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Circular job-related spatial mobility in Germany: Comparative analyses of two representative surveys on the forms, prevalence and relevance in the context of partnership and family development

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Abstract: Over the past few decades, employees have had to come to terms with increased demands of the labour market requiring greater flexibility and mobility. At the same time, increasingly versatile and complex forms of job-related spatial mobility are emerging. Consequently, the correlation between job mobility patterns and family-related processes is attracting more and more attention in the field of mobility and family research. However, to date there has rarely been a standard by which to systematically record and analyse job mobility. "Job Mobilities and Family Lives in Europe" (JobMob), a comparative European survey, and the "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam) constitute two sets of representative data for Germany, which provide largely comparable operationalisations for several forms of circular job mobility, thus allowing us to systematically perform comparative analyses. For the first time ever in this field of research, it is now possible to subject findings to a direct reciprocal validation process and to check whether general rules and correlations can be derived from them.

In this regard, the present article aims at achieving three essential objectives. First, we will introduce a common indicator for circular job mobility patterns found in the two surveys. On the basis of this common indicator, we will comparatively analyse the prevalence of different mobility forms and their composition according to key socio-demographic characteristics. In addition, we will use multivariate analyses to illustrate the relevance of job mobility for partnership and family development. Results suggest mobility patterns to be an important individual context factor when explaining processes relevant to partnerships and family. In particular, women who exhibit some degree of job mobility are less often married and rarely have children.

Keywords: Circular job-related spatial mobility · Job commuting · Business travel · Institutionalisation of relationships · Childlessness

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1 Introduction

There is a long tradition of research on job mobility in the field of sociology and in life course research. Classic examples include the early biographical study of Thomas and Znaniecki (1918-1920) on the immigration of Polish peasants to European countries and America. Especially in the past, labour migration has been the subject matter of a variety of studies. On the one hand, empirical data shows that the prevalence of residential mobility (international and internal migration) is relatively low; at least it is lower than analysts of the current globalisation processes have assumed or than it could be expected on the basis of commonly expressed statements by members of this increasingly "mobile" society (Sennett 1998; Castells 2003; Urry 2007). However, circular forms of job mobility – such as long-distance or weekend commuting or frequent business trips - have gained empirical relevance in recent decades (Schneider et al. 2002a/b; Schneider et al. 2008; Schneider et al. 2009; Haas/Hamann 2008; Ruppenthal/Lück 2009). In thus far, the theory advanced by Zelinsky as in the early 1970s has been confirmed. His theory holds that in the late modern stages of mobility, more complex forms of mobility will emerge, and that, as a consequence, "circulatory movements" will gain significance (Zelinsky 1971: 245).

Recent research has more strongly focused on this development; with the help of recent surveys, the amount of available data has improved significantly (*Lück/Schneider* 2010; *Schneider et al.* 2002a; *Schneider/Meil* 2008; *Schneider/Collet* 2010; *Statistisches Bundesamt* 2005). In the context of quantitative life course research that focuses on partnership and family development processes, the two surveys "Job Mobilities and Family Lives in Europe" (JobMob) (Schneider/Meil 2008) and the "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam) (Huinink et al. 2011) are particularly noteworthy.

Job mobility, and even circular job mobility, may in fact exert a crucial influence on a couple's or a family's everyday life. Overall, its scale, the amount of time required for it, the financial expense involved (e.g. *Rüger/Ruppenthal* 2010) and the psychological and physical consequences that may result from circular job mobility (e.g. *Schneider et al.* 2009b; *Limmer/Rüger* 2010) potentially constitute relevant parameters of the opportunity structure affecting partnerships and families (*Schneider* 2005; *Limmer/Schneider* 2008; *Huinink/Feldhaus* 2008).

Even though research in this area is intensifying, the potential of existing studies has not been fully exhausted. Due to the fact that the two mentioned studies on spatial job mobility have been guided by an influential study by *Schneider et al.* (2002a/b), they can operationalise a wide range of different forms of mobility in the same systematic way. For the first time in Germany, it is now possible to conduct comparative analyses on the topic of mobility and family research on the basis of two representative surveys. By taking advantage of reciprocal validation, one's ability to generalise the findings in this field of research will take a major step forward (e.g. *Raithel* 2008).

In this regard, the present article aims at achieving three essential objectives. First, we will present a common indicator for the circular job mobility patterns found in the two surveys. On the basis of this common indicator, we will conduct a comparative analysis of the prevalence of a variety of forms of mobility and their composition according to key socio-demographic characteristics for both samplings. Due to the fact that both studies focus on issues relating to partnerships and family structures, we will use multivariate analyses to illustrate the relevance of circular job mobility for the development of relationship as well as family structures.

2 Data and operationalisations

2.1 Data recording circular job-related spatial mobility in Germany

As concerns job mobility patterns, a key differentiation is made between residential and circular forms of mobility (e.g. *Limmer/Schneider* 2008). While mobility research in the past on the processes affecting partnership and family has concentrated on analysing residential forms of mobility, such as internal and international migration (e.g. *Wagner* 1989; *Huinink/Wagner* 1989; *Kley* 2009; *Kulu* 2005), this article focuses exclusively on circular forms of mobility, such as business travel, weekend commuting, and other mobile forms of working.

For the purpose of investigating the correlation between circular job mobility and related processes that are relevant to life course research, such as partnership and family developments and lifestyle choices, the study conducted by *Norbert F. Schneider* and his colleagues was ground-breaking for Germany (*Schneider et al.* 2002a/b). It also constituted an essential first step for the European study entitled "Job Mobilities and Family Lives in Europe" (*Schneider/Meil* 2008). Even though several other studies address the commuting behaviour of the working population,¹ for instance, those studies did not gather any data on partnership and family dynamics. Oftentimes, they are more likely to focus on socio-professional, health-related, geographic or infrastructure-related aspects. In addition, over recent years one research line has emerged that addresses the issue of "multilocality" of the people involved as well as their families (*Weichhart* 2009). Studies that concentrate on this topic are oftentimes geared towards one specific segment of circular mobility, such as weekend commuting or long-distance relationships (*Collmer* 2005; *Schier* 2009; *Reuschke* 2010).

¹ Every four years, commuting behaviour is studied in the microcensus (Mikrozensus). These studies concentrate on information such as distance between the residence and the workplace, the amount of time required for a commute and the most commonly used means of transportation (*Grau* 2009). In the surveys of income and consumption (Einkommens- und Verbrauchsstichprobe, EVS), information is gathered relating to second residences (*Statistisches Bundesamt* 2005). The Socio-economic Panel (Sozio-oekonomisches Panel, SOEP) also includes a segment on commuting. The survey looks into how often an employee commutes between his/ her main place of residence and the workplace as well as the distance between the workplace and the place of residence (*Wagner* 1989; *Stutzer/Frey* 2008). In their panel study, *Huinink* and *Kley* (*Kley* 2009) look into not only migration behaviour in general, but also into commuting mobility in the cities of Freiburg and Magdeburg; in their commuter report, *Wiethölter et al.* (2009) focus on the Berlin-Brandenburg region.

The "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam) is another representative study, which resembles the study by *Schneider* and his colleagues with respect to its methods of recording circular mobility, and which focuses on the impact it has on developments relevant to partnerships and family. Provided in the section below is a brief introduction to the two studies.

Job Mobilities and Family Lives in Europe (JobMob)²

In a representative survey conducted in Germany in 2007, 1,495 individuals between the ages of 25 and 54 were randomly selected and interviewed about their experience with job mobility, with the help of a standard survey instrument via landline telephone (CATI).³ In a second step, a random screening procedure was implemented to survey another 168 professionally mobile individuals (oversampling) in order to allow for differentiated analyses based on a wider empirical basis.⁴ Thus, a total of 1,663 respondents were interviewed in the German random survey (for more details on this, see *Schneider et al.* 2008; *Huynen et al.* 2008, 2010).⁵

In terms of its content, the study focused on the following three main aspects (*Limmer/Schneider* 2008):

- (1) What are the prevalence and variety patterns of spatial job mobility in Europe?
- (2) What are the causes and circumstances of their emergence?
- (3) What are the consequences of job mobility for one's partnership, family, subjective well-being, career, social relationships and social networks?

² The research project "Job Mobilities and Family Lives in Europe" was financed by the European Commission from funds made available through the Sixth Framework Programme, priority "Citizens and governance in a knowledge-based society."

³ In addition to the survey conducted in Germany, the survey was also conducted in five other European countries (Spain, France, Belgium, Switzerland and Poland). A total of 7,220 people were interviewed in this survey; of these 2,432 were mobile.

⁴ Randomly selected individuals were surveyed in short interviews (screenings) about their mobility behaviour and if these persons met a set of predefined criteria, they were also included in the sample (oversampling).

⁵ The data were subjected to a design and an adjustment weighting. In a first step, a design weight was calculated, which a) adjusts the imbalance of the probability of individuals from small and large households to be included in the sampling and b) adjusts the disproportionate number of professionally mobile persons interviewed in the representative part of the sampling. Based on the results, the bias that was calculated in the selective non-response was corrected. Five criteria were taken into account: age, gender, education, marital status and region (East/West). Official statistics from 2007 were used as a reference. Number of cases prior to weighting: N (total) =1,663 and n (employed persons) =1,359. A detailed description can be found in *Huynen et al.* (2008).

In 2010, a second interview phase was conducted in Germany. As a result, additional information will be made available for future longitudinal analyses.⁶

Panel Analysis of Intimate Relationships and Family Dynamics (pairfam)¹

The "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam) project is a representative, interdisciplinary longitudinal study that aims at researching different life styles of people living in families or relationships in the Federal Republic of Germany. This 14-year long-term project aims at interviewing a group of randomly selected individuals once a year. At the time of the first survey in 2008/2009, these individuals were categorised into representative groups between the ages of 15 to 17, 25 to 27, and 35 to 37 (cohort sequential design; N=12,402).⁸ Every year, the partner of the representative respondent (anchor person), if applicable, and/or from the second wave on their parents or step-parents and one children living in the household are also interviewed (multi-actor-design). The intended purpose of the pairfam project is to find answers to the following questions:

- (1) What course do relationships take from the moment they are entered into until the couple potentially divorces or separates? What are the consequences for the respective partners and their children (if there are any)?
- (2) What are the determining factors when founding and expanding one's family?
- (3) What are inter-generational relationships and the parent-child relationships like?
- (4) What influence do the surrounding social networks have on the dynamics of a family or relationship?

In addition, the modulated survey design that was used offers a number of different options in analysing the recorded data (cf. *Huinink/Feldhaus* 2008; *Huinink et al.* 2011). In the present paper, however, these will not be discussed further. Despite the fact that the analyses of job mobility patterns are not the major point of focus in the set of tools used in the pairfam survey, it does record central modules of job mobility in order to grasp its opportunity structure that is relevant for people living in relationships and families. Its approach to recording the data is similar to that of the first *Schneider et al.* (2002a,/b) study. As a panel study, pairfam thus makes it

⁶ The scientific use file of the dataset from the interview phase 2007 (1st wave) is available from GESIS – Leibniz-Institut für Sozialwissenschaften (http://www.gesis.org) with the study number ZA5065. You can find more information about the European comparative research project at http://www.jobmob-and-famlives.eu.

⁷ The "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam) was funded by the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG) as a long-term project.

⁸ Two weighting variables were formed in the pairfam study: a design weighting that controls for the different cohort sizes (dweight) and an additional factor (psweight), which – on the basis of the microcensus – adjusts for the factors age, gender, marital status, and whether or not there are any children. For more information, refer to *Brüderl et al.* (2010).

possible to acquire data and analyse job mobility, its prerequisites, and the potential consequences that result from it with the help of a prospective cohort study design. Due to the comprehensive interview programme and the limited amount of time available for the interviews, detailed information on the subject of mobility is only available in every other study wave. Pairfam will thus be able to provide a comprehensive set of longitudinal data that can be used in mobility and family research in the future.⁹

2.2 Operationalisation of circular job-related spatial mobility

As we mentioned before, whereas the JobMob survey had specifically been designed to acquire data about *job-related* mobility patterns, job mobility was neither the main point of focus of the theoretical design, nor the focus of the pairfam survey. Yet, since the two surveys are largely based on the earlier study by *Schneider* and colleagues (*Schneider et al.* 2002a/b), many forms of *circular* job mobility can be operationalised in a more or less identical way.

The conceptualisation of job mobility and the underlying categorisations are aimed at two things: firstly, capturing the existing types of job mobility as exhaustively as possible, and secondly, distinguishing between the various requirements that might arise for the opportunity structure of social relationships (cf. sect. 1). The following is an overview of the operationalisation categories that were used.

In this context, the criteria used in the JobMob study serve as the starting point. The term *mobile for job-related reasons* refers to individuals who, a) commute long distances, i.e. for each journey to or from work require at least one hour and commute at least three times a week; or b) have had to spend at least 60 nights away from home for job reasons in the past year. This category also includes Weekend commuters or such persons who, for job-related reasons, are in a long-distance relationship with at least one hour travel distance each way between their places of residence, or c) people who have relocated to a location at least 50 km away from their former residence at some point during the last three years. Individuals who are mobile in more than just one of these ways are referred to as "Multi-mobile" (*Limmer/Schneider* 2008). Since this article focuses on circular mobility, we will only discuss points a) and b). In this context, we have defined two distinct concepts of job mobility, which are not mutually exclusive: *job-related commuting* and *job-related overnight stays* outside of a person's place of residence.

Job-related commuting

Job-related commuting is the result of an individual's workplace being outside of their own place of residence, requiring them to travel to their workplace. In this article, we differentiate between three types of job-related commuters: (1) Short-

⁹ The datasets from the pairfam study can be requested from their subscriber service at http:// www.pairfam.de as a scientific use file. The website also provides additional information about the project.

distance commuters: their commute (one way) takes between 1 and 29 minutes; (2) *Medium-distance commuters*: their commute (one way) takes between 30 and 59 minutes; and (3) *Long-distance commuters*: the time required for their commute (one way) is at least 60 minutes.

Up until now, there has been no differentiation into Short- and Medium-distance commuters within the scope of the JobMob study. In that study, the persons concerned were not actually considered to be "mobile" since their commute took comparatively little time.¹⁰ In this article, we have defined these different categories in order to be able to distinguish more clearly between the different commuters on the basis of their commute, and to be able to better contrast individuals with long commutes (Long-distance commuters) with those who have shorter ways to work (Short- and Medium-distance commuters). In addition, the empirical question that to date still remains unanswered is whether there are any differences within the group of individuals with shorter commutes. In both studies it is possible to implement these categorisations of the different types of commuters. The amount of time needed for a one-way commute to work is recorded in minutes.¹¹

Job-related overnight travel

We have created the category of the so-called "Overnighters" to refer to individuals who frequently need to stay overnight outside of their place of residence for work reasons. Any individual who has spent at least 60 nights away from their primary place of residence for work reasons over the past 12 months can be referred to as an Overnighter. Individuals who fall into this category may either stay at varying work locations (*Varimobiles*) or in a second place of residence (*Shuttlers*). In both studies, the study respondents were asked to provide this information. Hence, two additional forms of circular mobility have been identified: (4) Varimobiles: Individuals who have spent at least 60 nights away from home for job-related reasons over the last 12 months (e.g. in hotels, boarding houses or company housing) and (5) Shuttlers: Individuals who have a secondary residence close to their work location (especially Weekend commuters).

In order to operationalise Shuttlers, we assume the existence of the following basic criteria: (a) the existence of housing (e.g. secondary place of residence) close

¹⁰ Since there were no established guidelines pertaining to the criteria of commuting time for Short-distance commuters and for Medium-distance commuters, these were defined by the authors in this case. As approximation the timespan has been divided in half.

¹¹ One criterion was also that the person commuted at least three days each week. In the JobMob study, the frequency of a person's commute was only recorded for the group of Long-distance commuters, whereas in the pairfam study, each and every respondent was queried consistently for all forms of commuting, whether they commuted on a daily basis or at least several times a week. On this issue, the pairfam study differentiates even further between whether the commute takes place from the first or the second place of residence. We do not make this distinction in our analyses, however.

to the workplace that is considered the starting point of the commute to work,¹² and (b) the number of times an individual spends the night at a place other than their primary place of residence/their base,¹³ and (c) for most of the time, the individual concerned must have worked at the same location, which constitutes another difference to Varimobiles. For the latter, varying work locations are a defining characteristic. This can happen in the context of "mobile professions," such as professional drivers, pilots, or installation mechanics.

The combined mobility indicator in the JobMob and pairfam studies

The ultimate design of the mobility indicators follows a strict systematic hierarchy. Scenarios involving multi-mobility, that is, in which an individual deals with at least two forms of mobility (cf. e.g. Limmer/Schneider 2008), are not explicitly indicated as such. Instead, the individuals concerned were assigned to a category on the basis of the following list of priorities: 1. Shuttlers, 2. Varimobiles, 3. Long-distance commuters, 4. Medium-distance commuters, 5. Short-distance commuters. Whenever two forms of mobility applied, we selected the one that was expected to have a stronger impact on the opportunity structure of a family or relationship, that is, the one that placed higher demands on a person's mobility. For example, Shuttlers are expected to live up to higher mobility demands than, for example, Short-distance commuters. In addition, there is another category of non-mobile individuals. Included in this category are those individuals who are gainfully employed at their place of residence (e.g. farmers, teleworkers). The category of "Other commuters" includes individuals whose commuting habits are unsystematic or irregular, so that they cannot be categorised on the basis of the criteria we provided. Due to the specific questionnaire used in the project, this group was only explicitly identified in the JobMob study. It will not be treated as a specific category in any of the multivariate statistical analyses so as to ensure that study results remain comparable.¹⁴

¹² In JobMob, the criterion was that this was kept due to the large distance between the workplace and the main place of residence; in pairfam, the number of times a person commuted to the workplace was assessed as seen from the secondary place of residence, which needed to have taken place at least once a week or at irregular intervals.

 ¹³ In JobMob, at least 60 nights over the last 12 months; in pairfam, data stating that the person had spent the night in a secondary place of residence at least once or twice a week and did not live there with a partner or with his/her parents.

¹⁴ Moreover, there are yet additional forms of mobility that can also be examined in the two studies. In addition to residential mobility, which is not the subject matter of this article, but which was also surveyed in the second wave of pairfam (the acquisition of a relocation biography in retrospect will be implemented in that study in a third wave), JobMob allows to analyse job-related long-distance relationships. The latter is not possible in pairfam. In that study, there can merely be a differentiation as to whether couples are living together or not, without providing any reasons as to why they may be living together or not.

3 Results

3.1 Descriptive analyses: the prevalence of circular job mobility and its correlation to socio-demographic characteristics

In a first step, we will present the prevalence of circular job mobility in Germany on the basis of the two studies (cf. tab. 1 and 2). In a second step, the composition of the different types of mobility will be examined based on key socio-economic criteria (cf. tab. 3 and 4). We assume that despite the different populations and objectives used, the essential trends will become apparent in both studies, and that it will be possible to paint a complete picture of the phenomenon of circular job mobility in Germany. Guided by these assumptions, we will focus on a comparison between the two studies. For the pairfam study, only the age groups of 25 to 27-year-olds and 35 to 37-year-olds were selected, because for the 15 to 17-year-olds, job mobility is not (yet) relevant to the same degree. In the JobMob study, all respondents (between the ages of 25 and 54) were taken into account. The analyses were each calculated using the relevant adjustment weightings.¹⁵

Illustrated in table 1 is the distribution of different types of mobility according to the two studies. In this regard, we differentiate between two groups: in order to provide a complete overview of the mobility patterns represented in the population sample of each study, we list all the information on the sampling as a whole (based on the "overall population" in each age group). In order to demonstrate the prevalence of the different types of mobility among the various kinds of gainfully employed persons, we provide numbers for each of these different groups individually as well.

Despite differences between the two studies as concerns the age composition (pairfam: from the ages of 25 to 27 and 35 to 37; JobMob: between the ages of 25 to 54) there are, in part, strong correlations between the distribution patterns. First of all, the percentage of overall job mobility – defined here as short-distance, medium-distance and long-distance commuting, varimobility, and weekend commuting (Shuttlers) – is higher in the JobMob study (75 %) than the 65 % that can be found in the pairfam study. As a result of the specific age groups chosen for the pairfam study (ages 25 to 27 and 35 to 37), there are significantly more individuals who still had not finished their education or who were on parental leave, which is why the percentage of not gainfully employed persons is so much higher in that study. In contrast, when looking at the group of gainfully employed persons, the difference in overall mobility is but a minor one. The same applies if one takes a closer look at only those types of mobility for which increased mobility demands can be assumed, such as Long-distance commuters, Varimobiles, and Shuttlers: of all the respondents, they make up 11.7 % (JobMob) and 11.9 % (pairfam), respectively; among gainfully employed persons, those categories make up 14.0 % and

¹⁵ In JobMob, the weight "w_nation" was used, in pairfam, unless defined otherwise, the calculation was based on a combination of "dweight" and "psweight" (cf. sect. 2.1).

		JobN	∕lob¹			Pair	fam	
	All resp	ondents	Gainf emplo perso	, byed	All respo	ondents	Gaint emplo pers	byed
	n	%	n	%	n	%	n	%
Short-distance commuters	701	46.9	701	57.3	2611	36.8	2611	51.0
Medium-distance commuters	241	16.1	241	19.7	1155	16.3	1155	22.5
Long-distance commuters	97	6.5	97	8.0	364	5.1	364	7.1
Varimobiles	68	4.5	65	5.3	448	6.3	448	8.7
Shuttlers	11	0.7	9	0.7	33	0.5	33	0.6
Non-mobiles ³	59	3.9	59	4.8	512	7.2	512	10.0
Other commuters ⁴	51	3.4	51	4.2	-		-	-
Not gainfully employed⁵	267	17.9	-	-	1964	27.7	-	-
Total	1,495	100	1,223	100	7,087	100	5,123	100

 Tab. 1:
 Circular job mobility data from the JobMob and pairfam studies

The number of cases for the forms of mobility "Varimobile" and "Shuttlers" may deviate slightly within the group of all respondents and the working population, because they were queried in retrospect with regard to spending the night away from home for job-related reasons for the last 12 months.

² Gainfully employed persons are such persons who are either employed full-time, are self-employed, employed part-time or are occasionally employed, those who are in training or are taking part in an internship programme, or who perform any other activity in return for compensation.

- ³ Included in the category of "non-mobile" persons are also those who make their living from home (e.g. farmers, teleworkers).
- ⁴ Included in the category "other commuters" are also those persons with commuting behaviour described as extremely unsystematic or irregular, so that they cannot be grouped based on the criteria used. Because of the relevant questionnaire, this group can only be identified in the JobMob study.
- ⁵ Included in the group of "Not gainfully employed" are those persons currently on parental leave, unemployed, homemakers or those in early retirement.

Source: Job Mobilities and Family Lives 2007; pairfam (Wave 1, 2008/2009); own calculations; weighted data

16.4 %, respectively. These findings clearly show the relevance of circular mobility arrangements, which can thus certainly not be considered to be only a marginal phenomenon in society.

However, differences with regard to the percentage of Short-distance commuters become apparent. In the JobMob study, Short-distance commuters total 46.9 % of all the respondents (as compared to 36.8 % in pairfam). In contrast, though, if

we concentrate on the group of gainfully employed persons, these differences are already significantly lower. Any remaining differences can probably be attributed to the fact that individuals exhibiting typical criteria of Short-distance commuters, such as part-time employees and women, and also, though less often, persons who live in major cities (cf. tab. 3 and 4), were represented in higher numbers in the Job-Mob study than they were in pairfam.

In both studies, the group of Short-distance commuters is the largest one, followed by Medium-distance commuters (16.1 % in JobMob and 16.3 % in pairfam as related to the total number of respondents). The numbers of Long-distance commuters in both studies were almost the same, although the group of Varimobiles was slightly larger in the pairfam study. This is particularly true when referring only to the group of gainfully employed persons. However, overall, the picture was fairly homogenous as concerns the prevalence of individual types of circular mobility.

		JobM	lob			Pairfa	am ¹	
	Age 2	25-27	Age	35-37	Age 2	5-27	Age 3	5-37
	n	%	n	%	n	%	n	%
Short-distance commuters	41	55.1	74	56.1	1,376	52.9	1,584	49.6
Medium-distance commuters	11	15.1	22	22.0	584	22.5	722	22.6
Long-distance commuters Varimobiles	12 7	16.3 9.5	8 7	5.8 5.0	182 223	7.0 8.6	229 284	7.2 8.9
Shuttlers	0	0	2	1.7	20	0.8	17	0.

Tab. 2:	Circular mobility in JobMob and in pairfam among gainfully employed
	persons, by age groups

Since the groups are listed separately here, instead of the design weighting, only selection weighting (psweight) is used. This is why the (weighted) number of cases differs from what is shown in table 1.

Source: Job Mobilities and Family Lives 2007; pairfam (Wave 1, 2008/2009); own calculations; weighted data

To allow for a direct comparison, the population sample in the JobMob study was adjusted to correspond to the age groups (ages 25-27 and 35-37) used in the pairfam study (cf. tab. 2). As a result of the differences in the study design, the numbers of respondents in both studies differ significantly. For this specific age group, there are significantly fewer cases available for analysis in the JobMob study. Except for the age group of 25 to 27-year-olds in the JobMob study, the results from both studies are fairly similar. Moreover, the differences between the age groups in the pairfam study are minor. This result is surprising at first, because different mobility patterns were in fact expected for each age group. For example, we know from earlier studies that mobility decreases with age, especially when taking into

account residential types of mobility (e.g. *Schneider et al.* 2008; *Wagner* 1989). Consequently, the minor differences between the age groups in the pairfam study do indicate fewer age differences in circular mobility patterns.

In the following, we will conduct a comparative analysis of the correlation between mobility patterns and the different socio-demographic, regional, and partnership- as well as family-related criteria in both studies with the help of common consolidated indicators (cf. tab. 3 and 4).¹⁶ Considering the low number of Shuttlers, these have been included in the group of Varimobiles. Both of these groups combined constitute the category of Overnighters (cf. sect. 2.2).¹⁷

From previous studies, which were mostly based on the data found in the Job-Mob study, we know that the various socio-demographic groups do, in part, exhibit significant differences in mobility behaviour. For example, gainfully employed women are significantly less likely to travel as Long-distance commuters or Overnighters than is the case with men, presumably because more women dedicate themselves to housework and parenting than men do (e.g. *Schneider et al* 2002a/b; *Meil* 2010a/b). Furthermore, there are also indications that some forms of job mobility do correlate with an individual's education, the form of employment (part-time or full-time), and the individual's occupational prestige (e.g. *Schneider et al.* 2008; *Ruppenthal/Lück* 2009; *Lück/Ruppenthal* 2010).

By using comparative indicators, we will analyse in the following whether these correlations can be reproduced in a similar fashion in the pairfam study. Moreover, we will analyse information relating to the geographic context. Due to differences relating to the labour market and infrastructure, we should be able to find differences in the distribution structures between the different groups in eastern and western Germany (higher mobility demands apply in eastern Germany) as well as between groups in major cities and in rural areas/small towns. We will finally examine whether mobility arrangements differ, depending on partnership- and familyrelated criteria. For example, the assumption could be made that persons who need to deal with higher mobility demands are more limited in their ability to find a partner (*Rüger/Ruppenthal* 2010). At the same time, however, the fact that a person is in a relationship is often the reason for a specific mobility arrangement, for example, as a way to reconcile two professional careers (Rüger/Becker 2011). Therefore, the question that arises is whether there are differences between the different types of mobility in terms of a person's relationship status. Moreover, one could also argue that persons who give in to higher mobility demands might be less strongly tied to relationship or family (Sennett 1998), and therefore less likely to be in a committed relationship, i.e. be married. Relationships that are subjected to higher mobility demands may be more selective, meaning that individuals who have to deal with higher mobility demands show a tendency to have shorter relationships. Conse-

¹⁶ The category of "Other commuters" is not taken into account because there is no way to compare the two studies in this analysis (cf. sect. 2.2).

¹⁷ Because the group of "Overnighters" includes significantly more varimobile persons than Shuttlers, the relevant findings are more strongly considered for the first group.

quently, they may not yet have contemplated the possibility of entering into a more institutionalised relationship (such as marriage).

By the same token, a person may first want to meet certain basic conditions before deepening their relationship with another, such as having more time to spend together for planning their future. Self-imposed prerequisites of this kind, however, might be thwarted because of the couple's current mobility patterns. Similar arguments might apply to family development. As far as that is concerned, the JobMob data shows a correlation between an individual's mobility patterns and childlessness (e.g. *Meil* 2010a/b; *Rüger/Becker* 2011). We will first conduct a bivariate analysis to find an answer to the question of whether these and other tendencies could also be confirmed in the pairfam study results. In the next section, these assumptions will be examined based on criteria relevant to partnerships and family by applying multivariate analyses.

An assessment based on the age criteria is not directly comparable in the two studies. However, in both studies the relationship between the different mobility arrangements and the age groups (V=0.084 and V=0.049) is minimal. Based on the JobMob study, a trend can be identified (cf. tab. 3), whereby job-related commuting with longer commute times (long-distance commuting) is disproportionately high both among younger individuals (ages 25-34) and in the group of older respondents (ages 45-54). However, according to the JobMob study, middle-aged respondents (ages 35-44) are overrepresented in the category of Overnighters (Varimobiles and Shuttlers). As concerns the correlation between mobility and gender, both studies offer very similar results. The longer the commuting time, the higher the proportion of men in the respective group of people, or rather the more likely it is for the proportion of women to decrease. These results match the findings shown in the microcensus of 2004 (Statistisches Bundesamt 2005). In both studies, Long-distance commuters and Overnighters are clearly more often men. Thus, the general finding according to which job mobility is usually a "male phenomenon" (e.g. Schneider et al. 2008) could be confirmed.

These results were somewhat more pronounced in the JobMob study than the pairfam study. One explanation for the specific gender differences can be found in the different lifestyles and working conditions of men and women. Despite the growing significance of women in the labour market, women in Germany are still more often the partner responsible for housework and childcare (e.g. *Peuckert* 2008). Part-time positions, which often make it easier to balance family life and career, and which require job mobility far less often than full-time positions do (e.g. *Rüger/Becker* 2011), are consequently more often held by women than by men. Furthermore, a disproportionately higher number of men work in "mobile professions".

Regarding formal *educational status*, both studies show some similar correlations. In both studies, individuals with an elementary school or secondary school education are represented slightly more often among the group of Short-distance commuters. In addition, individuals with higher levels of education can mainly be found among those with a medium-distance commute. Particularly individuals with a university degree are more likely to be found in those groups with higher mobility demands compared to the group of Short-distance commuters. All in all, due to

	Total	Non- mobiles	Short- distance commuters	Medium- distance comm.	Long- distance commuters	•	V (p value) ¹
Age							
25-34	24.1	14.3	23.6	25.3	30.5	23.3	0.004
35-44	40.6	37.5	41.8	37.8	30.5	53.4	0.084 (0.035)
45-54	35.3	48.2	34.5	36.9	38.9	23.3	(,
Gender							
Male	55.8	57.6	50.9	57.7	63.9	83.8	0.169
Female	44.2	42.4	49.1	42.3	36.1	16.2	(<0.001)
Education							
Elementary school	22.1	20.7	23.8	14.7	20.9	18.9	
Secondary school	47.0	44.8	48.7	43.5	51.6	37.8	0.092
Upper secondary school	13.5	12.1	12.9	16.8	9.9	14.9	(0.005)
University	18.3	22.4	14.5	25.0	17.6	28.4	
Employment status							
Full-time	78.7	79.2	75.5	79.2	87.4	95.7	0.134
Part-time	21.3	20.8	24.5	20.8	12.6	4.3	(<0.001)
Occupational prestige							
ISEI (16-40)	43.6	28.1	49.0	32.2	39.8	46.2	0.405
ISEI (41-65)	38.5	45.6	33.3	50.6	46.2	32.3	0.125 (<0.001)
ISEI (66-90)	17.9	26.3	17.6	17.2	14.0	21.5	((0.001)
Geographic factors							
West	85.8	89.7	89.0	77.9	83.0	82.2	0.131
East	14.2	10.3	11.0	22.1	17.0	17.8	(0.001)
Population 100,000 or more	34.5	28.1	29.4	51.3	30.7	37.5	0 1 4 0
Population 20,-100,000	26.4	42.1	29.0	18.9	20.4	19.4	0.148 (<0.001)
Population up to 20,000	39.2	29.8	41.5	29.7	48.8	43.1	(
Relationship- and family-relate	d factor	rs					
Partner	79.6	74.6	79.7	79.7	81.4	80.6	0.032 (0.883)
Married	54.1	64.4	55.2	51.0	52.1	48.6	0.064 (0.307)
Childless	32.8	17.2	31.8	35.7	38.1	38.9	0.093 (0.040)

Tab. 3:Forms of circular mobility in the JobMob study, composition according
to key socio-demographic characteristics (in %)

¹ Calculation based on Chi-square and Cramer's V tests.

Source: Job Mobilities and Family Lives 2007; own calculations; weighted data; weighted N≥1,122

	Total	Non- mobiles	Short- distance commuters	Medium- distance comm.	Long- distance commuters	Over- nighters	V (p value)
Age							
25-27	42.0	34.6	43.6	41.8	41.5	41.9	0.053
35-37	58.0	65.4	56.4	58.2	58.5	58.1	(0.006)
Gender							
Male	55.6	55.8	50.7	56.6	60.2	76.3	0.148
Female	44.4	44.2	49.3	43.4	39.8	23.7	(<0.001)
Education							
Elementary school	18.4	19,8	20,7	14,5	17,9	14,5	
Secondary school	36,5	32,6	38,9	33,7	33,8	36,7	0.065
Upper secondary degree	19,6	22,0	18,3	21,6	19,6	19,1	(<0.001)
University	25,4	25,5	22,1	30,2	28,8	29,8	
Employment status							
Full-time	79.6	74.1	76.4	80.5	86.5	95.6	0.169
Part-time	20.3	25.9	23.6	19.5	13.2	4.4	(<0.001)
Occupational prestige							
ISEI (16-40)	46.8	49.5	49.3	41.8	37.7	48.7	
ISEI (41-65)	36.7	40.7	36.6	36.5	41.6	29.7	0.126 (<0.001)
ISEI (66-90)	16.6	9.8	14.1	21.7	20.8	21.5	(< 0.001)
Geographic factors							
West	83.2	85.5	85.2	82.3	78.8	75.5	0.084
East	16.8	14.5	14.8	17.7	21.2	24.5	(<0.001)
Population 100,000 or more	67.1	70.3	65.2	72.0	70.5	59.1	
Population 20,-100,000	20.9	18.9	22.3	17.4	16.0	27.3	0.062 (<0.001)
Population up to 20,000	12.0	10.7	12.5	10.6	13.5	13.6	(
Relationship- and family-relate	ed facto	ors					
Partner	76.2	73.4	77.6	74.0	75.6	76.9	0.041 (0.077)
Married	53.8	58.1	54.6	53.2	50.2	48.8	0.047 (0.073)
Childless	57.4	51.4	55.4	62.5	61.2	60.1	0.073 (<0.001)

Tab. 4:Forms of circular mobility in the pairfam study, composition according
to key socio-demographic characteristics (in %)

Source: pairfam (Wave 1, 2008/2009); own calculations; weighted data; weighted N=5,123, (the analyses refer to both age groups, which is why the combined weight dxpsweight was used here, see *Brüderl et al.* 2010).

the modestly strong correlations among the two samplings, it seems that groups organised by educational background obviously exhibit fewer differences in terms of their circular mobility behaviour than with regard to their residential mobility patterns (see e.g. *Schneider/Meil* 2008; *Schneider/Collet* 2010).

As concerns the employment status (part-time or full-time), both studies show very similar findings. The higher the mobility demands, the lower the proportion of persons working in part-time employment. Whereas especially among the group of Short-distance commuters, of which close to a quarter are part-time employees, this number is still slightly disproportionate, the percentage decreases all the way down to 4 % in the group of Overnighters. There are also some very clear patterns concerning occupational prestige. Since there is a positive correlation between commuting distances and level of income (Statistisches Bundesamt 2005), the number of Short-distance commuters was expected to be higher among respondents with a very low professional status as compared to the Medium-distance and Long-distance commuters. However, it is remarkable that both studies show a slight overrepresentation of individuals with the lowest but also with a higher professional standing in the group of Overnighters. Included here are occupations such as lorry drivers and assembly workers, who, despite their lower occupational status, must accept the fact that they are Overnighters by job. This observation points to a certain amount of heterogeneity within this form of mobility; this assumption had already been made by other studies (e.g. Schneider et al. 2009b; Nolle 2005).

When looking at regional differences between eastern and western Germany, it seems obvious that the hypothesis expressed above can be confirmed by both studies: While mobility requirements are less pronounced in the west of Germany, in the east Long-distance commuters and Overnighters are more common. This might result from different infrastructural systems as well as settlement patterns. In some cases, however, an increased "pressure to be mobile" on the labour market is the reason. This was further confirmed by previous findings, according to which (in eastern Germany especially), there are very few people who rejected the mobility requirement (Schneider et al. 2008). With regard to the correlation between certain mobility types and the number of inhabitants of a town or city, there are significant differences in marginal distribution: in the pairfam study, the largest group (67 %) lives in major cities with a population of 100,000 and more (in contrast to only 35 %in the JobMob study). In the JobMob study, the largest group of respondents lives in locations with population sizes of up to 20,000; this group in turn only made up 12 % in the pairfam study. Despite these differences in marginal totals which are caused by different populations, there are in part similar tendencies within the different regions by population size. In major cities, those people with shorter commuting times are underrepresented because of the characteristic inner-city traffic conditions, whereas the percentage of those with medium-long commuting times is higher as compared to the overall distribution. Even though in both studies respondents from smaller cities (20,000-100,000 people) were represented less often in the group of Long-distance commuters, the JobMob study showed that a comparatively high share of respondents from small towns or rural areas are Longdistance commuters. The majority of these individuals are most likely persons ages

40 and up who live "in the country" with their children and are willing to accept long commutes. However, the number of individuals who spend the night away from home varies between the studies; in the pairfam study, the majority of these live in medium-sized cities. In the JobMob study, results were exactly the opposite. One explanation for these findings could be that different, age-specific professions are represented in the group of Overnighters, which rather correlate with geographic/ regional factors.

When looking at *partnership- and family-related characteristics*, it seems that the share of individuals in relationships is about the same in both studies. People's partnership status seems to have only a minor influence on the type of mobility they represent. As far as an individual's marital status is concerned, there were only minor differences between mobility types in the two studies, as well; the only conclusion that can be derived, if any, is that in comparison to the overall population, persons with higher mobility demands, such as Long-distance commuters and Overnighters, are less likely to be married. Differences in childlessness were much more pronounced: there was a positive correlation between long commutes/high mobility requirements and childlessness. As can be expected, there are large differences between the studies in the number of people that were childless. In this regard, the pairfam study exhibits significantly higher numbers of childlessness due to its focus on younger age groups.

The potential relevance of circular job mobility for partnership- and family-related aspects will be examined more closely in the following section by conducting multivariate analyses.

3.2 Multivariate analyses: the ability to explain aspects of partnership and family development based on circular job-related spatial mobility

In addition to the descriptive analyses, which are merely able to supply an initial point of reference, comparative multivariate analyses will be conducted. From these analyses we expect to obtain differentiated results on a number of different issues. The objective is to examine whether different mobility arrangements have an effect on an individual's relationship status, the institutionalisation of a relationship, and family development in general. In particular, we will examine the correlation between different types of mobility and the likelihood of being in a committed relationship, being married, and having at least one child in the current relationship. The focus here is not to find any extensive explanation for an individual's relationship or family status. Rather, we want to find out by means of comparative analyses whether an individual's mobility patterns are correlated with the stated variables. Can the findings of the descriptive analyses be upheld if we control for key covariates that are linked to mobility patterns? It is absolutely possible, for instance, that the descriptive results shown may in fact be the result of correlations with other criteria rather than with the mobility status. Thus, in order to make our models more specific, it is crucial to include such covariates that are linked to circular mobility behaviour. That way, we will be able to gauge the effects of the various forms

of mobility as precisely as possible. Another objective is to find a simple way to structure the models so that they can be properly compared. Accordingly, we must incorporate those socio-demographic as well as spatial-structural factors that have already been shown as relevant in our descriptive analyses (cf. sect. 3.1). Moreover, we will model the interaction between mobility patterns and gender, in order to be able to illustrate any gender-related differences. Studies conducted in the past have repeatedly shown that mobility may involve different conditions and consequences for men and women, respectively (e.g. *Schneider et al.* 2002a/b; *Meil* 2010a/b; *Feldhaus/Schlegel* 2011; *Rüger/Becker* 2011). This aspect will be examined with regard to the target variables under study in this paper.

The basic sample population for all three issues under review constitute gainfully employed persons. When analysing the relationship status of participants, all respondents will be included in the survey (N=1,297 in the JobMob study; N=5,686 in the pairfam study). As far as the JobMob study is concerned, the category of "Other commuters" will be excluded from the analyses, so that it can be compared to the pairfam study (cf. sect. 2.2). For reasons of homogeneity, we will only take into account individuals who are currently cohabiting with their partner (N=971 or 841 for JobMob; N=4,390 for pairfam) when analysing the respondents' family development (childless or not) and the degree to which partnerships are institutionalised (marital status). Since their number is small, we will include the Shuttlers in the Overnighters group together with varimobile individuals (cf. sect. 2.2). Target variables are dichotomous details about whether the participant in question is in a relationship, whether the respondent is married, or whether the individual has children with their current partner (codes: no=0/1=yes).¹⁸ We will calculate binarylogistic regression models. The reference category relating to the other mobility forms is made up of the group of Short-distance commuters in each case. The odds ratios (e^b) are shown in the tables.¹⁹

Relationship status

With regard to the relationship status, the multivariate analyses do initially confirm the descriptive findings. Neither in the JobMob nor in the pairfam study has it become apparent that different types of mobility have any significant effect on the likelihood of having a partner (cf. tab. 5 and 6, model 1). In contrast, however, when including the interaction term into the analyses (cf. tab. 5 and 6, model 2), some significant effects become apparent, albeit weak ones. When comparing women

¹⁸ For pairfam, the attribution of whether children exist is provided as an exact variable, in Job-Mob, any children born after the current relationship began are attributed to this relationship.

¹⁹ As to the interpretation: A value above 1 shows a positive influence of the variables incorporated, a value below 1 indicates a negative influence (for categorical characteristics each as compared to the selected reference category). A value of 1.5 means, for example, that if an independent variable in the measuring unit the comparison is based on increases by one unit, the relative odds that the focused events might in fact occur is increased by a multiplier of 1.5 (*Backhaus et al.* 2003; *Jaccard* 2001).

who are Medium-distance commuters, Long-distance commuters or Varimobiles to women who are Short-distance commuters, the odds of them living in a committed relationship are lower as compared to the same comparison amongst men; this can be understood to mean that women with higher mobility arrangements are less likely to live with a partner as compared to women with lower mobility demands, or men. Furthermore, in the JobMob study, the observation has been made that men who commute long distances are more likely to live with a partner than men who commute short distances. Considering the coefficient for the gender effect (while at the same time accounting for the interaction term based on gender times mobility), it expresses the ratio between women and men (provided that the mobility variable equals zero, i.e. in this case both are Short-distance commuting short distances and the likelihood of them having a partner, whereas this correlation is not as pronounced for male Short-distance commuters (tab. 6, models 2 and 3).

Marital status

When looking at an individual's marital status and its correlation to their mobility behaviour, the two studies show similar results. Model 4 (tab. 5 and 6) illustrates a positive correlation between non-mobile individuals and their marital status, as compared to Short-distance commuters. In addition, in both studies there is a significant negative correlation between Overnighters and married persons; moreover, the correlations between any other types of mobility and the marital status, as compared to the reference category of short-distance commuting, are negative. If the interaction effect is included (cf. tab. 5 and 6, model 5), what is apparent, especially with regard to the pairfam data, is the gender-specific correlation that was assumed. Whereas the mobility patterns among men do not have an impact on the likelihood of whether or not they are married, women with more demanding mobility arrangements are married less frequently, both when comparing them to men in the same constellation and when comparing them to women who commute short distances. If we check further for any additional factors of relevance, at least the effect for women within the group of non-mobile persons as well as in the group of Overnighters remains unchanged (cf. tab. 6, model 6). In the JobMob study, the tendencies and the degree to which these tendencies manifest themselves are almost the same as those above. Due to the lower number of cases, however, they are not statistically significant.

Childlessness in current relationships

For the criterion of being childless (in the current relationship), the multivariate analyses confirm the descriptive results, even when checking for additional key factors of influence. In both studies, we find that effects are greater for more extensive mobility arrangements than for the reference group of Short-distance commuters. In contrast, non-mobile individuals are significantly less likely to be without children, as could be expected. When also accounting for the interaction term (cf. tab. 5 and

		Re	Relationship (0/1)	(1)		Married (0/1)		C	Childless (0/1)	
		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Non-mobile	Non-mobile (<i>Ref.: Short -distance commuters</i>) Modium distance comm (Pod - Short distance	.781	.522+	.534	2.368*	.804	.652	.278**	.513	.588
commuters)	median raistance comm. Inel.: Juoi raistance commuters)	.953	1.030	.995	899.	1.038	1.341	1.211	.881	.746
commuters)	19 CONTINU. (181 01/01/-013/01/CE	1.197	1.901+	1.941+	.724	1.015	1.035	1.745*	.977	1.008
Overnighters	Overnighters (Ref.: Short-distance commuters)	1.017	1.422	1.301	.557*	.683	.907	1.590+	.980	.783
Non-mobile*women	'women		2.626	2.170		(a)	(a)		.193	(a)
Medium-dist	Medium-distance comm.*women		.879	.950		.776	727.		1.747	1.672
Long-distanc	Long-distance comm. *women		.446+	.478		.511	.651		3.145*	3.349+
Overnighter*women	*women		.379+	.535		.463	.587		4.440*	3.980+
Women (Ref.: Men)	:: Men)	.912	1.032	.896	.968	1.076	.787	1.071	.766	1.502
Age 35-44 (Ref.: 25-34)	tef.: 25-34)			1.626**			5.511***			.085***
Age 45-54 (Ref.: 25-34)	tef.: 25-34)			1.636**			9.257***			.049***
Completed s	Completed secondary school (Ref.: elementary)			.670			.807			1.765
Upper secon	Upper secondary school <i>(Ref.: elementary)</i>			.905			.551+			3.336**
University de	University degree (<i>Ref.: elementary)</i>			1.034			.684			3.799**
ISEI (41-65) /	ISEI (41-65) <i>(Ref.: ISEI 16-40)</i>			1.011			1.122			.792
ISEI (66-90) /	ISEI (66-90) <i>(Ref.: ISEI 16-40)</i>			1.068			.995			.799
West (Ref.: East)	East)			1.107			1.161			5.223***
Full-time <i>(Re</i>	Full-time (<i>Ref.: part-time</i>)			2.185***			2.775***			.146***
Nagelkerke R ²	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.003	0.014	0.057	0.020	0.047	0.287	0.031	0.055	0.480

Source: Job Mobilities and Family Lives 2007; unweighted data; own calculations; binary logistic regressions; +=p<0.10; *=p<0.05; **=p<0.01; (a) Co-efficient cannot be determined because the target value is a constant (i.e. all non-mobile women are married or are mothers)

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	Rel	Relationship (0/1)	1)		Married (0/1)		U	Childless (0/1)	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Non-mobile <i>(Ref.: Short-distance commuters)</i>	668.	.853	.796	1.301*	1.070	.874	.693**	.859	1.078
Medium-distance comm. <i>(Ref.: Short-distance commuters</i>)	.833*	.973	.914	.983	1.217+	1.184	1.257**	.893	.914
Long-distance comm. <i>(Ref.: Short-distance</i> commuters)	.918	1.094	1.004	+608.	1.120	1.064	1.340*	.811	.819
Overnighters (Ref.: Short-distance commuters)	.970	1.052	1.028	.796*	1.072	1.146	1.445**	996.	.977
Non-mobile*women		1.142	1.147		1.503+	1.743*		.620*	.411**
Medium-distance comm.*women		.704*	.773		.649**	.828		2.004***	1.918**
Long-distance comm. *women		.646+	.756		.466**	.691		3.249***	2.620**
Overnighter*women		.785	.888		.360***	.421**		3.726***	2.701**
Women (<i>Ref.: men)</i>	1.333***	1.496***	1.371**	.983	1.175*	.956		.731***	1.213+
Age 35-37 (<i>Ref.: age 25-27</i>)			2.082***			7.245***			.091***
Completed secondary school (<i>Ref.: elementary</i>)			1.185+			.680***			1.603***
Upper secondary school (<i>Ref.: elementary</i>)			1.004			.564***			2.830***
University degree (Ref.: elementary)			1.324*			.612***			2.637***
ISEI (41-65) (Ref.: ISEI 16-40)			1.079			.916			1.464***
ISEI (66-90) (<i>Ref.: ISEI 16-40)</i>			1.286*			.925			1.226
West (<i>Ref.: East</i>)			1.161+			1.851***			1.978***
Full-time (<i>Ref.: part-time</i>)			868.			.476***			6.551***
Nagelkerke R ²	0.007	0.009	0.055	0.005	0.015	0.301	0.012	0.032	0.439

Circular job mobility and the correlation to relationship status, marital status (when living with a partner) and

Tab. 6:

6, model 8), it can be stated that especially women exhibit the following correlation: Women (as compared to men) with more demanding forms of mobility are represented much more often among the group of persons who are childless. These effects of being childless remain unchanged even if reviewed based on additional covariates that also show extremely significant effects. These analyses confirm existing findings that indicate that the mobility status of men is not to the same extent correlated to having or not having children. In contrast, highly mobile women show higher ratios of current childlessness when compared to the group of non-mobile women (*Schneider et al.* 2002b: 256; *Limmer* 2005; *Schneider et al.* 2008; *Schneider et al.* 2009b; *Meil* 2010a/b).

The analyses presented here can be used to clearly illustrate that circular job mobility can represent a relevant factor within the scope of relationship and family developments - especially inasmuch as women are concerned. In it, we have identified substantial effects for Long-distance commuters and particularly for Overnighters: while the effect on the partnership status is only minor, the likelihood of a person being married or being childless varies considerably depending on the mobility status. Highly mobile women, who often spend nights away from home for work reasons, are less likely to live in a highly institutionalised partnership (marriage) and to be mothers. When controlling for additional relevant factors, these effects decrease, yet they remain significant especially in the pairfam study that included a larger sampling size. The findings, according to which circular job mobility appears to more strongly influence whether an individual plans to start a family than whether he or she lives with a partner or is married, may possibly indicate cumulative effects. What is known is that in western Germany especially, highly institutionalised relationships are often seen as a prerequisite for a couple's decision to have children. In addition, the (absent) findings pertaining to a person's relationship status might also point to the opposite effect, that is, it could be found that an existing relationship might be a reason why individuals are more mobile (e.g. Schneider et al. 2008; Rüger/Becker 2011). Conversely, mobility may often be a reason for individuals to (unintentionally) remain single (*Rüger/Ruppenthal* 2010).

4 Discussion

This article examined three central objectives. In a first step, we developed a common indicator for circular job mobility patterns to be used in the two representative surveys "Job Mobilities and Family Lives in Europe" (JobMob) and "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam). Based on this common indicator, we were able to analyse the prevalence of a variety of mobility forms and their composition according to key socio-demographic criteria for both studies by means of a comparative analysis. In addition, we analysed correlations between the various forms of circular job mobility and partnership as well as family development.

Whereas a large number of analyses have been conducted in the field of mobility and family research in response to the European comparative JobMob study, this is not yet the case with regard to the data from the pairfam study. One particular feature of this article was its comparative approach, with the advantage being that the research results from the two studies have directly reinforced each other. In terms of the non-standardised constructs in social sciences, the opportunities available for comparison only exist to a minimal extent in different studies. Only very rarely are consolidated, comparative indicators used. However, comparative analyses are helpful as a means to review constructs in terms of their reliability and their generalisation potential. One important objective of this article was to ensure reliability and to make generalisations about the concept of circular job mobility.

As concerns the prevalence of individual forms of circular job mobility, overall there were only minor differences. About one out of two gainfully employed individuals in Germany commutes short distances and almost one in five commutes medium distances. One out of seven gainfully employed individuals have to deal with even more extensive mobility arrangements, such as long-distance commuting or the need to frequently spend nights away from their permanent place of residence. This proves that the prevalence of more comprehensive forms of circular mobility is by no means a marginal phenomenon in our society.

The correlations between mobility patterns and socio-demographic criteria in both studies are quite similar as well. For example, we have found a gender-specific distribution among the different forms of mobility and a correlation with education: persons with a lower level of education were more frequently Short-distance commuters, whereas individuals with a higher level of education exhibited longer commuting times and faced higher mobility demands. Regional and structural criteria played a role with regard to differences between eastern and western Germany. In the west, lower mobility demands were more common. By contrast, the labour market places higher mobility demands on employees in the east. These differences are most likely the result of infrastructural differences and differing levels of "mobility pressure" on the labour market.

Finally, on the basis of multivariate comparative analyses we were able to show that circular job mobility can have an impact on partnership and family development. Substantial effects were apparent in particular for the group of Long-distance commuters and Overnighters. However, this applies to a lesser extent to the likelihood of a person living with a partner. The assumption that singles especially are among those who deal with mobility issues to a greater extent could not be confirmed in either of the studies. However, both studies produced comparative findings indicating that the transition to marriage or to the process of starting a family within existing partnerships does strongly correlate with circular job mobility. Therefore, we have successfully confirmed that mobility plays an especially significant role once the partnership-related opportunity structure increases in importance. This, in turn, may affect the opportunities available in the day-to-day structuring of the relationship, the couple's closeness of interaction, the amount of time they can spend together, and factors that can be assumed to be irreconcilable with high mobility requirements, such as the birth of a child. This is particularly the case when more extensive forms of organising become necessary, for example a couple's ability to care for their children. To date, women are still more strongly affected by this than

men. Therefore, the empirical findings can also be summed up as follows: If circular mobility plays a role in the context of personal relationships and family, then this is particularly the case for women.

It should be emphasised that the comparative analyses presented here are cross-sectional. As a result, any causal explanations will clearly be limited. Therefore, future studies conducted on the basis of longitudinal designs seem promising. For example, when do changes arise within a person's life with regard to his or her mobility behaviour? What causal influence do the different forms of circular mobility have on the processes of institutionalising intimate relationships? How do intentions (e.g. with regard to starting a family) and decisions relating to the dynamics of the relationship change when mobility patterns change? These research questions, which should be conducted with the help of longitudinal study designs, may in fact play a role in decrypting the specific adaptation and selection processes relating to an individual's mobility behaviour and the associated steps and strategies a person takes to deal with partnerships and family-relevant aspects. Concerning the question of how relationships are formed and institutionalised, the use of this longitudinal data may allow us to pose the question much more clearly than ever before with regard to the correlation between the processes that determine the choice of a partner and the steps leading to institutionalising the relationship. Is mobility more often a barrier to partnerships or can it in fact be useful for a person's efforts to deal with certain demands that only arise within a relationship, such as the ability to synchronise two professional careers? As concerns the correlation between mobility and the processes involved in starting a family, preliminary longitudinal analyses show that when a person stops commuting medium or long distances, it indicates that there is an increased likelihood that the person intends to start a family. In the future, a greater amount of attention should be paid to these kinds of longitudinal analyses. Both studies now offer the relevant empirical foundation.

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