

Presentation at Leicester/RC 33, September 2016

A Field Approach to Spatial Structures: Correspondence analysis as a tool to map practices of movement

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Key words: Spatial analysis, mobilities paradigm, multiple correspondence analysis

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4974 words.

Abstract

In my contribution, I suggest to combine spatial analysis with the claims of the Mobilities Paradigm. As a tool to explore the interrelations of different spatial layers and the relevance of infrastructures and sociostructural dimension, I suggest the usage of multiple correspondence analysis as a statistical technique. Using quantitative data, correspondence analysis allows us to extract patterns of practices which can then be plotted against structural characteristics. Yet, in contrast to most multivariate methods, multiple correspondence analyses does not assume specific relationships between independent and dependent variables but maps patterns of categorical profiles found within the data and interprets their positioning by projecting additional variables into the two dimensional plots.

In my research, I apply this method to data of the Swiss Microcensus Transport and Mobility collected in 2010. Thus, mobility practices are understood as emerging within and shaped by the specific context of social and spatial situations. As unit of analysis, I take trips made and analyse their characteristics against the background of spatial properties, the availability of infrastructures, individual mobility resources as well as socio-demographic characteristics of the people moving and their households. On this token, geographies and spaces however are not equalised with two-dimensional territories but as socially constituted relational systems.

Introduction

The goal of my paper is twofold:

- I suggest to understand space as constituted by movements. This suggestions draws on the Mobilities Turn in addition to the Spatial Turn.
- Second, drawing on Bourdieu and his concept of the field, I understand mobility practices as structured by and as structuring space – that is: geographical and social space. As a method to explore the field of mobility practices, I also follow Bourdieu and use Multiple Correspondence analysis.

My contribution consists of the following parts:

1. In the first section, I will briefly sketch the Mobilities Paradigm and its assumptions regarding the constitution of space and the social.
2. In the second step, I will combine the understanding of space as made up by movements with Bourdieu's concepts of fields and social practices.
3. Thirdly, I will introduce multiple correspondence analysis as a statistical technique to construct and explore social fields.
4. Fourthly and finally, I will present the results of a multiple correspondence analysis of movements. Therefore, I use the data from the Swiss Micro Census on Mobility and Transport (MCMT) 2010.

In my original abstract, I announced an international comparison of the Swiss Micro Census on Mobility and Transport with the German data set Mobility in Germany (MiD) as well as a comparison in time. In contrast to this announcement, in the following I will confine myself to the findings from Switzerland and the 2010 data in order to focus more detailed on the methodological aspects.

1. The Mobilities Paradigm and the constitution of social and geographical space

The point of departure for the following consists in the assumptions of the Spatial Turn as well as the Mobilities Paradigm. On this token, space is no longer conceptualised as a physical

container existing independent of the social. Rather, in an anti-essentialist way, space is seen as socially constructed. In the words of Doreen Massey, space and place are “the product of social relations which are most likely conflicting and unequal” (Massey 2005: 152). Thus, specific historic relations have produced specific spatial formations. And these spatial formations constitute a crucial element of the corresponding specific historic social formations.

For social research, this understanding of space directs the focus “on how this social construction of space actually works” (Baur et al. 2014: 14). As Baur et al. (2014) have summarised, the construction and constitution of space can be analysed on several levels and applying different methods and perspectives.

My focus consists in the *constitution of space by practices of movements*. These practices are not arbitrary but *patterned – through the forces of social and material structures*. In this view, space is not some surface on which the social takes place. Rather, the ongoing practices of movement constitute the social and the spatial world. In addition, these practices do not take place in an “empty space” but are themselves shaped by social and spatial structures. Thus, as Baur et al. (2014: 15) further state, space is a multi-level phenomena and these levels are interrelated.

The crucial role of movement as an elementary characteristic of present societies has been emphasised by scholars of the so called Mobilities Paradigm. Its core states that the *social world is made up of movements*. Quoting John Urry:

“[A]ll social relationships should be seen as involving diverse 'connections' that are more or less 'at distance', more or less fast, more or less intense and more or less involving physical movement. Social relations are never only fixed or located in place but are to very varying degrees constituted through 'circulating entities'.” (Urry 2007: 46)

Mobilities scholars criticize what they call “sedentarist metaphysics”, that is, the assumption of the social being spatially fixed and geographically located. Sociological concepts of society, regions, cities and neighbourhoods are sedentarist concepts, understanding social entities as a territorially defined units. In opposition to these traditional concepts, in mobilities research, the focus is placed on movement – movement of people, goods, symbols and information. As Sheller and Urry phrased it in the foundational paper in 2006:

“A more relational approach to the classic problem of agency and structure brings to the fore the movements implicit in identifications, grammars, economies, intensities, and

orientations; as people, capital, and things move they form and reform space itself” (Sheller/Urry 2006: 2016).

Taking the core claim of the mobilities paradigm together with Massey's conflicting and unequal relations, my point of departure consists in an *understanding of space as constituted by unequal movements. These spaces then are constitutive of social structures and social relations.* In addition, I do not deduce the relevance of spatial structures from their territorial proximity or assume a territorial-hierarchical layering of spaces as from large to small, but I argue – drawing on the discussion on scale in human geography (Amin 2002; Collinge 2005) – that these different layers and their linkings should be analysed empirically. The relational, topological character of space in present societies and the inappropriateness of an Euclidian operationalisation of space has been shown also by e.g. Saskia Sassen and her study on global cities (Sassen 2001), Manuel Castells (2002) and his space of flows (Castells or by Stephen Graham and Simon Marvin (2001) in their book “Splintering Urbanism”. Broken down to my focus on practices of movement, this implies a relational understanding of space which abstracts from territorial metrics.

Whereas the Spatial Turn and the Mobilities Paradigm are not confined to human moves, my focus is placed on geographical practices of mobility and their patterned structures. I am interested in understanding the specific characteristics and shapes of socio-spatial formations which come into being through the everyday movement practices of people.

2. Structured social fields of practices

One of the preconditions allowing people to move consists in the *material infrastructure*. In geographic space, these infrastructures of movement consist of roads, public transportation systems etc. The availability of these infrastructures is not ubiquitous, the chance to be mobile thus depends in principle on one's geographic position.

However, the shaping force of these material structures cannot be simply deduced from their existence or proximity. Whether motorway access or the availability of public transport systems is relevant, depends also on socio-structural factors. At least in parts, public infrastructures may be substituted by private resources – a lack of public transport connectivities can be substituted by private car ownership and car usage. Then again, if one

lives in an urban centre, neither, motorised nor public transport may have a relevant impact since everyday opportunities may be close by.

In short, I do not want to operationalise space as a container, within which certain resources can be found. Rather, I suggest to understand space as a relational topology which is constituted by the link-establishing practices of movements.

Yet, the problem is, how do I identify which are the structuring aspects of space? How can I figure out, which geographical structures matter and for whom?

As one way to deal with this problem, I suggest to mobilise some concepts introduced by Pierre Bourdieu (. My point of departure, the understanding of space as structured by and structuring (mobility) practices, draws on a Bourdieu'sian approach to the structure-agency problem. In his study of cultural practices, Bourdieu elaborated the social structures forming cultural practices and patterns of taste. The social space of lifestyles then is shown to be structured by economic and cultural capital. On the other side, cultural practices and taste not only depend on one's position in social space but impact one's chances in social space. Differently phrased, Bourdieu identifies cultural practices as also structuring social space. This social space is a relational space of social positions.

My intention is, to apply this relational thinking to the field of mobility practices. Fields, in Bourdieu's view, are seen as fields of power relations (cf. Bourdieu 1993). Every field contains specific central positions and peripheries which are characterised by specific resources or capitals, defining the chances within the field. Thus, my theory-founded hypothesis claims that mobility practices are shaped by social and spatial capitals and resources. And I suggest to use the method of Multiple Correspondence Analysis in order to detect the relevant shaping socio-spatial capitals.

In his work *Distinction* (Bourdieu 2000) as well as in other studies, Bourdieu used the method of Multiple Correspondence Analysis in order to map fields of practices (Lebaron 2009). Multiple Correspondence Analysis is a model-free statistical method. This means, there are *no assumptions about the interrelations between categories* go into the analysis. Patterns, associations and interrelations are not identified before the analysis but elaborated in a second step of the analysis.

3. Multiple Correspondence Analysis

Although quite established in France, correspondence analysis became known and was applied in studies of social inequality in the UK (cf. Le Roux et al. 2008) and in German speaking sociology (cf. Blasius, 1994; Mühlichen and Blasius 2008) only recently and much later than Bourdieu's research. Very often, correspondence analysis is used as a tool for researching social inequalities of various kinds. The underlying geometric approach, based on chi-square distances between empirical and expected frequencies, produces the characteristic diagrams of attributes commonly plotted in a two-dimensional space. There, attributes likely to be found in combination are plotted close to each other whereas characteristics which are rather unlikely to appear together are plotted at distance. The exact positions of the attributes in the diagram are thus mathematically and geometrically determined by their necessary distances from all other attributes. The variables found in the centre of the graph represent the typical or average profile of the attributes studied and points at the peripheries indicate high deviations from these central profiles. The challenge for the researcher consists of making sense of the extracted dimensions of which commonly only the first two are plotted and shown (Le Roux et al., 2008: 1054, cf. Clausen, 1998; Blasius & Greenacre 2006). In order to identify structuring dimensions, one can plot supplementary variables into the graph. If the categories of these supplementary variables are scattered widely across the plot, one can assume an association with the found dimensions.

In the following empirical part of my contribution, I will use this statistical tool of Multiple Correspondence Analysis as a search tool for structuring dimensions of social and geographical space. Yet, before I present the findings from this analysis, I will briefly introduce my data and some descriptives about the variables used.

4. Results

4.3. Data and Descriptives

In my analysis, I use the Swiss Micro Census Mobility and Transport (MCMT) 2010, a data set produced and provided by the Federal Office of Statistic. The survey is repeated every 5 years. The 2010 data set contains 60 000 households and almost 63 000 people. The Micro Census Mobility and Transport contains information on the size and residence of the household, characteristics of the location of residence, socio-demographic information, information on the

transport resources available as well as information on trips and transport choices made at a reference day.

Since I am interested in space as constituted by relations, that is: mobilities, my unit of analysis consists in the *trips made rather than individual people or households*. Thus, my data set contains information of 211 359 trips made merged with the socio-demographic information on the person who travelled and on the household.

On average, every trip took 28 minutes and covered a distance of 11 km. For every trip, there is a purpose given, such as going to work, doing shoppings, attending others or travelling for leisure purposes. The frequencies of these purposes of the trips are distributed as follows:

| Purpose of Trip | n | % | Mean travel time (Min) | Mean travel distance (km) | Made by women (%) |
|----------------------|--------|-------|------------------------|---------------------------|-------------------|
| Work | 43638 | 20.65 | 21.67 | 11.35 | 42.69 |
| School, Education | 14877 | 7.04 | 20.91 | 6.93 | 50.37 |
| Shopping, Services | 49056 | 23.22 | 17.93 | 6.12 | 61.07 |
| Business Trips | 5863 | 2.77 | 45.58 | 28.37 | 24.10 |
| Leisure Trips | 82342 | 38.97 | 36.18 | 12.30 | 52.84 |
| Attendance of Others | 11647 | 5.51 | 17.81 | 9.50 | 60.23 |
| Other | 3869 | 1.83 | 103.59 | 53.20 | 51.38 |
| Sum | 211144 | 100 | 28.35 | 11.31 | 52.05 |

Table 1: Purpose of trips, distances, travel time and gender share by purpose, data: MCMT 2010

The largest single purpose is leisure trips which is in transport research some sort of residual category for trips which cannot be deduced from set preferences.

Trips can be made in different ways, using different modes of transport.

The distribution of the choices of means of transport is shown in the following table:

| Means of Transport | n | % | Mean travel time (Min) | Mean travel distance (km) | Made by women (%) |
|----------------------|--------|-------|------------------------|---------------------------|-------------------|
| Non-motorised | 80159 | 38.44 | 20.91 | 1.66 | 56.13 |
| Individual motorised | 102538 | 49.18 | 25.13 | 15.05 | 47.58 |
| Public transport | 25809 | 12.18 | 56.19 | 22.91 | 58.54 |
| Sum | 208506 | 100 | 28.35 | 11.31 | 52.06 |

Table 2: Means of transport, distance, travel time and gender share of trips, data: MCMT 2010

The most important mode in Western societies is individual motorised transport, that is car traffic. Smaller distances however are often travelled non-motorised, that is cycling or walking, whereas the average public transport trip is longer than both other forms of movement. At this moment, it is important to note that Switzerland has a very high coverage by means of public

transport and the share of busses and trains in the overall modal split of inland passenger transport is amongst the highest in Europe (cf. Eurostat 2015).

For the question, which places are linked by movements, I assume the purpose of movement plays an important role. Thus, in the following, I will map two different spaces of movements as their relations, that is the *space of work trips* and the *space of leisure trips*. These two spaces are expected to be shaped in parts by different dynamics and forces.

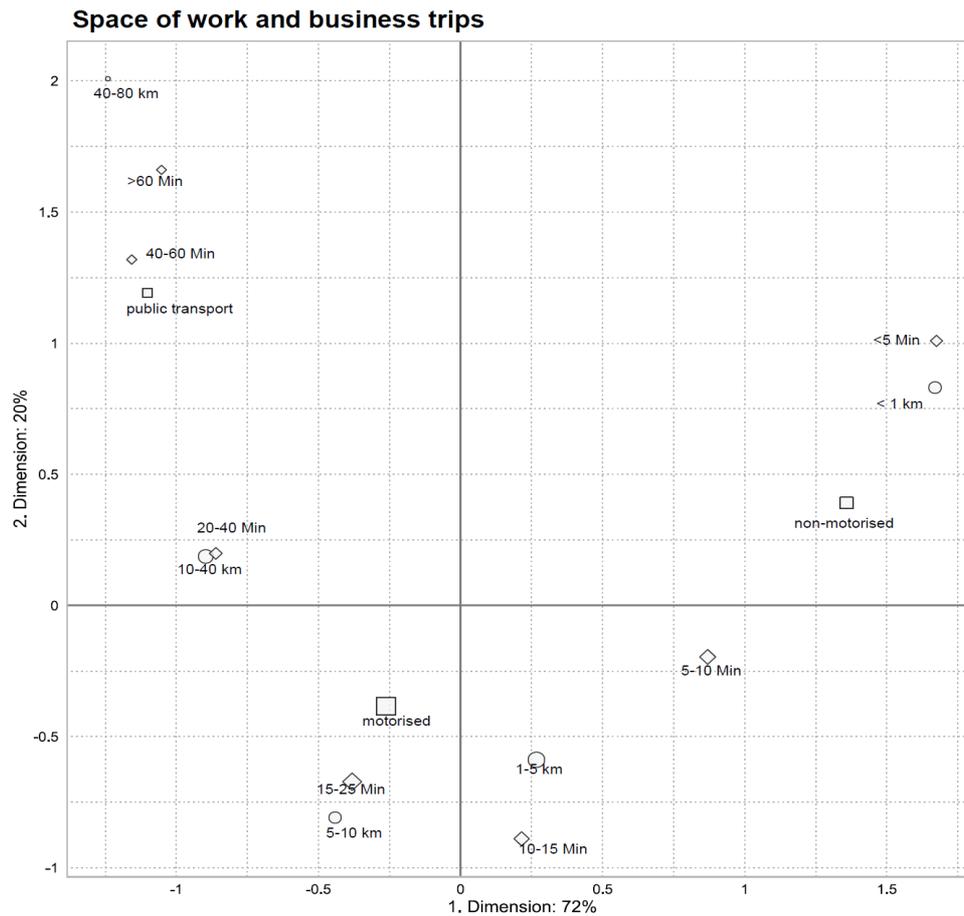
| | n | % | Mean travel time (Min) | Mean travel distance (km) | Made by women (%) |
|---------------|--------|-------|------------------------|---------------------------|-------------------|
| Rural-rural | 29075 | 14.03 | 24.32 | 6.50 | 51.88 |
| Rural-centre | 4324 | 2.09 | 48.09 | 32.38 | 49.88 |
| Centre-rural | 4216 | 2.03 | 52.19 | 32.31 | 49.86 |
| Rural-sururb | 5212 | 2.51 | 41.51 | 29.89 | 47.49 |
| Suburb-rural | 5162 | 2.49 | 43.51 | 27.13 | 47.87 |
| Rural-town | 300 | 0.14 | 35.67 | 18.03 | 50.00 |
| Town-rural | 305 | 0.15 | 31.45 | 16.86 | 50.16 |
| Centre-suburb | 16633 | 8.02 | 33.06 | 16.11 | 49.49 |
| Suburb-centre | 16557 | 7.99 | 34.10 | 16.00 | 49.54 |
| Centre-town | 125 | 0.06 | 64.98 | 45.16 | 40.80 |
| Town-centre | 132 | 0.06 | 67.96 | 54.91 | 40.90 |
| Centre-centre | 58473 | 28.21 | 22.95 | 5.50 | 54.70 |
| Suburb-town | 165 | 0.08 | 52.23 | 31.86 | 45.45 |
| Town-suburb | 167 | 0.08 | 51.22 | 40.02 | 43.71 |
| Suburb-suburb | 65075 | 31.39 | 21.71 | 6.24 | 52.29 |
| Town-town | 1380 | 0.67 | 18.96 | 2.33 | 53.04 |
| Sum | 207301 | 100 | 28.35 | 11.31 | 52.06 |

Table 3: Direction of trips, travel time, distance and share of women, data: MCMT 2010

4.4 The space of work trips

For Multiple Correspondence Analysis, I had to omit all cases with missing information. Going into the analysis are 130223 trips going to work or travelling for business purposes. About 50% of these trips are short trips with up to 5 km of distance. 17% of these trips cover 5 to 10 km and 25% up to 40 km. Only 7% of the trips are longer than 40 km.

In my analysis, I want to figure out to what extend these trips, their direction and the mode of transport used is shaped by spatial and socio-structural dimensions. The resulting multiple correspondence analysis extracts two dimensions. The first one alone explains already 72% of the variation, the second one 20%.



Graph 1: Space of work trips, Data: MCTM 2010

Together with the relative contributions per dimension (Table 4) the space of work trips is defined by the horizontal opposition between short non-motorised trips on the right and longish trips on the left, for which public transport is used. On the right hand side are the trips within the settlement, whereas on the left there are the trips out of one's municipality. The second dimension, the vertical one, is characterised by the opposition between motorised transport and medium length trips at the bottom and public transport and long distances at the top.

Differently phrased, the space of work trips is characterised by a **zone of short distances and slow transportation**. Then, there is a **zone of medium work trips which are made by car**. And finally, there is a **zone of long trips which are typically made by public transport**.

In order to figure out, which material or infrastructural characteristics matter in this context, that is, which *attributes of the built environment influence or shape these relations*, I will now project additional information into this existing geometry of the space of work trips.

| Category | Contribution | Coordinates |
|--------------------|--------------|-------------|
| Dimension 1+ | | |
| Distance < 1km | 21.8 | 1.67 |
| Non-motorised | 18.7 | 1.36 |
| Time < 5 Min | 13.9 | 1.66 |
| Dimension 1 - | | |
| Distance 10-40 km | 9.3 | -0.90 |
| Public transport | 7.2 | -1.15 |
| Dimension 2+ | | |
| Distance 40 -80 km | 13.1 | 1.95 |
| Time > 60 Min | 12.9 | 1.66 |
| Public transport | 12.0 | 1.27 |
| Distance < 1km | 8.1 | 0.87 |
| Time 40-60 Min | 8.0 | 1.30 |
| Time < 5Min | 7.0 | 1.02 |
| Dimension 2- | | |
| Time 15-25 Min | 8.4 | -0.90 |
| Time 10-15 Min | 7.0 | -0.82 |
| Distance 1-5 km | 6.9 | -0.59 |
| Distance 5-10 km | 6.9 | -0.65 |

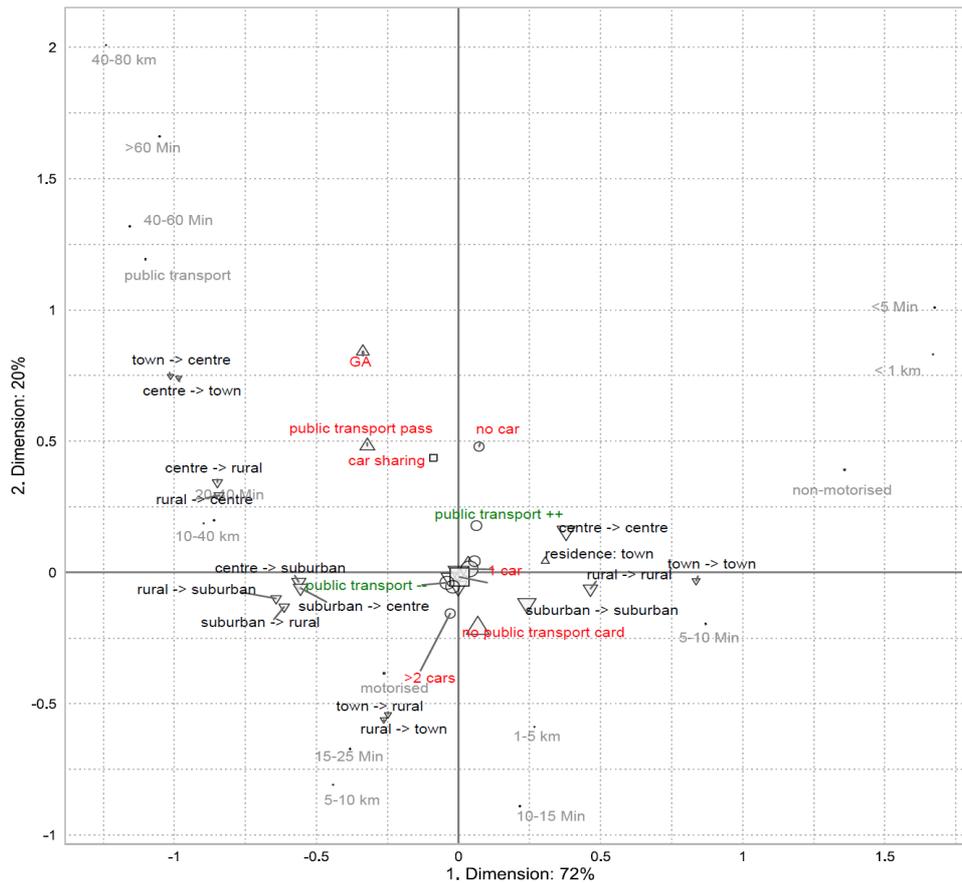
Table 4: Over-average contributions on Dimension 1 and 2

These additional information is plotted into the existing geometry according to their likeliness of appearing together with the active categories. The information on spatial characteristics and mobility resources are: type of residential municipality and its classification regarding public transport, the direction of the trips made and the mobility resources available to the household.

The resulting plot (Graph 2) shows, that in the top left quadrant, there are private mobility resources for public transport. Furthermore, here, the trips tend to link centres with rural or suburban locations. Yet, it appears hardly relevant whether the coverage of public transport is very good at the place of departure or at the target location. At the right hand side of the plot, trips tend to be made typically within the municipality of residence, that's why they tend to be short. At the bottom, the trips are made by people from household often with 2 cars and more but no card for public transport, and most trips seem to be made linking non-centres.

In the centre of the graph, however, we can find the attribute of 1 car per household and of bad public transport coverage. This seems to be statistically the normal case and somewhat irrelevant for the length and mode of transport.

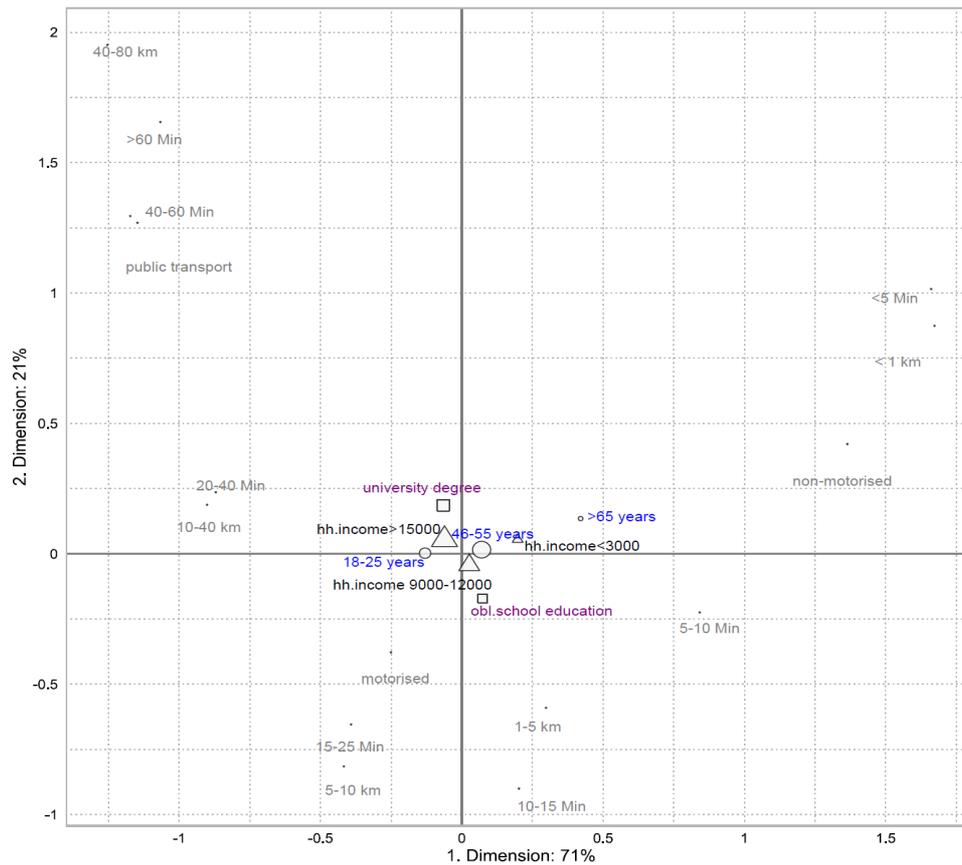
spatial attributes in the space of work trips



Graph 2: Space of Work Trips with spatial attributes and mobility resources, data: MCMT 2010

In sum, this step of the analysis shows, that the identified zones of the space of work trips are connected with different private mobility resources and spatial properties: The zone of short trips links places within one municipality and there are hardly any mobility resources needed. Yet, here, the availability of public transport infrastructures is best. The zone of long distances travelled by public transport obviously requires private mobility resources such as travel passes. And typically, these trips link central residential locations with rural places or towns. The zone of car trips of medium length however tends to be outside the city centres and requires private car ownership.

Social dimensions in the space of work trips



Graph 3: Social dimension in the space of work trips, data: MCMT 2010

Thus, the *vertical axis* seems to be defined by the *direction of the trips* or rather, what kind of municipalities or places are linked, whereas the *horizontal axis* differentiates between *car based or public transport based* mobility resources. Interestingly, the longest trips are on the same side as the attribute of 'no car', highlighting the irrelevance of private motorised transport for the length of the trips made. Relevant, however, is the privately owned car for trips outside the centres.

In a third step, I projected socio-structural characteristics of the travelling persons and their households into the geometry of the space of work trips (Graph 3). In particular, I used the variables education, household income and age. Whereas age seems to follow the first dimension, differentiating between short and long trips, education follows the vertical second dimension. The weighted household income has also a slight horizontal pattern. However, none of these socio-structural properties seem very relevant. Only *age* has a maximum coordinate

distance of more than 0.5 and can be considered important. It seems, that the Swiss space of work trips is hardly socially stratified.

4.5 Space of leisure trips

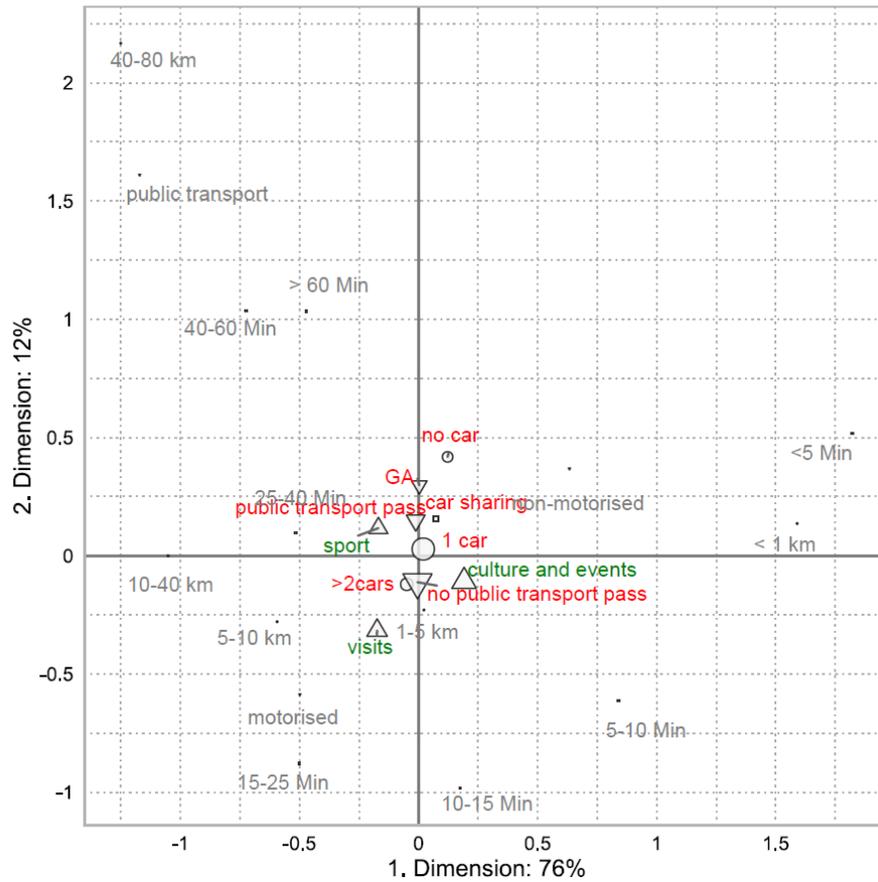
Leisure trips constitute the largest purpose of transport and trips. Of the trips analysed in the data set, about 40% are leisure trips. In transport research, the category of leisure trips is somewhat a black box or residual category for the difficult-to-explain trips, that is, for the trips without a deducible purpose like work or shopping. In mobilities research, leisure trips are explained as constituting the social or differently phrased, social relations, social integration and social interaction requires mobilities since social networks are often stretched across large distances (cf. Larsen et al. 2006).

| | n | % |
|---------------------------|-------|------|
| Visits | 13376 | 17.7 |
| Sport/outdoor activities | 10866 | 14.4 |
| Cultural and other events | 22027 | 29.2 |
| other | 29202 | 38.7 |
| Sum | 75471 | 100 |

Table 5: Subcategories of leisure trips, data: MCMT 2010

The geometry of the space of leisure trips looks very similar to the geometry of the space of work trips. The first dimension explains almost 76% of the inertia, while the second dimension explains another 12%. The space is defined by a horizontal opposition between short and non-motorised trips on the right and medium length trips at the left. The vertical dimension however differentiates again between long distances made by public transport and medium length distances made by car.

Spatial Resources in the space of leistung trips



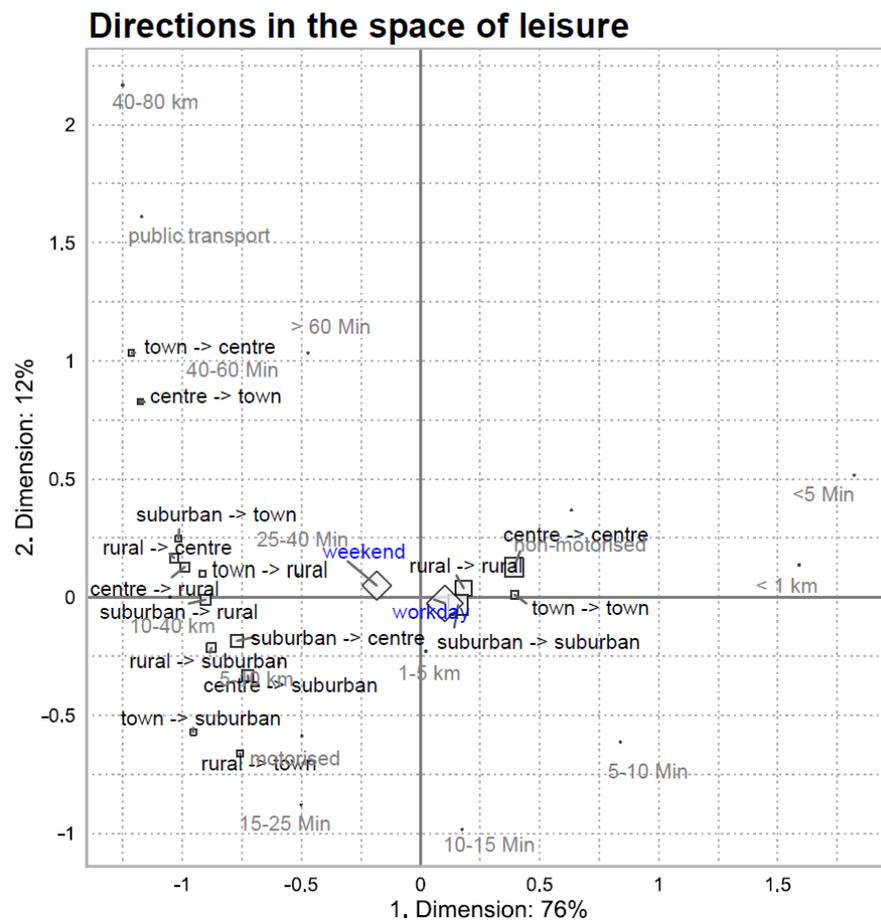
Graph 4: Mobility resources and purposes of leisure trips, data: MCMT 2010

| | Contribution | Coordinate |
|-------------------|--------------|------------|
| Dimension 1+ | | |
| Distance <1 km | 28.9 | 1.59 |
| Time < 5 Min | 17.7 | 1.82 |
| Non-motorised | 10.3 | 0.63 |
| Dimension 1- | | |
| Distance 10-40 km | 10.7 | -1.05 |
| Dimension 2+ | | |
| Time > 60 Min | 19.4 | 1.03 |
| Distance 40-80 km | 14.5 | 2.17 |
| Public transport | 12.1 | 1.61 |
| Dimension 2- | | |
| motorised | 12.4 | -0.59 |
| Time 10-25 Min | 11.9 | -0.88 |
| Time 10-15 Min | 9.0 | -0.98 |

Table 6: Over-average contributions in the space of leisure trips, data: MCMT 2010

In the second step, I project the purpose of the leisure trip together with the relevant spatial structures and mobility resources into the geometry. Since neither the coverage by public transport nor the type of municipality mattered, I did not include them into the visualisation.

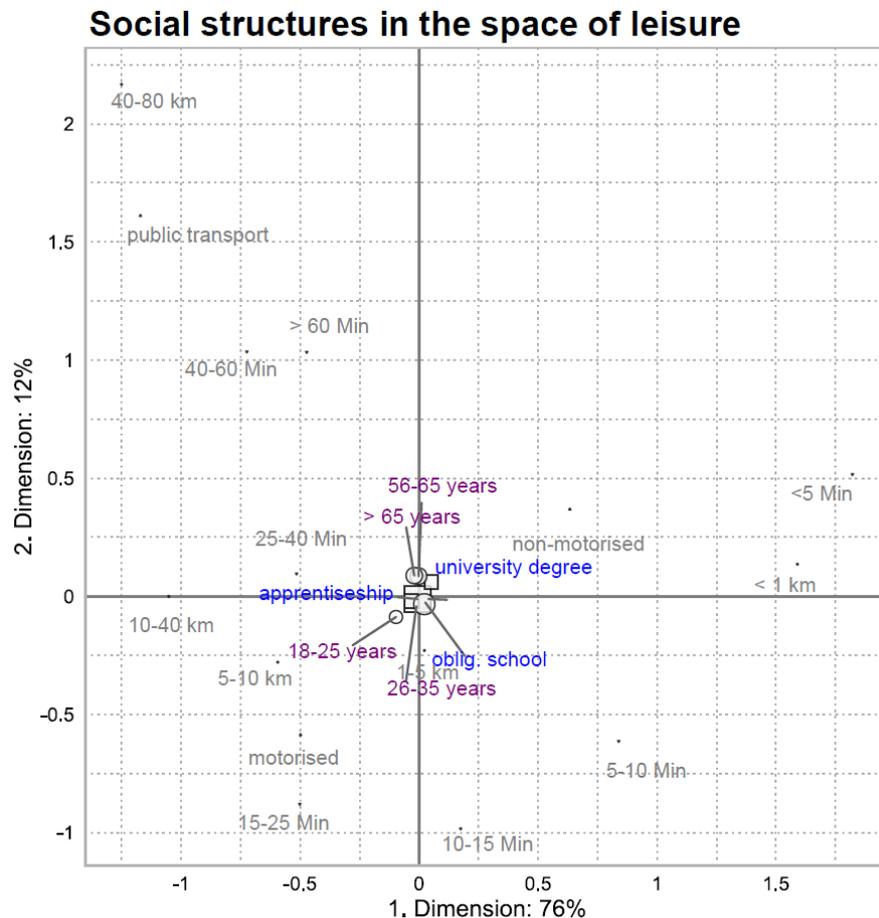
Thus, it seems to be especially visits which are associated with car trips. Sport as well as other activities lie a little more on the side of small distances and non-motorised transport as well as long distances and public transport.



Graph 5: Directions and week days in the space of leisure trips, data: MCMT 2010

More interesting is to analyse, what kind of municipalities are connected with these leisure trips (Graph 5). Quite expectable are the short trips again the ones which tend to connect places within the same municipality. The long trips made by public transport tend to link first of all centres and towns, a little less often, centres and towns with suburban and rural places. Trips linking places outside the centres are located on the side of motorised traffic and medium length trips.

Another, yet only marginally relevant finding is the time-dimension of leisure trips, showing that the in-municipality trips are made most often during the week, but the out of municipality trips are made more likely at the weekends. This of course represents the time structure of modern societies with 5 days dedicated to work and the weekend to leisure which seems to involve longer trips.



Graph 6: Socio-structural aspects in the space of leisure trips

Sociostructural aspects however play virtually no role for the kinds of leisure trips made. Neither income, gender, type of household seem to have an impact on the length or mode of leisure trips. There are only very small associations with age and education.

Conclusion

Combining the insights of the spatial turn with the key claim of the mobilities paradigm, that spaces and the social are made up by movements has significant implications for social research

with a focus on space. Rather than pre-defining relevant spatial units, their shape and characteristics should be assessed empirically. Also, the relevance of spatial and social structures for the constitutions of these socio-spatial formations should be the result of empirical analysis.

Understanding space and the social as made up by movement requires appropriate methods. Against the outlined background, I see shortcomings in transport research and some quantitative spatial analyses in their assumption, that geographic proximity defines the relevance of infrastructures and places. By inserting a set of characteristics of for example the place of residence or the household into a regression model as independent variables, researchers assume a pre-defined kind of relevance of these attributes. Yet, just because they are close, infrastructures like public transport are not necessarily used. Rather, I would like to argue that the relevance of infrastructures as well as socio-structural characteristics depends very much on the broader setting, the social and geographical position, their past socio-spatial itineraries and the extension of their social networks.

By suggesting the technique of multiple correspondence analysis, I suggested a method which explores the spaces constructed through the practices of movement without pre-modelling the form and direction of influences between spatial layers. I found for both purposes, leisure and work, oppositions between short non-motorised trips, long trips made by public transport and medium length trips made by car. Whereas the first two kinds of trips most often involve central locations as either start or destination, the latter more often link places outside the big central cities in Switzerland. Thus, a very pronounced finding of the analysis consists in the interdependencies of the direction of the trips made and their mode, length and duration. This means, different kinds of trips link different kinds of places. On the other side, of course, the length and duration of trips is highly dependant on the place within which they happen.

Quite interestingly, socio-structural dimension seem to hardly matter as structuring forces in the spaces of movements. It would be interesting to compare these findings with other countries in order to figure out, whether this is a Swiss specificity – what I assume based on earlier findings and comparisons (Manderscheid 2016) - or a more widespread finding.

Bibliography

- Amin, A., 2002: Spatialities of globalisation. *Environment and Planning A* 34: 385–399.
- Baur, N., L. Hering, A.L. Raschke and C. Thierbach, 2014: Theory and Methods in Spatial Analysis. Towards Integrating Qualitative, Quantitative and Cartographic Approaches in the Social Sciences and Humanities. *Historical Social Research* 39: 7–50.
- Blasius, J., 1994: Empirische Lebensstilforschung. S. 237–254 in: J.S. Dangschat & J. Blasius (Ed.), *Lebensstile in den Städten. Konzepte und Methoden*, Opladen: Leske + Budrich.
- Blasius, J. and M. Greenacre, 2006: Correspondence Analysis and Related methods in Practice. PP. 3–40 in: M. Greenacre & J. Blasius (Ed.), *Multiple correspondence analysis and related methods*, Boca Raton: Chapman & Hall.
- Bourdieu, P., 1993: Über einige Eigenschaften von Feldern. PP. 107–114 in: *Soziologische Fragen*, Frankfurt am Main: Suhrkamp.
- Bourdieu, P., 2000: *Distinction. A social critique of the judgment of taste.*, Cambridge, Massachusetts: Harvard University Press.
- Castells, M., 2002: The Space of Flows. PP. 314–366 in: I. Susser (Ed.), *The Castells Reader on Cities and Social Theory*, Oxford: Blackwell Publishers.
- Clausen, S.-E., 1998: Applied correspondence analysis: An introduction. Bd. 121 *Quantitative Applications in the Social Sciences*, Thousand Oaks: Sage.
- Collinge, C., 2005: The différence between society and space: nested scales and the returns of spatial fetishism. *Environment and Planning D: Society and Space* 23: 189–206.
- Eurostat (2015): Modal Split of Inland Passenger Transport, 2002 to 2012 (http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Modal_split_of_inland_passenger_transport_2002_and_2012_%28%C2%B9%29_%28%25_of_total_inland_passenger-km%29_YB15-de.png)
- Graham, S. and S. Marvin, 2001: *Splintering Urbanism. Networked infrastructures, technological mobilities and the urban condition.*, London, New York: Routledge.
- Larsen, J., K.W. Axhausen and J. Urry, 2006: *Geographies of Social Networks: Meetings, Travel and Communications*. *Mobilities* 1: 261–283.
- Le Roux, B., H. Roanet, M. Savage and A. Warde, 2008: Class and cultural division in the UK. *Sociology* 42: 1049–1071.
- Lebaron, F., 2009: How Bourdieu „Quantified“ Bourdieu: The Geometric Modelling of Data. PP. 11–29 in: K. Robson & C. Sanders (Ed.), *Quantifying Theory: Pierre Bourdieu*, Dordrecht: Springer.

Manderscheid, K., 2016: Mobile Ungleichheiten. Eine sozial- und infrastrukturelle Differenzierung des Mobilitätstheorems. *Österreichische Zeitschrift für Soziologie* 41: 71–96.

Massey, D., 2005: *For Space.*, London, Thousand Oaks, New Delhi: SAGE Publications.

Mühlichen, A. and J. Blasius, 2008: Der „soziale Raum“ der Lebensstile und Prominenten. PP 113–139 in: D. Schrage & M.R. Friederici (Ed.), *Zwischen Methodenpluralismus und Datenhandel*, Wiesbaden: VS Verlag für Sozialwissenschaften.

Sassen, S., 2001: *The Global City.* New York, London, Tokyo, Princeton: Princeton University Press.