Workshop 3 - Migration, Residential Mobility, and Housing Policy

Residential mobility and migration of the separated

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ABSTRACT

Separation has become a rather common life event over the last few decades. It is a stressful event for those who experience it, not least because separation involves a residential move of at least one of the ex-partners. Separation is known to have a disruptive effect on the housing careers of those involved, mainly because a decrease in resources causes (temporary) downward moves on the housing ladder. Little is known about the geographies of residential mobility behaviour of the separated. Do the separated show distinctive geographical behaviour, in the sense of frequency, distance and direction of residential relocations? This paper investigates the hypothesis that the separated move more often than singles and people in intact couples, are less likely to move over long distances and move more often to cities than people in intact couples. Special attention was paid to gender differences, differences between those with and without children and whether any effect of separation on spatial housing careers is lasting or temporary. Applying hazard analysis on retrospective life course data for the Netherlands, this study shows that the separated move more often than others and this effect lasts up to five years after separation. Separated fathers move less often over long distance than married fathers. And moves of the separated are more often to cities than moves of people in a relationship, but not more often than moves of singles.
1. INTRODUCTION

In his classical work *Why Families Move* Rossi (1955) showed that there is a close relationship between household careers and housing careers in the life course. Life events like leaving the parental home, getting married and getting children all coincide with upward moves on the housing ladder. Rossi developed his analytical framework in the 1950s – the ‘golden age of the family’ – when household careers were relatively standard, with not much tolerance of deviant household behaviour. Nowadays there is much more variation in household careers, with a wider variety in life events and their ordering. These changes made household careers less stable and consequently also had an effect on the differentiation in housing careers (Mulder, 1993; Clark & Dieleman, 1996). In response, the theoretical paradigm within which households and their housing career are studied, has shifted from the family life cycle (Glick, 1957), via the ‘expanded life cycle’ (Stapleton, 1980), to the life course (Elder, 1985; Willekens, 1999).

One of the main causes of a wider variation in life courses is the rise in separation (marital divorce and the break up of a non-marital union). In most western countries, divorce rates increased strongly since Rossi wrote his influential book, especially during the 1970s. In the Netherlands, for example, of all marriages in 1971, about one in every eight was estimated to end in divorce, against approximately one in every three marriages in 2001 (CBS, 2006a). For a considerable part of the population, separation has become a rather common life event, especially when we also take the dissolution of non-marital consensual unions into account. Although exact figures are hard to find, we know that consensual unions get dissolved at a much higher rate than marriages (Liefbroer & Dykstra, 2000; Latten, 2004). The rise in separation has brought more instability in household careers, which also has its effects on housing careers.

Part of the existing research on divorce and housing is inspired by a concern about increasing housing demand and affordability problems in the housing market (Dieleman & Schouw, 1989; Van Noortwijk et al., 1992; Gober, 1992; Boheim & Taylor, 2000; Buzar et al., 2005). Separating couples place demand for one extra dwelling on the housing market. The extra housing demand resulting from separation/divorce was estimated at 40% in the early 1990s (Van Noortwijk et al., 1992). The majority of the separated looks for affordable, rented housing, a type of housing which is also demanded by (young) starters on the housing market. This increases pressure on this submarket and it has become increasingly difficult to satisfy the demand (Schouw & Dieleman, 1987; McCarthy & Simpson, 1991).

Research shows that a separation has a disruptive effect on the housing careers of those involved. Because of a drop in resources, the separated more often experience downward moves on the housing ladder: moves from owner-occupied to rented accommodation and moves to smaller and lower quality housing (Sullivan, 1986; Schouw & Dieleman, 1987; McCarthy & Simpson, 1991; Van Noortwijk et al., 1992; Feijten, 2005a). Especially the housing careers of women and one-parent families are negatively affected (Sullivan, 1986; Spain, 1990; McCarthy & Simpson, 1991; Poortman, 2000; Feijten, 2005a). The downward moves may impair the well being of the individuals involved (Anthony, 1997; Bratt, 2002; Gram-Hanssen, 2005) and may have a long lasting impact on peoples’ lives because they are not able to ‘repair’ their housing career in the years after the divorce.

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1 In this study, we use the term ‘separation’ to indicate the break up of both marital and non-marital unions. To define the moment of break up of marital unions, we use the moment of the *de facto* separation of the partners, and not the *de jure* dissolution of the marriage.

2 Calculated as the percentage of marriages that will end in divorce if the duration-specific divorce rates and death rates in a certain year would continue.

3 Divorce rates decreased slightly after 2001, but this decrease is masked by a juridical ‘escape route’ to divorce that has been an alternative to regular divorce since 2002. Marriages can be converted into ‘registered partnerships’ and subsequently, a registered partnership can be dissolved through a civil procedure; this trajectory goes a lot faster than a traditional divorce, and is therefore often called a ‘flash divorce’. If ‘flash divorces’ were included in the divorce rates, we would see that divorce rates remained fairly stable and even slightly increased last year (Van Huis, 2005; De Graaf, 2006).
Although we know a lot about the effects of separation on housing careers, little is known about the effect of separation on the spatial career of those involved (a recent exception is Flowerdew & Al-Hamad, 2004). The spatial career refers to the geographical aspects of the housing career in terms of the frequency, distance and direction of moves over the life course. Separation has an effect on the frequency of moves of the separated because at least one of the ex-partners will have to move. But also if that first move is left out of consideration, the separated are still likely to move more frequently. One of the reasons is that the move out of the joint home is often a leap downwards on the housing ladder, which necessitates at least one ‘adjustment’ move in order to recover to the old level of housing quality (McCarthy & Simpson, 1991; Dieleman & Schouw, 1989). The separated can also be expected to show different behaviour in terms of the distance and direction of their moves because of their specific household history, their drop in financial resources, their ties to children and other members of their social network, and their new living arrangement as a one-person or one-parent household.

Insight in the spatial careers of the separated is important because the group of housing consumers which ever experienced a separation is growing. If the separated do show different spatial behaviour compared to those who never separated, studying their behaviour might enhance our understanding of how housing markets function. The likely higher frequency of moving of the separated compared to other household types increases the general level of mobility on the housing market. Many of the separated become one-person households, but their spatial behaviour will probably differ from the spatial behaviour of the never-married or never-cohabitated singles. Thus, one-person households should not be regarded as one homogeneous group. Also when the separated form a new couple, their spatial behaviour might differ from those in couples who never experienced a separation.

This paper studies the frequency, distance and direction of moves of separated people. Use is made of the life course perspective as an analyzing framework. This is considered to be the most appropriate framework because the spatial behaviour of the separated is strongly determined by their past experience, and also by circumstances in parallel careers. It is very suitable for studying the extent to which past experience remains influencing spatial behaviour after the separation. Is the effect of separation on the spatial career lasting, or does it fade as time goes by, or when one patches up by repartnering? Hypotheses are derived from the life course approach and from empirical literature on separation and housing. The hypotheses are tested on retrospective life course data for the Netherlands, applying hazard analysis on discrete time data. We estimate several types of logistic regression models with time varying covariates to analyze the probability of moving, distance moved, and residential environments moved between.

2. BACKGROUND AND HYPOTHESES

2.1 Separation as a manifestation of differentiation of life courses

In the past decades, life courses have destandardized, as demographers and sociologists have pointed out (Rindfuss et al., 1987; Liefbroer & Dykstra, 2000). Twentieth century societal phenomena such as individualisation, strong economic prosperity and ‘manufactured uncertainty’ have been argued to underly the shift towards more differentiated and destandardized life courses. Demographers developed the theory of the Second Demographic Transition (Van de Kaa, 1994; Lesthaeghe, 1995), in which technical, social and cultural developments are put forward as causes for the destandardization of life courses. Among the sociologists, Beck’s theory on the Risk Society (1992), and the Modernization and Postmodernization theory (Inglehart, 1977; Giddens, 1991) use similar ingredients to explain the changes in twentieth century life courses.

The increased variety in life courses is often referred to as ‘differentiation’. Differentiation has increased on the one hand because norms on ordering of events and which events to experience have weakened (Settersten & Hägestad, 1996), and on the other hand because, as Winter & Stone (1999, p. 42) put it “individuals respond to socio-structural
uncertainties with an individual orientation rather than one derived from a collective consciousness or group norm about what one should be doing at a particular age”.

2.2 Trends in separation and divorce in Western countries

One of the most apparent manifestations of increasing differentiation and disorder in life courses is the rise in separation and divorce. Yearly divorce rates increased in the Netherlands from 3 to 10.5 in every 1,000 marriages between 1950 and 2001 (CBS, 2006b). Over the individual life course, the increase of these yearly aggregated rates indicates a strong increase in the probability that a marriage ends in divorce. Unmarried cohabitation unions get dissolved at even higher rates (Liebrot & Dykstra, 2000; Latten, 2004). European figures on divorce rates are shown in Figure 1. In North Europe divorce rates have stabilized or even decreased over the last decade. These countries were the early adaptors at the outset of divorce, and they are now again being the first in showing a stabilisation in divorce behaviour. In West and East Europe, divorce rates are more heterogeneous and in South Europe, divorce rates are still the lowest in Europe, but relatively speaking, they increased the most between 1990 and 2000. Figure 1 reflects the phases through which Western countries progress according to the theory of the Second Demographic Transition (Lesthaeghe, 1995), the Nordic countries being the furthest ahead in this development and Southern Europe the last.

FIGURE 1. Estimated number of marriages ending in divorce per 100 marriages starting in the given year

Source: Eurofound, 2005

2.3 Discontinuity and disorder in individual life courses

At the individual level, increased differentiation in life courses means that one event or state in a life course does not necessarily lead to a predefined following state, and acts involving a commitment do no longer guarantee continuity (Winter and Stone, 1999). Nevertheless, marriage has apparently not lost its attraction to large numbers of people. Cramer (2003) suggests that, although divorce rates have increased, it is still the intention and promise of security and continuity that draws people into marriage. Despite the societal trend towards more differentiation and destandardization of life courses, individuals still tend to be risk-aversive. People try to rule out uncertainty and one way of doing that is by making commitments (Becker, 1964; Feijten et al., 2003). Getting married, having a child and buying a home are among the life events bringing on the strongest commitments in a human life. Considering union formation, people starting a union invest in a relationship. If they start living together and ultimately if they marry, they reduce uncertainty by making a commitment and they express to choose continuity over uncertainty in their life course.

However, ever fewer people succeed in sticking to the commitments they made, as the increasing divorce rates show. Unmarried cohabitation has become a common alternative for those seeking a less committing alternative to marriage. It is often claimed that sociocultural norms regarding intimate relationships have slowly shifted from one single
monogamous relationship for life to serial monogamy. This implies that the majority of people experience one or more separations in their life, and that separation becomes almost just as common as union formation. It also implies that being separated is more often a temporary state from which one exits into a new relationship.

Although separation is more common nowadays, it is a stressful event for those who experience it (Holmes & Rahe, 1967). Undoing commitments comes at a high cost, not only financial costs but also social and emotional costs. This is especially true for dissolution of a marital union, because marriage is still a much larger commitment than a consensual union. One of the reasons why a separation is so stressful is because it not only disrupts the relationship career, but also strongly affects parallel careers, such as the fertility career, the labour market career, and the spatial career. Changing house as a result of separation is often experienced as very stressful, because it tears people (especially children) away from a place filled with memories of better times (Anthony, 1997).

2.4 Consequences of separation for spatial careers
Since spatial and residential mobility are closely related to life events and life course stages, the increased differentiation and disorder in life courses has also increased differentiation and discontinuity in spatial careers. Intact couples are likely to live in independent housing, often owner-occupied and of the single-family type. And when these couples move they are likely to move up the housing ladder. Separation has been shown in several studies to increase differentiation in the type of housing where people live, compared to people in intact couples. Those who separate are more likely than intact couples to move down the housing ladder: moves from large to small dwellings, moves from owner-occupation into rented housing and from single-family dwellings into multi-family dwellings. Women have been shown to be more vulnerable in the long run than men, especially when they are homeowners, because they keep running the risk of falling out of homeownership for years after the divorce (Feijten, 2005a). For both separated men and women moving back to parents and moving in with friends are common (temporary) living arrangements. Those who separate are likely to leave their independent dwelling and move to less independent living arrangements. This is considered as a serious disruption of their housing careers. In Great Britain, 61 % of the women who separated in 1976 ended up in shared housing after separation while only 14% lived in shared housing before the separation (Sullivan, 1986). For The Netherlands, Schouw and Dieleman (1987) showed that in 1981 37% of men and women moved into shared housing after a separation.

Besides the consequences of separation for housing careers in terms of housing quality, we also expect separation to have an effect on the spatial aspects of housing careers and the frequency of moves. This expectation rises from the fact that moves triggered by separation are deviant compared to moves triggered by other life events in three different ways. First, they are urgent. A couple that has decided to split up usually wants to effectuate that decision as soon as possible. This implicates that they will settle for almost any housing, even if it is rather poor compared to the housing they leave, or even if it is not located where they prefer. A recent comparative study has found that especially men suffer from a break up in terms of housing and access to durable consumer goods immediately after the break up (Aassve et al., 2006).

Second, they are often restricted in financial terms. People who separate are financially afflicted often in multiple ways: they cannot benefit from economies of scale anymore, and in case both partners worked, their new household has only one instead of two incomes. A considerable share of women is still left without any income after a divorce because they do not have any independent source of income. But even if women have their own source of income, the gender wage gap on the labour market causes women on their own to be worse of then men (see Poortman, 2000; Manting & Bouman, 2004 for evidence for the Netherlands; Jarvis & Jenkins, 1999 for the UK; and Bröckel, 2005 for Germany). The worsened economic position of women can be very persistent and long lasting. Manting and Bouman (2004) showed that in the first five years after marital break up many women are deprived and only slowly patch up. Repartnering helps in regaining a better economic position.
for women, but not for men (that is mainly because men do not suffer much economically from divorce in the first place).

Third, moves triggered by separation are spatially restricted, especially when the couple had children. Usually one of the ex-partners gets custody over the children and a visiting arrangement is settled for the other parent. This means that the non-custody parent has to live at such a distance to the children that it is feasible to see them on a regular basis. Also, their housing has to be suitable for having children around, especially when children stay overnight. In the Netherlands, around 82% of minor aged children live with the mother and only 11% with the father. Over the last decades, the frequency of contact between minor children and non-custody fathers has increased (Fokkema et al., 2002). Nowadays around 60% of non-custody fathers see their children at least once a week, and around 28% of non-custody fathers have their children sleep over at least one night a week.

These special characteristics of housing moves resulting from separation leads to a set of hypotheses about the frequency, distance and direction of moves by separated people. The first hypothesis is that we expect that separated people move considerably more often than singles and people in intact couples. Some older studies have found this to be true for the first years after the dissolution of marital unions (McCarthy & Simpson, 1991), but we will test it also for cohabitants, and for a longer period after the separation. The first and obvious reason for high mobility after separation is the move implied by the separation itself, because separation requires at least one of the partners to leave the joint home. Secondly, often at least one or more ‘adjustment’ moves have to be made in order to recover to the old level of housing quality. If people moved in with family or friends directly after separation, this is very likely to be a temporary situation. Some people will manage to find decent housing soon afterwards, but for others it may take longer before their housing situation is satisfactory for them. Thirdly, the frequency of moving is expected to increase because of moves to live with a new partner. As a reverse case of separation, cohabitation with a new partner requires a move of at least one of the partners in order to live together.

The second hypothesis is that we expect that separated people are less likely to move over long distances than singles and people in intact couples. Firstly because a move resulting from separation is purely a push-triggered move. There is nothing that pulls the separated to a new place (except, perhaps, in cases when one wishes to live somewhere else, in order not to be reminded of the broken relationship). The separated will often have strong ties and large place utility in the place where they lived before the separation (Wolpert, 1965; see also Bonney et al., 1999). They are likely to be embedded in social and institutional networks, and therefore there is no reason to leave the place, only to leave the joint home. Thus, they are likely to stay close to their previous home, so that they can maintain their location specific capital. When a separated person has children who stay with their ex-partner, this is an extra factor which is likely to hamper long distance moves. When a separated parent without custody wants to see his or her children regularly, they can not live too far from their children. Because men less often get custody, they are most likely to be restricted in moving distance.

The third hypothesis is that we expect separated people to move more often to (or stay in) cities than people in intact couples. There are several reasons to believe so. A very practical aspect is the greater availability of affordable housing in cities. Spain (1990) found that female headed households with children were strongly overrepresented in central cities in the US, which is likely to be because of the affordable, low quality housing available there. From a social-emotional point of view, separated people may prefer to live in a place with more anonymity and a more tolerant moral climate. And finally, but perhaps just as important, cities offer a wide range of jobs (Van Ham, 2002), distractions and a large pool of potential new partners. The growth of one–person households in inner cities like the inner city of London is attributed to urban amenities like these (Hall & Ogden, 2003). Suburbs are, by contrast, the place typically for families. Separation may lead to a move out of the suburb into the city, thereby creating discontinuity in the spatial career because most moves of households with children are directed from the city to more child-friendly suburbs. Discontinuity and downward housing moves can be made up for through repartnering, mainly for women. Sullivan (1986) showed this to be true for housing quality, and South & Crowder (1998)
found a multiplication in probability of moving from a poor to a non-poor neighbourhood for single mothers who (re)marry compared to those who do not (re)marry. This leads us to expect that when the separated start a new relationship, they may have an increased probability of moving (back) to the suburb.

3. DATA AND METHOD

3.1 Data
For this study we use survey data from three merged retrospective life course surveys with a large set of overlapping variables. For all three data sets, information was collected about respondents’ past life concerning family, relationships, work, education and housing, by means of structured face-to-face interviews. The data of the SSCW survey and the Netherlands Family Survey 1993 was collected in 1993 and the data of the Netherlands Family Survey was collected in 2000. Respondents who did not yet leave the parental home for the first time were excluded from the analysis. Also some respondents for which vital information on their life course was missing were excluded. This resulted in a total of 4,102 available life courses for our analysis. In order to control for measurement differences between the surveys, we included dummies to indicate the separate datasets in our multivariate analyses. Because no significant differences showed up these dummies were not included in the final models.

The main careers of interest were the relationship career and the spatial career. An adequate way of capturing change over time in these life careers is by reshaping the available respondent-file into a person-period file. For each respondent we created a separate case for each year since leaving the parental home up to the moment of interview. This resulted in a dataset with a total of 103,239 person years. Only person years after people left the parental home were included because we only want to analyze independent spatial careers. Spells of return to the parental home, for example after a separation, are included. All independent variables are time-varying, which means that their score can vary between person years, for example to indicate whether or not people have children. Appendix 1 contains descriptives and frequencies of the variables used in the multivariate models.

The dependent spatial variables indicate the frequency of moves, the distance of moves and the direction of moves. The frequency variable indicates whether people have moved in a person-year or not. The distance-variable indicates whether the distance covered in a move was more or less than 40 kilometres. It was decided to use 40 kilometres as the dividing line for short and long distance moves, because distances over 40 kilometres often imply that people move out of their usual daily activity space. The direction-variable has three categories: moves to a city (municipalities of more than 100,000 inhabitants), moves to a suburb (the immediate area around cities) and moves to rural areas (the rest of the Netherlands). The categorization is displayed in a map of the Netherlands in Appendix 2.

For the purpose of the analysis several categories of living arrangement were defined: ‘single’ (= always lived alone), ‘in first relationship’ (either married or unmarried cohabitation), ‘separated/divorced’ (living previously with a partner but now living alone), ‘widowed’ (now living alone but formerly living with a partner who has since deceased) and ‘in higher order relationship’ (now living with a partner but experienced at least one union dissolution, either through divorce, separation or widowhood). For the frequency hypothesis, we were especially interested in the duration effect of separation. Therefore we included an interaction term between living arrangement and duration of the living arrangement. For the distance hypothesis, we were especially interested in the hypothesised spatial restrictions for non-custodial fathers, so we included an interaction between living arrangement, gender and presence of children (either or not having children aged 12 or younger). For the direction hypothesis, we discerned people initially living in cities and people initially living outside cities by running separate models for these groups.

Several control variables were included in the models: gender, ten-year birth cohort, age and age squared (divided by mean age to prevent the coefficient from being too small to


display), work situation, educational level (low, middle and high), socio-economic status (measured on the International Socio-Economic Index, see Ganzeboom et al., 1992), tenure of the previous home (owner-occupied or other), and address density of the previous place of residence (addresses per square km / 1,000).

3.2 Method

Our analyses are divided in three parts. In the first part we analyse the frequency of moving, in the second part we analyse the moving distance and in the third part we analyse the direction of moves. Each part of the analysis consists of a bi- or trivariate contingency table analysis followed by a multivariate regression analysis. The contingency table analyses give a first impression of how spatial events are distributed over living arrangements, and the multivariate analysis subsequently provides more insight in the determinants behind the observed distributions. The contingency table analyses are presented in graphs. The multivariate analyses are discrete time hazard analyses. We expressed each of our hypotheses as a probability of experiencing a certain event or not, indicated by a categorical response variable, that is, per hypothesis:

1. frequency: if people move (1) or not (0);
2. distance: if people move short distance (1), long distance (2) or not at all (0);
3. direction: (a) if people move within the city (1), move out of the city (2) or do not move at all (0) and (b) if people move within the suburban/rural area (1), move to the city (2) or do not move at all (0).

The first hypothesis was analyzed using a logistic regression model, and the second and third hypotheses were analysed using multinomial logit regression models. In all models explanatory covariates on the relationship history and a number of other background characteristics and contextual indicators were included. Because respondents can experience more than one move over their life course, observations are clustered within respondents and are therefore not independent. Ignoring this in our models would bias the outcomes and cause the standard errors to be too small. By applying a Huber White estimator in the multivariate analyses, we control for interdependency of observations within respondents, and obtain correct standard errors (Huber, 1967).

4. ANALYSIS

4.1 Frequency of moving

To get a first impression of the moving frequency of the separated, we calculated a frequency-of-moves to duration-of-living-arrangement ratio. This ratio expresses the average number of moves made per year people spent in a living arrangement (right censored for living arrangements that last up till the survey moment). The left ‘first year separated’ bar in Figure 2 shows that separated people move on average 1.7 seven times in the year of separation. Obviously, part of these moves are moves in order to get separated –so-called synchronized moves, moves which coincide with another demographic life event– but the remaining part consists of subsequent moves. Because we know that some of the separated stay in the former joint dwelling (Flowerdew & Al-Hamad, 2004; Schouw & Dieleman, 1987), this mean value of 1.7 implies that others move even two or three times in the year of separation. Figure 2 shows that the frequency of moving declines every year after the separation, but it takes five years until the moving frequency is comparable to those in their first relationship. The separated thus move much more often than people in other living arrangements. Separate analysis showed that this is true for both men and women (not shown).
As said, part of the moves in Figure 2 are ‘synchronized moves’ – moves in order to become separated, or married, or to move in with a new partner. To get insight in the level of spatial mobility that remains when we leave these synchronized moves out of consideration, we repeated the analysis excluding ‘synchronized moves’ as displayed in the bars on the right in Figure 2. The general pattern is roughly the same as displayed in the bars on the left, only the frequencies are lower. Yet it gives interesting additional information, because it shows that even when the synchronized move is excluded, separated people still have a high moving frequency in the year of separation. The overall conclusion is that the effect of separation on moving frequencies on average lasts for about five years. Five years is apparently the average period that people need in order to patch up from the breach in their housing career caused by separation.

Because the high moving frequency of the separated may partly be caused by particular characteristics they have, we analyzed the risk of moving in a multivariate hazard model as shown in Table 1. In a logit model on person years the effect of personal and household characteristics on the odds of moving compared to not moving are estimated (including synchronized moves). The most important effects are the effects of living arrangement. The model shows that controlled for background and contextual variables, the main effect of separation on the probability of moving is positive and significant, compared to people in a first relationship (reference category). The separated thus show a consistently higher moving propensity than others, which replicates our bivariate finding. People in a higher order relationship are also shown to move significantly more often than people in a first relationship. The main effect of duration of a living arrangement shows that the longer people are in a living arrangement, the lower their risk of moving (negative significant effect of duration). The interaction effects between living arrangement and duration show that the duration effect is even stronger for the separated (negative effect of interaction effect separated-duration). So, for the separated, the risk of moving declines quickly with every year after the separation.

Figure 3 shows the relative risks of moving by living arrangement and duration by living arrangement. These are calculated from the main effects and interaction effects of living arrangement and duration in Table 1. Figure 3 shows that separated people initially have the highest risk of moving, almost twice as high as for people who are in their first relationship. In the years after, the risk of moving for the separated decreases at a fast pace. After the fourth year, the moving risk of the separated becomes lower than the risk for people in a first relationship. This finding is comparable to the one in the bivariate analysis, so it seems that the moving risk of the separated is mainly affected by the act of separating and the
state of being separated, and not so much by other personal or contextual characteristics we controlled for.

The effects of the control variables in Table 1 correspond to findings from existing studies. Moving probability decreases with age (with a reverse effect at higher ages; maximum of the parabola lies at 54 years) and is lower for homeowners and people with young children. Moving probability increases with socio-economic status, educational level, and address density. There is no clear effect of birth cohort on moving frequency.

**TABLE 1. Logit regression of moving probability (ref = no move)**

|                                | Coef. | S.e.  | Exp(B) |
|--------------------------------|-------|-------|--------|
| Living arrangement (ref = in first relationship) |       |       |        |
| Single                         | -0.924| 0.060 | 0.397  |
| Separated                      | 0.646 | 0.130 | 1.907  |
| in higher order relationship   | 0.341 | 0.124 | 1.406  |
| widowed                        | -0.567| 0.318 | 0.567  |
| Duration of living arrangement | -0.060| 0.004 | 0.941  |
| Interaction type of living arrangement * duration of living arrangement |       |       |        |
| single                         | 0.051 | 0.004 | 1.052  |
| separated                      | -0.144| 0.034 | 0.866  |
| in higher order relationship   | -0.019| 0.017 | 0.982  |
| widowed                        | -0.016| 0.041 | 0.984  |
| Female                         | 0.050 | 0.032 | 1.051  |
| Birth cohort (ref = before 1935) |       |       |        |
| 1935-1944                      | 0.073 | 0.048 | 1.076  |
| 1945-1954                      | 0.140 | 0.047 | 1.151  |
| 1955-1964                      | 0.050 | 0.048 | 1.051  |
| >=1965                         | -0.047| 0.067 | 0.954  |
| Age                            | -0.077| 0.012 | 0.926  |
| Age squared / mean age         | 0.024 | 0.006 | 1.024  |
| Work situation (ref = working) |       |       |        |
| in education                   | -0.052| 0.058 | 0.949  |
| otherwise not working          | 0.021 | 0.048 | 1.022  |
| unknown                        | -0.249| 0.175 | 0.779  |
| Educational level (ref = low)  |       |       |        |
| Middle                         | 0.272 | 0.037 | 1.313  |
| High                           | 0.502 | 0.045 | 1.652  |
| unknown                        | 0.003 | 0.203 | 1.003  |
| Socio-economic status (ISEI/10)| 0.052 | 0.010 | 1.053  |
| Children under age 13          | -0.168| 0.029 | 0.845  |
| Owner-occupied home            | -1.140| 0.036 | 0.320  |
| Address density                | 0.032 | 0.007 | 1.033  |
| Intercept                      | -0.004| 0.218 | 0.996  |

N 84338
Wald chi2 (df=26) 3721.3
Pseudo R2 0.110
FIGURE 3. Relative risks of moving by living arrangement and duration of living arrangement

![Graph showing relative risks of moving by living arrangement and duration of living arrangement.]

4.2 Distance of moves
Figure 4 shows mean and median moving distances in kilometres, by living arrangement. For all living arrangements, the mean moving distance is much higher than the median moving distance. This is because most moves take place within the municipality, so over relatively short distances. Separated people move on average over shorter distances than people in other living arrangements, including those in a first relationship. However, the median moving distance of the separated is somewhat higher compared to people who are in a first relationship.

The different pattern for mean and median moving distances of separated people indicates that the separated move over somewhat longer distances than people in a first relationship, but that they hardly make moves over really long distances (which those in a relationship do). That the separated move over somewhat longer distances may be caused by the urgency of the separation move. At the moment of separation people do not have much choice of housing or location, and they cannot wait until a better opportunity comes by, so they will often accept housing that is not as close as they might prefer.

To further explore if the separated less often move over long distances, we calculated the percentage of moves over more than 40 km. For this analysis, we left out the widowed due to too few observations. We broke down the figure by child status, in order to test our hypothesis on spatial restrictions of separated people with children. Because it is thought that separated men with children are the most restricted in their moving behaviour because children often live with the mother, we further broke down the figure by gender. It has to be noted that we do not know from the data with which parent the children live after the separation. The results in Figure 5 show that only 5.3% of separated men with children move over long distance. Men with children in the other living arrangements are much more likely to move over long distance (single men with children 18.8%; men in first relationship with children 18.5%; and men with children in higher order relationship 20.5%). Separated fathers are also less likely to move over long distance compared to separated men without children (14.0%). So, even though fathers after separation may not move to a house right around the corner (given the median distance of 8.4 kilometres in Figure 4), they rarely move really far away from their children. This facilitates weekly contact between fathers and children. Figure 5 also shows that all categories of separated people (either man or women, with or without children) are less likely to move over long distance compared to other living arrangements. This confirms our hypothesis that the separated are tied to their old location of residence, and
find a new home in the same area, which allows them to retain social networks and other location specific capital.

**FIGURE 4.** Mean and median moving distance in kilometres, by living arrangement

![Figure 4](image)

**FIGURE 5.** Percentage of long distance moves (>40 km) of all moves, by living arrangement, sex and child status

![Figure 5](image)

Spatial ties become more complicated when people repartner after separation, as can be seen in the bottom four bars in Figure 5. Those in higher order relationships are more likely to move over long distance compared to the separated, but still less often than their counterparts in a first relationship. We expected separated men who start a new relationship and who have children living with their ex-wife to be the least likely to move over long distance because they are still tied to the place of residence of their children. This however, is not supported by the outcomes, because we see that fathers in a higher order relationship move much more
often over a long distance than separated fathers (20.5% versus 5.3%). The result might be caused by the fact that the category ‘men with children in higher order relationship’ contains both men who have children with their ex-partner and men who have children with their new partner (and men who have children with both). Unfortunately, the data do not allow us to discern between these groups, but it could be expected that they display different moving behaviour.

In Table 2 we present a multinomial logit regression model where we estimated the probability of moving over short and long distance, both compared to the probability of not moving. As we are mainly interested in the probability of long distance moving, we discuss the effects on the probability of a long distance move first. The probability of moving over long distance differs between people depending on their living arrangement, gender and whether they have young children or not. Although not many effects are significant the direction of the results still gives an indication of differences between groups. The differences are easiest to interpret from Table 3, where relative risks are displayed for each subgroup (all risks relative to the risk of males with children in their first relationship). There we see that separated people have higher probabilities of moving over long distance except for men with children. This finding corresponds with the findings from Figure 5. So, even after we control for background characteristics, separated men with children are less likely to move over long distances. The results for the other categories of separated were altered by the control variables. In the graph, the separated had lower percentages of moves over long distance than the reference category, but in the multivariate analysis their relative risk of moving over long distance is higher. The same is the case for people in a higher order relationship; their relative risks of moving over long distances are the highest. This is likely to be partly the effect of the move in with the new partner. The high relative risk of men with children in a higher order relationship is unexpected, because a part of this group was expected to be spatially restricted if their children live with their ex-wife (see also the discussion on this group in the trivariate analysis). Lastly, singles without children have the lowest probability of moving over long distance. This is somewhat surprising, because it is often argued that singles more often migrate for work or study reasons because they are not tied by any household members.

When we look at the results for short distance moves, we see that compared to the reference category (people in first relationship with children) the separated and those in a higher order relationship are more likely to move over a short distance. Women have an overall lower probability of moving over short distance. This gender effect does not vary between living arrangements, except for childless single females; they have a higher probability of moving over short distance than their male counterparts.

The effects of control variables are mostly in the expected direction. Younger birth cohorts have an increasing positive effect on short distance moves and an increasing negative effect on long distance moves. With age, the probability of moving over short and long distances decreases. A high socio-economic position (educational level and ISEI score) increases the probability of both types of moves, but stronger so for long distance moves. Homeowners have a small likelihood of moving over both short and long distances; homeownership makes people generally immobile, as we also know from the literature (Clark & Dieleman, 1996). Living in a densely populated area does not affect the probability of a long distance move, but it increases the probability of a short distance move. This is probably attributable to the wider choice in dwellings in densely populated areas.
### TABLE 2. Multinomial logit regression of probability of moving over short or long distance (ref=no move) interaction effects between living arrangement, sex and child status

| Relationship situation + child-under-12 status (ref = first relationship, with children) | Short distance move | Long distance move |
|---------------------------------|--------------------|--------------------|
|                                 | Coef. | S.e. | Exp(B) | Coef. | S.e. | Exp(B) |
| single, no children             | -0.692 | 0.069 *** | 0.501 | -0.670 | 0.128 *** | 0.512 |
| single, with child(ren)         | -0.231 | 0.307 | 0.794 | 0.117 | 0.515 | 1.124 |
| first relationship, no children | 0.184 | 0.044 *** | 1.202 | 0.117 | 0.098 | 1.124 |
| separated, no children          | 0.613 | 0.112 *** | 1.846 | 0.506 | 0.273 * | 1.659 |
| separated, with child(ren)      | 0.760 | 0.266 *** | 2.139 | -0.435 | 0.771 | 0.647 |
| higher order relationship, no children | 0.705 | 0.150 *** | 2.025 | 0.245 | 0.401 | 1.278 |
| higher order relationship, with child(ren) | 0.485 | 0.214 ** | 1.625 | 0.842 | 0.402 ** | 2.320 |
| Female                          | -0.106 | 0.053 ** | 0.899 | 0.007 | 0.119 | 1.007 |

Interaction relationship status * child status * sex (first relationship, no children, male)

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| single, no children, female     | 0.358 | 0.092 *** | 1.431 |
| single, with child(ren), female | 0.210 | 0.371 | 1.234 |
| first relationship, no children, female | 0.028 | 0.062 | 1.028 |
| separated, no children, female  | 0.019 | 0.156 | 1.019 |
| separated, with child(ren), female | -0.168 | 0.317 | 0.845 |
| higher order relship, no ch., female | 0.312 | 0.232 | 1.367 |
| higher order relship, with ch., female | -0.241 | 0.328 | 0.786 |

Birth cohort (ref = before 1935)

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| 1935-1944                        | 0.100 | 0.050 ** | 1.105 |
| 1945-1954                        | 0.208 | 0.049 *** | 1.231 |
| 1955-1964                        | 0.199 | 0.050 *** | 1.221 |
| >=1965                          | 0.053 | 0.070 | 1.055 |

Age / mean age

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| 0.006                           | 0.007 | 1.006 |

Work situation (ref = working)

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| in education                     | 0.005 | 0.063 | 1.005 |
| otherwise not working           | 0.148 | 0.052 *** | 1.160 |
| unknown                         | -0.073 | 0.196 | 0.930 |

Educational level (ref = low)

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| middle                          | 0.252 | 0.038 *** | 1.287 |
| high                            | 0.470 | 0.046 *** | 1.601 |
| unknown                         | 0.147 | 0.191 | 1.158 |

Socio-economic status (ISEI/10)

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| Owner-occupied home             | -1.183 | 0.039 *** | 0.306 |
| Address density                 | 0.040 | 0.008 *** | 1.040 |

Intercept

|                                 | Coef. | S.e. | Exp(B) |
|---------------------------------|-------|------|--------|
| Interception                    | -0.323 | 0.230 | 0.745 |

N 83739
Wald chi2 (df=58) 3875.7
Pseudo R2 0.095

Note: widowers are left out due to too few observations

### TABLE 3. Full interaction effects on probability of moving over long distance, calculated from the above model

| No children | Child(ren) |
|-------------|------------|
| Male        | Female     | Male        | Female     |
| Single      | 0.51       | 0.47       | 1.12       | 1.41      |
| In first relationship | 1.12       | 1.18       | 1.00       | 1.01      |
| Separated   | 1.66       | 1.38       | 0.65       | 1.82      |
| In higher order relationship | 1.28       | 2.99       | 2.32       | 1.75      |
4.3 Direction

The third hypothesis we wanted to test is about the direction of moves. Our expectation was that the separated move relatively often to the city, or, if they already live in the city, stay in the city, compared to people in other living arrangements. Figure 6a shows for movers who already live in the city, the percentage of them who stay in the city, who move to the suburb, and who move to a rural area, broken down by living arrangement. The vast majority of urbanites who separate stay in the city (around 86%). Only just over 8% moves to the suburb and almost 6% moves from the city to rural areas. Moving singles also tend to stay in the city (almost 77%) and those who move out of the city more often move to the rural area than to the suburb. Of the moving urbanites in a relationship, almost 68% stays in the city and the rest moves in about equal shares to the suburb and the rural area.

**FIGURE 6a.** Moves to city, suburb and rural area from the city, by living arrangement (N=6430)

![Chart showing moves to city, suburb, and rural area](chart.png)

When we look at the destination of those who move from the suburbs (Figure 6b), we see that moves to the city are most common among singles (almost 30%) and those who are separated (20%). The percentage staying in the suburb is the highest among the separated. This is probably due to the general tendency of the separated to move mainly over short distances (see distance analysis). The percentage of moves to the rural area is much lower for the separated (almost 11%) than for the other living arrangements (between 20% and 30%).

Lastly, we analyzed the direction of moves by people living in the rural area (Figure 6c). The vast majority of people living in the rural area remain in the rural area when they move, although, as could be expected, the percentages are lower for singles and separated than for people in a relationship. Almost 15% of the separated movers who live in rural areas, move to the city; that is over twice as often compared to people in a first relationship. Only singles move to the city more often (almost 19%), but that is probably partly due to education-related moves which are overrepresented among singles.
In general, the results show that the separated most often stay in the residential environment where they lived before the separation, but if they move to another residential environment, the city prevails. Although the presented analyses cannot reveal why we see this pattern, it is likely that it has to do with the housing stock and the socio-cultural climate in cities. The particular low incidence of moves to the rural area suggests this as well.

In the multivariate analyses presented in Table 4 and 5 we are mainly interested in moves from and to cities. The first model estimates for people living in the city the probability of moving within the city and the probability of leaving the city (Table 4). The second model estimates for those living outside the city the probabilities of moving to the city or moving to other parts of the country (Table 5).

Our general expectation was that separated people more often find a place to live in the city than in other residential environments. For those already living in the city, this means that they are expected to have a high probability of moving within the city and a low probability of moving out of the city. Indeed we see in Table 4 that among movers, the separated have a significantly higher probability of moving within the city and a lower probability of moving out of the city. The effect of being separated on moving out of the city is not negative, like we expected, but it is not significantly positive either. Probably the strongly increased moving frequency of the separated per se means that also a number of them leave the city when moving. The living arrangement variable further shows that being in a higher order relationship strongly increases the probability of moving out of the city. People who start a new relationship apparently often move (in) with their new partner to the suburbs or the rural area. This confirms our hypothesis that repartnering leads to moves to areas associated with family living. As housing and neighbourhood quality is generally perceived to be higher outside the cities, this finding also suggests that by repartnering people can redirect their housing career upwardly (which has also been found in other studies, e.g. South & Crowder, 1998).
FIGURE 6c. Moves to city, suburb and rural area from the rural area, by living arrangement (N=6392)

Other factors which increase the probability of moving out of the city are being female, being non-employed (compared to those with a job), having a middle or high level education (compared to those with a low level of education) and having a high socio-economic status. Urbanites who own their home are very unlikely to leave the city (their chance is about one quarter of the chance of urbanites who are renters). Lastly, we see that with increasing address density the probability to leave the city is lower. Partly, this will be the result of the fact that in large (and densely populated) cities there is a wider choice in housing, which increases the chance that a house is found in the city.
### TABLE 4. Multinomial logit regression of probability of moving within the city or out of the city (ref = no move).

| Relationship situation (ref = in first relationship) | Moving within the city | Moving out of the city |
|------------------------------------------------------|------------------------|------------------------|
| single                                               | Coef. 0.014 0.053     | Exp(B) 1.014 0.236 0.142 * 1.266 |
| separated                                            | Coef. 0.528 0.109 *** | Exp(B) 1.696 0.434 0.281 1.543 |
| higher order relationship                            | Coef. 0.569 0.165 *** | Exp(B) 1.767 1.355 0.346 *** 3.879 |
| Female                                               | Coef. 0.528 0.109 *** | Exp(B) 1.696 0.434 0.281 1.543 |
| Birth cohort (ref = before 1935)                     |                        |                        |
| 1935-1944                                            | Coef. 0.046 0.077     | Exp(B) 1.047 -0.188 -0.201 0.829 |
| 1945-1954                                            | Coef. 0.078 0.079     | Exp(B) 1.081 0.046 0.028 * 1.047 |
| 1955-1964                                            | Coef. 0.071 0.081     | Exp(B) 1.074 -0.530 -0.548 0.589 |
| >=1965                                               | Coef. 0.081 0.111     | Exp(B) 1.084 -0.677 -0.707 0.508 |
| Age                                                  | Coef. -0.081 0.023 ***| Exp(B) 0.922 -0.189 -0.190 0.828 |
| Age squared / mean age                                | Coef. 0.003 0.012     | Exp(B) 1.003 0.056 0.056 1.057 |
| Work situation (ref = working)                       |                        |                        |
| in education                                          | Coef. -0.136 0.099    | Exp(B) 0.873 -0.201 0.225 0.818 |
| otherwise not working                                 | Coef. 0.025 0.075     | Exp(B) 1.025 0.367 0.180 ** 1.443 |
| unknown                                              | Coef. -0.491 0.318    | Exp(B) 0.612 2.604 1.293 ** 13.514 |
| Educational level (ref = low)                        |                        |                        |
| middle                                               | Coef. 0.246 0.065 *** | Exp(B) 1.279 0.424 0.167 *** 1.528 |
| high                                                 | Coef. 0.436 0.077 *** | Exp(B) 1.547 0.499 0.198 *** 1.646 |
| unknown                                              | Coef. 0.198 0.262     | Exp(B) 1.082 0.682 0.454 0.506 |
| Socio-economic status (ISEI/10)                      |                        |                        |
| Children under age 13                                | Coef. -0.250 0.060 ***| Exp(B) 0.779 -0.012 0.131 0.988 |
| Owner-occupied home                                  | Coef. -1.203 0.088 ***| Exp(B) 0.300 -1.327 0.163 *** 0.265 |
| Address density                                      | Coef. -0.009 0.016    | Exp(B) 0.991 -4.833 0.288 *** 0.008 |
| Intercept                                            | Coef. 0.368 0.403     | Exp(B) 10.169 0.857 *** |

The probability of moving within the city is positively affected by being in a higher order relationship, being middle or high educated, and negatively affected by being single, having young children, rising age and being a homeowner. That singles have a lower probability of moving within the city than people in a first relationship is at first sight surprising. One would expect that the city is typically a place for one-person households, and that if one-person households move, they stay in the city. However, the effect found here merely reflects the generally low moving propensity of singles (because the effects must be interpreted relative to the probability of not moving). A low moving propensity among singles was already found in the analysis reported in Table 1. The same is true for being a home-owner; the negative effect on both the probability of moving within the city and moving out of the city merely reflects the generally low moving propensity of homeowners.
TABLE 5. Multinomial logit regression of probability of moving within the suburb/rural area or to the city (ref = no move)

| Moving within suburban/rural area | Moving to city |
|-----------------------------------|---------------|
| **Coef.** | **S.e.** | **Exp(B)** | **Coef.** | **S.e.** | **Exp(B)** |
| Relationship situation (ref = in first relationship) | | | | | |
| single | -0.532 | 0.070 | *** | 0.587 | -0.247 | 0.209 | 0.781 |
| separated | 0.615 | 0.094 | *** | 1.849 | 0.908 | 0.327 | *** | 2.480 |
| higher order relationship | 0.575 | 0.115 | *** | 1.778 | 0.529 | 0.465 | 1.697 |
| Female | -0.127 | 0.043 | *** | 0.881 | -0.036 | 0.181 | 0.965 |
| Birth cohort (ref = before 1935) | | | | | |
| 1935-1944 | 0.077 | 0.065 | | 1.080 | -0.066 | 0.288 | 0.936 |
| 1945-1954 | 0.119 | 0.062 | * | 1.127 | -0.426 | 0.271 | 0.653 |
| 1955-1964 | 0.096 | 0.065 | | 1.101 | -0.789 | 0.277 | *** | 0.454 |
| >=1965 | 0.185 | 0.092 | ** | 1.203 | -0.362 | 0.386 | 0.696 |
| Age | -0.118 | 0.016 | *** | 0.889 | -0.172 | 0.061 | *** | 0.842 |
| Age squared / mean age | 0.025 | 0.008 | *** | 1.025 | 0.034 | 0.031 | 1.035 |
| Work situation (ref = working) | | | | | |
| in education | 0.017 | 0.089 | | 1.017 | -0.077 | 0.303 | 0.926 |
| otherwise not working | 0.084 | 0.077 | | 1.087 | -0.268 | 0.241 | 0.765 |
| unknown | 0.089 | 0.290 | | 1.093 | -0.028 | 0.672 | 0.972 |
| Educational level (ref = low) | | | | | |
| middle | 0.287 | 0.046 | *** | 1.332 | 0.220 | 0.216 | 1.246 |
| high | 0.499 | 0.056 | *** | 1.647 | 0.527 | 0.254 | ** | 1.693 |
| unknown | 0.124 | 0.243 | | 1.132 | 0.894 | 1.190 | 2.445 |
| Socio-economic status (ISEI/10) | | | | | |
| Children under age 13 | -0.093 | 0.038 | *** | 0.911 | -0.209 | 0.157 | 0.811 |
| Owner-occupied home | -1.219 | 0.043 | *** | 0.296 | -0.710 | 0.203 | *** | 0.492 |
| Address density | -0.024 | 0.023 | | 0.976 | 2.519 | 0.092 | *** | 12.417 |
| Intercept | 0.742 | 0.282 | *** | -4.755 | 1.018 | | *** |

N 52275
Wald chi2 (df=40) 3112.11
Pseudo R2 0.181

Note: widowers excluded due to too few observations

Finally, Table 5 shows models of moving direction for those living outside cities. We expected people living outside the city who separate to have a high probability of moving to the city. Indeed, moving to the city is very likely for the separated; their chance of moving to the city compared to not moving is about 2.5 times as high as for people in a first relationship (significant) and also higher than for singles and people in a higher order relationship. It must be noted that their probability of moving within the suburb/rural area is high as well, which can be attributed to their generally high moving propensity. People who start a new relationship do not move to the city significantly more often than people in a first relationship, but they do move more often outside the city. This finding is in accordance with the finding from Table 4 that urbanites in a higher order relationship move more often out of the city; the area outside the cities is generally more attractive for people who start a household with a new partner than the city. The only control variable increasing the probability of moving to the city is being high educated. This is likely to be caused by the availability of high skilled work in cities (the escalator function of cities; Fielding 1992; Van Ham, 2002) and the appreciation of the high educated of the city as a living environment (see Feijten, 2005b).
5. SUMMARY AND CONCLUSION

With this study we showed that separation leads to distinctive spatial behaviour. First of all, the recently separated move much more often than people in other living arrangements. The effect lasts to up to five years after the separation. Also those in a higher order relationship move more often than people in a first relationship. Second, the mean distance of moves by the separated is slightly shorter compared to singles and people in a first relationship. The multivariate analysis revealed that it is mainly separated men with children whose probability of moving over long distance is low. We attribute this to the ties they have to their children, who usually stay with the mother after separation. Third, with regard to the type of residential environment people move to, the separated tend to stay in the residential environment where they lived before separation. If they change residential environment, moves to the city prevail, as we expected. Overall all our hypotheses were confirmed, although the results were more convincing for frequency and direction than for distance.

For all three aspects of spatial careers, the findings from the multivariate models did not differ much from the bivariate (or trivariate) findings. This indicates that living arrangement in combination with relationship history is a very robust determinant of spatial behaviour. We showed that no matter what type of person or in what circumstances, separation increases the moving frequency, mainly over short distance and often directed to the city. In the multivariate models, only socio-economic status and age had consistently significant effects, but these did not influence the effect of living arrangement very much.

In many housing and migration studies, one-person households and multi-person households are distinguished, but no distinction is made between one person-households who experienced a relationship break up and those who did not, and neither is a distinction made between people in a first relationship and people in a higher order relationship. Our study shows that by enriching the living arrangement variable with information on the relationship history, more variation in moving behaviour can be explained than by simply categorizing current household composition. Ties to former household members (especially children) and to places where one lived in the former relationship, apparently put restrictions on peoples’ spatial behaviour. It confirms once again a very consistent finding in life course studies, that past experience shapes future behaviour.

As the part of the population who ever experienced a separation still increases, this also implies an increase in disordered and discontinued spatial careers. On the macro level, this leads to increased differentiation in spatial careers. Housing careers which solely consist of upward moves will become less common. For example, moving to a house in the suburb does not guarantee that one will always stay in the suburb, as separation may lead to a (temporary) stay in the city. Finding a new partner can redirect the spatial career to a new place with new opportunities. Moves over long distance are for some of the separated less feasible as they are tied to places and people from their past. Increasingly complex family structures, with second spouses, children and stepchildren are likely to have spatial repercussions on the individual level and on society level. When attempting to understand the functioning of housing markets, it is inevitable to acknowledge this increasing complexity and differentiation.

It would be interesting to dig deeper into this shift towards increasing discontinuity and differentiation of spatial careers due to patterns of separation and repartnering. Analyzing the consequences of break up for different birth cohorts could give more insight in the mechanisms at play. In this study, there was no clear effect of birth cohort, but interacting birth cohort with living arrangement might yield interesting results. The meaning of separation and repartnering may change as these events become more common, and therefore the way they affect spatial careers may change as well. The emergence of unmarried cohabitation as a lasting alternative to marriage may also play a role here. How spatial policy and macro-level trends interact with these changing life courses should be taken into account as well. For example, in the 1960s and 1970s when divorce was not yet so common, many councils gave priority to separated households in the allocation of council housing (Schouw & Dieleman, 1987), but this priority status vanished as the number of separations rose. How
people cope with separation in their spatial careers depends on wider housing market circumstances, and the way people cope with their situation in turn influences the development of the housing market.

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APPENDIX I. Descriptives and frequencies of variables

| VARIABLE | All person years (N=103239) | Last person year only (N=4102) |
|----------|-----------------------------|---------------------------------|
|          | N  | %   | N   | %   |
| Living arrangement |    |     |     |     |
| single     | 32785 | 31.8 | 686 | 16.72354949 |
| in first relationship | 64929 | 62.9 | 2928 | 71.37981472 |
| separated / divorced | 2839 | 2.7 | 226 | 5.50970557 |
| in higher order relationship | 2085 | 2.0 | 194 | 4.729400293 |
| widowed   | 601 | 0.6 | 68 | 1.657727938 |
| Duration of living arrangement |    |     |     |     |
| Mean 11.1 (st.dev. 9.3); Mean 17.7 (st.dev. 11.9); min. 1; max. 54 |    |     |     |     |
| Gender |    |     |     |     |
| male     | 55008 | 53.3 | 2157 | 52.58410531 |
| female   | 48231 | 46.7 | 1945 | 47.41589469 |
| Birth cohort |    |     |     |     |
| before 1935 | 25106 | 24.3 | 570 | 13.89566065 |
| 1935-1944 | 24865 | 24.1 | 676 | 16.47976597 |
| 1945-1954 | 27497 | 26.6 | 1023 | 24.93905412 |
| 1955-1964 | 20255 | 19.6 | 1173 | 28.59580692 |
| >=1965   | 5516 | 5.3 | 660 | 16.08971234 |
| Age |    |     |     |     |
| Mean 33.1 (st.dev. 11.1); Mean 42.2 (st.dev. 12.3); min. 18; max. 84 |    |     |     |     |
| Age squared / mean age |    |     |     |     |
| Mean 34.2 (st.dev. 23.4); Mean 54.2 (st.dev. 30.3); min. 9.1; max. 197.9 |    |     |     |     |
| Work situation |    |     |     |     |
| working | 63581 | 61.6 | 2574 | 62.7498711 |
| in education | 11912 | 11.5 | 229 | 5.582642613 |
| otherwise not working | 27274 | 26.4 | 1279 | 31.17991224 |
| unknown | 472 | 0.5 | 20 | 0.48756704 |
| Educational level |    |     |     |     |
| low     | 41836 | 40.5 | 1504 | 36.6504144 |
| middle | 38065 | 36.9 | 1676 | 40.85811799 |
| high    | 22295 | 21.6 | 888 | 21.6479766 |
| Socio-economic status (ISEI/10) |    |     |     |     |
| Mean 4.52 (st.dev. 1.77); Mean 4.47 (st.dev. 1.92); min. 0; max. 8.8 |    |     |     |     |
| Children aged 12 or younger |    |     |     |     |
| no children aged 12 or younger | 75222 | 72.9 | 3235 | 78.8639688 |
| child(ren) aged 12 or older | 28017 | 27.1 | 867 | 21.1360312 |
| Tenure of previous home |    |     |     |     |
| owner-occupied | 71636 | 69.4 | 2063 | 50.29254022 |
| other | 31603 | 30.6 | 2039 | 49.70745978 |
| Address density (addresses per km2/1000) |    |     |     |     |
| Mean 1.89 (st.dev. 1.61); Mean 1.77 (st.dev. 1.60); min. 0.08; max. 5.95 |    |     |     |     |
| Move (regressor in frequency analysis) |    |     |     |     |
| no move | 91663 | 88.8 | 3986 | 97.1721117 |
| move | 11576 | 11.2 | 116 | 2.82788835 |
| Long distance move (regressor in distance analysis) |    |     |     |     |
| no move | 95335 | 92.3 | 4001 | 97.53776645 |
| short distance move (less than 40 km) | 6333 | 6.1 | 90 | 2.194051682 |
| long distance move (40 kilometres or n) | 1571 | 1.5 | 11 | 0.268161782 |
| Move to city (regressor in direction analysis) |    |     |     |     |
| not at risk (=already living in the city) | 50582 | 49.0 | 1415 | 34.49536811 |
| no move | 47952 | 46.4 | 2627 | 64.04193077 |
| move outside city | 4190 | 4.1 | 55 | 1.340809361 |
| move to city | 515 | 0.5 | 5 | 0.12189176 |
| Move out of city (regressor in direction analysis) |    |     |     |     |
| not at risk (=not living in the city) | 80135 | 77.6 | 3164 | 77.1331058 |
| no move | 19879 | 19.3 | 896 | 21.84300341 |
| move within city | 2301 | 2.2 | 34 | 0.828863969 |
| move out of city | 924 | 0.9 | 8 | 0.195026816 |
APPENDIX II. Residential environments in the Netherlands: city, suburb and rural area
Since spatial and residential mobility are closely related to life events and life-course stages, the increased differentiation and disorder in life courses can also be expected to increase the differentiation and discontinuity in spatial careers. We expect separation to have an effect on the spatial aspects of housing careers (distance and direction) and the occurrence of moves because moves triggered by separation are deviant compared to moves triggered by other life events. Thus, at the beginning of the living arrangement, separated singles move significantly more often than people in a first relationship. Residential mobility was measured as the number of moves between Norwegian neighborhoods while the children were between the ages of 10 and 18 years. For each follow-up year only one move was counted, which means that the maximum possible number of residential moves during the observational period was nine. In a recent methodological review of the residential mobility literature, the concept of mobility is inconsistently operationalized along four dimensions: school vs. residential, distance, timing, and frequency (Garboden et al., 2017).