

Suburbanization and centralization dynamics in the social reconfiguration of metropolitan space

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Abstract

Suburbanization and centralization are two key factors in the construction of metropolitan space, with the original centralization of the population in inner cities, followed by the development of suburbanization processes, but at the same time, they are residential choices that households and individuals make over their life courses. This chapter aims to shed light on these residential choices. In a first step, we propose a theoretical framework to understand the complexity of the events that trigger these choices, as well as the influence that social, life and spatial contexts have on them. The second step consist in an explanation of these decisions, implementing a strategy to operationalize the proposed theoretical framework with the cross-sectional data available in Spain. The main results highlight how suburbanization and centralization are diverse movements that, far from having a single explanation, vary substantially according to the spatial and life-cycle contexts of the actors.

1. Introduction

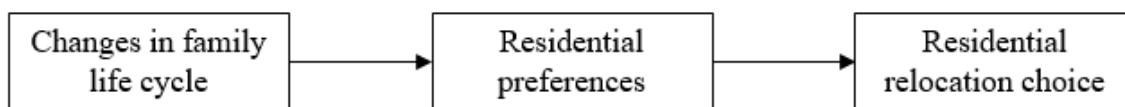
Since the second half of the twentieth century, the phenomenon of metropolitanization has intensified in all Western major cities. Once confined to their municipal limits, old cities have expanded their sphere of influence towards their surrounding municipalities, giving rise to the birth of metropolitan areas. An initial phase, during which rural inhabitants began to concentrate in cities, was replaced by a new stage in metropolitan evolution, as migration became secondary to internal residential mobility. The importance of this shift was both quantitative, in that this became the main demographic flow (re)configuring urban space and population growth, and qualitative, in that the direction and intensity of this mobility determined urban development in each specific area. In this context, three forms of residential mobility emerged that would determine the processes of urban development and transformation: centralization (movements from the suburbs or outskirts to the city centre), suburbanization (movements from the centre to the suburbs) and movement between suburban municipalities. Of these three, centralization and suburbanization stand out for a number of reasons. Firstly, they are characteristic of the initial stages in the life cycle of metropolitan cities, with centralization representing the beginning of concentration and suburbanization corresponding to the stages of metropolitan consolidation and expansion. Secondly, the two movements are complementary and constitute the primary demographic flows between the two basic components of the metropolitan system – urban centres and suburbs – and are key to understanding the processes of social and demographic reconfiguration in metropolitan areas. Above all, however, centralization and suburbanization are residential choices made by individuals and households that choose to relocate in response to the emergence of certain preferences, needs and/or desires. Understanding the demographic flows that transform cities requires knowledge about the individual residential mobility decisions which by aggregation, produce the demographic flows that (re)produce the urban space. This chapter meets that need by explaining the residential choices of the actors involved and their effect on the social reconfiguration of metropolitan cities, paying special attention to the two principal residential dynamics of suburbanization and centralization. The authors studied this question in detail in the “Metropolitan

Social Reconfiguration Processes” project (RECSOC). Within this framework they published number of works on the topic (Susino, 2010; Susino, 2003; Susino and Duque-Calvache, 2012; Torrado, Duque-Calvache and Nogueras, 2021; Torrado, Duque-Calvache and Fuster, 2021; Torrado, Duque-Calvache and Palomares, 2020; Duque-Calvache, Torrado and Fuster, 2017; among others) in addition to a doctoral thesis on centralization movements (Torrado, 2020). This chapter focuses on the reasons behind residential choices discovered by the RECSOC project, presenting the primary findings related to suburbanization and centralization flows in Spain. To that end, the chapter is structured in two parts. The first discusses the theoretical framework developed to study residential choice. This framework, while it is original, does draw on prior studies of residential behaviour (Mulder & Hooimeijer, 1999). The second applies the definition of Spanish metropolitan areas established by Feria and Martínez (2016) to the particular focus of the chapter in order to explain suburbanization and centralization movements in the country.

2. A theoretical proposal for the study of suburbanization and centralization as residential choices

The study of centralization and suburbanization as residential choices received very early attention in the literature on residential behaviour, dating back to the classic work by Rossi (1955). This author established that suburbanization corresponds to the early stages in the life course and is a form of a mobility related to adjusting to or anticipating the birth of children (Michielin and Mulder, 2008). Centralization, on the other hand, is linked to life-course changes after the formation of a family related to the dissolution of the household or entering the ‘empty nest’ stage (Shin, 2012). However, this focus is rather limited, as it attributes centralization and suburbanization decisions solely to changes in the family life course of individuals and households.

Figure 1. Classic causal diagram for residential choice



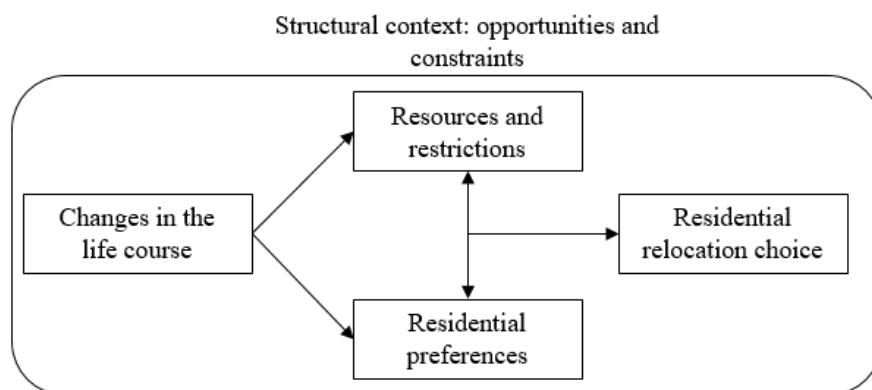
Source: Authors, based on Rossi (1955)

This model was developed later by Clara Mulder (Mulder, 1993; Mulder and Hooimeijer, 1999) who defined the conceptual framework used by most of the studies on residential mobility to date. According to Mulder, individuals experience various changes in their life cycles (understood more broadly than the old concept of the family life course to embrace educational, professional, residential and family changes) that act as a catalyst for residential mobility, producing preferences that are not satisfied by current location (with regard to both housing and the surrounding environment). Although these preferences do not translate directly into a decision, they come face to face with the determinants arising from the personal, or micro, and structural, or macro, contexts that frame residential behaviour.

Mulder defines the micro context in terms of individual resources and restrictions. The primary resources, which are connected to the social position of the subjects, principally financial and economic (Feijten, Hooimeijer and Mulder, 2008). The main restrictions, on the other hand go beyond a lack of material resources to include the ties that bind individuals to their sphere of activity, to other members of the household and to their dwelling, including their place of employment (Bailey, Blake and Cook, 2004) or education (Susino, 2003). Moreover, the process of negotiating with other members of the household when deciding on relocation often restricts initial needs according to the spaces of daily activity (not only education and work, but friends, family and the like) of the other people in the household (Coulter, Ham and Findlay, 2016).

With regard to macro/structural determinants, Mulder writes about the opportunities and constraints related to the historical time, economic cycles and the characteristics of work and housing markets, all issues that are beyond the control of individuals and households. These constraints and opportunities range from the availability of new housing (Feria and Andújar, 2015), to the characteristics of the public housing stock, mortgage loan interest rates (Coq-Huelva, 2012), local and national housing policies (Ronald, 2008) and even to the influence of economic expansion or contraction in national and international markets (Feria and Andújar, 2015; Pujadas, Bayona and Gil-Alonso, 2014).

Figure 2. Mulder's causal diagram for residential choice



Source: Authors, based on Mulder and Hooimeijer (1999)

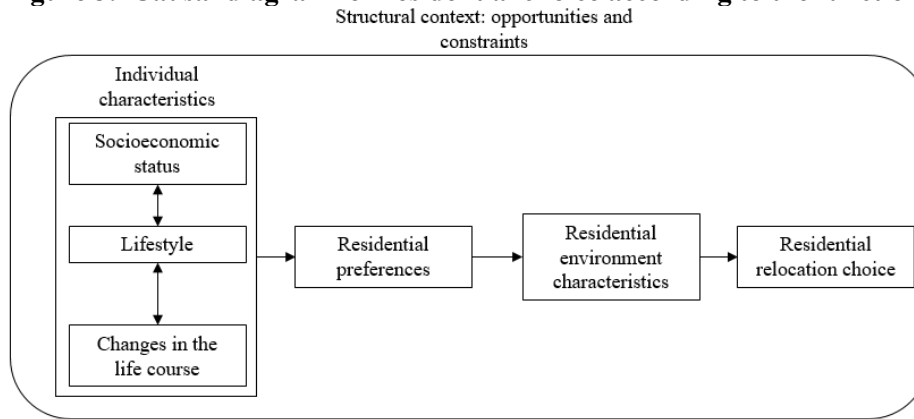
The application of this general model to the study of decisions related to suburbanization and centralization has resulted in a number of studies that use an approach termed the ‘functional fit’ theory (Torrado, 2020; Torrado, Duque-Calvache and Fuster, 2021). According to this theory, individuals chose to move to urban centres or suburbs in response to a series of triggers that lead them to choose the environment whose objective characteristics (services, location and housing) best fit their preferences and needs. This theory points to three triggers for residential choice: 1) life-course events, primarily understood as changes in the household configuration; 2) socioeconomic status, a determining variable related to the resources and restrictions that influence choice (Mulder and Hooimeijer, 1999); and 3) lifestyle, in other words, the attitudes and practices related to the family, social interaction and the use of space.

Although the functional fit approach has allowed many earlier studies to establish relationships between the personal characteristics of individuals and the choice of residential environment (Duque-Calvache, 2015; Feijten and Ham, 2007; López-Gay and Recaño, 2008; Marois and Bélanger, 2013; Shin, 2012; South and Crowder, 1997; Turcotte and Vézina, 2010), this explanation by itself is insufficient. While the objective characteristics of environments clearly influence choice (Bayoh, Irwin and Haab, 2006), the decision-making process is rather more complex, in that the assessments that individuals make regarding the characteristics of a specific environment can vary substantially according to their imaginaries, which are always constructed based on prior residential experience (Blaauboer, 2010; Feijten et al., 2008). Accordingly, although the process of choosing an environment may be conceived as a functional fit between personal characteristics and environmental characteristics, this fit can differ in accordance with different individual perceptions, a dimension overlooked in the works done based on this perspective.

In the twenty-first century, some studies have begun to take a closer look at the role played by the subjective component of environments in residential choice, which Mulder and Hooimeijer (1999) refer to as the ‘situation’. According to these works (Ærø, 2002, 2006; Blaauboer, 2010; Feijten et al., 2008), when deciding on a residential environment, individuals take into consideration not only the suitability of the objective characteristics of the environment vis-à-vis their preferences, but also a variety of

subjective elements about the environment that are constructed through their experiences with and in them (Ærø, 2006). Acquiring this residential experience is a social learning process in which individuals develop their habitus and, more specifically, their residential habitus. This habitus comprises two closely related components that individuals bear in mind when making residential choices: their imaginaries related to the environment and the different resources or capital located in a space.

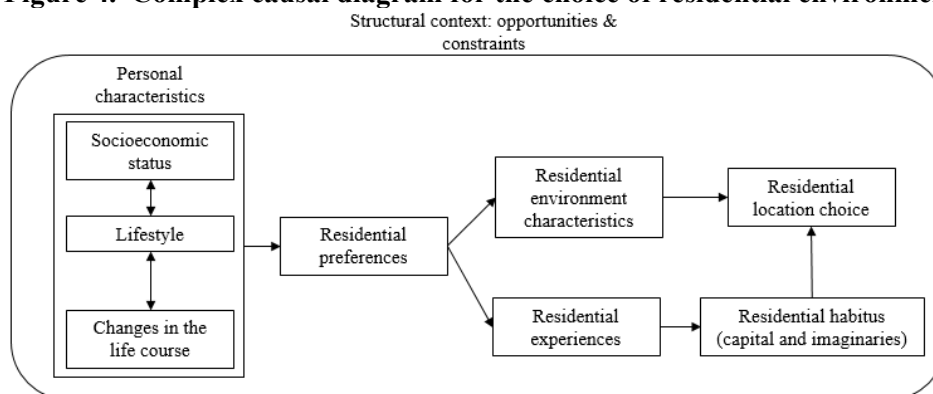
Figure 3. Causal diagram for residential choice according to the functional fit approach



Source: Authors, based on Mulder and Hooimeijer (1999)

A subject's imaginary is related to how they perceive environments, to the different assessments that they make about spaces and their respective identifications and emotions. Throughout the process of residential socialization, individuals acquire memories and experiences that configure their perspective regarding different environments (in this case, urban centres or suburbs), causing them to develop what is commonly referred to as 'rootedness' (Clark, Duque-Calvache and Palomares-Linares, 2015). At the same time, during the socialization process, individuals amass capital in the urban space in the form of resources that are social (friendship, family and neighbourhood networks), economic (for example, real estate) and cultural (knowledge of the environment and its possibilities) (Blaauboer, 2010) that, to a certain extent, condition and orient their choice of residence.

Figure 4. Complex causal diagram for the choice of residential environment



Source: Authors, based on Mulder and Hooimeijer (1999) and Feijten et al. (2008)

This chapter analyses residential choice as a complex decision, as summarized in Figure 4. As with Mulder and Hooimeijer (1999), the process of residential choice in this case begins with the appearance of new preferences due to a number of triggers related not only to the life course, but also to lifestyles and limitations in the form of resources and constraints that are linked to social position. The emergence of these preferences creates an imbalance between the current and the desired location, leading people

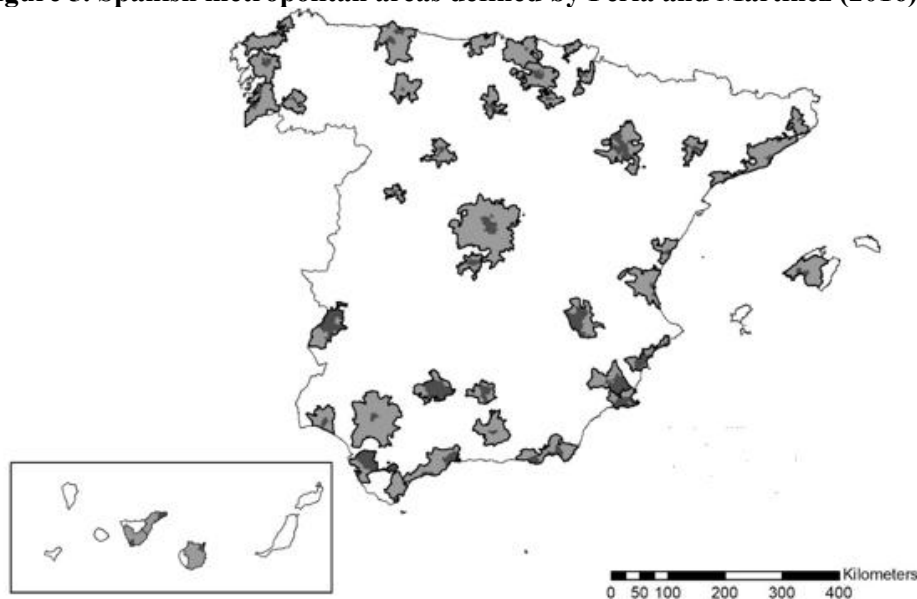
to consider the different environments available for relocation. In this consideration, individuals go through a process of analysis and decision-making that is quite complex. On the one hand, they evaluate the extent to which the characteristics of the environments adapt to their preferences. At the same time, however, this process includes a subjective dimension related to what individuals think about a particular environment, as well as the opportunities offered in the form of any capital they have there. Once they have considered and analysed the objective and subjective characteristics of the possible spaces, they choose the environment, urban or suburban, that best fits their residential preferences. However, this decision-making process does not occur in isolation, rather, as with residential behaviour in general, it is framed within a historical, political, economic, cultural, social and spatial context that determines the structural opportunities and constraints that shape the process of choosing a residential environment.

3. Data and methods

This chapter analyses residential choice in accordance with the factors presented in Figure 4, going from least to most complex. Firstly, centralization and suburbanization are analysed using the functional fit approach in order to identify the individual factors ('personal characteristics' in the diagram) that explain the decision to opt for either the urban centre or the suburb. Here, centralization and suburbanization are explained in general terms, highlighting the social categories that lead an individual to one choice or the other, with the understanding that certain social categories are more attracted to certain environments because of their objective characteristics. Secondly, the article takes a more in-depth look at the subjective dimension of spaces, operationalizing 'residential experiences', examining not only how this affects the overall explanation for centralization, but also how the explanation itself may vary when the different residential experiences and, consequently, habitus of individuals are taken into consideration. Thirdly, the article explores how the urban/suburban choice is not an isolated one, made in the ether, but framing by a structural context. Finally, as there is no data available to make a longitudinal analysis, another contextual factor – space – is considered, with an analysis of how the reasons for residential choice may vary according to the type of metropolitan area.

The 44 metropolitan areas in Spain as defined by Feria and Martínez (2016) comprise the field of study, broken down (Feria, 2013) into five primary types according to their development from lesser to greater: emergent, minor, standard, large and urban region.

Figure 5. Spanish metropolitan areas defined by Feria and Martínez (2016)



Source: Authors

The data used in the study is the 2011 Spanish Population and Housing Census. The use of this source is due to the following reasons: 1) It contains the most up-to-date data on individuals. As of the writing of this chapter, individual data from the 2021 census has not been made public. 2) Feria and Martínez (2016) used this census to define and classify metropolitan areas as urban or suburban, something basic to study suburbanization and centralization movements. 3) The 2011 census provides a wealth of information on individual variables, allowing for a comprehensive operationalization of nearly all the individual determinants that influence residential choice.

The proposed causal theory is applied to the analysis of residential choice using logistic regression models, a technique that is widely employed in residential behaviour studies to model the choice of environment. These models provide information on how belonging to a specific social category influences the choice of suburbanization or centralization. In order to clarify the interpretation of the models and compare them with different samples, the results are presented using average marginal effects (AMEs), as is standard practice (Williams, 2012). The marginal effects are easily interpretable as the probability – in positive or negative percentage terms – that a social category will make the choice being analysed.

A total of 10 logistical models were developed in pursuit of three aims. Firstly, one suburbanization model and a second centralization model are developed, covering all the metropolitan areas in Spain in order to learn more about the general determinants behind the two choices. Secondly, four models are created (two for suburbanization and two for centralization) that broke the sample down according to whether the movements were made by individuals who had been born in the environment to which they later moved or not. Comparing these two groups made it possible to address the effect of residential habitus in the choice of environment. Thirdly, four models are developed (once again two for suburbanization and two for centralization) that broke the sample down between the two extreme types of metropolitan area: emergent/new versus urban regions. This provided information about variations in residential choice according to the structural context represented by the type of metropolitan area where a person lives.

The dependent variables used to construct the models considering whether an individual's movement constituted suburbanization or centralization. These dichotomous variables given a value of "1" if the individual made the analysed movement (whether suburbanization or centralization) and "0" when they did not, either in the form of making a different movement or staying in place. The variables took into consideration mobility during the year before the census (2010-11). This is because is the more accurately measure to analyse immediate determinants of residential choice, given the proximity in time between the moment and the census containing the characteristics. Finally, with respect to the independent variables, every effort is made to operationalize the different dimensions included in the causal diagram. We considered the following factors:

- Life course: age, gender, household composition.
- Social position: social-labour status, education level.
- Lifestyle: place of work, number of household tasks.
- Housing arrangement: form of ownership.
- Residential experience: type of municipality where the person was born.
- Metropolitan area: type as classified according to Feria (2013).

4. Centralization and suburbanization movements in Spanish metropolitan areas

4.1. A general explanation for suburbanization and centralization

The models below show how centralization and suburbanization are complementary – and even contrary – movements with regard to most of the characteristics of the individuals involved, indicating the critical

role that both movements play in the social reconfiguration of metropolitan areas and, specifically, the transformation of urban centres and suburbs.

Beginning with the life course factor, centralization is a movement that attracts people of various ages, with an increased presence of men. Suburbanization, on the other hand, is more closely associated with younger people on average, with no gender influence. Household composition, in turn, has very little effect on the direction of the movement, although it does influence the intensity. The two movements are positively correlated to couples without children and nonfamily households, indicating that having children is a limiting factor for both. This is logical, since the models indicate the probability of centralization or suburbanization versus the probability of alternative movements or staying in place (with the latter category being more significant), indicating the household categories with the greatest mobility. An analysis of the intensity of the marginal effects identifies the specific differences between the two types of movement. Here, the limiting effect of having children is much stronger regarding centralization than suburbanization, showing that the choice to move to the suburbs is generally more closely tied to the stages of family expansion, with movement to the centre more tightly connected to nonfamily households and, to a lesser degree, couples without children.

Social position is also associated with important differences between the two movements. While the correlation between being self-employed or a manual worker (generally lower categories in the social hierarchy) and centralization is low, it is quite high with individuals with higher education. Suburbanization, on the other hand, is linked to service workers (particularly public services like the hotel trade, retail sales, etc.) and the self-employed, with no clear correlation with education level. Accordingly, centralization is a movement characteristic of the middle classes as opposed to suburbanization, which is mainly made up of the new service proletariat. This complementarity accounts for the significance of these movements in the social division of the metropolitan space: The centralization of talent and the suburban dispersion of the working classes can be seen much more clearly when analysing 10 years of mobility in cities at the top of the urban hierarchy (Torrado, Duque-Calvache and Nogueras, 2021).

The daily practices related to lifestyle variables are also linked to both movements. Centralization is closely associated with outsourcing domestic labour, working near the home (in the same municipality) and owning a second residence. Suburbanization, on the contrary, is characterized by the opposite: having primary responsibility for domestic chores, living far from one's place of work and the insignificance of a second residence. These differences have been identified before in the literature to explain how the choice to live in the centre is related to hedonistic lifestyles designed to concentrate living spaces (de Pablos and Sánchez-Tóvar, 2003; Lees, Slater and Willy, 2013), as opposed to the focus on family life in suburban environments, which are perceived as more peaceful and safer (Fishman, 1987). However, the differences regarding social position suggest another explanation related to lifestyle: centralization is more characteristic of people with greater resources, as opposed to the limitations faced by the suburban working class sectors when searching for housing in city centres, in addition to their lack of economic possibilities for outsourcing domestic labour.

When housing arrangements are taken into account, centralization is closely linked to living in rental housing and, although to a lesser extent, in housing provided by a friend, family member or company. Suburbanization, in turn, is highly associated with mortgaged property ownership and renting. This reinforces the hypothesis that centralization has stronger ties with the more transitory stages of the life course than suburbanization. But also underscores another important factor (examined in greater depth below): for some people centralization is only possible because a friend or family member has supplied the residence, something that can only occur when an individual has a solid social network in the city.

The final two variables play an important role in operationalizing the structural context of the mobility: the residential experience related to one's place of birth and the type of metropolitan area. The significance of both variables validates the causal diagram proposed for the analysis of residential

choice, demonstrating their importance with regard to understanding what causes an individual to choose one residential environment over another. Moreover, it justifies the subsequent analysis of the residential choice broken down by residential experience and type of area, since the explanations no doubt differ according to life and spatial contexts. The results are equally important with respect to direction and intensity. Firstly, place of birth has an important effect on residential experience, with a higher probability of moving to the environment where one was born, although this is much more pronounced with centralization than suburbanization. Secondly, with the type of metropolitan area, there is a partial confirmation of metropolitan development models (Champion, 2001), with the probability of centralization decreasing as the degree of metropolitan development increases, with the exception of emergent areas, which generally have low levels of intermunicipal mobility (Feria, 2013). Suburbanization does not follow a clear pattern, although its probability in emergent areas is negative.

Figure 6. Logistical models for centralization and suburbanization in Spanish metropolitan areas

	Centralization			Suburbanization		
	dy/dx	Sig	SE	dy/dx	Sig	SE
Age	0.00%		0.00%	-0.10%	***	0.00%
Age squared	0.00%	*	0.00%	0.00%	***	0.00%
Women	-0.25%	*	0.01%	0.11%		0.02%
Household composition (Ref: One person under 65)						
One person over 65	-0.17%		0.03%	0.61%	**	0.04%
Single parent with children under 25	-1.43%	***	0.03%	-1.31%	***	0.05%
Single parent with children over 25	-0.38%		0.03%	-0.77%	***	0.05%
Couple without children	0.53%	*	0.02%	1.33%	***	0.03%
Couple with children under 25	-2.36%	***	0.03%	-0.81%	***	0.03%
Couple with children over 25	-2.44%	***	0.03%	-1.26%	***	0.05%
Nonfamily household	2.12%	***	0.03%	0.78%	***	0.05%
Other family	0.42%		0.03%	0.63%	***	0.03%
Socioeconomic status (Ref: Professionals)						
Self-employed	-0.74%	**	0.02%	0.33%	*	0.03%
Clerical workers	-0.17%		0.02%	0.21%		0.02%
Other service workers	0.09%		0.02%	0.52%	***	0.03%
Manual workers	-1.07%	***	0.03%	-0.16%		0.03%
Other workers	-1.12%		0.06%	0.03%		0.07%
Nonworkers	-0.99%	***	0.02%	-0.32%	**	0.03%
Education level (Ref: Primary or less)						
University degree	1.87%	***	0.02%	0.15%		0.03%
A-level/vocational	0.65%	**	0.02%	0.24%		0.03%
Secondary school	0.06%		0.02%	0.20%		0.03%
Number of household tasks	-0.29%	***	0.01%	0.13%	***	0.01%
Place of work (Ref: Does not work)						
Same municipality	1.52%	***	0.02%	-1.90%	***	0.03%
Other municipality in the metro area	-0.85%	***	0.02%	3.20%	***	0.02%
Outside metro area	-3.98%	***	0.03%	-3.02%	***	0.05%
Second residence (Ref: No)	0.60%	***	0.02%	-0.17%		0.02%
Housing arrangement (Ref: Owner with mortgage)						
Fully-paid ownership	-0.58%	**	0.02%	-2.22%	***	0.02%
Inherited ownership	-0.54%		0.03%	-1.47%	***	0.04%
Rental	3.09%	***	0.02%	0.63%	***	0.02%
Other housing arrangement	0.78%	***	0.02%	-1.05%	***	0.03%
Type of metro area (Ref: Urban regions)						
Large	0.51%	**	0.02%	0.66%	***	0.02%
Standard	1.50%	***	0.02%	0.62%	***	0.02%
Minor	1.56%	***	0.02%	0.80%	***	0.02%

Emergent	1.38%	**	0.04%	-0.70%	**	0.05%
New	1.26%	***	0.02%	0.19%		0.02%
Birthplace (Ref: Abroad)						
Inner city, same area	1.61%	***	0.02%	0.00%		0.02%
Suburb, same area	-0.37%		0.02%	0.60%	***	0.03%
Inner city, other area	-0.39%		0.03%	-0.81%	***	0.03%
Suburb, other area	-1.02%	*	0.04%	-0.93%	***	0.05%
Non-metropolitan municipality	-1.28%	***	0.02%	-1.40%	***	0.03%
R ²		0.184			0.227	

Source: Population and Housing Census, 2011

4.2. The importance of life contexts

Having demonstrated the relevance of the place of birth variable as an indicator of residential experience, it can be used to differentiate centralizers and suburbanites according to their backgrounds and analyse the determinants that act in each case. For example, the question arises of whether the determinants affecting residential choice differ according to the direction of the movement, in other words, outgoing or return. To answer this question, the models in Figure 6 have been replicated for the two groups: individuals born in the environment to which they move versus individuals born elsewhere. Generally speaking, the models show that the individual factors that explain outgoing and return movements are distinct, indicating an effect of residential habitus in these divergences.

Centralization actually has two different facets: recentralization, in which individuals return to the urban centres where they were born, versus concentration, where individuals move to a new environment. When life course is taken into consideration, age is not a significant variable in return movements, although age squared is significant in outgoing movements, indicating that recentralization is related to more diverse age groups. Neither does household composition show large variations, although there is a clear dominance of nonfamily households, couples without children and other families versus households with children. However, the effects of the different categories are more intense in the case of concentration, showing that recentralization is linked to a greater diversity of life situations. The clearest differences between concentration and recentralization are found in social position. With recentralization, with the exception of the positive probability related to having a university education, social position has little effect. Concentration, on the other hand, is clearly connected to the archetypal category of the middle class: professionals. All the categories related to the social-labour status variable are negative except for personal service workers. These divergences in social position show that social class is an important factor related to movement to the centre for the first time, but not for returning. One possible explanation for this lies in the concept of localized capital. It is more than likely that because of their previous experience in the urban centre, returning individuals were able to accumulate some spatial capital – a house, social networks, inside information about the housing market – that lessens the importance of access to financial resources. This spatial capital is also seen in the variables related to lifestyle, such as one's place of work. Although the direction of the categories with this variable is the same for outgoing and return movements, the probability of working in the same municipality is higher in the case of centralization, likely due to an enhanced understanding of the local job market or the availability of social networks that provide access to it. Finally, but no less important, are the effects of housing arrangements. Although renting and living in a home provided by someone else are the preferred options. Living in housing that is inherited or otherwise provided has a positive effect on return movements, indicating that returning to one's city of origin is related not only to renting, but also to having physical capital in the form of a home.

Figure 7. Logistical models explaining centralization and suburbanization according to residential birth environment

	Centralization						Suburbanization					
	Born in inner city			Not born in inner city			Born in suburbs			Not born in suburbs		
	dy/dx	Sig	SE	dy/dx	Sig	SE	dy/dx	Sig	SE	dy/dx	Sig	SE
Age	-0.01%		0.01%	0.01%		0.00%	-0.06%	**	0.01%	-0.10%	***	0.00%
Age squared	0.00%		0.00%	0.00%	*	0.00%	0.00%		0.00%	0.00%	***	0.00%
Women	-0.30%	*	0.03%	-0.20%		0.01%	0.25%		0.07%	0.07%		0.02%
Household composition (Ref: One person under 65)												
One person over 65	-0.31%		0.08%	0.05%		0.04%	0.80%	*	0.17%	0.56%	**	0.04%
Single parent with children under 25	-1.25%	**	0.08%	-1.26%	*	0.04%	-0.44%		0.19%	-1.36%	***	0.05%
Single parent with children over 25	-0.37%		0.08%	-0.09%		0.04%	0.41%		0.17%	-0.91%	***	0.05%
Couple without children	0.23%	*	0.06%	1.10%	**	0.03%	0.65%	*	0.13%	1.38%	***	0.03%
Couple with children under 25	-2.51%	***	0.07%	-1.64%	***	0.03%	-0.80%	*	0.14%	-0.75%	***	0.03%
Couple with children over 25	-1.81%	***	0.08%	-2.88%	***	0.04%	-0.07%		0.16%	-1.42%	***	0.05%
Nonfamily household	1.18%	**	0.09%	3.05%	***	0.03%	0.54%		0.23%	0.75%	**	0.05%
Other family	0.42%		0.07%	1.03%	*	0.03%	1.05%	**	0.14%	0.72%	***	0.04%
Socioeconomic status (Ref: Professionals)												
Self-employed	-0.52%		0.06%	-0.77%	*	0.02%	0.14%		0.14%	0.40%	**	0.03%
Clerical worker	0.25%		0.05%	-0.70%	*	0.02%	-0.22%		0.12%	0.31%	**	0.02%
Other service workers	-0.02%		0.06%	0.27%		0.02%	0.24%		0.14%	0.61%	***	0.03%
Manual workers	-0.55%		0.06%	-1.23%	*	0.03%	-0.45%		0.14%	-0.06%		0.04%
Other workers	-0.56%		0.15%	-2.77%	*	0.07%	0.17%		0.37%	-0.12%		0.07%
Nonworkers	-0.50%	*	0.05%	-1.24%	***	0.02%	-0.11%		0.12%	-0.25%		0.03%
Education level (Ref: Primary or less)												
University degree	1.55%	***	0.06%	1.98%	***	0.02%	-0.11%		0.12%	0.21%		0.03%
A-level/vocational	0.54%		0.05%	0.74%	**	0.02%	0.02%		0.10%	0.33%	*	0.03%
Secondary school	0.17%		0.06%	-0.09%		0.02%	-0.02%		0.09%	0.24%		0.03%
Number of household task	-0.18%	*	0.02%	-0.38%	**	0.01%	-0.08%		0.04%	0.14%	**	0.01%
Place of work (Ref: Does not work)												
Same municipality	1.98%	***	0.04%	1.18%	***	0.02%	-1.05%	***	0.11%	-1.79%	***	0.03%
Other municipality in the metro area	-0.69%	**	0.05%	-0.27%		0.02%	2.02%	***	0.10%	3.53%	***	0.03%
Outside metro area	-2.94%	***	0.09%	-5.33%	***	0.03%	-1.90%	***	0.19%	-3.47%	***	0.05%
Second residence (Ref: No)	0.91%	***	0.04%	0.00%		0.02%	-0.09%		0.09%	-0.24%	*	0.02%
Housing arrangement (Ref: Owner with mortgage)												
Fully-paid ownership	0.00%		0.05%	-1.56%	***	0.02%	-1.09%	***	0.09%	-2.42%	***	0.03%
Inherited ownership	0.68%	*	0.07%	-2.24%	***	0.03%	0.03%		0.11%	-1.88%	***	0.04%
Rental	2.95%	***	0.04%	2.92%	***	0.02%	0.67%	***	0.08%	0.74%	***	0.02%
Other housing arrangement	1.01%	***	0.06%	0.07%		0.02%	-0.81%		0.13%	-1.10%	***	0.03%
R ²			0.164			0.161			0.159			0.227

Source: Population and Housing Census, 201

Suburbanization contains the same disparities in outgoing and return movements. In general, the determinants of movement to the suburbs are practically identical to the overall determinants related to centralization, while return movement to the suburbs is more difficult to explain. Specifically, such return movements are diverse in terms of the life course variable and cover a wide range regarding both age and household composition, as opposed to outgoing movements, where the profile is more defined, in line with centralization. While social position does not appear to greatly affect return movements to the suburbs, which are mixed, it does play a role with outgoing movements, which are clearly tied to the middle and working classes, service industry workers, clerical workers and the self-employed. The variables related to place of work and education or study reveal a much more marked job-housing distance in outgoing movements, while this variable is weaker with returning movements.

This could be explained by the greater social and information possessed by returning individuals, which would make it easier for them to find work in the municipality where they reside. Finally, outgoing movements to the suburbs are clearly linked to access to mortgaged ownership or rentals, while the options for returning individuals are more diverse, without any significant differences between access to mortgaged, inherited and transferred properties.

4.3. Contextual effects: the influence of metropolitan development

The theoretical proposal developed here also distinguishes between suburbanization and centralization by the type of metropolitan area. Here, the models for the two residential choices were replicated for two extremes: urban regions and minor and emergent areas. The results demonstrate that the known history of suburbanization and centralization is, above all, the history of big cities, with the explanation for the two dynamics in mid-sized and small cities being much more complex and difficult to address using the explanatory variables found in the literature.

Centralization in urban regions is linked to specific stages in the life course, most particularly to non-traditional households and people without children, while this effect is weaker in smaller areas. The same is true for social position, where the effects of social-labour status are stronger – with higher values – in urban regions and education level is significant, with individuals with higher education more likely to centralize in urban regions, an effect that disappears in minor and emergent areas. Finally, lifestyle follows the same pattern; the classic urbanite lifestyle of centralizers, characterized by outsourcing domestic labour and concentrated living spaces, particularly regarding the place of work, is found in urban regions, but takes a different form in minor areas.

Suburbanization trends mirror centralization, in that suburbanization in minor and emergent areas is more difficult to explain using the chosen variables, which have a weaker link to this particular residential choice, generally speaking. Regarding life course, suburbanization in large areas is more closely associated with couples without children and, comparatively, families with children (the effects are negative, but to a much lesser extent than in the minor areas) and to a lesser degree to alternative households like nonfamily households that are usually more characteristic of large, diverse cities. However, in small areas, the effect of having children is much more limiting, as is being in a couple without children. Regarding social position, suburbanization in urban regions is clearly a movement characteristic of working class categories (service industry workers, clerical worker and the self-employed) without university education, while there is no such effect in emergent areas, where suburbanization is socially mixed. Finally, with respect to lifestyle, suburbanization in both types of areas is tied to domestic insourcing, but differences exist with respect to the place of work. While suburbanization movements in urban regions are related to the classic suburbanite job-housing distance, this is not the case in smaller and emergent areas, where suburbanites have a positive propensity to work in the municipality where they live.

Figure 8. Logistical models to explain centralization and suburbanization according to type of metropolitan area

	Centralization						Suburbanization					
	Urban regions			Minor and emergent areas			Urban regions			Minor and emergent areas		
	dy/dx	Sig	SE	dy/dx	Sig	SE	dy/dx	Sig	SE	dy/dx	Sig	SE
Age	0.02%		0.01%	0.05%		0.00%	-0.08%	***	0.01%	-0.10%	**	0.00%
Age squared	0.00%	**	0.00%	0.00%		0.00%	0.00%	*	0.00%	0.00%		0.00%
Women	0.01%		0.03%	-1.11%	*	0.01%	0.10%		0.05%	-0.03%		0.01%
Household composition (Ref: One person under 65)												
One person over 65	-0.27%		0.07%	0.27%		0.02%	0.51%	*	0.15%	0.49%		0.03%
Single parent with children under 25	-1.41%	***	0.08%	-1.04%		0.03%	-1.09%	***	0.16%	-2.19%	**	0.04%
Single parent with children over 25	-0.43%		0.08%	-1.37%		0.03%	-0.73%	**	0.16%	-1.20%		0.03%
Couple without children	0.18%		0.05%	1.67%		0.02%	1.20%	***	0.11%	0.96%	*	0.02%
Couple with children under 25	-2.98%	***	0.06%	-2.19%	**	0.02%	-0.35%	*	0.11%	-1.30%	**	0.02%
Couple with children over 25	-3.43%	***	0.08%	-2.04%	*	0.03%	-0.96%	***	0.17%	-1.90%	***	0.03%
Nonfamily household	1.54%	***	0.07%	2.62%		0.03%	0.64%	*	0.16%	0.88%		0.03%
Other family	0.09%		0.06%	0.17%		0.02%	0.76%	***	0.12%	0.13%		0.02%
Socioeconomic status (Ref: Professionals)												
Self-employed	-2.04%		0.05%	-0.22%		0.02%	0.46%	**	0.10%	-0.67%		0.02%
Clerical workers	-0.71%		0.04%	-0.19%		0.02%	0.27%	*	0.08%	-0.25%		0.02%
Other service workers	-0.69%		0.05%	0.12%		0.02%	0.59%	***	0.09%	-0.11%		0.02%
Manual workers	-3.53%	*	0.06%	-0.51%	*	0.02%	0.14%		0.13%	-0.58%		0.02%
Other workers	-4.73%		0.14%	-0.49%		0.05%	-0.59%		0.31%	-0.20%		0.03%
Nonworkers	-1.96%	***	0.04%	-0.72%	*	0.02%	-0.23%		0.09%	-0.38%		0.02%
Education level (Ref: Primary or less)												
University degree	1.54%	***	0.05%	0.72%		0.02%	-0.46%	**	0.12%	0.48%		0.02%
A-level/vocational	0.46%	*	0.05%	0.52%		0.01%	-0.12%		0.11%	0.52%		0.02%
Secondary school	0.16%		0.05%	-0.48%		0.01%	-0.02%		0.12%	0.93%	**	0.01%
Number of household tasks	-0.32%	***	0.02%	-0.20%		0.01%	0.16%	**	0.03%	0.25%	*	0.01%
Place of work (Ref: Does not work)												
Same municipality	0.52%	***	0.04%	6.48%	***	0.01%	-2.33%	***	0.11%	0.77%	*	0.02%
Other municipality in the metro area	-1.27%	***	0.04%	5.25%	***	0.02%	1.82%	***	0.07%	6.49%	***	0.02%
Outside metro area	-1.31%	**	0.10%	-8.66%	***	0.02%	0.11%		0.20%	-3.73%	***	0.02%
Second residence (Ref: No)	-0.12%		0.04%	2.34%	***	0.01%	-0.49%	***	0.07%	0.23%		0.01%
Housing arrangement (Ref: Owner with mortgage)												
Fully-paid ownership	-0.32%		0.04%	-0.71%		0.02%	-1.72%	***	0.08%	-2.93%	***	0.02%
Inherited ownership	-0.14%		0.07%	-1.60%		0.02%	-1.28%	***	0.15%	-1.14%	**	0.02%
Rental	2.04%	***	0.04%	3.75%	***	0.01%	0.41%	***	0.06%	0.48%	*	0.01%
Other housing arrangement	0.96%	***	0.05%	0.16%		0.02%	-0.95%	***	0.10%	-0.87%	*	0.02%
R ²			0.200			0.160			0.232			0.191

Source: Population and Housing Census, 2011

5. Filling the gaps: an agenda for further research

The aim of this chapter is modest: to demonstrate the applicability of a theoretical framework developed by the authors in recent years for the analysis of residential choice, an objective that has been met with the validation of the proposed causal theory. However, an analysis of the specific contributions made by this study of residential choice reveals some limitations, remaining gaps and unanswered questions. The major contributions of this study are four. 1) Creating and implementing an interpretive theoretical framework for residential choice that can be used to analyse other mobilities. 2) Recognizing the need to analyse movement choices in the context of broader life and residential experiences to provide additional meaning. 3) Realizing the importance of spatial and contextual factors in residential choice. 4) Identifying the implications of different forms of mobility for the reconfiguration of residential spaces.

The creation and implementation of the framework in successive steps has produced a highly useful analytical and conceptual tool that can be applied to the study of other forms of residential mobility. The analysis showed that variables beyond life course and social position such as lifestyle are relevant when explaining and modelling residential choice. This highlights the need for a deeper exploration of this question to discern how the different factors associated with lifestyle – the relationship between space and housing (de Pablos and Susino, 2010), consumption patterns and ideology (Ley, 1994) and even sexuality (Lees, Slater and Willy, 2013) – can influence the choice of a specific environment. Moreover, the confirmation of the complexity of residential choice as a phenomenon modified by one's previous life experiences and the surrounding contexts does more than just validate the theoretical framework developed here and its operability. It also indicates the need to analyse movements and choices not as a single reality, but as a diversity of explanations and motivations that require investigation. Despite being useful and applicable, the interpretive framework presented here does not probe some key issues that operate in the 'black box' of residential choice (Mulder and Hooimeijer, 1999), like the process of configuring needs, desires, preferences and expectations and their relationship with the choice made. Very little work has been done on these questions with respect to mobility in general (Coulter, Ham and Feijten, 2011), and future research will need to incorporate and find ways to operationalize them in this theoretical framework.

Indeed, the other major contribution made by the study concerns the procedures for operationalizing and implementing the residential choice framework with regard to the available data to construct individual statistical models in places like Spain, where the absence of longitudinal data makes it necessary to work with transversal statistics such as the census employed here. With this approach, it becomes possible to overcome the disadvantages of transversal data and make full use of their potential (something reflected in the way many of the results obtained in this study agree with findings in other international studies that use longitudinal data). Here, the analysis of residential choice has three steps. The first analyses the effect of individual variables on residential choice, providing an initial overall understanding of general choice patterns and their potential contradictions. The second step introduces life context variables, like residential experience, and territorial variables, such as the characteristics of municipalities and areas in order to compare their importance and effect on choice. The third and final step dissects the movement in accordance with these clearly relevant contexts, modelling choice separately, by prior residential experience and territory. The result is a complex overview of residential choice based on a diversity of explanations and meanings. This relatively simple procedure can serve as a guide to obtain a comprehensive overview of the social forces behind the transformation of metropolises.

This then leads to the second question regarding the importance of residential experience when opting for centralization or suburbanization. Here, there is an indisputable need to analyse residential choice in a broader biographical context, where the conceptual tools developed by sociological theory have a great deal to contribute. Explaining and understanding residential behaviour requires going beyond the immediate life events and motivations that have traditionally

been used to consider life experiences and residential backgrounds over time, along with important variations in residential behaviour, in general, and in the choice of an environment, in particular. Different concepts from the sociology of action like habitus, imaginaries, capital and arrangements are essential to explain and comprehend the mobility decisions of actors. An understanding of the urban environment as a social field where actors take decisions (and compete for positions), using their available resources (or capital), guided by their imaginaries could be a good starting point to guide future research. Using these particular conceptual tools when analysing residential behaviour requires the development of new methodological strategies. From a quantitative perspective, this means constructing models that can somehow introduce variables that make it possible to operationalize residential experience, as well as the need to model specific backgrounds, beyond general behaviours or choices. Qualitatively, it means closely exploring the concept of residential habitus to analyse its social construction and implications, in addition to studying the historical behaviour of individuals using the possibilities offered by life histories. Qualitative techniques are also needed to delve into the so-called black box of mobility, to understand how decisions related to (im-)mobility take hold.

Regarding the third point, this study has demonstrated that residential choice is affected by spatial and contextual factors related to the metropolitan housing market. These spatial effects are not only relevant when explaining residential choice, but also modify it, causing the individual determinants to vary according to the territorial context where the choice is made. Although this chapter has only taken the type of metropolitan area into consideration, new variables related to the dynamics of the metropolitan housing market need to be introduced. In this respect, an earlier work (Duque-Calvache et al., 2017a) showed that these variables are relevant when analysing the total proportion of mobility in different parts of Spain, but with significant divergences in the explanations for short-distance (intra-municipal) proximity and metropolitan (inter-municipal) mobility. While the former is mainly explained by factors related to demographic dynamism in different areas and to housing stock, the latter, which is of greater interest to this study, is much more difficult to model, as it also corresponds to socioeconomic differences between urban centres and suburbs. However, the analyses in the cited study are not at the level of the individual, but aggregate, in which the units of analysis are the areas. Given this evidence, one of the fields that remains open consists of more systematically analysing the effect of contextual and social-spatial factors on residential choice. For this purpose, would be helpful the construction of aggregate databases and integrating them with individualized databases with spatial references (like the census) and analysing their effects on individual decisions using other techniques, like multilevel analysis.

Finally, the study raises challenging points about the ability to analyse different residential choices in order to find out the processes of socio spatial reconfiguration that operate in other scales. Although this study focuses on choices made at the metropolitan level, the analysis is applicable to other lower-level contexts, such as, for instance, neighbourhoods. The logic behind the procedure used in this study consists of discovering the factors of attraction and repulsion that operate in the different spaces. These centrifugal and centripetal forces, to borrow the terminology used by Donzelot (2004), are the two main gears behind the reconfiguration of spaces. One choice empties the space, while the other fills it, providing a potential comprehensive explanation for the different socio-spatial processes that may be operating inside it. However, as observed by Donzelot (2004) and as Palomares-Linares (2017) developed in her study, it is necessary to consider other choices, other gears to finetune the role played by the actions of actors in reconfiguring space. Exclusion, staying in place and short-distance mobility are all also relevant choices that, while outside the scope of this particular study, would be quite beneficial with regard to more precisely understanding how and to what extent the actions of actors transform a space. Indeed, future research would do well to apply these types of procedures to other spaces and their socio-spatial dynamics.

References

Ærø, T. (2002). Residential preferences, choice of housing and lifestyle (Unpublished doctoral thesis). Aalborg University, Aalborg, Denmark.

Ærø, T. (2006). Residential Choice from a Lifestyle Perspective Residential Choice from a Lifestyle Perspective. *Housing, Theory and Society*, 23(2), 109–130. <https://doi.org/10.1080/14036090600773139>

Bailey, A. J., Blake, M. K., & Cooke, T. J. (2004). Migration, care and the linked lives of dual-earner households. *Environment and Planning A*, 36, 1617–1632. <https://doi.org/10.1068/a36198>

Bayoh, I., Irwin, E. G., & Haab, T. (2006). Determinants of residential location choice: How important are local public goods in attracting homeowners to central city locations? *Journal of Regional Science*, 46(1), 97–120. <https://doi.org/10.1111/j.0022-4146.2006.00434.x>

Blaauboer, M. (2010). The Impact of Childhood Experiences and Family Members Outside the Household on Residential Environment Choices. *Urban Studies*, 48(8), 1635–1650. <https://doi.org/10.1177/0042098010377473>

Champion, A. G. (2001). Urbanization, Suburbanization, Counterurbanization and Reurbanization. En R. Paddison (Ed.), *Handbook of Urban Studies* (pp. 143–161). London: SAGE.

Clark, W. A. V., Duque-Calvache, R., & Palomares-Linares, I. (2015). Place Attachment and the Decision to Stay in the Neighbourhood. *Population Space and Place*. <https://doi.org/10.1002/psp.2001Place>

Coq-Huelva, D. (2012). Crecimiento suburbano difuso y sin fin en el área metropolitana de Sevilla entre 1980 y 2010. Algunos elementos explicativos. *Scripta Nova: Revista Electrónica de Geografía y Ciencias Sociales*, 16(397).

Coulter, R., van Ham, M. y Feijten, P. (2011). A longitudinal analysis of moving desires, expectation and actual moving behaviour. *Environment and Behaviour A*, 43, 2742–2760.

Donzelot, J. (2004). La ville à trois vitesses: relégation, périurbanisation, gentrification. *Esprit*, 3/4(303), 14–39.

Coulter, R., Ham, M. van, & Findlay, A. M. (2016). Re-thinking residential mobility. *Progress in Human Geography*, 40(3), 352–374. <https://doi.org/10.1177/0309132515575417>

Duque-Calvache, R. (2015). Áreas metropolitanas andaluzas. La movilidad residencial y su relación con la vivienda. Sevilla: Consejería de Fomento de la Junta de Andalucía.

Duque-Calvache, R., Torrado, J.M. & Fuster, N. (2017). La importancia de los factores espaciales y contextuales en la movilidad residencial. *Papers, revista de sociología*, 102(4), 607–635. <http://dx.doi.org/10.5565/rev/papers.2415>

Feijten, P., Hooimeijer, P., & Mulder, C. H. (2008). Residential experience and residential environment choice over the life-course. *Urban Studies*, 45(1), 141–162. <https://doi.org/10.1177/0042098007085105>

Feijten, P., & Ham, M. Van (2007). Residential mobility and migration of the divorced and separated. *Demographic Research*, 17, 623–654. <https://doi.org/10.4054/DemRes.2007.17.21>

- Feria, J. M. (2013). Towards a Taxonomy of Spanish Metropolitan Areas. *BAGE*, 63, 349–378.
- Feria, J. M. & Andújar, A. (2015). Movilidad residencial metropolitana y crisis inmobiliaria. *Anales de Geografía*, 35(1), 129–140. https://doi.org/10.5209/rev_AGUC.2015.v35.n1.48962
- Feria, J. M., & Martínez, L. (2016). La definición y delimitación del sistema metropolitano español. Permanencias y cambios entre 2001 y 2011. *Ciudad y Territorio. Estudios Territoriales*, 48(187), 9-24.
- Fishman, R. (1987). *Bourgeois Utopias: The Rise and Fall of Suburbia*. New York: Blackwell.
- Lees, L., Slater, T., & Wyly, E. (2013). *Gentrification*. New York: Routledge.
- López-Gay, A., & Recaño, J. (2008). La renovación sociodemográfica de un centro urbano maduro: perfiles migratorios y filtros residenciales en la ciudad de Barcelona. *Scripta Nova: Revista Electrónica de Geografía y Ciencias Sociales*, 12(126).
- Marois, G., & Bélanger, A. (2013). De la banlieu a la ville central: déterminants de la mobilité résidentiel le des banlieusards de Montréal. *Canadian Journal of Urban Research*, 22(2), 45–68.
- Michielin, F., & Mulder, C. H. (2008). Family events and the residential mobility of couples. *Environment and Planning A*, 40(11), 2770–2790. <https://doi.org/10.1068/a39374>
- Mulder, C. H. (1993). *Migration Dynamics: A Life Course Approach*. Amsterdam: PDOD Publications.
- Mulder, C. H., & Hooimeijer, P. (1999). Residential Relocations in the Life Course. En L. J. G. Van Wissen y P. A. Dysktra (Eds.). *Population Issues, an Interdisciplinary Focus* (pp. 159–186). New York: Kluwer Academic. https://doi.org/10.1007/978-94-011-4389-9_6
- Pablos, J. C. de, & Sánchez-Tovar, L. (2003). Estilos de vida y revitalización del espacio urbano. *Papers*, *Revista de Sociología*, 71, 11–31. <http://dx.doi.org/10.5565/rev/papers/v71n0.1148>
- Pablos, J. C. de, & Susino, J. (2010). Vida urbana: entre la desigualdad social y los espacios del habitar. *ANDULI*, (9), 119–142.
- Pisman, A., Allaert, G., & Lombaerde, P. (2011). Urban and suburban lifestyles and residential preferences in a highly urbanized society experiences from a case study in Ghent (Flanders, Belgium). *Belgeo*, (1–2), 89–104. <https://doi.org/10.4000/belgeo.6394>
- Pujadas, I., Bayona, J. & Gil-Alonso, F. (2014). Pautas territoriales recientes de la movilidad residencial en las mayores regiones metropolitanas españolas: ¿cambios coyunturales o estructurales?. En XIV Congreso Nacional de Población de la AGE. Sevilla: Asociación de Geógrafos Españoles.
- Ronald, R. (2008). *The ideology of home ownership: Homeowner societies and the role of housing*. London: Palgrave Macmillan.
- Rossi, P. (1955). *Why families move: A study in the social psychology of urban residential mobility*. New York: Free Press.
- Shin, E. J. (2012). *An Empirical Study of Urban/Suburban Residential Location Choice in the Seattle Metropolitan Area*. (Masters Thesis). Department of Design and Urban Planning, University of Washington, Washington D.C.

South, S. J., & Crowder, K. D. (1997). Residential Mobility Between Cities and Suburbs: Race, Suburbanization and Back-to-the-City Moves. *Demography*, 34(4), 525–538. <https://doi.org/10.2307/3038307>

Susino, J. (2003). Movilidad Residencial: procesos demográficos, estrategias familiares y estructura social (Tesis Doctoral Inédita). Departamento de Sociología, Universidad de Granada, Granada.

Susino, J. (2010). La movilidad residencial diferencial en la reconfiguración metropolitana. En J.M. Fera y J.M. Albertos, *La ciudad metropolitana en España: procesos urbanos en los inicios del siglo XXI* (pp. 149-174). Madrid: Thompson-Routers.

Susino, J., & Duque-Calvache, R. (2012). Veinte años de suburbanización en España, 1981-2001: el perfil de sus protagonistas. *Documents D'Anàlisi Geogràfica*, 59(2), 265–290. <https://doi.org/10.5565/rev/dag.31>

Torrado, J.M. (2020). Flujos espaciales y dinámicas residenciales de movilidad residencial en las áreas metropolitanas españolas (Unpublished doctoral thesis). Departamento de Sociología, Universidad de Granada, Granada.

Torrado, J.M., Duque-Calvache, R. & Fuster, N. (2021). El papel de la experiencia residencial en la elección de entorno. Trayectorias residenciales de centralización y suburbanización. *Papers, revista de sociología*, 106(3), 413-439. <https://doi.org/10.5565/rev/papers.2865>

Torrado, J.M., Duque-Calvache, R. & Nogueras, R. (2021). ¿Hacia una ciudad dual? Suburbanización y centralización en las principales ciudades españolas. *REIS, Revista Española de Investigaciones Sociológicas*, 176, 35-58. <http://dx.doi.org/10.5477/cis/reis.176.35>

Torrado, J.M., Duque-Calvache, R. & Palomares, I. (2020). Procesos de centralización urbana: factores individuales y tipologías metropolitanas. *Documents d'anàlisi geogràfica*, 66(3), 1-24. <http://dx.doi.org/10.5565/rev/dag.568>

Turcotte, M., & Vézina, M. (2010). Migration entre municipalité centrale et municipalités avoisinantes à Toronto, Montréal et Vancouver (Tendances sociales canadiennes No. 11–008–X).

Williams, R. (2012). Using the Margins Command to Estimate and Interpret Adjusted Predictions and Marginal Effects. *The Stata Journal*, 12(2): 308-331.