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Research Article

Separation as an accelerator of housing inequalities: Parents' and children's post-separation housing careers in Sweden

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Separation as an accelerator of housing inequalities: Parents' and children's post-separation housing careers in Sweden

Kirsten van Houdt¹

Abstract

BACKGROUND

Parents who separate face the challenge of an urgent change in housing needs. Both parents have their individual needs – e.g., proximity to work – as well as the common need to provide stability for their children and to stay involved – e.g., proximity to school and living space for the children. The urgency and specificity of the needs might be particularly problematic for parents with few financial resources, especially in today's competitive housing market.

OBJECTIVE

The aim of this study is to show whether, and to what extent, the consequences of parental separation for housing careers are stratified by parents' income.

METHODS

Using Swedish administrative data, the study analyzes pre- and post-separation housing careers (moving distance, frequency, housing type, and neighborhood) of parents with minor children between 2011 and 2020 (N = 27,204 parent couples).

RESULTS

Parents with lower incomes suffer greater increases in housing instability after a separation, with more frequent moves and a higher tendency to exchange owner-occupied for rental housing. In addition, they move over longer distances and end up living further away from each other. At the same time, parents with middle and higher incomes suffer the largest downgrades in housing type and neighborhood deprivation, mothers in particular.

CONCLUSIONS

Although the results imply that a separation involves a certain level of convergence in housing inequalities, lower-income parents also experience a downgrade and are, pre- and post-separation, worst off.

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CONTRIBUTION

This study reveals that housing instability forms another, underexposed way in which lower-income families suffer stronger economic and potentially emotional consequences of separation.

1. Introduction

Due to rising divorce rates and the increasing popularity of nonmarital childbearing, it is increasingly common for children to experience parental separation (Thomson 2014). A separation is a disruptive life event, especially if it involves children. At least one of the parents will have to find a new place to live, and in many cases both will have to relocate because the financial burden of the former joint house cannot be carried by a single parent (André, Dewilde, and Muffels 2019). Finding a new house is a challenge, especially in the competitive housing markets in urbanized areas (Musterd et al. 2017). Yet, for recently separated parents, what is even more challenging is that the need for a new residence is urgent, they have to deal with the emotional, practical, and financial implications of the separation (Amato, 2000), and, given joint responsibility for the children, they have to live within close proximity of each other (Van der Wiel, Kooiman, and Mulder 2021). Not surprisingly, a separation most commonly involves a downgrade in housing conditions (e.g., fewer rooms, less outdoor space) and an increase in the distance between children and the non-residential parent (Dewilde 2008; Feijten and Van Ham 2010; Ferrari, Bonnet, and Solaz 2019; Mikolai and Kulu 2018).

A residential move can have a large impact on children's lives, especially if it concerns changing neighborhood or even city or town, as that intervenes with important dimensions of children's lives, such as friends, school, and sports clubs. High residential mobility is associated with all kinds of negative outcomes among children and adults, such as health problems, depression, behavioral problems, and lower educational attainment (Choi and Oishi 2020; Jelleyman and Spencer 2008). Although moves often entail an improvement in housing conditions or neighborhood context, an often urgent and involuntary post-separation move is commonly 'disadvantaging' (Lupton 2016). The place where people end up – the neighborhood, the location, and the residence – affects individuals' and families' wellbeing and functioning (Bratt 2002; Campagna 2016; Zavisca and Gerber 2016).

Thus, parents' opportunities in the housing market can have far-reaching consequences regarding the impact level of a separation. Although a separation involves a housing downgrade for almost any parent couple (Feijten and Van Ham 2007; Ferrari, Bonnet, and Solaz 2019), parents who manage to provide stability – that is, a home in the

same neighborhood, with long-term potential – minimize the extent to which their separation disrupts their children’s lives (Amato 2000). By contrast, having few options, having to move between temporary solutions, and having to settle for a home out of reach of the former living environment increase children’s experience of the separation as disruptive. In other words, inequalities in post-separation residential mobility and housing conditions might play an important role in the well-established finding that family instability amplifies socioeconomic inequalities (Hogendoorn, Leopold, and Bol 2020; McLanahan 2004; McLanahan, and Percheski 2008). Unfortunately, we know very little about socioeconomic stratification in the effects of separation on housing careers.

2. The current study

The aim of this study is to show whether and to what extent the consequences of parental separation for housing careers are stratified by parents’ income, and thus to add to our understanding of and knowledge about socioeconomic inequality as a consequence of separation. The study also helps to identify groups that are particularly vulnerable in the housing market, which is of crucial importance, given the current housing crisis. I consider a number of outcomes: moving distance, distance between parents, quality of housing, and neighborhood characteristics. I analyze Swedish administrative data on the housing careers of separated parents with young children – pre- and post-separation – and compare parents with different levels of income.

The contribution of this study is twofold. First, it integrates research on post-separation housing careers with research on housing inequalities. Although the two fields acknowledge the link between separation and socioeconomic inequalities, the way in which inequalities interact with the housing consequences of separation has received limited attention. There is some research on the relation between income and geographical distance between separated parents and their former joint house, showing that income is negatively associated with distance in Sweden and France (Ferrari, Bonnet, and Solaz 2019; Stjernström and Strömberg 2012), yet no association was found in the United Kingdom (Thomas, Mulder, and Cooke 2018). Furthermore, those with higher incomes – and especially the partner with the higher income – are less likely to move following a separation (Ferrari, Bonnet, and Solaz 2019; Gram-Hanssen and Bech-Danielsen 2008; Mulder and Malmberg 2011; Mulder et al. 2012). Findings from Hungarian survey data indicate that the likelihood of moving during the years after a divorce or separation follows different patterns for people from different socioeconomic backgrounds, but not in any clear, systematic way (Murinkó 2019). As these studies concern comparisons within the group of separated persons, they do not tell us whether separation affects housing careers differently for different people. For example, separated

parents with lower income might live in lower-quality housing, but that might not be unique to post-separation housing careers per se, as income is related to housing quality in general. Identifying any stratified effects of separation requires a comparison with pre-separation housing. As far as I am aware, only one study makes such a comparison, using French administrative data to show that those with lower incomes are more likely to stop owning their home and to move into smaller housing (Ferrari, Bonnet, and Solaz 2019)

Most previous work on post-separation housing careers has focused on the likelihood of moving, moving distance, and home ownership, with only a small number of studies considering moving frequency, home ownership, and type of housing (André, Dewilde, and Muffels 2019; Feijten and Van Ham 2010; Ferrari, Bonnet, and Solaz 2019; Gram-Hanssen and Bech-Danielsen 2008; Mikolai and Kulu 2018). The present study combines these different outcomes and adds another dimension: neighborhood context. As Lupton (2016) points out, there are different kinds of moves, and their impact on people's lives depend on a range of factors. For example, a move to a smaller house might not be a downgrade if it is located in a more advantaged neighborhood, and housing stability might have advantages over housing upgrading (Jelleyman and Spencer 2008). Therefore, in order to comprehensively examine inequalities in post-separation housing careers it is crucial to consider a wide range of housing dimensions.

3. Background

3.1 Separation and housing careers

In the social sciences, housing careers are most commonly approached via the life course perspective (Coulter, Ham, and Findlay 2016; Wagner and Mulder 2015), which is based on the idea that life courses are characterized by a multi-dimensional structure of interrelated life domains such as family life and professional career. These different domains shape needs and preferences for housing over the life course. For example, getting a new job might change the preferred location and having a child might require a more spacious house or a quieter neighborhood. These needs and preferences form the framework in which housing decisions are made. A residential relocation is costly, both financially and non-financially, and people therefore only move if the benefits outweigh the costs or if it is absolutely necessary. Thus, housing careers are tightly linked to life course transitions and housing mobility is often triggered by a change in a life course domain.

A separation can be considered a life course transition that comes with a particularly far-reaching change in housing needs, for three reasons. First, as the household splits in two, the couple loses its economy of scale. At least one and often both of the (ex-)partners

will have to find new housing, as the financial burden of the former joint house is often too high to be carried by a single person (André, Dewilde, and Muffels 2019; Mulder and Wagner 2010). Second, the need to move is urgent. Decisions made under the (time) pressure of a dissolved relationship might lead to suboptimal outcomes, like a low selling price for the joint home, or poor selection of new accommodation (Dewilde 2009). Third, if the former couple has children the ex-partners are spatially constrained. Ideally, the parents will reside close to each other and to the children's school so that the children can alternate between their parents relatively easily (Poortman and Van Gaalen 2017). This applies particularly in the Swedish context, where the post-separation involvement of both parents is relatively high (Fransson, Hjern, and Bergström 2018; Thomas, Mulder, and Cooke. 2018).

3.2 Socioeconomic inequalities in housing careers

Another crucial factor in explaining housing careers is access to resources. There is a rich literature describing housing as both an outcome of inequality (e.g., inequalities in access and quality) and a source of inequality (e.g., home ownership and the neighborhood as capital). As this study focuses on how housing careers develop after parental separation, it is mostly concerned with inequalities in housing as an outcome. I consider several dimensions of housing careers.

First, there are socioeconomic inequalities in access to housing. Those with greater financial resources can afford a wider range of dwellings. Apart from the ability to pay monthly running costs, the formal procedures of buying or renting require financial credibility such as a stable income, a certain amount of capital, and a clean credit record. Those who do not meet these criteria depend on social housing policies, such as housing allowances and public housing. Such arrangements provide relatively few options and little flexibility.

The Swedish case is characterized by a large, public housing sector, with state-regulated access and rent control but large shortages. The only alternative to the long housing queue is to sublet (so-called second-hand contracts) from individual property owners or first-hand renters, which is temporary by definition (one year maximum), more expensive, and unregulated, so landlords can choose tenants in any way they wish (often someone they know directly or indirectly, with a good financial record) (Lind 2014).

Second, inequalities in access to housing translate into inequalities in housing quality. For those with fewer resources, access is limited to poorer housing options. Lower-income families often have to compromise on both size and quality: The number of (bed)rooms per household member, the level of maintenance, and the number and quality of the facilities (e.g., bathroom, kitchen, balcony) tend to increase with the

household's income and education level (Ayala and Navarro 2007; Fusco 2015). Moreover, lower-income families more often experience crowding and reside in neighborhoods with limited facilities and infrastructure (Evans and Saegert 2000; Mood and Jonsson 2016).

3.3 Separation as an accelerator of housing inequalities

This study does not deal with income inequalities in housing careers per se but rather with inequalities in the extent to which separation changes housing careers (i.e., the interaction between economic indicators and separation). Those with fewer financial resources are in a more vulnerable position in the housing market than their more advantaged counterparts (Musterd et al. 2017). Therefore, I expect their housing careers to suffer stronger negative consequences from the sudden change in housing needs associated with a separation. I focus on five dimensions of housing careers: the likelihood of moving, moving distance (from the current to the new dwelling as well as between parents), moving frequency, type of housing, and neighborhood context.

A move requires all household members adjusting to a new living environment, which might be challenging and involves the loss of location-specific capital: Attachment to the neighborhood, friends and contacts in the area, local knowledge, and daily routines are all examples of things that take time and investment to obtain but are potentially lost with a residential move (Coulton, Theodos, and Turner 2012). When parents separate, moving is inevitable for at least one and potentially both parents. If one parent keeps the family dwelling, this offers a certain level of stability: even if the children spend time with both parents, they have the room, the house, and the environment they are familiar with. If, instead, both parents move into new homes, the children face an inevitable change in context. I expect that parents with fewer financial resources – that is, lower incomes – both have to move out following a separation more often than their more advantaged counterparts, where one is able to carry the financial burden of the family dwelling (Hypothesis 1).

Furthermore, the frequency of moving is an important factor, as frequent relocations can have negative outcomes for parents and children. For both children and adults the relationship between residential mobility and health problems, behavioral problems, depression, and lower educational attainment is well established in the existing literature (Choi and Oishi 2020; Jolleyman and Spencer 2008). In addition, moving is costly: Apart from moving the previous house's contents, furnishing the new house might require buying new items, and monthly housing costs might overlap. Generally, separated people move more frequently than non-separated people (Mikolai, Kulu, and Mulder 2020). Parents with fewer resources might have to move more often in order to find a residence

that meets their needs (i.e., pull mechanisms) (Feijten and Van Ham 2007) and those in more vulnerable positions in the housing market are also more vulnerable to forced moves; for example, because of temporary tenancies or their housing being demolished (i.e., push mechanisms) (Clark 2010). I expect that parents with lower incomes move more often than their more advantaged counterparts during the first years following a separation (Hypothesis 2).

An important determinant of the impact of a move is its distance: The greater the distance, the more likely it intervenes with location-specific capital and other life domains such as work, school, or sports (Coulton, Theodos, and Turner 2012). In the case of parental separation a move not only involves adjustment to a new house and neighborhood (or even two, for the children) but also coordination between the two households (Poortman and Van Gaalen 2017). The further apart parents live, the more difficult it is to fit contact with both parents into the children's daily lives (school, friends, sports) and the more effort it takes to maintain their relationships with both parents. In sum, both moving distance and distance between parents might amplify the difficulties parents and children face after a separation (Poortman 2021). Under the assumption that moving after a separation is driven by the need to live apart, rather than the desire for a new dwelling, parents will generally aim for minimal change (Thomas, Mulder, and Cooke 2017; Thomas, Mulder, and Cooke 2018). For example, they want their children to stay at the same school and to maintain their social network. Yet, given the lower level of flexibility and the more limited range of options, I expect that for separated parents with fewer financial resources it is more difficult to find housing meeting those preferences, forcing them to move longer distances (Hypothesis 3) and as a consequence end up living further apart (Hypothesis 4). This is in line with previous findings (Ferrari, Bonnet, and Solaz 2019; Stjernström and Strömgren 2012).

Lastly, parents with fewer resources might experience a deeper drop in their housing career after a separation than more advantaged parents. Parents who manage to find acceptable housing after their separation (for example, buying a different dwelling or finding an affordable tenancy) do not suffer too great a financial loss. Meanwhile, parents who are not able to get a mortgage by themselves and have few affordable options in the rental sector might have to accept suboptimal solutions, such as short-term contracts or a rent they cannot really afford (André, Dewilde, and Muffels 2019). Such an unstable solution, most probably requiring frequent moves (involving costs), combined with few financial buffers, could result in an accelerated level of deprivation as reflected in housing quality. In other words, separation could potentially amplify socioeconomic housing inequalities. I expect that parents with fewer financial resources more often move from owned to rental housing (Hypothesis 5), more often downgrade in terms of the type of housing (e.g., a single-family dwelling to an apartment, smaller number of rooms) (Hypothesis 6), and more often downgrade in terms of neighborhood (Hypothesis 7).

At the same time, there is also a structural argument to make for convergence rather than divergence of housing quality after separation: Those with a higher standard of housing before the separation have more to lose. Parents who were already living at the minimum – for example, in a small, badly maintained apartment in a disadvantaged neighborhood – do not have so far to fall before they hit the bottom, especially in a generous welfare state. By contrast, parents with a high standard of living – for example, a spacious house with a garden in a popular area – have further to fall. This argument is in line with the previous finding that those with higher incomes are more likely to move into smaller housing (Ferrari, Bonnet, and Solaz 2019).

3.4 Differences between fathers and mothers

The consequences of parental separation are gendered. Whereas fathers suffer the strongest negative consequences regarding parent–child relations (Kalmijn et al. 2019), mothers suffer the most severe economic consequences (Hogendoorn, Leopold, and Bol 2020). These economic consequences for mothers are also reflected in their post-separation housing careers: Mothers are more likely than fathers to exchange owner-occupation for rental housing and more often move into a smaller house (Ferrari, Bonnet, and Solaz 2019; Mikolai and Kulu 2018). At the same time, mothers more often stay in the former joint home and move over shorter distances (Mulder and Malmberg 2011; Stjernström and Strömberg 2012). This is mainly due to the fact that children more often stay with their mother than their father after a separation (Thomas, Mulder, and Cooke. 2017, 2018). Yet, given this study's focus, the question is whether mothers' and fathers' post-separation housing careers are differently stratified by income. In other words, are there any gender differences in the mechanisms suggesting that separated parents with lower levels of income are more likely than their counterparts with higher levels of income to both leave the former joint house (H1), move more frequently (H2), move over longer distances (H3), move further apart (H4), exchange owner-occupied for rental housing (H5), and downgrade in terms of dwelling (H6) and neighborhood (H7)? The existing literature on the consequences of separation suggests that changes in household income (along with physical custody) are the most important mediator of differences between mothers' and fathers' housing careers (Hogendoorn, Leopold, and Bol 2020), but does not point to any clear gender differences in the way income moderates post-separation housing careers. Therefore, I adopted an exploratory approach to gender differences by conducting the analyses for mothers and fathers separately.

3.5 The Swedish context

Sweden provides an interesting context for this topic, as it a European forerunner in terms of family and welfare policies but is also experiencing major housing issues.

Since the upward trend in divorce levelled off at the turn of the century, Sweden's divorce rate is no longer exceptionally high in comparison to other European countries (Andersson and Kolk 2015; Sandström and Garðarsdóttir 2018). However, Sweden stands out in terms of its high share of cohabiting unions (Ohlsson-Wijk, Turunen, and Andersson 2020): More than half of Swedish children are born to (unmarried) cohabiting partners (Andersson, Thomson, and Duntava 2017; Thomson 2005). Although marital and non-marital partnerships are more similar in Sweden than in most other Western countries in terms of stability (Andersson, Thomson, and Duntava 2017) and legal status (Perelli-Harris and Gassen 2012), unmarried parents are more likely to separate than married parents. This means that in Sweden, relatively many separations involve children. At age 15, 28% of the Swedish children have experienced parental separation (Andersson, Thomson, and Duntava 2017).

After a separation, Swedish parents continue to share legal custody of their children. Parents are generally free to decide how they divide the care and residence of their children after separation, but over the last decades there has been a strong trend towards a more gender-equal division. Whereas in the early 1990s only 4% of the children spent half of their time living with both of their separated parents (with the majority living with their mother), this percentage had increased to 32% by 2010 (Fransson, Hjern, and Bergström 2018; Ministry of Social Affairs 2011). In most other cases, children live primarily with one of their parents (in most cases the mother) but see the other parent on a regular basis (Ministry of Social Affairs 2011).

The relatively high involvement of Swedish fathers in post-separation child arrangements reflects the strong promotion of gender equality in childcare and the labor market. The Swedish state has the highest proportion of female labor market participation in the EU (International Labour Organization 2021) and strongly supports the dual-earner model and the financial self-reliance of both men and women. For example, Sweden adopted gender-neutral parental leave in the early 1970s, facilitating both parents' involvement in their children's early years and minimizing the gendered consequences of parenthood for the professional career.

Furthermore, the Swedish welfare state aims to buffer the economic consequences of separation to a considerable degree. A package of taxes and transfers alleviates socioeconomic differences between households, including single-parent households. For example, all families receive payment for each minor child and an income-based housing allowance, public childcare is highly subsidized, and if parents are separated the parent with whom the child lives receives obligatory child support payments (guaranteed by the state).

Although the Swedish welfare state is internationally known as generous and egalitarian, since the 1980s Sweden has lost its top position in the international economic equality ranking (Therborn 2020). The welfare state has been shrinking slowly but steadily; for example, by cutting income replacement policies such as unemployment benefits. This has had a stronger negative effect on the relative income position of single (parent) households than on dual-earner households (Alm, Nelson, and Nieuwenhuis 2019). Another important driver of growing inequality is the concentration of capital income, particularly from capital gains such as stocks and real estate. These inequalities are currently reflected in the Swedish housing crisis (Grander 2017). Due to a shortage of rental accommodation, waiting queues have been growing over the last decades (in 2022 the waiting time was 9 years on average, with the cities as positive outliers). At the same time, generous mortgage taxes have been encouraging households to buy property, driving up housing prices – by 18% between 2020 and 2021 (Svensk Mäklarstatistik 2021). This forces a growing group of people who cannot afford to buy a house into private rentals, with much higher prices and without legal rights.

4. Data and method

4.1 Data

Using data from the Swedish administrative registers (provided by Statistics Sweden; SCB), this study analyzes the housing careers of couples with children between the years 2011 and 2020. A system of unique personal identifiers enables linking several administrative registries (such as information on income and housing from tax registers and information on education from the Swedish Agency for Higher Vocational Education) as well as linking partners (including ex-partners) and parents to children.

In this context, the use of administrative data has a number of important advantages. Surveys suffer from selective non-response and (in the case of a panel design) selective drop-out. Those with stable family relationships are more likely to participate in surveys, resulting in an under-representation of separated couples. In addition, reaching those with turbulent housing careers is difficult as the survey invitation might never reach them: moving house is a major cause of drop-out in panel surveys (Plewis, Ketende, and Joshi 2008; Washbrook, Clarke, and Steele 2014). Furthermore, surveys are commonly restricted to family members within the household, excluding ex-partners, and do not allow studying the interdependence of (former) couples' lives after their separation. The use of the Swedish administrative registers overcomes these problems by providing reliable, longitudinal data on all Swedish residents.

I analyze housing careers from 2011 onwards because it allows me to distinguish people living in the same building but in different apartments (who would have been registered as living in the same house in previous years). Especially in the case of co-parenting, in which ex-partners might desire to live in close proximity, this is an important level of detail to include.

Based on the birth registers, I selected different-sex couples, registered as having lived together at least one year between 2013 and 2016, having separated in 2017 or earlier, with at least one (legal) child aged below 10 at the time of separation. This time window allows me to study their pre- and post-separation housing careers for at least three years. The age restriction for the children allows me to capture the time in which children are most dependent on their parents, when the post-separation co-parenting dynamics are most clearly reflected. I excluded couples in which one or both parents already had children with a previous partner, couples in which one or both moved abroad, couples who reunited during the period of observation, and couples in which one or both deceased before the end of observation. By focusing on this final sample of 27,204 first-time parent couples I exclude a number of factors that go beyond the scope of this study and would complicate the comparison between separated and non-separated parents (e.g., widowhood or international migration).

4.2 Measures

4.2.1 Demographic variables

Family structure. The data represent yearly measures (December 31st) of each year I observed the parent couple (regardless of whether they were together or separated). I considered the parents separated in the year they registered at different addresses (each address is represented by an untraceable, unique code). For each year, the data show the number of (legal) children, their age, and whether they are registered as living with their parent(s), as well as any new partners registered at the same address. In the analyses I included the age of the couple's youngest child and their number of children at the end of the year of their separation. In addition, for the mother and father separately, I included whether (one of) the children were registered at their address (yes/no) and whether there was a new partner registered as well (yes/no) – both measured at the end of the year of the separation.

Income. Separation and income are partly endogenous (Hogendoorn, Leopold, and Bol 2020), and might be subject to fluctuations during the separation. To gain insight into the longer-term effect of income on (post-separation) housing careers rather than the (temporary) effect of separation on income I considered income in the three years prior

to separation. The measure represents personal disposable income, including income from labor, capital gains (or losses), social benefits, allowances, and alimony (received and paid). I averaged the income of these three years (for the mother and father separately), and constructed tertiles on the basis of their birth cohort. In comparison to including income as a continuous predictor, this categorical, relative measure allows for any non-linearity in the effect of income and provides a more insightful view of the level of stratification. In addition to this measure, I constructed a measure representing the share of the contribution of each parents' individual income to the household income during these three years, ranging from 0 (indicating that the parent had no income, but the partner did) to 1 (the parent had an income, and the partner did not).

Control variables. For both parents, I distinguished three levels of education: (1) less than higher secondary education, (2) completed higher secondary education, (3) completed tertiary education. In Sweden, education is state funded (including universities) and children follow compulsory schooling for ten years, starting when they turn six. In addition, the models included parents' age (in years), marital status (married/cohabiting), unemployment (yes/no), and whether they lived in one of Sweden's nine largest cities (yes/no, based on the number of residents registered in the municipality), all measured at the time of separation.

4.2.2 Housing variables

Moving and distance. I defined a move as a change of registered address. The data provide (encrypted) coordinates of each address with a precision of 250x250 meters in urban areas and 500x500 meters in non-urban areas. Using these coordinates, I calculated the distance between parents' houses and the distance of moves (for the father and the mother separately) at the end of the first year after the separation (31st of December). Note that the time between the actual separation and the (yearly) measurement varies between 12 months and one day, meaning that this move does not necessarily represent the first move (although in most cases it does).

Moving frequency. Based on the first three years after the separation, I constructed a measure counting the total number of registered moves (throughout the year) for the father and mother separately.

Housing type. Roughly two types of houses are distinguished in the registration of dwellings: apartments and single-family houses (*småhus*). For apartments, the number of rooms (of at least 7 square meters, not being the kitchen and bathroom, and involving direct daylight) is registered. Based on this information, I classified dwellings in three groups, in descending order of size: (1) single-family houses, (2) apartments with more than two rooms, and (3) apartments with two rooms or less. This classification builds on

the assumption that single-family houses are in general more spacious than apartments and tend to have more outdoor space. This a necessary simplification, given the lack of data on the number of rooms in single-family houses. Using the classification, I constructed a dichotomous measure indicating whether the post-separation housing was a downgrade compared to the pre-separation housing (yes/no).

Home ownership. Dwellings are registered as owner-occupied or rental housing, which I used to construct a dichotomous measure of owner-occupied housing (yes/no). Note that the measure does not indicate which family member is registered as the owner.

Neighborhood deprivation. SCB uses a 9-digit regional division of Sweden, the so-called DeSO (*Demografiska statistikområden*; Demographic Statistics Area) to produce statistical data on smaller areas representing people's more direct living environment. The division distinguishes almost 6,000 areas with between 700 and 2,700 inhabitants and takes geographical conditions into account so that the boundaries of each DeSO align with, for example, railways, roads, and watercourses. To illustrate, Stockholm metropolitan area consists of 1,287 DeSOs. For each DeSO, I used the unemployment rate, the percentage of foreign-born individuals, the average income, and the percentage of lower-educated individuals (secondary education or less, aged 18 and older) to construct a measure of neighborhood deprivation, which is a predicted factor score (factor analysis, maximum likelihood estimation). A higher score represents a higher level of neighborhood deprivation, indicating a higher unemployment rate, a larger percentage of foreign-born and lower-educated individuals, and a lower average income. This measure was based on data from 2011 (the start of the window of observation), meaning that for each DeSO it is constant over time and that change can only occur by moving to a different DeSO. Although any meaningful neighborhood change within the observed time span is unlikely (Meen, Nygaard, and Meen 2013), this is also a way to tease out those changes that are directly caused by the move.

Table 1 shows the descriptive statistics of the variables included in the analyses, separated by income tertile, and for mothers and fathers separately. Note that the distribution over the income tertiles reflects that parental separation is more common in the lower income tertiles, in line with previous research (Raley and Sweeney 2020).

Table 1: Descriptive statistics of the analytical sample

	Mothers			Fathers			
	Lowest	Middle	Highest	Lowest	Middle	Highest	
Income tertile							
N	11,032	8,957	7,215	11,276	9,173	6,755	
Demographics	M/Prop.	M/Prop.	M/Prop.	M/Prop.	M/Prop.	M/Prop.	SD
Age ¹	33.84	35.98	38.84	37.51	38.04	40.80	5.72
Contribution to household income ²	0.36	0.45	0.50	0.51	0.60	0.64	0.14
Education ¹							
<i>Less than secondary</i>	0.17	0.07	0.04	0.26	0.13	0.06	
<i>Secondary</i>	0.40	0.38	0.24	0.43	0.54	0.35	
<i>Tertiary</i>	0.43	0.56	0.73	0.32	0.33	0.58	
Unemployed (ref.no) ²	0.24	0.06	0.04	0.21	0.04	0.02	
Parents were married (ref. cohabiting)	0.22	0.22	0.26	0.21	0.23	0.26	
No. of children ¹	1.80	1.87	1.94	1.77	1.90	1.97	0.76
Age youngest child ¹	4.78	5.79	6.48	5.02	5.72	6.26	2.66
Co-resident children (ref. no) ¹	0.73	0.65	0.64	0.29	0.38	0.45	
Lives with new partner (ref. no) ¹	0.03	0.03	0.02	0.05	0.03	0.02	
City (ref. no) ²	0.28	0.26	0.36	0.31	0.25	0.34	
Pre-separation housing							
Moving frequency (three years) ³	0.59	0.39	0.34	0.60	0.37	0.34	0.78
Housing type ²							
<i>Apartment < 3 rooms</i>	0.10	0.05	0.04	0.11	0.04	0.03	
<i>Apartment > 2 rooms</i>	0.39	0.26	0.23	0.42	0.24	0.21	
<i>Single family house</i>	0.51	0.69	0.73	0.47	0.72	0.76	
Owner-occupied housing (ref. rental) ²	0.59	0.78	0.89	0.57	0.81	0.91	
Neighborhood deprivation ²	0.27	-0.12	-0.52	0.28	-0.12	-0.58	0.91
Post-separation housing							
Moved (ref. not moved) ¹	0.67	0.71	0.66	0.58	0.48	0.45	
Both moved (ref. one/neither moved) ¹	0.17	0.20	0.24	0.19	0.20	0.22	
Moving frequency (three years) ⁴	1.32	1.26	1.09	1.25	0.93	0.83	1.07
Moving distance (km) ⁵	20.33	11.26	10.10	19.19	14.54	13.47	59.83
Distance between parents (km) ¹	19.08	12.69	10.67	19.37	12.16	10.56	57.74
Housing type ¹							
<i>Apartment < 3 rooms</i>	0.24	0.18	0.14	0.26	0.14	0.11	
<i>Apartment > 2 rooms</i>	0.48	0.46	0.42	0.36	0.39	0.30	
<i>Single family house</i>	0.28	0.35	0.44	0.38	0.56	0.59	
Owner-occupied housing (ref. rental) ¹	0.40	0.54	0.77	0.51	0.74	0.85	
Neighborhood deprivation ¹	0.36	0.04	-0.38	0.33	-0.03	-0.49	0.90

Source: Statistics Sweden

Notes: ¹ Measurement December 31st after the separation.

² Measurement December 31st before the separation.

³ Sum of the number of moves in the 3 calendar years preceding the year of separation.

⁴ Sum of the number of moves in the 3 calendar years following the year of separation.

⁵ Based on the measurement at December 31st before the separation and December 31st after the separation.

4.3 Analytical strategy

Given that this study is the first to consider income stratification in post-separation housing careers, it is important to provide a clear, descriptive image. As the upper part of Table 1 shows, the different income tertile groups have quite different demographic make-ups. For example, higher-earning parents tend to separate at a higher age, are more highly educated, and are more often unemployed. Therefore, assessing the role of income in post-separation housing careers requires taking these differences into account, rather than a purely descriptive approach. In addition, the housing career consists of many dimensions (bottom part of Table 1) which cannot be captured in one single analytical framework, and requires different types of models. Therefore, the analyses consist of separate models predicting the different dimensions of housing, controlling for the demographic variables. To explore gender differences in income stratification in post-separation housing careers I performed separate analyses for fathers and mothers. All standard errors were adjusted for clustering within municipalities.

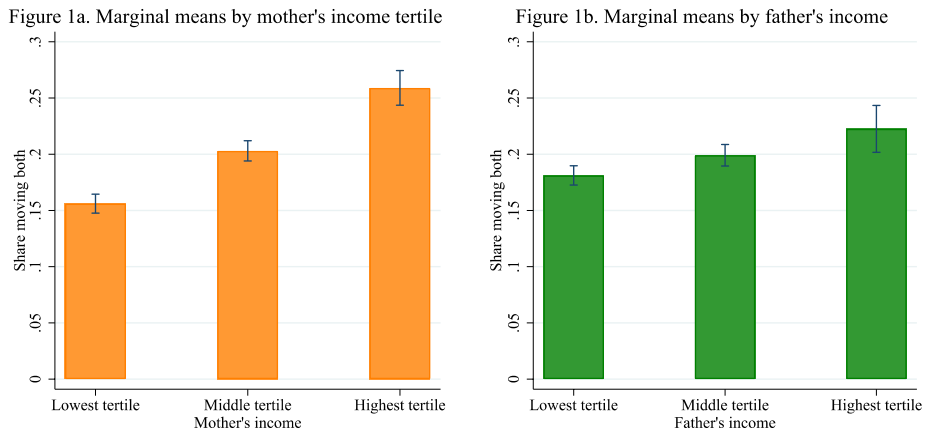
5. Results

5.1 Moving

Figures 1a and 1b show the marginal prediction (and 95% confidence intervals) of the proportion of parent couples who both moved out of the family home during the first year after separation, by income tertile of the mother and father respectively. These estimates were based on a logistic regression model (Table A-1).

In general, the results show that in the majority of parent couples (around four-fifths), one partner stays in the pre-separation family home after the separation. In contrast to the first hypothesis, higher income is associated with a higher rather than a lower likelihood of both parents moving to a new dwelling. The differences are most pronounced among mothers' income tertiles, with a difference of more than 11 percentage points between the lowest (15.6%) and the highest (25.9%) income tertile.

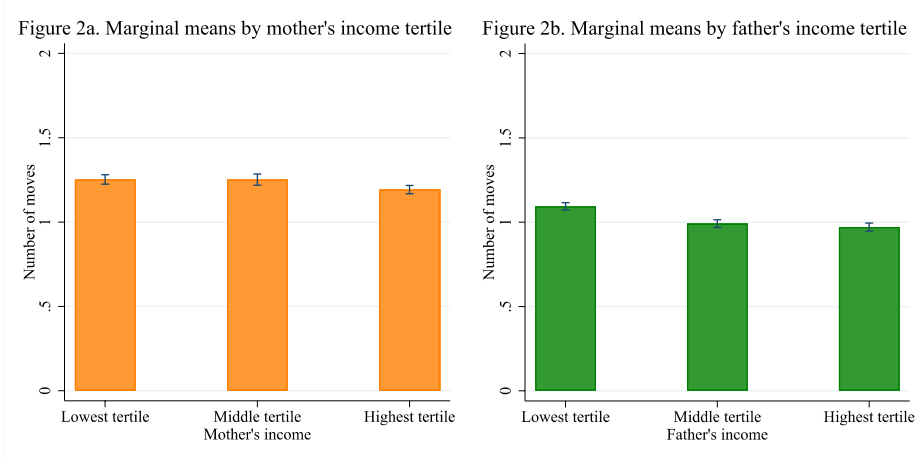
Figure 1: Both parents moving after separation



5.1.1 Moving frequency

Figures 2a and 2b show the marginal prediction of the number of moves of fathers and mothers in the first 3 years after separation, separated by income tertile. As this outcome is a count variable, the estimates were based on Poisson regression models (Table A-1). In addition to the demographic variables, the models were controlled for the number of moves during the 3 years preceding the separation in order to take any initial differences in the tendency to move – unrelated to the separation – into account.

Among both fathers and mothers, parents with lower incomes move most often, which is in line with the second hypothesis. Mothers in the lowest and middle income tertile move on average 1.25 times, whereas mothers in the highest income tertile move on average 1.19 times. Among fathers, the main distinction is between the lowest tertile and the one hand and the middle and highest tertiles on the other (1.09 vs. 0.98 times respectively). These findings suggest that although parents with higher incomes both move out of the family home more often, their housing careers appear to be more stable in the years that follow. From a couple perspective, the lower the income relative to the partner's before the separation, the larger the number of moves. Yet, considering the standard deviation of the frequency of moving (1.07), the differences are relatively small.

Figure 2: Number of moves in the first 3 years after separation

5.1.2 Distance

Figures 3a and 3b show the marginal prediction of the distance of fathers' and mothers' moves in kilometers, based on the comparison between the location registered on December 31st before the separation and the location registered on the first December 31st after the separation. It only includes the parents who moved (18,529 mothers and 14,041 fathers). The estimates were based on linear regression models (Table A-1, Appendix). Given the skewed distribution of the dependent variable, the same models were applied to the natural logarithm of the distance in order to meet the model's requirement (normal distribution) more closely. Given that the effects were similar in terms of their direction and relevance (t-score), for a more intuitive interpretation I only present the predictions of the original variable.

The average distances are quite substantial, approximately 15 kilometers, reflecting that it is quite common to cross municipal or even regional borders. As a reference, Sweden measures approximately 1,500 kilometers from north to south. In line with the third hypothesis, income is negatively associated with the distance moved for mothers. While the moves of mothers in the lowest income tertile are on average 18.6 kilometers, the moves of mothers in the middle and higher income tertiles are shorter, with an average of 11.5 kilometers. Among fathers there are no significant differences between the income tertiles.

Figure 3: Distance of the first move

Figure 3a. Marginal means by mother's income tertile

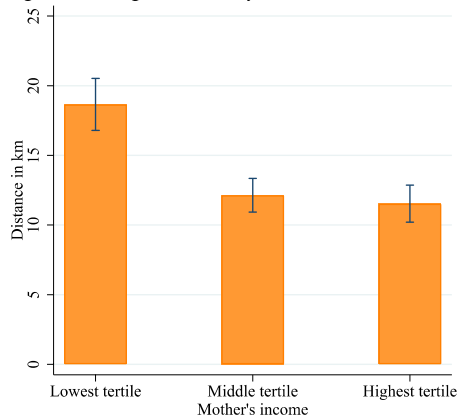
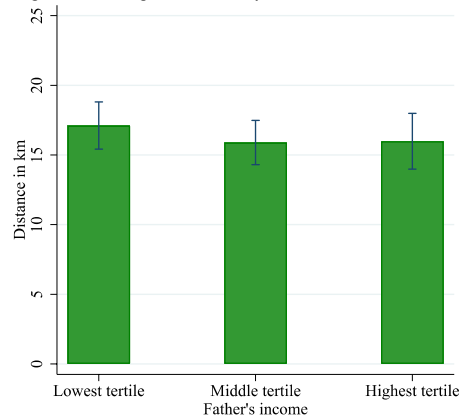
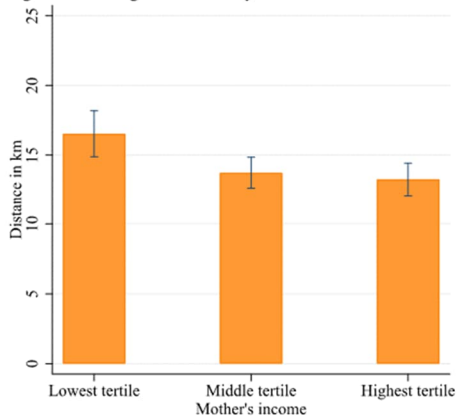
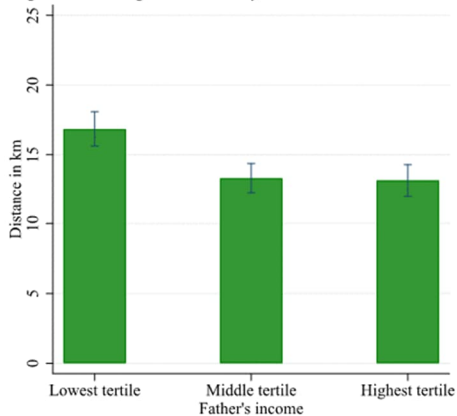


Figure 3b. Marginal means by father's income tertile



Figures 4a and 4b show the marginal prediction of the distance between the parents in kilometers, based on a comparison of their locations registered on the first December 31st after the separation. The estimates were based on a linear regression model (Table A-1). An alternative model predicting the natural logarithm showed comparable results.

In line with the fourth hypothesis, the distance between the parents shows more or less the same pattern as the moving distance for mothers (Figures 3a and 3b), with larger distances between parents in the lowest income tertile than in the middle and highest income tertiles. However, in this case the differences are more or less similar for mothers' and fathers' tertiles.

Figure 4: Distance between the parents in the first year after separation**Figure 4a. Marginal means by mother's income tertile****Figure 4b. Marginal means by father's income tertile**

5.2 Home ownership

Figures 5a and 5b show the marginal prediction of the proportion of mothers and fathers (respectively) who moved from owner-occupied to rental housing in the year of their separation, by income tertile. The estimates were based on logistic regression models (Table A-2) and only include parents who lived in owner-occupied housing before the separation took place (19,982 mothers and 19,982 fathers).

The estimates show a remarkable gender difference. Moving from owner-occupied housing into rental housing is much more common among mothers than among fathers. This is (at least partly) a reflection of the fact that mothers move out more often than fathers (in 67% of the cases versus in 51% of the cases). In line with the fifth hypothesis, moving into rental housing is negatively associated with income: Among former homeowners, parents in the lowest income tertile most often move into rental housing after their separation (40% of the mothers and 20% of the fathers). This is most uncommon among the highest income tertile (20% of the mothers and 11% of the fathers); the middle income tertile lies in between. These differences cannot be explained by group differences in parents' tendency to move after separation.

Figure 5: Move from owner-occupied housing to rental housing

Figure 5a. Marginal means by mother's income tertile

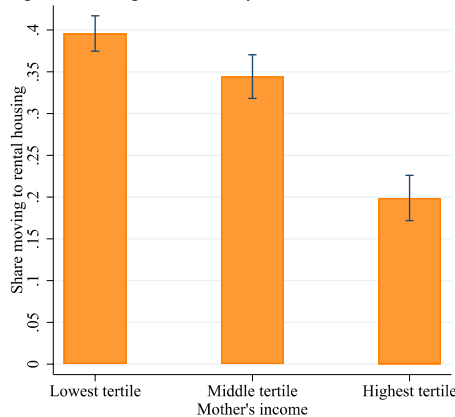
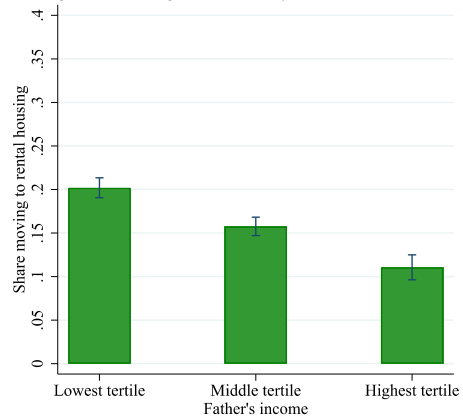


Figure 5b. Marginal means by father's income



5.2.1 Type of housing

Figures 6a and 6b show the marginal prediction of the proportion of mothers and fathers who made a downward move in terms of type of housing in the year of their separation, by income tertile. More specifically, it shows parents who moved from a single-family house into an apartment, or from an apartment with more than two rooms into an apartment with two rooms or less. The estimates were based on logistic regression models (Table A-2).

The estimates show that, among mothers, income is positively associated with making a downward move, as opposed to the sixth hypothesis. Mothers in the highest and middle income tertiles make a downward move in more than 40% of the cases, whereas mothers in the lowest tertile make a downward move only in 33% of the cases. There are no significant differences between fathers with different levels of income. For both mothers and fathers, the lower their income relative to their partner's income before the separation, the more likely a downward move.

Figure 6: Downgrade in type of housing

Figure 6a. Marginal means by mother's income tertile

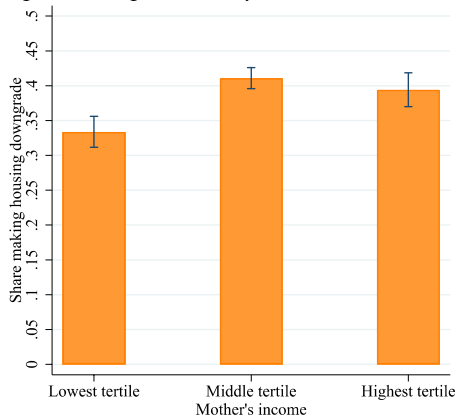
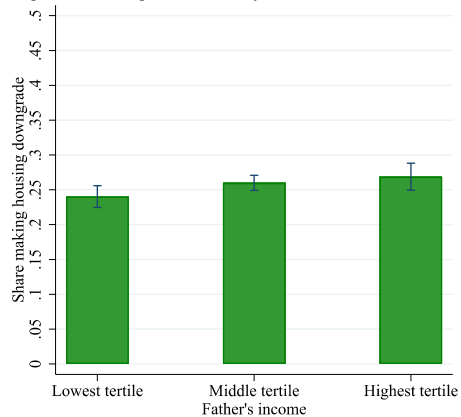


Figure 6b. Marginal means by father's income tertile



5.2.2 Neighborhood deprivation

Figures 7a and 7b show the marginal prediction of change in the neighborhood deprivation index by income tertile, based on the comparison of mothers' and fathers' pre-separation DeSO and post-separation DeSO. A positive score indicates that the parent moved to a more deprived neighborhood. The estimates were based on linear regression models (Table A-2).

The results show that on average separated parents live in more deprived areas than they did before the separation, with mothers making more of a downward move than fathers. Yet, as with the type of housing, and contrary to the seventh hypothesis, it appears that parents in the higher income tertiles have most to lose. Among mothers, the middle and highest income tertiles experience an increase of around 0.15 on the deprivation scale, whereas this is only 0.08 for their lowest-income-tertile counterparts. Among fathers the differences are slightly bigger, 0.03 versus 0.11. Furthermore, the lower the income relative to the partner's before separation, the more likely a move to a more deprived area.

Figure 7: Change in neighborhood deprivation rate

Figure 7a. Marginal means by mother's income tertile

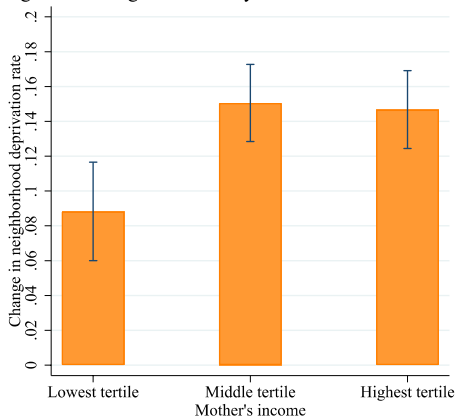
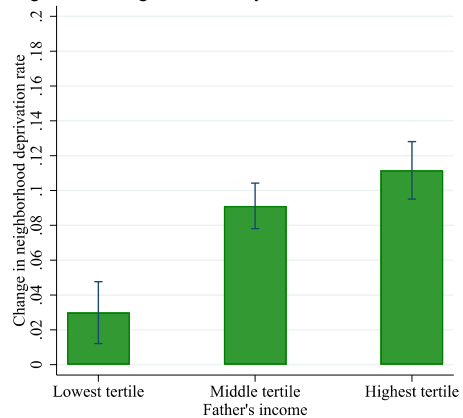


Figure 7b. Marginal means by father's income tertile



5.3 Control variables

Although there is some variation in the outcomes concerning the role of the control variables, there are some general patterns.

Having children registered at the same address is negatively associated with the number of moves, moving into rental housing, an increase in neighborhood deprivation, and a downgrade in type of housing. This could indicate that when considering the children's primary residence (with the father or the mother), parents take the level of housing stability and conditions into account. Alternatively, parents with whom the children are registered receive more (formal or informal) support, providing them with better opportunities. In addition, the age of the youngest child negatively affects the distance of the move and the distance between the parents, but is also associated with a higher likelihood of downgrade in the type of housing. Given the sample's age range (0 to 10), this possibly reflects parents' preference that the children keep attending the same school, which possibly comes at the cost of the type of available housing. Lastly, parents' housing careers generally seem to benefit from higher levels of education and being employed.

5.4 Additional analyses

Differences in income possibly play a more important role in areas with highly competitive housing markets, which raises the question of the extent to which the results are driven by such areas. Therefore, I estimated the effect of income separately for the three largest local labor markets² (Stockholm, Gothenburg, and Malmö) and the rest of the country, for all the outcomes (Table A-3 and A-4). In general, the observed income stratification in post-separation housing careers is not driven by the three largest local labor markets, as they apply to these areas as well as the rest of Sweden. However, some differences between parents with different levels of income are larger in the three largest local labor markets. Parents in the higher income tertiles are more likely to both move out of the former joint house in general, but this difference is larger for fathers living in these areas than in the rest of Sweden. Although, in general, mothers with higher levels of income have a lower frequency of post-separation moving, this does not hold for mothers living in the three largest local labor markets. Furthermore, lower-income parents' higher likelihood of moving from owner-occupied to rental housing, as well as their lower likelihood of downgrading in terms of type of house or neighborhood, is more pronounced in these areas. Whereas fathers with different levels of income in general do not differ in their likelihood of downgrading in type of housing, fathers in the highest income tertile living in the three largest local labor markets are more likely to downgrade than their lower- and middle-income counterparts. Income stratification in the distance moved and the distance between parents does not differ between these areas and the rest of Sweden.

6. Conclusion/discussion

Separated parents form a particularly vulnerable group in today's competitive housing market. The urgent and complex housing needs resulting from a separation might be even more difficult for parents with few financial resources. This study is the first to provide a multi-dimensional overview of the level of income stratification in parents' post-separation housing careers.

The findings show that parents with lower incomes experience greater increases in housing instability, with more frequent moves and a higher tendency to exchange owner-

² Local labor markets are economically integrated areas in which individuals' home and work are within a reasonable distance of each other. SCB provides a yearly list, assigning each Swedish municipality to a local labor market: <https://www.scb.se/hitta-statistik/statistik-efter-amne/arbetsmarknad/sysselsattning-forvarvsarbete-och-arbetsstider/registerbaserad-arbetsmarknadsstatistik-rams/produktrelaterat/Fordjupad-information/lokala-arbetsmarknader-la/forteckning-over-lokala-arbetsmarknader/>

occupation for rental housing. In addition, they move over longer distances and live further apart. This implies that parents with lower incomes end up further away from their former living environment, and that encounters with their children involve more travelling. On top of the financial costs of moving and travelling, maintaining the relationship between children and both parents involves both parents and children having to deal with bigger challenges and a larger burden of adjusting to a new environment.

At the same time, I found that in terms of housing type and neighborhood deprivation the middle- and higher-income parents suffer the largest downgrades, mothers in particular. This could reflect a floor effect: Those who are already living in small apartments in deprived neighborhoods cannot fall any further, while for those in large houses in popular neighborhoods almost any move involves a downgrade. Yet, although this implies that a separation involves a certain level of convergence between the housing careers of lower-income parents and their more advantaged counterparts, they all experience a downgrade, and after a separation lower-income parents are still worse off.

Mothers' and fathers' post-separation housing careers differ in several dimensions in absolute terms, in line with previous studies (Ferrari, Bonnet, and Solaz 2019; Mikolai and Kulu 2018). Mothers move more frequently, move more often from owner-occupied to rental housing, and experience stronger downgrades in type of housing and neighborhood. Although the way fathers' and mothers' post-separation housing careers are stratified by income is relatively similar, differences by income in the likelihood of both parents moving out, moving distance, moving into rental housing, and downgrading in type of housing are stronger among mothers than among fathers. In other words, the post-separation housing careers of mothers – who suffer more severe economic consequences from a separation than fathers (Hogendoorn, Leopold, and Bol 2020) – depend more strongly on income.

The question that these data do not answer is the extent to which the observed patterns reflect inequalities in opportunities and constraints, or differences in preferences. First, the assumption that both parents want to stay involved in their children's lives might not hold equally for all parents. Unfortunately, the Swedish register data do not provide information on how parents divide childcare after the separation. Parenting arrangements probably not only drive but are also driven by housing outcomes and restrictions. Studying the interrelation between the two would be a valuable contribution to our understanding of the stratified consequences of separation. Second, parents might prefer staying in certain types of neighborhoods, despite the level of deprivation. For example, the places where parents move to might be driven by a need for support from their social network, especially if their financial resources are limited. Nevertheless, regardless of parents' motives, the disadvantages observed among the lowest income tertile – a larger distance between parents, moving from owner-occupied to rental housing, and moving

more frequently – all involve higher financial and emotional costs. Thus, housing careers can be considered yet another way in which the stratified effects of separation are manifested.

At the same time, the role of financial resources is more complicated than this descriptive study might suggest. By focusing on how pre-separation differences determine post-separation outcomes the analyses did not consider post-separation changes in income. Therefore, the housing inequalities observed here should not be considered separate from and additional to financial inequalities following parental separation, but rather a reflection and possibly an accelerator of financial inequalities. For example, a separated mother who experienced a deep drop in income by separating from a high-earning partner no longer has the financial resources to buy a house, and might end up spending a lot of money on moving between temporary contracts in the private rental sector. A more detailed analysis of the possible reinforcement of post-separation income loss and housing conditions could provide additional insights into the multidimensional character of the consequences of separation. Furthermore, although capital income is included in the measure of income, the data do not provide a direct measure of wealth. Next to income, financial capital plays an important role in the housing market (Fusco 2015). Whereas Sweden has a relatively flat income distribution, it has a high concentration of capital (Therborn 2020). Thus, the stratification by income considered in this study might underestimate economic inequalities in the effect of separation on housing careers.

This study shows that separated parents form a particularly vulnerable group in the housing market, which can cause additional stress and anxiety, especially for lower-income parents and their children (Bratt 2002; Campagna 2016). In both research and policy-making it is important to consider housing as a possible mediator of the negative consequences of separation. For example, in order to minimize instability after a separation, lower-income families need more support in finding a stable housing solution and a way to coordinate the involvement of both parents, despite the longer distances the children need to travel.

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Appendix

Table A-1: Models predicting moving and distance after parental separation

Dependent variable	Both parents moved		Number of moves ¹		Distance of the first move				Distance between parents	
	Logistic regression		Poisson regression		Linear regression				Linear regression	
	Beta	t	Beta	t	Mother	Father	Mother	Father	Beta	t
Income tertile mother (ref. lowest)										
<i>Middle</i>	0.39	8.74	<-0.01	-0.06	-0.05		-6.03		-0.02	-2.76
<i>Highest</i>	0.73	13.14	-0.02	-2.98	-0.05		-5.59		-0.03	-2.81
Contribution to household income mother			-0.04	-6.00	0.02		2.42			
Income tertile father (ref. lowest)										
<i>Middle</i>	0.14	2.59				-0.04	-6.48	-0.01	-1.05	-5.13
<i>Highest</i>	0.29	3.57				-0.05	-7.04	-0.01	-0.79	-4.20
Contribution to household income father						-0.05	-7.40	-0.02	-1.81	
Education mother (ref. < secondary)										
<i>Secondary</i>	0.11	1.55	0.03	3.69	-0.06		-3.69		-0.04	-2.92
<i>Tertiary</i>	0.10	1.28	0.01	0.98	-0.05		-3.05		-0.04	-2.86
Education father (ref. < secondary)										
<i>Secondary</i>	0.21	3.54				-0.04	-4.79	-0.01	-0.67	-1.48
<i>Tertiary</i>	0.21	2.83				<0.01	0.08	0.02	1.58	-0.31

Table A-1: (Continued)

Dependent variable	Both parents moved				Number of moves ¹				Distance of the first move				Distance between parents			
	Logistic regression		Poisson regression		Mother		Father		Mother		Father		Linear regression		Linear regression	
Model	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
Mother unemployed (ref. no)	<0.01	0.09	<0.01	0.96					0.04	4.42			0.03		0.03	3.45
Father unemployed (ref. no)	0.01	0.17					0.04	8.48			0.05	5.38	0.04		0.04	5.33
Lived in large city (ref. no)	0.18	2.77	-0.04	-4.24	0.04	9.04	0.04	9.04	<-0.01	-0.57	-0.04	-4.72	-0.02		-0.02	-2.96
Number of joint children	-0.39	-7.06	0.02	4.95	0.06	9.29	0.06	9.29	-0.03	-4.37	-0.01	-1.32	-0.03		-0.03	-4.38
Mother's age	-0.25	-5.09	-0.13	-22.09					0.01	1.11			<-0.01		<-0.01	-0.01
Father's age	-0.32	-5.57			-0.10	-12.74					<-0.01	0.03	0.02		0.02	1.89
Parents were married (ref. cohabiting)	0.13	3.37	0.01	1.76	0.02	3.91	0.01	3.91	0.01	1.22	-0.00	-0.04	0.01		0.01	0.87
Age youngest child	-0.05	-1.13	0.01	2.23	0.03	4.15	-0.07	-7.81	-0.07	-7.81	-0.06	-5.19	-0.05		-0.05	-6.50
Children registered with mother (ref. no)	1.06	10.23	-0.23	-34.02			0.04	3.94					-0.06		-0.06	-5.41
Children registered with father (ref. no)	-0.01	-0.13			-0.48	-41.74					-0.01	-0.77	-0.10		-0.10	-9.37
Mother lives with new partner (ref. no)	0.08	1.74	-0.02	-3.20			<-0.01	-0.52					-0.03		-0.03	-3.09
Father lives with new partner (ref. no)	0.12	2.48			0.02	5.11					0.01	1.25	0.02		0.02	1.20
(Pseudo) Log-Likelihood	-12935.83		-35912.03		-33329.70		-101619.13		-101619.13		-77551.66		-148699.39		-148699.39	
(Pseudo) R-square	0.04		0.04		0.11		0.02		0.02		0.01		0.02		0.02	
N	27 204		27 204		27 204		18 529		18 529		14 041		27 204		27 204	

Source: Statistics Sweden.

Notes: Standardized beta coefficients; t statistics in second column. Standard errors adjusted for clustering within municipalities.

¹ Controlled for the number of moves in the three years preceding the separation.

Table A-2: Models predicting (changes in) housing outcomes after parental separation

Dependent variable	Owner-occupied to rental housing				Downgrade in type of housing				Change in neighborhood deprivation			
Model	Poisson regression				Logistic regression				Linear regression			
	Mother		Father		Mother		Father		Mother		Father	
	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
Income tertile mother (ref. lowest)												
<i>Middle</i>	-0.24	-4.55			0.35	7.78			0.04	5.11		
<i>Highest</i>	-1.02	-12.15			0.26	2.73			0.04	2.67		
Contribution to household income mother	0.01	0.23			-0.57	-13.36			-0.05	-5.64		
Income tertile father (ref. lowest)												
<i>Middle</i>			-0.44	-5.84			0.13	1.95			0.04	5.63
<i>Highest</i>			-0.97	-8.46			0.17	1.83			0.05	6.11
Contribution to household income father			-0.28	-4.09			-0.58	-9.22			-0.07	-7.45
Education mother (ref. < secondary)												
<i>Secondary</i>	-0.17	-2.31			0.40	8.02			0.02	2.14		
<i>Tertiary</i>	-0.47	-6.17			0.33	6.71			0.02	2.46		
Education father (ref. < secondary)												
<i>Secondary</i>			-0.35	-3.85			<-0.00	-0.01			0.04	4.29
<i>Tertiary</i>			-0.13	-1.20			0.29	6.09			0.05	4.89
Mother unemployed (ref. no)	0.14	4.44			-0.08	-2.45			-0.02	-2.27		
Father unemployed (ref. no)			0.13	2.68			0.01	0.31			-0.01	-2.35
Lived in large city (ref. no)	-0.27	-1.50	0.24	2.51	-0.28	-4.16	0.09	2.00	-0.03	-1.88	-0.02	-2.18
Number of joint children	<-0.01	-0.00	0.06	1.13	-0.22	-8.13	0.04	0.75	<-0.01	-0.06	<-0.01	-0.53
Mother's age	-0.43	-9.58			-0.16	-4.39			0.01	1.35		
Father's age			-0.33	-4.77			-0.08	-1.92			0.01	0.74
Parents were married (ref. cohabiting)	-0.11	-2.98	0.04	0.64	0.01	0.34	0.11	3.30	-0.02	-3.59	<0.01	0.72
Age youngest child	0.16	3.56	0.09	1.35	0.17	5.24	0.17	2.82	0.01	0.85	0.01	0.87
Children registered with mother (ref. no)	-0.67	-15.73			-1.06	-30.60			-0.10	-13.09		
Children registered with father (ref. no)			-2.58	-30.95			-2.08	-43.42			-0.07	-11.26
Mother lives with new partner (ref. no)	-0.32	-7.04			-0.20	-6.38			-0.02	-3.91		
Father lives with new partner (ref. no)			-0.22	-3.98			-0.10	-3.07			-0.02	-3.34
(Pseudo) Log-Likelihood	-11573.28		-7759.28		-16703.79		-13784.48		-28171.30		-27072.68	
(Pseudo) R-square	0.07		0.12		0.07		0.10		0.02		0.01	
N	19,982		19,982		27,204		27,204		27,204		27,204	

Source: Statistics Sweden.

Note: Standardized beta coefficients; t statistics in second column. Standard errors adjusted for clustering within municipalities.

Table A-3: Models¹ predicting moving and distance after parental separation, interaction between income and three largest local labor markets²

Dependent variable	Both parents moved		Number of moves ³				Distance of the first move				Distance between parents	
Model	Logistic regression		Poisson regression				Linear regression				Linear regression	
			Mother		Father		Mother		Father			
	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
Income tertile mother (ref. lowest)												
Middle	0.30	4.43	<0.01		-0.05		-0.05	-4.87			-0.03 ^{***}	-3.20
Highest	0.50	6.50	-0.04		-3.67		-0.04	-3.13			-0.02	-1.50
Income tertile father (ref. lowest)												
Middle	-0.06	-0.83			-0.06	-6.45		-0.01	-0.70	-0.03 ^{***}		-3.14
Highest	-0.12	-1.54			-0.07	-6.22		0.02	1.04	-0.02		-1.71
Lived in 3 largest local labor markets (ref. no)	-0.09	-1.08	-0.06		-4.45	0.03	3.67	0.03	1.56	-0.03	-1.65	<0.01
Interaction mother												
Middle*local labor markets	0.13	1.93	<0.01		0.18		-0.01	-0.89			0.01	0.83
Highest* local labor markets	0.26	3.03	0.03		2.96		-0.03	-2.03			-0.01	-0.86
Interaction father												
Middle* local labor markets	0.30	4.15			0.03	3.55		<0.01	0.21	<-0.01		-0.48
Highest* local labor markets	0.50	4.82			0.02	1.92		-0.03	-1.38	-0.01		-1.05
(Pseudo) Log-Likelihood	-12874.34		-35904.88		-33310.94		-101616.34		-77552.94		-148702.65	
(Pseudo) R-square	0.05		0.04		0.11		0.02		0.01		0.02	
N	27,204		27,204		27,204		18,529		14,041		27,204	

Source: Statistics Sweden.

Note: Standardized beta coefficients; t statistics in second column. Standard errors adjusted for clustering within municipalities.

¹ All models were controlled for parents' education, employment status, age, number of joint children, age of youngest joint child, whether they were married (pre-separation), whether they have a child registered at their house (post-separation), and whether they lived with a new partner (post-separation).² Stockholm, Gothenburg, and Malmö.³ Controlled for the number of moves in the 3 years preceding the separation.

Table A-4: Models¹ predicting (changes in) housing outcomes after parental separation, interaction between income and three largest local labor markets²

Dependent variable	Owner-occupied to rental housing				Downgrade in type of housing				Change in neighborhood deprivation			
Model	Poisson regression				Logistic regression				Linear regression			
	Mother		Father		Mother		Father		Mother		Father	
	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
Income tertile mother (ref. lowest)												
Middle	-0.17	-2.87			0.23	4.65			0.03	3.20		
Highest	-0.67	-9.53			-0.01	-0.07			-0.01	-0.77		
Income tertile father (ref. lowest)												
Middle			-0.33	-3.61			-0.14	-2.36			0.03	3.39
Highest			-0.59	-4.56			-0.14	-1.80			0.02	3.03
Lived in 3 largest local labor markets (ref. no)	-0.69	-7.95	0.08	0.66	-0.53	-4.92	-0.13	-1.44	-0.06	-3.04	-0.02	-1.69
Interaction mother												
Middle*local labor markets	-0.08	-1.17			0.23	4.35			0.02	1.36		
Highest* local labor markets	-0.35	-3.73			0.46	4.59			0.07	4.47		
Interaction father												
Middle* local labor markets			-0.16	-1.64			0.40	5.70			0.03	2.45
Highest* local labor markets			-0.49	-3.43			0.42	3.99			0.04	3.75
(Pseudo) Log-Likelihood	-11320.56		-7758.21		-16670.76		-13743.80		-28152.51		-27070.01	
(Pseudo) R-square	0.09		0.12		0.07		0.11		0.02		0.01	
N	19,982		19,982		27,204		27,204		27,204		27,204	

Source: Statistics Sweden.

Note: Standardized beta coefficients; t statistics in second column. Standard errors adjusted for clustering within municipalities.

¹ All models were controlled for parents' education, employment status, age, number of joint children, age of youngest joint child, whether they were married (pre-separation), whether they have a child registered at their house (post-separation), and whether they lived with a new partner (post-separation).

² Stockholm, Gothenburg, and Malmö.