The Challenge of Multimodality:

Everyday Mobility in the City of Essen

by Patrick Linnebach
The Challenge of Monomodality: Everyday Mobility in the City of Essen

Summary
Young adults in the city of Essen are less frequently multimodal in their movements than in other large German cities with more than 500,000 residents. This finding cites a distinction which applies even more so to the entire population of Essen. In this working paper, the question will be asked as to why Essen has a comparatively low measure of multimodal mobility behavior. The paper’s central message is: In order to better understand mobility behavior in Essen, it is helpful to refer not only to actors but also to actor-networks according to Actor-Network Theory (ANT). This is especially constructive with respect to the resulting consequences of the methodology.

Acknowledgement
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1. Introduction

In a recent article, Jens Dangschat and Astrid Segert (2011) give clear contours to the potential additional benefits of sociological research on sustainable mobility. As the field of sustainable mobility must be seen as a crucial area of activity for confronting the challenges of climate change, the present working paper addresses these supposed benefits and attempts to gain a better understanding of the mobility behavior of Essen’s population. Indeed, this is with the concrete background knowledge that the population of Essen is much less frequently multimodal – and in this regard, demonstrably less sustainable – in their movements than people living in other large German cities with populations greater than 500,000.1 However, at this point it is not yet a question as to how multimodal traffic services might be established in Essen. Instead, the question to answer in the following is: how can Essen’s comparatively less multimodal mobility behavior be sociologically explained?

The knowledge that, by intercommunal comparison, Essen’s populace is significantly more monomodal in its movements is based on an earlier published article (cf. Linnebach & Jansen 2014). In this article, we followed up on the question as to whether one can empirically prove the claim that the future of mobility is going to be multimodal (cf. Kuhnimhof et al. 2012). Based on data representative of the city of Essen, as surveyed in the project “Climate Initiative Essen” (CIE), we were able to show that young adults (aged 18-29), including those in Essen, are indeed more multimodal in their movements than the general population (59% compared to 40%). However, we were also able to show that young adults in Essen are less frequently multimodal in their movements than young adults in other large German cities that also have more than 500,000 residents (only 59% compared to 70%). Additionally, when not only young adults but all of our respondents were compared, even more marked differences between Essen and other large cities become apparent (40% compared to 55%).

To explain this difference, Rational Choice Theory (RCT) offers an established perspective on the choice of transportation means in sociological research on mobility behavior (cf., e.g., Bamberg & Schmidt 1994; Franzen 1998). But here, without going into detail and for the sake of brevity, Stefan Hirschauer (1999: 226ff.) indicates the limitations of such a perspective with plausibility. In pointing out that means of transportation act on our behalf, he sharply summarizes his criticism and concludes that sociological mobility research would be better off in exiting RCT.

Hirschauer’s statement that means of transportation act on our behalf seems to be nothing less than a provocation when, for example, one looks at the recently published anthology on public mobility (in German language), edited by Schwedes (2014). In the view of the collective group of mobility researchers therein, it is not about means of transportation acting on our behalf, but actually about the actors themselves (even if actors does not always mean individuals, but also collective or corporate actors). In any case, despite, e.g. discussing automatic and driver-assist systems, not a single formulation in the entire twelve articles published in the anthology, is to be found in which an automobile, a bicycle, a streetcar, or a similar vehicle is acting. In accordance with Hirschauer’s wording, the central thesis of the present paper is that it should therefore be sociologically helpful not to limit the term actor to just individual or collective actors, but instead to speak of actor-networks in line with so-called Actor-Network Theory (ANT).

The argument is structured as follows: First the aforementioned difference in multimodality values between the city of Essen and other large German cities will be addressed (Section 2). Regarding the question as to how to explain this, there will be a discussion in Section 3 about the variable of age, which is the central variable in the theme of multimodal mobility behavior. In keeping with the hypothesis that with age, the more monomodal one becomes, the actor in such an explanation is each surveyed person herself. Along with income, a second factor will be discussed before the following question receives primary focus in Section 4: To what degree does refer-

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1 Individuals move about in a multimodal fashion when they use more than one mode of transportation per week (further details in Section 2).
rning to the concept of "mobility culture" enhance the explanation? With classical French sociologist Emile Durkheim, one may assume that it is not only the citizens of Essen who decide on how to move – but also the infrastructure of Essen (Section 5). Therefore, the aforementioned supposition will be made more explicitly clear suggesting that it is helpful to refer to actor-networks in order to better understand the mobility behavior of Essen’s populace. The article finishes with thoughts on the question of which sociological consequences may emerge from theoretically shifting from actors to actor-networks (Section 6). This is with particular regard to the field of activity for communal climate protection being addressed by the competition “Energieeffiziente Stadt” (Energy Efficient City).

2. Multimodality

In mobility research, the so-called modal split is the central indicator of mobility behavior. It is the breakdown of the entire traffic volume of a population under study into individual modes of transportation. When methodologically observed, the underlying unit of examination is not the behavior of every individual surveyed, but of the population under survey as a whole, for example the residents of the city of Essen. Numerous mobility surveys, such as the one conducted in Essen in 2011 (cf. Stadt Essen 2012), are based on this method.\(^2\) As a positive result, the data is presented in aggregate form so that it is in fact possible to determine the modal split for individual population segments (for instance, students, laborers or pensioners; women compared to men; younger compared to older groups of people; etc.) or also individual areas of the city (for example, specific districts or quarters). However, as a disadvantage, it is not possible to find out the composition of a population group that displays a similar mobility behavior or a specific mobility style.

The modal split is calculated by determining the portion of each mode of transportation used from the total of all routes traveled during the period of the report. In the German Mobility Panel (MOP), this period amounts to two calendar weeks per surveyed person (but to expressly reduce the influence of weather, the weeks must be non-consecutive, cf. Streit et al. 2015: 20). As a consequence, modal split panel studies incur a comparatively high cost and are time consuming. Under these circumstances, there are good organizational reasons, along with the already mentioned content reasons, to examine the mobility behavior in a cross-sectional survey instead of longitudinally.

In cross-sectional population surveys – for example, the two conducted by the CIE project (CIE 2012, 2014), or the two “Mobilität in Deutschland” (MiD) studies from 2002 and 2008 (IAS 2002, 2008) – the modal split was therefore approximated based on questioning about how often individual modes of transportation (personal automobiles, public transportation\(^3\) or bicycles) were regularly used. The possible answers in each case were: daily, weekly, monthly, less than monthly or never. This is another valid method for gaining detailed information about mobility behavior. Furthermore, as an advantage (compared to modal split panel studies) it allows for an analysis regarding the differentiation between monomodal and multimodal mobility behavior, because the data are not in aggregate form. So, it is possible to categorize every surveyed person according to her personal style of mobility.

In this way, all surveyed persons can be categorized into seven user groups: three monomodal, and four that are multimodal (cf. Table 1). Accordingly, mobility behavior is considered to be monomodal when, during a one-week period, only one mode of transportation is regularly used. The use of more than one mode of transportation per week qualifies as multimodal mobility behavior (cf. Ahrens et al. 2010). Thereby, it is completely irrelevant whether several modes of transportation are combined together to travel a single route. In this case, the literature would refer to the distinction from multimodality as intermodality (cf. Beutler 2004).

\(^2\) Based on this study, results for the city of Essen showed the following modal split: 54% of the Essen population travels by individual motorized transportation (IMT), including personal vehicles, either as driver or passenger, motorcycles, or moped; 22% went on foot; 20% with public transportation (PT); and 5% by bicycle (cf. Stadt Essen 2012: 37).

\(^3\) Regarding the subject of public transportation (PT), one must also include the use of buses and trains within an area (local public transportation) as well as the use of trains for one-way distances of 100+ kilometers.
On this basis, a comparison of data from CIE project to the portions indicated in the two previously mentioned MiD studies shows that nearly 40% of Essen’s population travelled multimodally in 2012 and 2014, whereas, in other large German cities (with more than 500,000 residents), at least 55% of the population travelled multimodally as early as 2002 (cf. Table 2). The details show that the small proportion of multimodal mobility in Essen is caused by the high percentage of people who use solely automobiles for transportation (a difference of more than 15 percentage points). Therefore, as one might expect, there is only a small portion of people in Essen who travel by bicycle, either monomodally or multimodally.

But even this casual observation raises the question as to how to explain the difference. This is especially so if the way we move – and the efforts toward more multimodal and sustainable mobility – are considered to be a central area of activity in the social transformation toward more (communal) climate protection (cf., e.g., WBGU 2011).

Table 1: Monomodal and Multimodal User Groups

<table>
<thead>
<tr>
<th>User Group</th>
<th>Conditions for Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>Other transportation modes are used less than once per week.</td>
</tr>
<tr>
<td>Public Transport</td>
<td>The two transportation modes combined in each set are both regularly used at least once per week.</td>
</tr>
<tr>
<td>Automobile</td>
<td>Each of the three transportation modes is regularly used at least once per week.</td>
</tr>
<tr>
<td>Automobile &amp; Bicycle</td>
<td></td>
</tr>
<tr>
<td>Automobile &amp; Public Transport</td>
<td></td>
</tr>
<tr>
<td>Bicycle &amp; Public Transport</td>
<td></td>
</tr>
<tr>
<td>Automobile &amp; Bicycle &amp; Public Transport</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ahrens et al. 2010: 26

Table 2: Comparison of Multimodality

<table>
<thead>
<tr>
<th>User Group</th>
<th>CIE 2012</th>
<th>CIE 2014</th>
<th>MiD 2002 Area Size Category: 500,000+</th>
<th>MiD 2008 Area Size Category: 500,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>1.3</td>
<td>2.3</td>
<td>3.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Public Transport</td>
<td>12.4</td>
<td>14.5</td>
<td>14.3</td>
<td>11.6</td>
</tr>
<tr>
<td>Automobile</td>
<td>46.7</td>
<td>44.3</td>
<td>27.8</td>
<td>23.3</td>
</tr>
<tr>
<td>Σ Monomodal</td>
<td>60.4</td>
<td>61.1</td>
<td>45.2</td>
<td>40.7</td>
</tr>
</tbody>
</table>

| Automobile & Bicycle              | 13.6     | 12.9     | 14.7                                   | 16.4                                  |
| Automobile & Public Transport     | 15.0     | 18.7     | 20.0                                   | 17.0                                  |
| Bicycle & Public Transport        | 4.6      | 1.7      | 8.0                                    | 12.6                                  |
| Automobile & Bicycle & Public Transport| 6.5      | 5.6      | 12.2                                   | 13.3                                  |
| Σ Multimodal                      | 39.7     | 38.9     | 54.9                                   | 59.5                                  |

N = 959  
N = 956  
N = 5,733  
N = 5,045

Source: CIE 2012, 2014; IAS 2002, 2008 (percentage values are column percentages; sum errors are due to rounding)
3. Age and Income

As we have shown, if young adults move more multimodally than the population as a whole, the variable “age” must be the main factor accounting for multimodal mobility behavior. This is probably connected to a number of socio-structural reasons,\(^4\) such as a greater proportion of students in a city’s populace (cf. Kunert et al. 2012: 13).

Regarding the difference in proportion of multimodality between Essen and similar large cities (to be explained here), the age variable is evidently only an explanatory force when the age distribution in Essen clearly differs from other large German cities. To be exact, this would only be a convincing explanation if the population of Essen were significantly older. In population research, one valid indicator for age distribution within a population is the so-called youth quotient, the portion of society aged from 0 up to 18 measured relative to the population from 18 up to 65.

Based on data from the 2011 census (cf. Statistische Ämter des Bundes und der Länder 2014), comparing the age distribution of the city of Essen with the age distribution in the next two larger cities (Stuttgart and Dortmund) as well as the next two somewhat smaller (but still large) cities (Bremen and Dresden), the indication is that Essen’s population is not significantly older than any of the four cities being compared (cf. Table 3). On the contrary, Essen’s populace – with a youth quotient of 24% – is proportionately younger than the three cities outside the Ruhr region: Bremen, Dresden, and Stuttgart. Therefore, the factor of age cannot explain the proportionate intercommunal difference in multimodality.

Other behavioral backgrounds are often discussed along with the age variable to explain differences in mobility behavior, for example the relationship between income distribution and mobility behavior (cf. Götz 2011: 333). Based on our second survey data (CIE 2014), let us first consider Essen’s distribution of income as classified in Table 4 below. From this, it is apparent that a significant relationship exists between the level of monthly household income and the respondent’s style of mobility: the higher the income, the more the mobility behavior will be multimodal.

In this vein – analogous to the age variable above – it clearly makes sense to compare the income distribution in Essen to the four other correlated cities. If it were to be shown in this way that significantly less (net household) monthly income is available to private households in Essen, it would indeed be a very informative clue as to why Essen’s populace is considerably less multimodal in its movements when compared to other large German cities. Based on available data (cf. Regionalstatistik 2015), it is possible to compare the available household income per resident with the exception of Dresden\(^5\) for which there is no data on hand (cf. Table 5).

\(^4\) Whether the development of multimodal mobility actually amounts to a steady trend throughout society, or the development is only dependent on how long people delay starting a family [i.e. is limited to the period in life between leaving the parental home and the point of starting one’s own family]—the question is hard to judge at this point (cf. Linnebach & Jansen 2014: 97ff.).

\(^5\) Therefore, Dresden was replaced in Table 5 with Hanover, the next smaller (large) city.
When one compares the income situation in Essen with that of Bremen, Stuttgart, Dortmund and Hannover, it appears (correlative to the age variable) that Essen’s populace is on average not significantly poorer than the populace of the other four cities in the comparison. Although it might be informative to have not only the average values but also the entire distribution of available income to examine (for which there is no available comparative data), it is not likely that the income factor might causally explain the intercommunal difference in proportions of multimodality. In an interim judgment regarding the two socio-structural or demographic factors of age and income, it may be concluded that there is still a large gap in knowledge about the backgrounds of multimodal mobility behavior (cf. Wojtysiak & Dziekan 2012).

Table 4: Relationship between Household Income and Mono-/Multimodality

<table>
<thead>
<tr>
<th>User Group</th>
<th>Less than 1,500 EUR</th>
<th>1,500 up to 2,000 EUR</th>
<th>2,000 up to 4,000 EUR</th>
<th>4,000 EUR and higher</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>5.8</td>
<td>5.7</td>
<td>1.4</td>
<td>0.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Public Transport</td>
<td>37.2</td>
<td>20.5</td>
<td>5.7</td>
<td>1.8</td>
<td>14.4</td>
</tr>
<tr>
<td>Automobile</td>
<td>32.1</td>
<td>47.5</td>
<td>49.6</td>
<td>47.4</td>
<td>45.2</td>
</tr>
<tr>
<td>Σ Monomodal</td>
<td>75.1</td>
<td>73.7</td>
<td>56.7</td>
<td>50.1</td>
<td>62.7</td>
</tr>
<tr>
<td>Automobile &amp; Bicycle</td>
<td>2.2</td>
<td>10.7</td>
<td>16.0</td>
<td>17.5</td>
<td>12.4</td>
</tr>
<tr>
<td>Automobile &amp; Public Transport</td>
<td>16.1</td>
<td>13.1</td>
<td>17.0</td>
<td>25.4</td>
<td>17.6</td>
</tr>
<tr>
<td>Bicycle &amp; Public Transport</td>
<td>3.6</td>
<td>0.8</td>
<td>1.1</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Automobile &amp; Bicycle &amp; Public Transport</td>
<td>2.9</td>
<td>1.6</td>
<td>9.2</td>
<td>5.3</td>
<td>5.8</td>
</tr>
<tr>
<td>Σ Multimodal</td>
<td>24.8</td>
<td>26.2</td>
<td>43.3</td>
<td>50.0</td>
<td>37.5</td>
</tr>
</tbody>
</table>

N = 665

More than 10 percent above average
5 to 10 percent above average
5 to 10 percent below average
More than 10 percent below average

Source: CIE 2014 (Stressed deviations that appear in color should be read in comparison to the “total” column; percentage values are column percentages; sum errors are due to rounding)

Table 5: Comparison of Household Income

<table>
<thead>
<tr>
<th></th>
<th>Available Income of Private Households (in thousands of EUROS)</th>
<th>Available Private Household Income per Resident (in EUROS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essen</td>
<td>11,139,222</td>
<td>19,422</td>
</tr>
<tr>
<td>Bremen</td>
<td>11,423,867</td>
<td>20,806</td>
</tr>
<tr>
<td>Dortmund</td>
<td>10,399,046</td>
<td>17,893</td>
</tr>
<tr>
<td>Hannover</td>
<td>10,270,065</td>
<td>19,465</td>
</tr>
<tr>
<td>Stuttgart</td>
<td>14,019,515</td>
<td>22,739</td>
</tr>
</tbody>
</table>

Source: Regionalstatistik 2015
4. Mobility Culture and Lifestyle

A very promising starting point for further research of multimodal mobility behavior might be provided by the concept of "mobility culture", for which the starting hypothesis is the existence of various mobility cultures. Accordingly, if we regard our four comparative cities, Essen might have a different mobility culture than perhaps Bremen or Stuttgart. And further, it is also certainly plausible to assume that one can speak of a city the size of Essen logically having not just one, but several mobility cultures within its urban society. Although the concept of mobility culture is theoretically somewhat vague, it entails at least two concepts worth considering in more detail: the infrastructure and spatial design on the one hand and the mobility and lifestyle orientations on the other.

Especially with regard to the mobility and lifestyle orientations of the transportation user and based on Gunnar Otte’s lifestyle typology [cf. Otte 2005], the sociological concept of lifestyle will be more closely examined in the following. Again, using our own data [CIE 2012], when one compares Essen’s nine Otte lifestyles – as established in one equivalent milieu in each case – with that of German cities with more than 500,000 residents [cf. here Otte & Baur 2008], it clearly shows strong differences in the distribution of lifestyles and milieus respectively [cf. the values in straight brackets in Figure 1, the first value is for Essen and the second for German cities with more than 500,000 residents].

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Especially with regard to the typology dimension of Ausstattungsniveau (Y-axis), Essen cannot be categorized as a typical large German city. The three milieus with upscale ("gehoben") living conditions are underrepresented in Essen (18% compared to 38%),

Figure 1: Otte Milieu Structure (Source: CIE 2012, Otte & Baur 2008)
and the three milieus with low ("niedrig") living conditions are overrepresented (41% compared to 12%). Also when considering the typology dimension of Modernität/Biographische Perspektive (X-axis), this assessment remains unchanged. Traditional lifestyles and milieus, respectively, are especially overrepresented in Essen (22% compared to 8%). Accordingly, differences in milieu structure can function exactly as indicators for variations in mobility behavior (or here for the amount of multimodality) when individual milieus vary distinctly from each other in their mobility behavior. That is why in Figure 1 (in the curly brackets) for each of Otte’s nine milieus the corresponding monomodality and multimodality value is provided, which also comes from the results of our population survey (CIE 2012). The first value in (curly) brackets is the monomodality portion, and the second is the multimodality portion in Essen.

The results show that the individual milieus do indeed differ greatly in how they move about. The farther to the right (and the higher respectively) one shifts in the figure, the more multimodal the mobility behavior becomes. In concrete terms, there are two insights that are central to this relationship. First, both milieus, Liberal Gehobene and Reflexive, that are underrepresented in Essen compared to other large German cities (cf. in Figure 1, the values in straight brackets), are greatly above average in multimodal travel (54% and 56% respectively, compared to the abovementioned 40% for the entire population). Secondly, both milieus, Konventionalisten and Traditionelle Arbeiter, that are by comparison strongly overrepresented in Essen, are considerably below average in multimodal travel (each at 29% compared to 40%). With this in mind, one might indeed assume that the manner of lifestyle of survey respondents is a valid indicator of their mobility behavior. Therefore, it should also make sense that mobility orientation and lifestyle orientation are closely interlocked with each other—as the language of mobility and lifestyle orientations suggests. In other words, there is an assumed correlation between them.

However, Otte’s nine milieus are unevenly distributed across the area of the city of Essen. This means that there are city districts and quarters in which specific milieus and lifestyles are over or underrepresented. As a result, it will be shown in the following section that there must yet be another aspect to the observance and explanation of multimodal mobility behavior to be considered: namely, the mobility culture aspect referred to above as infrastructure and spatial design.

5. Infrastructure and Space

Essen is composed of a total of 50 quarters ("Stadtteile") that make up nine city districts ("Stadtbezirke"). In Table 6 below the distribution of Otte’s nine milieus across the nine districts is shown in detail. Thereby, it also shows that both multimodal milieus, Liberal Gehobene and Reflexive, are especially overrepresented in the two districts II and IX (28% and 26% respectively, as compared to 15% in the total sampling), and it also shows that an above-average number of survey respondents in both districts move about multimodally (44% and 48% respectively, as compared to 40% in the total sampling).

Against this background, we conduct a cross-check and look at only the mobility behavior in individual districts. Interestingly, doing so indicates that in district III (as in district II), for example, 44% of those we surveyed also move about multimodally. But also of interest is the fact that both milieus, Liberal Gehobene and Reflexive, with collectively a portion of only 10% (compared to 15% in the total sampling) in district III, are significantly underrepresented. At this point, in order to explain the variation in mobility behavior, it would be well advised to take into consideration – along with the two factors of age and income, and the factor of lifestyle – the socio-spatial factor of infrastructure as well. This applies not only within Essen, but also for the comparison of Essen with other cities of a similar size.

In this respect, Emile Durkheim (1895: 57) speaks about “social facts of an ‘anatomical’ or morphological nature” that “do not at first sight seem relatable to ways of acting, feeling or thinking.” Therefore, if one wishes to better understand the mobility behavior of the population in a “car-friendly” city such as Essen, it would appear to be of central importance to include
the “morphological” variable infrastructure into sociological research – for example, the social fact of “car friendliness”, the extent of public transportation and bike paths, the number of charging points for electric vehicles (cars and bikes) or the availability of car and bike sharing.

Compared to the factors discussed above (such as age or lifestyle), which are theoretically based on the commonly used term actor, factors of a genuine “morphological nature”, such as a city’s or a quarter’s infrastructure and spatial design, are certainly much more difficult to explore sociologically. This is presumably one reason that, to date, they are less present or completely absent from works relevant to sociological mobility research. Instead, the ANT, created by Bruno Latour, Michel Callon and others, provides a quite promising approach to confronting this difficulty – by following the programmatic objective of no longer viewing society, nature, and technology as separate elements, and thereby seeking to understand natural and artificial objects, plants and animals along with people as components of the social world. That is why ANT makes a case for replacing the term actor with actor-network (cf. Latour 2005).

At this point, to answer the cogent question as to why the population of Essen is more monomodal in its movements than cities of a comparable scale, an expanded definition of actor will necessarily lead to an alternative methodological procedure. This differs from the heretofore most commonly practiced forms of quantitative longitudinal and cross-sectional analyses. Additionally, as can be read in several passages of Latour’s “Reassembling the Social,” one must “follow the actors!” To be specific, this means to work ethnographically, or in a combination of participatory observation and qualitative interviews for discovering
more about and exactly why an overwhelming portion of Essen’s populace is monomodal in its movements.

6. Conclusion

This working paper has been realized within the CIE project, subtitled “Handeln in einer neuen Klimakultur”, which translates to acting in a new climate culture. Its objective is to contribute to a change in Essen’s existing local climate culture(s) in order to achieve [a] new climate culture(s) and thereby an effort towards more energy efficiency in the city of Essen. Keeping in mind the field of “sustainable mobility” – as a crucial area of activity for confronting the challenges of climate change – and Essen’s high monomodality portion of 60%, it is entirely reasonable to make political demands for a mobilization of Essen’s residents toward greater use of environmentally friendly modes of transportation (specifically: bicycles, public transportation, available car and bike sharing, and walking). For example, one can attempt to stabilize the already existing multimodal mobility behavior of young adults beyond the family start-up phase. Or, one might also try to infuse multimodal behaviors into parts of the population that are currently still monomodal.

A corresponding well-established infrastructure, especially in the areas of electric and bicycle mobility would be a kind of conditio sine qua non for both of the aforementioned goals (see also Deffner et al. 2014). Finally, similar to approaches by ANT scholars, a stronger qualitative or ethnographic-oriented sociological mobility research could enable a better understanding of this conditionality.

References


Götz, K., 2011: Nachhaltige Mobilität. pp. 325-347 in:
M. Groß [ed.], Handbuch Umweltsoziologie. Wiesbaden: VS.


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Contributions out of the KWI staff and from academics being closely attached to the KWI personally or by means of content are highly welcome and possible at any time under workingpaper@kwi-nrw.de.

About the Institute for Advanced Study in the Humanities (KWI):
The Institute for Advanced Study in the Humanities (KWI) in Essen belongs to the three universities of Bochum, Dortmund and Duisburg-Essen, which form the University Alliance Ruhr (UAR). The KWI promotes excellent interdisciplinary research in the humanities, social and cultural sciences and maintains close cooperations with regional, national and international partners. It conducts basic research on the principles of modern culture with regard to relevant questions of contemporary societies. At present the Institute focuses on the thematic fields of cultures of the European in historical perspective (“Europe”), cultural diversity of global citizenship (Interculturality), cultural aspects of climate change (“Climate and Culture”), communicative practices used by members of different cultures of communication (“Culture of Communication”) and civic participation (“Culture of Participation”). The KWI engages in civic education and outreach programmes by organizing public events and cooperations with cultural institutions as well as the media.