine to what extent certain value references prevail.

To analyze narratives of urban mobility in Germany, two kinds of empirical material were gathered. The first one consisted of a corpus of newspaper articles published in the daily German newspapers with the widest circulation between November 2017 and November 2018. These articles were randomly chosen from a list of 1,910 articles from the *Gruner + Jahr* newspaper databank that had been tagged with keywords like "transport policy," "station," "street," "road traffic," or "local traffic." Due to the very time-consuming qualitative analysis planned, 106 of these articles were randomly chosen for the analysis. Since 30 of these articles did not cover the topic of urban mobility, we actually analyzed 76 articles, with a total of more than 70,000 words. The corpus was assessed qualitatively, drawing on the methods of qualitative content analysis (Mayring 2000, 2010) and narrative analysis using the pentadic approach described above.

Qualitative content analysis was used to identify the general thematic focal points of the discourse on urban mobility. To this end, references to the basic values *stability/conservation*, *justice*, and *innovation* were identified and summarized regarding their specific content – e.g., when air-quality protection was mentioned, this text sequence was coded as "air quality" within the superordinate code *stability/conservation*. Apart from the detection of references to the core values, we used several explicit guiding questions for a deductive analysis of the corpus and subordinated them to the respective core values when applicable. Examples are "Was urban space described as a resource that various actors compete for?"; "Which costs and benefits of urban mobility are referred to?"; "Are concrete or abstract actors described as beneficiaries or victims?" and "Which social and technical innovations are mentioned and how are they evaluated?"

This content analysis was supplemented by narrative analysis, which instead of "just" identifying the topics of the texts, assesses only those text sequences that describe actions with regard to their specific configuration of pentadic elements: what is being done, by whom, by what means, to which end, and in which context. Elements not mentioned were coded as "missing," allowing for assertions regarding the completeness of these micro-narratives. Since actions are described only in certain parts of texts, the narrative analysis can only provide information on these segments. On average, two to three micro-narratives per text were analyzed and clustered regarding the pentadic element "purpose," when applicable regarding the referred value, otherwise regarding other aims (e.g., transportation-related aims such as becoming a bicycle-friendly city, having fewer cars in the city center, or reducing the traffic on an inner-city motorway). A comprehensive description of the results of the content analysis can be found in the IASS study "Status quo statt Verkehrswende" (Neebe and Kallenbach 2019). Given this article's focus on the narrative analysis, only the main results of the content analysis are referred to here.

The second kind of empirical material for this project was gathered in participant observations of public events in Berlin that revolved around transportation and mobility. The observations were

conducted directly, by observing the events at first hand, and in a semi-structured way as there was a focus on narrative patterns in the statements made by speakers at the events. Over a period of one year from March 2018 to March 2019, my project colleagues and I visited nine public events on mobility and logged the debates to gather data that would provide us with additional material on current debates on urban mobility. The public events that we visited serve as case studies: the objective was not to cover a whole discourse, but to qualitatively assess these debates as points of comparison for the results of the media analysis.

The choice of events was often a pragmatic one: time constraints, the accessibility of locations, and the availability of events themselves determined which events were chosen. Certainly, the timeframe investigated is slightly different to that of media analysis, but the relative temporal proximity should suffice for a comparison. Since the observations were conducted in a covert way – we did not inform the organizers that we were gathering material for research nor did we ask the participants on stage or in the audience for their consent – I am not going to disclose identifying details of these events to protect personal rights and thus meet the standards of ethical research (Fine 2015). The events brought together scientific, political (municipal, regional, and national), civil society, and economic actors. The topics of the gatherings included the mobility transition in general, e-mobility, climate protection, cycling infrastructure, innovations, urban motorways, and gender equality – all of them with reference to mobility.

Each set of data represents extracts from the German discourse on urban mobility; both are part of its discussion in the *public* sphere. In Gerhards and Neidhardt's (1990) model of the public sphere, the authors differentiate three levels of the public that interact with one another and together constitute the public sphere. In their model, the public sphere is the place of agenda-setting and opinion formation within the political system; the political system, by contrast, serves the establishment of collectively binding decisions. The three levels that they differentiate are: 1) the direct, spontaneous encounter of people (e.g., in buses or shops); 2) public events on a certain topic that gather a collection of speakers and an audience; and 3) the mass media (Gerhards and Neidhardt 1990, 20–24).

The authors state that public opinions develop from their circulation through all three levels, but that it is the mass media that has the highest relevance for the political system. Topics and opinions that are constituted in direct encounters or at public events are only broadly perceived and thus politically significant once they are picked up on by the mass media. Against this backdrop, the narrative analysis of media discourse on the one hand and of public events on the other serves as a fruitful approach to understand and compare two main levels of the public sphere. The results can be expected not only to detect what widely shared public opinions on urban mobility existed in 2018, but also which alternative views were present at that time in other discursive arenas. Following Gerhards and Neidhardt's model, it is these alternative views that the mass media might one day draw on and that can therefore already shed some light on future mobility transitions to come.

Narratives of urban mobility in the German media

The content analysis of the media corpus showed that references to the three values *stability/conservation*, *justice*, and *innovation* were evenly distributed. On one hand, the major topic regarding the *stability/conservation* value was the protection of air quality – given the time frame of the analysis and many cases of NO_x limit exceedances and debates on the diesel emission-test manipulations during this time, this does not come as a surprise. The protection of the climate or the environment, on the other hand, played only a marginal role in the corpus. Regarding the value *justice,* many notions were made regarding discussions on who is responsible for bearing the expenses of the diesel fraud and of measures to lower NO_x emissions. Further notions of justice – for instance regarding the profiteers or victims of the transportation sector or the distribution of urban space – were rarely mentioned. By contrast, innovations, were frequently described, especially autonomous driving, electric engines, and ride-sharing services accounted for most of them.[6] We drew two conclusions from the content analysis that are particularly critical. First, the debate on urban mobility very much upholds the image of the car-centered city. Be it the need for staying within the NO_x limits to prevent driving bans or all the references to autonomous driving, as well as the absence of core demands pertaining to debates on sustainable mobility such as a redistribution of space, none of this pointed toward a transformation that would question the status quo. Second, what was just as striking was the merely local perspective on mobility issues: neither climate change nor global justice played a role. Instead, the debate is characterized by a localism which blanks out global risks that need to be addressed. A mere focus on air quality and measures to improve it might have an effect on GHG emissions as well, but when these means

are only applied in cities that exceed the limit for NO_x, their scope will not suffice in reducing GHG emissions to the necessary extent.

In contrast, the narrative analysis not only detected general thematic patterns, but provided insights on the structural and thematic characteristics of the micro-narratives. The results were indeed different from the ones derived from the content analysis. When looking at the micro-narratives clustered into thematic groups in terms of their purpose, most of them were related to *stability/ conservation* – in distinction to the content analysis where the three core values were about evenly distributed. Based on the claim that micro-narratives found in texts and utterances aggregate to narratives of a whole discourse, one can speak of a prevalence of an "air-quality narrative" in the German media discourse on urban mobility at that time. The acts related to it are manifold: retrofitting diesel vehicles, renewing municipal buses, considering free public transport, intensifying speed limits, improving infrastructure for bicycles, implementing funding programs for municipalities or simply "doing anything." These acts are, at least in part, similar to demands by civil society actors and politicians advocating a mobility transformation.

Yet, this narrative's scope is a lot more limited: its scene, the place of action, resides only in those cities that exceed the limit value of NO_x. The narrative is only about staying under this threshold, not about a general mobility transition and most certainly not in any other cities beyond the ones mentioned. Other frequent micro-narratives aim at an increase in road safety and point toward more general concerns. For instance, they address collisions involving cyclists and demand the prevention of any road deaths in traffic. These micro-narratives' acts are often very concrete and demand structural changes such as safer cycling lanes, speed limits, or reconstructions of crossings. That this "narrative of road safety" succeeded in prevailing at least partly might suggest that a "securitization" (Buzan, Waever, and De Wilde 1998) of demands for a mobility transition is particularly successful in gaining discursive ground.

A lot less prevalent than the *stability/conservation* value, but still relevant for the mobility discourse in the German media, is the value of *innovation*: about twelve percent of the purposes described innovation-related aims of actions such as "facilitating autonomous driving," "distribute car-sharing," or "Germany should take the lead in digital innovations." It should be noted that, when structurally interpreted, these innovation-related purposes mean that innovation is described as a goal that is justified as an end in itself. Interestingly, the micro-narratives that had acts related to innovation,

by contrast, showed either no purpose at all or purposes that were about financial profit or a higher efficiency. Innovation in the urban mobility discourse in the German media is therefore not even narrated as the technological fix for environmental or social problems. Instead, it forms a "narrative of autotelic innovations" corresponding to a modernity-based belief in progress or a "narrative of profitable and efficient innovations" corresponding to a neo-liberal economic understanding.

In comparison to the results of the content analysis, actions and attitudes directed toward justice played no role in the corpus. That *justice*-related references were generally relatively prominent in the content analysis was mainly due to the allocation of passages that dealt with the asserted responsibility of actors on various political levels to solve the problem with the NO_x emissions and the diesel fraud to the code of *justice*. Nonetheless, these claims did not translate into purposes of micro-narratives because the ultimate aim of these demands to solve the NO_x and the diesel problem was to improve the air quality and to prevent driving bans, not to improve equity or fairness.[7] Thus, be it local, global, or intertemporal, justice basically played no role in the narratives of urban mobility.

The aggregation of purposes throughout this corpus showed that the urban mobility discourse in the German media is mainly structured by narratives of air quality, road safety, and autotelic or profitable and efficient innovations. Micro-narratives related to the *stability/conservation* value were most prevalent while any narratives of justice were virtually absent. The debate is thus mostly distinguished by narratives that stabilize the dominant culture of automobility and the car-centered city as a guiding principle. Only the narrative of road safety can be seen as a narrative questioning this status quo and envisioning an alternative mobility culture. The "localism" that was already visible in the content analysis manifested in the narrative analysis even more: tackling the climate crisis was the purpose within one single micro-narrative – out of approximately two hundred micro-narratives that we coded in total. The pentad's "scenes" confirmed this result. While the exceedances of NO_x limit values often served as a backdrop for action, the climate crisis did not play any role. The narrative of profitable innovations meanwhile was framed neither locally nor globally, but nationally, dedicating itself to increasing the gross domestic product.

Narratives of urban mobility in public events

The public events shared some of the narratives found in the media debate – which was to be

expected since these are intertwined arenas of public opinion. Two of these shared narratives are the "narratives of innovations," both in their autotelic and efficiency versions. Speakers at the events asked how innovations could be promoted within the mobility sector and how these could spread within society. They also described innovation as a means to efficiency, to time saving, and to traffic control and called for other legal frameworks to promote digitalization. The speakers additionally talked about a wide-ranging dialogue with multiple stakeholders with the aim to create innovations together. These narratives that render innovations as such an inherently desirable state bear the imprint of modernist thinking and repeat its promises of progress (Dingler 2003). But there were also other narrative configurations in which innovations were described as means to achieving more equality in the mobility sector or as a means to more climate protection. These innovations included an application providing information on the functionality of public elevators, thus facilitating mobility for people with, for example, wheelchairs or baby strollers. Another example was the usage of urban structural data to calculate the energy demand of different urban settlement structures. Thus, innovation is still often described as an end in itself or a means to efficiency, but innovations are also described as serving other value-related purposes in the public debates: as equal access to mobility subsumable under the value *justice* and lower energy demands subsumable under the value *stability/conservation*.

The latter value also held the "narrative of air quality" in the public events which is another similarity to the media discourse. The micro-narratives are as well based on exceeding value limits for nitrous oxides and discuss different approaches for reducing them, (e.g., the reduction of traffic lanes or the construction of a concrete cover for urban motorways). The "narrative of road safety" is also present in the debates. One speaker claimed that the German *Straßenverkehrsordnung* (Road Traffic Act) should be renewed to ensure a distribution of space that is safe for all traffic participants and the reconstruction of a road is a means to more safety. Another speaker noted that bicycle lanes should be expanded to allow for all people to bike safely irrespective of their age. Yet, what was so strikingly missing in the media is very present in the debates highlighted at the public events, namely a narrative of climate protection. The respective micro-narratives point to a variety of measures and describe the need for fundamental change, for different urban settlement structures, for more walking and cycling, for the proliferation of car-sharing, for more bicycle stands, and for the reduction of parking spaces – all

mobilized for the single purpose of preventing further aggravation of the climate crisis and to comply with the Paris Agreement.

In the media discourse, narratives of justice were not very substantial. By contrast, at the public events that we visited, they were indeed present. One concerned a just distribution of scarce urban space, based on the critique that cars take up a disproportionately large share of public space relative to other modes; accordingly, a redistribution of urban space was justified. Another narrative addressed equal access to mobility and occurred in three of the events: one of them, as already mentioned above, addressed the functionality of elevators. Other micro-narratives described the need for actions directed toward gender equality – both for making otherwise male-dominated decision-making processes in the mobility sector accessible for all genders and for providing everyone irrespective of their gender with equal access to mobility. An example of this latter issue involved drawing attention to the fact that public transport schedules tend to prioritize mobility patterns more frequently found among males due to gendered working conditions. While in the media discourse on urban mobility, society is seen to be categorized into groups of people using different means of transport – cyclists, car drivers, pedestrians – or rarely and still vaguely into different age groups, the debates at the public events accounted for further structures of discrimination in society and thus in the mobility sector as well: ableism and sexism.

Discussion

The media debate and the public events represent different levels of the public sphere. In summary, the media articles were structured by narratives of urban mobility that represent a discursive equivalent to the car-centered city, which we can understand both as an ideational guiding principle of urban planning and as a material condition of built urban spaces. The persistence of this guiding principle manifests in claims to improve air quality in order to prevent driving bans and in demands for innovation as an end in itself or as a means for more efficiency in an otherwise unaffected mobility system. The only narrative that departed from this guiding principle was the "narrative of road safety." It promoted the construction of safe bicycle lanes – a demand made by many political and civil society actors in the mobility sector, which succeeded in gaining narrative ground due to high news value and, possibly, its reference to the value *stability/conservation* to which most media narratives referred. The particular potential of this value may lie in its

compatibility with *security dispositifs* and mechanisms of *securitization* (Opitz 2008). Overall, however, narratives of urban mobility in the German media were characterized by strong emphasis on localism, with demands for climate protection and their global perspective kept at a distance.

The narratives employed in the public debates partially overlapped with those found in the media articles. For instance, the narrative of innovation as an end in itself and a means of improving efficiency and the narratives of road safety and of air quality were relatively prominent as well. This can certainly be attributed to an overall belief in innovation and progress on the one hand and to the currency of the topic of NO_x emissions on the other. Yet, striking differences were apparent in the narrative of climate protection. By demanding innovations for GHG reductions, fundamental changes, and a departure from a car-centered mobility culture, this narrative established climate protection and compliance with the Paris Agreement as the first and foremost goal. The fact that this narrative of climate protection did not feature in the media articles might indicate that it was not fully integrated in the mainstream mobility discourse in 2018 despite being already fully established as a narrative of urban mobility in the expert community.

The same goes for the narrative of a just distribution of urban space and the narrative of equal access to mobility, both of which were totally absent in the media articles that did not feature *justice*-related narratives at all. Even though the narrative of climate protection is related to the frequently invoked value of *stability/conservation*, like the narrative of road safety, it might not have been as successful in entering the media discourse due to its global scale that stands in stark contrast to the media's localism. The resonance of the Fridays for Future movement might lead to different results if the same analysis was carried out in 2020. It may be the case that the narrative of climate protection has migrated from the level of public events to the mainstream media debates on urban mobility.

The media was to a large extent still characterized by the car-centered city and strong localism, providing a discursive equivalent to the built environment that supports a mobility culture centered on automobility. By contrast, the public debates did indeed indicate more fundamental changes in urban mobility, providing a global and justice-related perspective. They do challenge the status quo – both the discursive one, upending existing narratives of the car-centered city; and ultimately the material one, by opening up spaces for policies that re-build urban spaces for more sustainable cities. Based on Gerhards and Neidhardt's model of the public

sphere, these challenging narratives are worth noting. First, they represent the perceptions and future visions of urban mobility that are present in one of the three levels of the public sphere. Second, these narratives point to what a thematically interested part of society imagines as a future mobility culture. Finally, they might ultimately become part of a wider public debate, paving the way for a political path to a new, sustainable mobility culture.

Conclusion

Based on a social constructivist approach to mobility within the mobility culture framework and on a post-structuralist understanding of narratives as constitutive of the social world, this article analyzed the narratives on urban mobility in both the German media and in public events held in the country on the topic of mobility. Despite a strongly perceived sense of urgency and various calls for a transformation of the mobility sector by many actors, the media analysis showed strong persistence of the guiding principle of the car-centered city – a result that supports the mobility culture framework's assumption that a mobility culture is strongly intertwined with a discourse which can, in its underlying structural components, be as stable and resilient as built streets and parking areas.

By contrast, our analysis of several public events suggests that alternative narratives of urban mobility are available to the actors addressing future designs of urban mobility. Narratives of gender equality, of a just distribution of urban space, of road safety and, first and foremost, of climate protection in the mobility sector were defining components of the statements made by political, civil society, economic, and scientific actors that came together at the public events that we investigated.

Among the various narratives, the narrative of road safety has made its way into the media, calling for safe cycling infrastructure and thereby questioning an urban planning system entirely focused on cars. It might be a forerunner for mobility transitions to come: for a new mobility culture that takes over after decades of the car-centered city. If the newly detected narratives are to gain more ground, this new mobility culture might be more climate-safe, grant more equal access to mobility, distribute urban spaces more equally, and guarantee more safety for all the people moving through our city streets.

Notes

1. A salient example of social inequalities in the mobility sector can be seen in the case study by Bartling (2006) on the evacuation plans of New Orleans for Hurricane Katrina in 2005 – which took people's access to private transport for granted. It

thus failed to account for socioeconomically marginalized residents who did not have access to private automobiles (Adey 2010). Further inequalities in the mobility sector, also regarding gender, are accurately described in the literature (Hanson 2010; Law 1999; Preston and Rajé 2007).

2. The principle of the car-centered city was introduced to Germany by the urban planner Hans Bernhard Reichow (1959). In his book *Die autogerechte Stadt [The Car-friendly City]* published in 1959, he demanded a new urban road system that not only allowed motorized traffic to constantly flow through the city, but could also be expanded by additional lanes in the future.

3. Even though one should note that social mobility is also dependent on spatial mobility, as Mimi Sheller and John Urry note, "Moving between places physically or virtually can be a source of status and power … or where movement is coerced it can generate deprivation and untold suffering" (Sheller and Urry 2006, 213).

4. The combination of these two terms allows for a twofold perspective: While *stability* stands in the tradition of discourse strands dealing with the stability of resource utilization (for instance in eighteenth century discourses on "sustainable" forestry) and refers to a certain state, *conservation* refers to discourses on nature conservation and highlights the aspect of taking action toward it.

5. This literature-based derivation of the three values originally stems from Manuel Rivera, part of which can also be found in a previous article (Schmidt and Rivera 2020).

6. Even though one could assume that autonomous ride-sharing services could contribute to a decrease in private car ownership and lower GHG emissions, a study by Europe's transport campaign group *Transport and Environment* suggests that the opposite is likely to be the case. More specifically, by 2050 carbon dioxide (CO_2) emissions could increase by 40 percent in the case of an unregulated advent of driverless cars (Transport and Environment 2019).

7. The pentadic element *purpose* that was picked to thematically cluster the micro-narratives and to evaluate their connection to values was a methodological choice. We deemed that choosing *purpose* over other elements of the pentad to aggregate micro-narratives was reasonable since it is the one element that not only captures what someone does but also to which end. It thus lays the focus on a deed's intentionality that differentiates it from mere conduct. Moreover, *purpose* is the pentadic element that provides information on what a society might think of as a desirable future.

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