Commuting Behaviour as Part of Lifestyle

Christoph Craviolini, Department of Geography, University of Zurich

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Christoph Craviolini – Diploma Student
SOTOMO Research Group
Department of Geography
University of Zurich
Zurich

Phone: 0041 (0) 78 842 57 37
email: cravioli@geo.unizh.ch

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Abstract

Commuting can be considered as an element of lifestyle. An analysis of commuting behaviour thus needs to take into consideration the commuters' differentiation according to lifestyle and status. Already existing methods neglect this influence. Based on a method developed for residential segregation by Hermann, Heye and Leuthold, an approach to such a socially differentiated analysis is presented in this paper. An important part is the operatinalisation of lifestyle and status on the basis of variables from the Swiss census data and the definition of commuting behaviour types. An empirical implementation of the approach is presented for to the German-speaking part of Switzerland.

Keywords

Commuting – Social differentiation – Lifestyle

1. Introduction

As a result of increasing spatial mobility, the geographical organization of work and life has been marked by a radical change in the course of the last century. Commuting has become a characteristic element of modern working life and the complexity of mobility forms has increased.

Today, within metropolitan areas, workplaces and infrastructure have become quasi ubiquitous. Consequently geographic distance of workspace and place of residence is not any longer a strong constraint for the organization of life. Hence, the determining factors are the scope of action, given by the individual economic and social restrictions, and individual preferences – in other words the lifestyle. The pluralisation of lifestyles led, among others, to a differentiation of living and mobility ideals. Individuals in the metropolitan regions do therefore not only segregate depending on the quantity of disposable resources, but also according to lifestyle. This differentiation according to lifestyle and status has been empirically tested for residential segregation by Hermann, Heye and Leuthold (2005). As the commuting behaviour depends on the choice of housing location and vice-versa, a relationship between the commuting habit of an individual, his social position and his lifestyle is to be expected. Thus ultimately commuting is to be seen as an element of lifestyle too. This relation has been postulated by different authors, but until now not been analyzed in detail. The present work aims to fill this gap with an empirical analysis.

1.1 Objectives

Models and empirical studies limited to the mere consideration of access to transport infrastructure, economic restrictions, as well as covered distance are not suited to explain the difference in commuting behaviour between individuals with similar restrictions, because these differences are expression of a different lifestyle. In order to understand this causality, a socially differentiated analysis of the commuters that captures their different social dispositions, is of fundamental importance.

The aim of this work is to analyze different commuting behaviour types regarding the status and lifestyle characteristics of its members and to give answers on questions such as: Who are the commuters? Who commutes how, how long and where?

2.   Socially Differentiated Commuter Analysis

In the following chapter the underlying theories and the required steps for the analysis of the presumed relation will be identified and discussed. The analysis is limited to the German-speaking part of Switzerland and based on the Swiss census data of the year 2000.

In the first section the mobility aspect will be discussed and commuting behaviour types defined. The second section deals with the concept of habitus according to Pierre Bourdieu and shows how status and lifestyle can be operationalized in order to provide a basis for the analysis of the previously defined mobility types regarding their status and lifestyle characteristics.

2.1   Commuting Behaviour

The commuters' mobility behaviour depends on lifestyle and social status in two respects: On the one hand indirectly by the choice of the housing location, on the other hand by the mobility behaviour itself. To be able to examine these relationships in detail, the mobility behaviour is analyzed regarding three main questions: How? How long? Where?

2.1.1   Means of Transportation

The choice of means of transportation reflects on the one hand infrastructural restrictions at the place of work as well as at the place of residence, on the other hand it is determined by individual preferences and financial restrictions. The latter is insofar linked to the choice of the means of transportation, as financial restrictions limit the availability of motorcars. Four different classes have been defined:

Table 1

Mean of Transportation
Individual motor car traffic
Public transport
Multi-modal (individual motor car traffic and public transport)
Slow-moving traffic (pedestrian, bicycle and moped)

2.1.2   **Covered Distance** (Measured as Expenditure of Time)

The distance reflects the temporal and financial restrictions as well as the preference regarding the spatial separation of workplace and place of domicile. Financial restrictions are insofar linked to the covered distance, as bigger financial resources increase chances to reside in privileged areas. Household type (e.g. couple with child), the workload (e.g. full- time) and family type (role allocation) are among the factors on which the temporal restrictions depend.

2.1.3   **Spatial Direction** (*Raumtypologische Richtung*)

Direction is not to be regarded as a geographic direction, but as typological one. It signifies a movement from one spatial type to another, e.g. living place in the suburban area, workplace in the centre of the agglomeration. This direction can be considered as the expression of the preferences regarding the natural and the infrastructural environment as well as the housing type. On the basis of the classification of Schuler, Dessemontet and Joye (2005), five principal spatial types are distinguished:

Table 2

Spatial Type	Abbreviation	Coding
High order centers *(Large cities)*	HOC	1
Middle and low order centers *(Small and intermediary cities)*	MLC	2
Suburban areas	SUB	3
Periurban areas	PER	4
Rural areas	RUR	5
No Transition from one spatial type to another		
Place of residence and work in the same municipality (*Binnenpendler*)	SAM	
No spatial separation of place of residence and workplace	NOS	

These types are assigned to the place of work as well as to the place of residence, resulting in a direction matrix of 35 commuting types, each one characterized by a specific spatial direction. The so-called *Raumtypologische Matrix.*

Figure 1 The Matrix of Spatial Directions (*Raumtypologische Matrix)*

Spatial Type of Place of Work

	HOC	MLC	SUB	PER	RUR	SAM	NOS
HOC	11	12	13	14	15	10	1
MLC	21	22	23	24	25	20	2
SUB	31	32	33	34	35	30	3
PER	41	42	43	44	45	40	4
RUR	51	52	53	54	55	50	5

Spatial Type of Place of Domicile

Instruction on How to Read the Spatial Type Numbers:
XX: The first number stands for the spatial type of domicile, the second for that of workplace
    (E..g 11: High order centre to high order centre)
X0: Place of work and domicile in the same municipality. X indicates the spatial type.
 X: No spatial separation of workplace and domicile.

This separation in three dimensions leads to commuting behaviour types with a specific combination of spatial direction, time expenditure and choice of means of transportation. By relating these mobility behaviour types to the socio-economic properties of their members, statements about relations between status, lifestyle and commuting behaviour become possible.

2.2 Social Differentiation

The theoretical basis for the analysis and the operationalization of the commuter's social differentiation provides Bourdieu's concept of social space (Bourdieu, 1994). According to Bourdieu, the position of an individual in the society is not given by class, but on the one hand by his total amount of available capital (economic and social capital) and on the other hand by the relative shares of these capitals. The vertical axis of his space represents the total volume of capital and therefore reflects the traditional stratification of society by status (Heye and Leuthold, 2005). The horizontal axis stands for the structure, i.e. the composition, of

capital and reflects the contrast between monetarily materialistic based and more education and knowledge oriented habitus. This axis forms the lifestyle axis.

2.2.1   Status

The total amount of capital as well as the status can be approached and operationalized by its components, that is, level of education, occupational status and capabilities (income and assets). The latter information is absent in the census data, wherefore one has to renounce a closer examination. The later analysis of the commuting behavior types regarding the status dimension will rely firstly on the relative shares of different occupational status groups (derived from the socio professional occupation categories), secondly on a occupation prestige score developed by the sociologist Donald Treiman (Ganzeboom and Treiman, 1996 and 2003). Treiman allots information over a professions' prestige, derived from interviews, to its ISCO code (Internatinal Standard Classification of Occupations). The resulting scale with values from 0 to 100 mirrors the "societal importance" of a specific occupation (Stamm and Lamprecht, 2000).

2.2.2   Lifestyle

Lifestyle is depicted by means of the degree of individualization. This is insofar correct as the differentiation of society according to lifestyle represents the consequence of its increasing individualization and pluralisation (Häuserman and Siebel, 1996). The degree of individualization can be regarded as the divergence from the traditional bourgeois lifestyle (Heye and Leuthold, 2005). The operationalization must thus be based on indicators that reflect this divergence such as family model, role allocation and household type.

Bühler's (2002) gender-cultural family models constitute the basis for the operationalization of the differences regarding the family ideal. Her classification is based on the different role allocations of the parents in regard to domestic work and gainful occupation. The most traditional model, the traditional bourgeois one, is characterized by a man working full-time and a woman who is not economically active, but cares about parenting and the ménage. Its modern antipode is the egalitarian model oriented to family life, in which both parents work part-time and share the parental and the housekeeping responsibilities. Other models are the modern bourgeois and the egalitarian model oriented to employment, which represent hybrid forms of the previous ones.

The household type – expression of individual living ideals – is classified in six groups: flat-sharing communities, single-person households with and without child, couples with and without child, and others. In order to minimize the biographic bias, only persons within an age range from 30 to 50 have been taken into consideration. The traditional household type, in

which the majority of this age group actually lives, is the family household (Hermann, Heye and Leuthold, 2005). Other living forms can thus be interpreted as divergence from the standard and serve as individualization indicators.

The analysis of the differentiation according to lifestyle will be based on the one hand on the structure of the previously discussed indicators, on the other hand on an individualization index developed by Hermann, Heye and Leuthold (2005). Indicators that are positively correlated to individualization are taken into account with a positive sign, negatively correlated with a negative one. Beside the family model and the household type, this index includes information on the proportion of working mothers and women without children.

Table 3

| Individualization Index = 3*SPH +1.2*FSC +2.5*WOC + 3*EMO -1.5*TBM |
| --- |
| SPH: Single Person household (30 to 50 years) |
| FSC: Flat-share communities (30 to 50 years) |
| WOC: Women without child (35 to 44 years) |
| EMO: Employed mother (25 to 44 years) |
| TBM: Traditional bourgeois model (with child younger than 16) |
| Source: Hermann, Heye and Leuthold (2005) |

3. **Results:** The Commuting Behaviour Types in the Status - Individualization - Diagram

The mobility behaviour types will be represented in the so-called Status - Individualization - Diagram (S-I-Diagram), in order to visualize their social differentiation. This diagram mirrors Bourdieu's concept of social space. The horizontal axis stands therefore for the differentiation according to lifestyle and is based on the previously discussed individualization index of Hermann, Heye and Leuthold (2005). The vertical axis reflects the status dimension and is based on Treiman's occupation prestige score. Unlike Bourdieu's social space, not individuals, but commuting behavior types are represented. The scales have been transformed so that the value 50 represents the Swiss average value.

3.1   Spatial Direction

Figure 2   The Spatial Directions in the S-I-Diagram
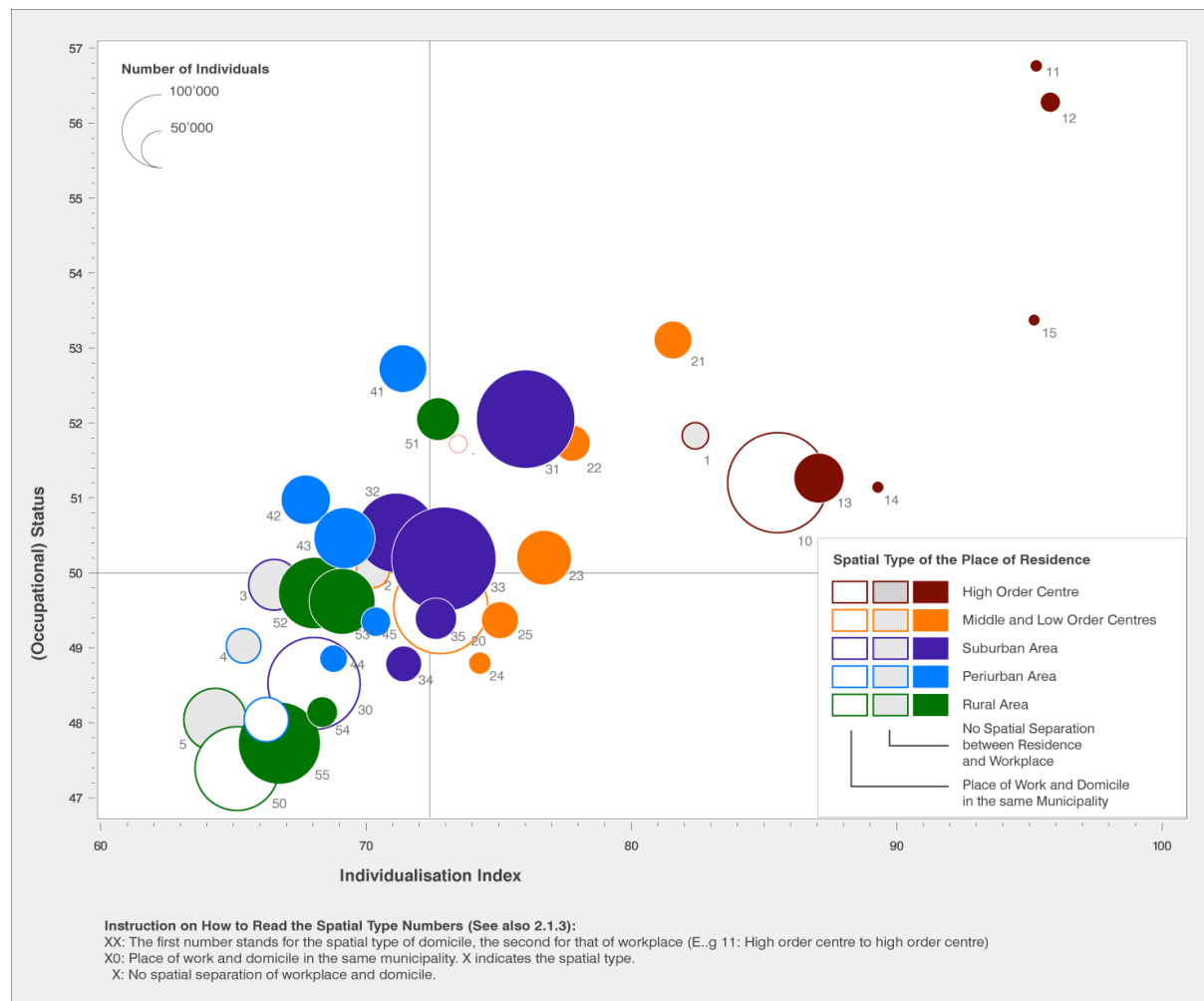
The graphical representation of the different spatial directions in the S-I-diagram shows a structuring of the space according to the place of domicile's spatial type. This differentiation runs diagonal from the lower left to the upper right corner and reflects a rural - centre polarity. The spatial directions with workplace and place of residence in rural areas constitute the one extreme, witch features low status as well as low individualization values. The opposite constitute the spatial types having the workplace in a centre and the living place in another high order centre. These commuting types are characterized by very high status values and a high degree of individualization.

A comparison of commuting behaviour types with similar spatial type of domicile shows the following internal structure: Commuting behaviour types containing a movement towards high order centres show – in comparison with the others – significant higher status values and

as a general rule also a higher degree of individualisation. Idem holds true for the middle and low order centres, but less pronounced. By contrast commuting behaviour types with workplace and place of residence in the same municipality and separation of domicile and workplace, are among the ones with the lowest status values (except those with domicile in a low or middle order centre). Those implying no separation of domicile and place of work show higher status but lower individualisation values than the latter. The difference between these two types according to status is greatest in suburban and periurban areas, the one according to lifestyle is much more pronounced in urban areas.

## 3.2   Commuting Types by Distance

Figure 3   Commuting Types by Distance in the S-I-Diagram
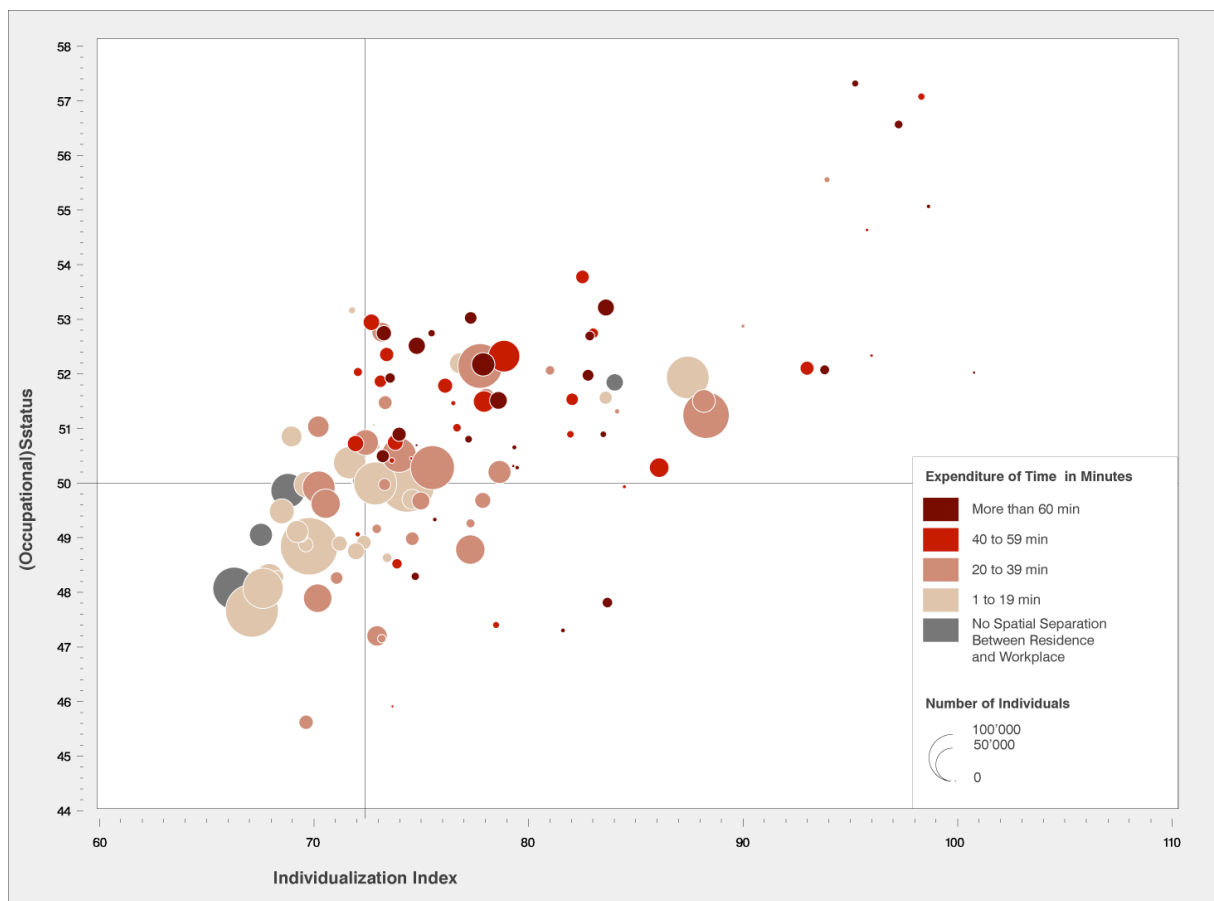
The representation of the commuting behaviour types having a specific spatial direction and expenditure of time shows a concentration of low-distance-commuting types in the lower left corner of the graph, which is characterized by low status as well as by low individualisation values. In contrast the long-distance-commuting types tend towards relatively high status and

lifestyle values. One can therefore recognize a diagonal structuring of the S-I-space according to the expenditure of time. A closer examination of the time classes' distribution reveals a considerable difference between types having an expenditure of time less than 40 minutes and those that are beyond. The latter show much more pronounced lifestyle characteristics and are mostly above the overall average value.

Figure 4   Commuting Types by Distance in the S-I-Diagram:
   A Comparison of High Order Centre, Suburban and Rural Area.
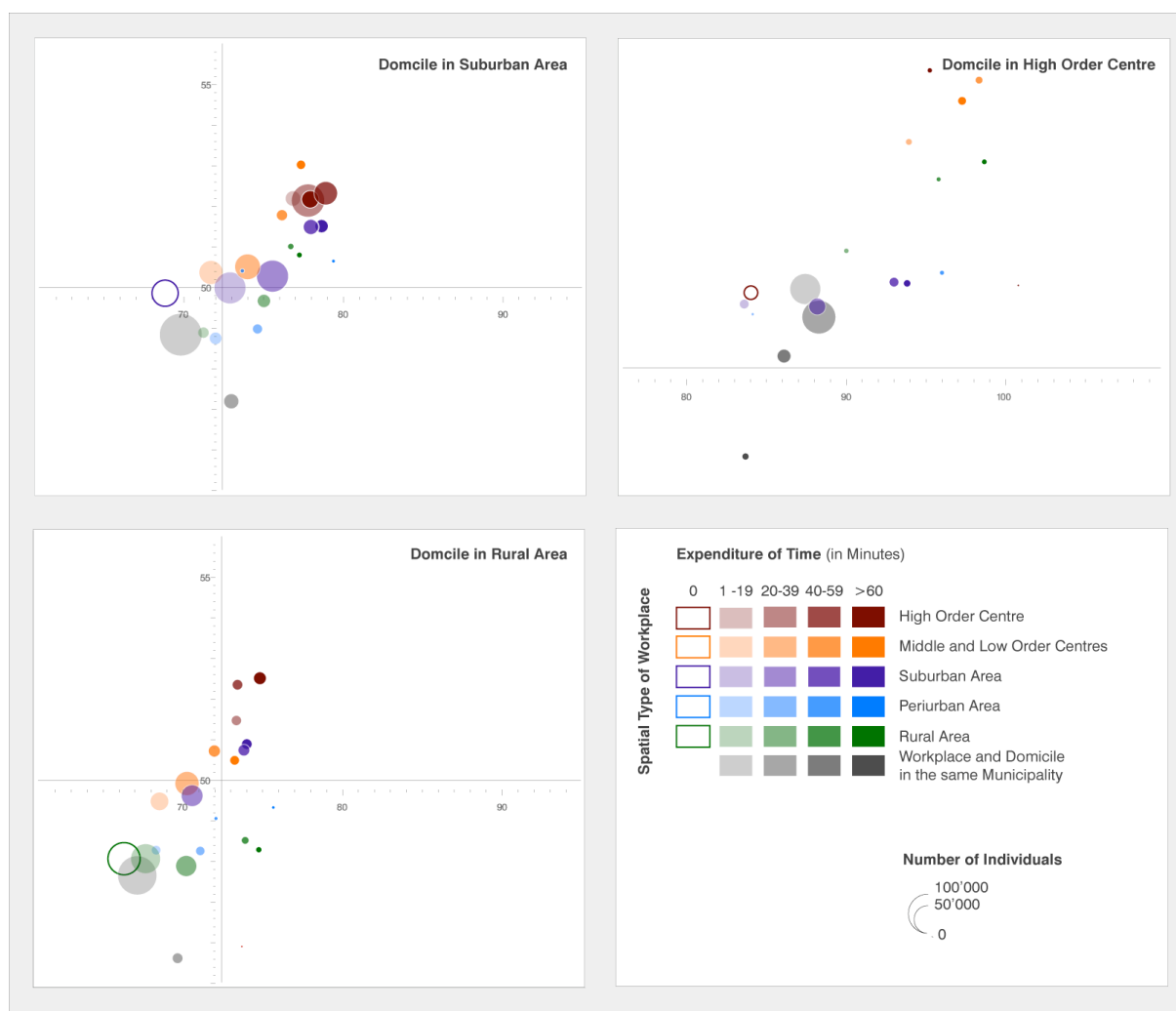
A comparison of the commuting behaviour types with similar spatial type of domicile shows the following interdependence between covered distance, viz. expenditure of time, and status

as well as lifestyle values: Directions with high status values also tend – in comparison with the others having the same domicile's spatial type –to show a high average commuting time. Commuting behaviour types with a workplace corresponding to the place of domicile differ from the others in respect of the relation between status and covered distance. For these types, this relationship is negative; viz. values decline as the covered distance increases. The lifestyle development of these commuting behaviour types depends on whether the domicile belongs to a high order centre type or not. In the first case the relationship between expenditure of time and lifestyle is negative, in the second one it is positive. The other commuting behaviour types rather tend to a positive time-lifestyle-relationship, although this effect is – with exception of commuting behaviour types with place of residence in the suburban or periurban area – not very pronounced.

3.3   Spatial Direction by Means of Transport

Figure 5   The Spatial Directions by Means of Transport in the S-I-Diagram
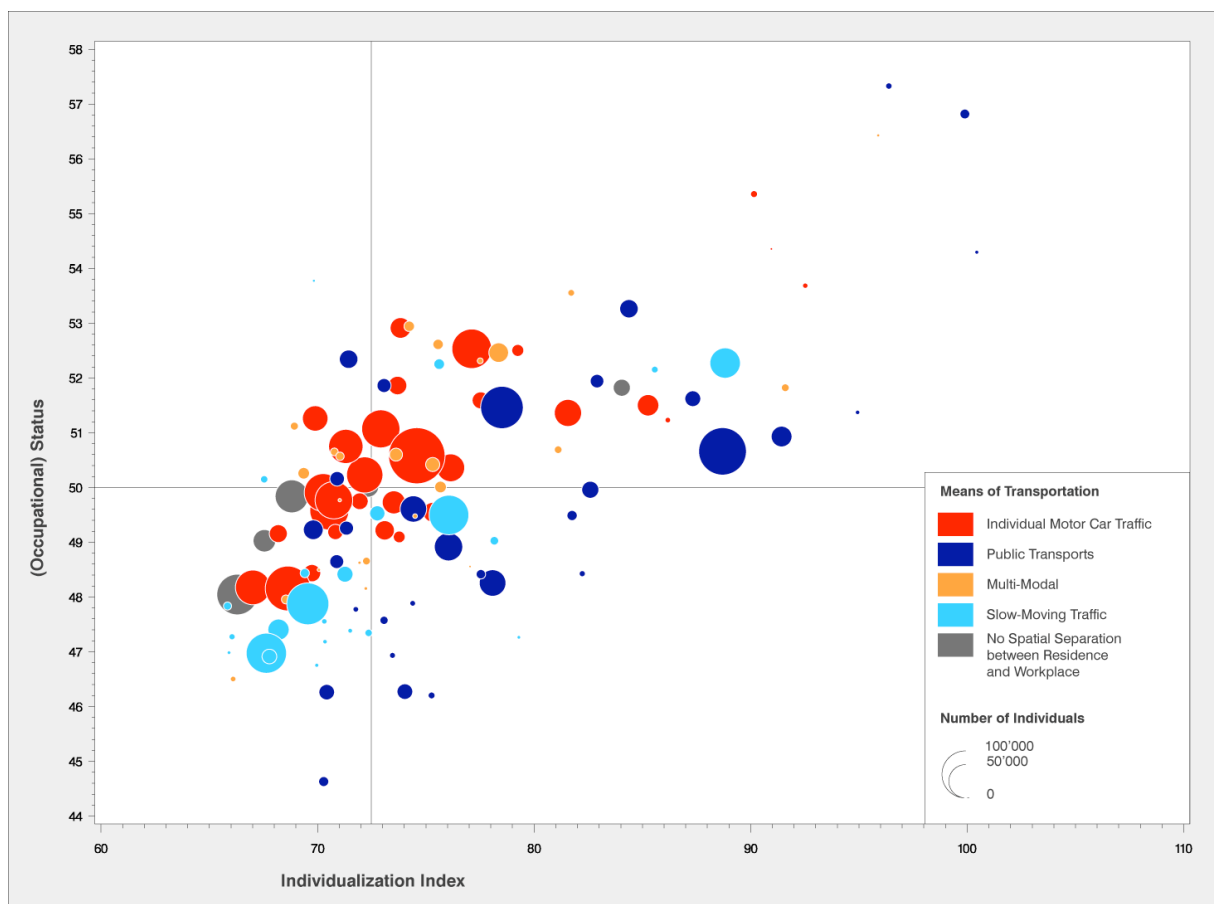
The commuting behaviour types which include the usage of slow-moving traffic show – with exception of those having domicile or workplace in a high order centre – a concentration in the lower left corner of the S-I-graph. The multi-modal commuting types show a similar spatial distribution to the slow-moving ones, but have in comparison higher status and lifestyle values. Commuting behaviour types including public transport usage scatter over a wide range and are among those with the lowest as well as among those having the highest status and lifestyle values. Commuting types having individual motor car traffic as means of transportation, feature – in comparison with the others – high status values.

Figure 6   The Spatial Directions by Means of Transport in the S-I-Diagram: A Comparison of High Order Centre, Suburban and Rural Area.
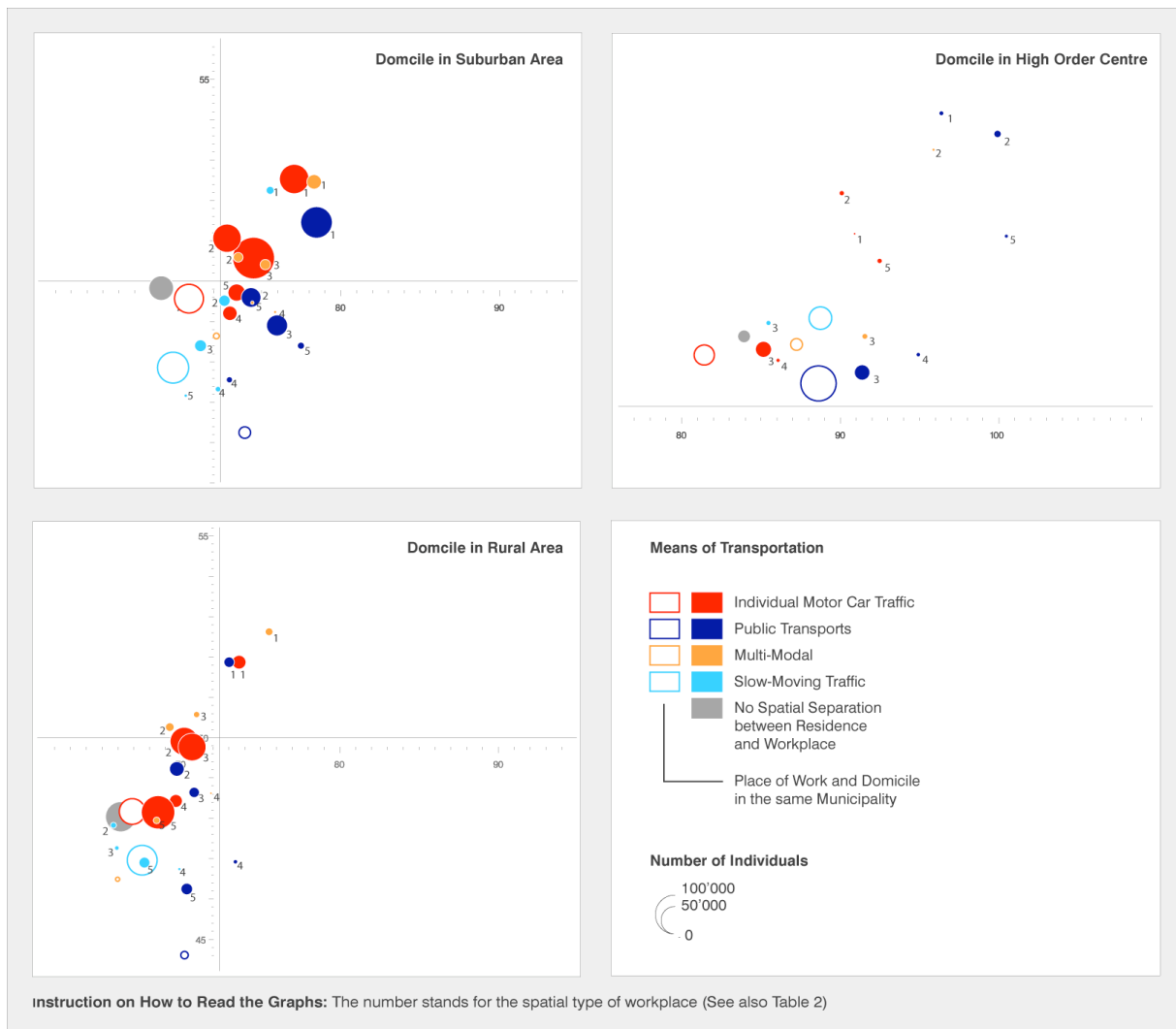
The comparison of the commuting behaviour types with similar spatial type of the domicile shows the following: While commuting behaviour types using a car normally feature higher status values than those with public transport use, the situation for the spatial direction centre to centre is inverse. Generally speaking one can say that commuting behaviour types with car usage show a lower degree of individualisation than those with public transport usage. The spatial directions rural to centre or rural to periurban area, differ from the others according to the position of the commuting behaviour types with multi-modal transport use, as they show higher status values than the ones with car or public transport usage. Commuting types having the domicile in high order centres are different from the other in regard to the slow-moving traffic's status characteristics. In centres, slow-moving traffic shows – in comparison with the other means of transport having the same spatial direction – the highest status scores.

4. Conclusion

In this contribution a concept for a socially differentiated commuter analysis, based on a research method developed by Hermann, Heye and Leuthold from Bourdieus concept of social space, has been presented. The intention has been to provide a first overview over status and individualisation characteristics of different spatial directions and to analyse the development of these two factors depending on different means of transport or commuting time.

The visualisation of the results points out an effective differentiation of the commuters according to lifestyle as well as status and therefore support the thesis as presented at the outset. The commuters present – in comparison with the remainder of the population – a much higher degree of individualisation. While the overall lifestyle average value is 50 (Hermann, Heye and Leuthold, 2005), the average of the commuters is 72.4. The results also reveal a strong correlation between the place of domicile's spatial type and the status and lifestyle characteristics of commuting behaviour types. Furthermore a strong dependence between status score and workplace in high order centres is revealing. The choice of means of transportation mostly seems to be a question of economic resources. Nevertheless it shows strong lifestyle dependence, especially in urban areas. The differentiation according to expenditure of time reveals a correlation between time and status as well as between time and lifestyle. The latter, however, seems to be more pronounced.

In order to be able to point out whether status or lifestyle exerts a stronger influence – especially on the choice of means of transport or average commuting time – a closer examination of household type, family status and other factors is required. The final diploma thesis will to some extent deal with this question.

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