Dwelling type and quality of life in urban areas: evidence from the European Social Survey

Dr. Nessa Winston

School of Applied Social Science

University College Dublin

Belfield

Dublin 4

Republic of Ireland

Email: nessa.winston@ucd.ie

Tel: +353-1-716-8261

Fax: +353-1-716-1197

Dwelling type and quality of life in urban areas: evidence from the European Social Survey

Much of the literature on sustainable communities and compact cities calls for higher density housing. However, case studies suggest that there can be problems with multi-unit dwellings. Problems identified include inadequate space, noise pollution, suitability for families and children, and a lack of personal green/outdoor space. These studies raise questions about the quality of life, life satisfaction and liveability for its residents. Some suggest that residing in these dwellings is likely to be short-term, that those who can do so relocate to lower density housing over time. However, rigorous comparative research on this topic has not been conducted to date. This paper draws on comparative data from the European Social Survey to analyse: the quality of multi-family dwellings in European urban areas; the characteristics of residents of these dwellings, and their quality of life compared with those living in detached housing.

Keywords: Built form; housing density; life satisfaction; quality of life; compact cities

1. Introduction

Higher density urban housing has been linked to a range of beneficial social, economic and environmental outcomes. Increasing the provision of this housing is enshrined as a goal in policies in many countries. It is likely that policy-makers will continue to support higher density housing as climate change and other environmental pressures add to the pressures on the demand for land. For example, increased flood-risk will put some land and housing beyond use for residential purposes. Furthermore, it is likely that additional land will be required for energy and food. The literature provides some mixed evidence on the benefits of higher density housing, particularly the built form most associated with it, namely apartments and multi-unit or multi-family dwellings. In an attempt to enhance knowledge on some of these issues, this paper adopts a comparative European perspective to examine the experiences of those living in multi-unit housing. It explores the quality of the built environment in which such dwellings are located, the socio-demographic characteristics of those living there, and their overall quality of life.

2. Literature review

Much of the literature on sustainable housing and urban planning calls for higher density housing and multi-unit housing. Along with support for mixed use developments, its importance is linked to the concept of the compact city (Jenks *et al* 1996; Williams, Burton, and Jenks 2000), to smart growth, and to sustainable cities (Power and Houghton 2007). While there is some debate about the actual density required, the suggested advantages are varied. These include: its capacity to support mixed use developments and access to a range of local services (Bramley and Power 2009); reduced need to travel by car and fuel emissions (Breheny and Rockwood 1993; Owens 1991; 1992; Sherlock 1991); increased active travel (walking, cycling etc) and public transport use (Barrett 1996; Newman and Kenworthy 1989; Calthorpe 1993; Duany and Plater-Zyberk 1991); conservation of rural land, which may be essential for other purposes such as food and recreation (Burton and Matson 1996); regeneration of urban areas, both inner city and suburbs (e.g. Gwilliam *et al* 1999; Southworth 1997); increased efficiency in the provision of utilities and infrastructure (Newman 1992; Troy 1996); and lower energy consumption (DETR 1994; Newton *et al* 2000). Some also contend that it may enhance social cohesion and community development, though there are arguments on both sides here (Barton 2000). It is argued that pedestrian- and child-friendly compact cities and urban villages are important for social interaction in higher density areas (Elkin *et al* 1991). Indeed, Burton (2002) has suggested that child density may be an indication of success of housing developments.

Compact or higher density cities are not without their critics. Some research suggests that many people do not wish to live at higher densities (Neal 2003; Howley 2010; CABE 2005a, 2005b). Similarly, others contend that people prefer detached or semi-detached homes compared with flats or terraces (HATC 2006; Burgess and Skeltys 1992; Reid 1994). Mace, Hall, and Gallent (2007) argue that families, in particular, may be opposed to higher densities. In the context of shrinking cities, some call for lower density housing to be constructed in order to attract the family market (Hall 2003; Mace, Hall and Gallent 2007). Furthermore, Mace, Hall, and Gallent (2007) suggest that this market is essential for "sustainable, stable, mixed communities" compared with "gentrified ghettos of exclusion", as families are less likely to be "footloose" and have a stake in the quality and quantity of local services (Mace, Hall, and Gallent 2007). Some studies of high-rise living reveal negative effects on children and mothers (Gillis 1977; Fanning 1967; Fowler 2008; Lowry 1990; Wilkinson 1999). However, Gifford (2007) argues that many of these studies focus on social housing and a more nuanced study of these relationships is required, including issues such as housing choice (McCarthy *et al* 1985), affordability and poverty (Davey Smith and Hart 1998; Galobardes *et al* 2006; Graham 2000). Referring to the work of Dixon and Dupuis (2003), Carroll, Witten, and Kearns (2011, 354) suggest that there is a "prevailing

discourse of houses, gardens and open space as desirable sites for children". Furthermore it is argued that developers and planners do not take households with children into account when planning apartment developments (Costello 2005; Fincher 2004).

Clearly the quality of the housing and neighbourhoods is essential (e.g. Urban Task Force 1999, Williams 2009). Aspects of quality identified include personal safety, a healthy environment, a good quality built environment and respect for and enhancement of local character (Llewelyn-Davies 1997). However, some studies have found problems in this regard. For example, Bramley and Power's (2009) research on English housing suggests that higher density urban areas and housing types are associated with higher levels of dissatisfaction with the neighbourhood and with the incidence of neighbourhood problems. However, some of this can be explained by the socio-demographic characteristics of residents, especially by high levels of poverty and social renting. They conclude that "who lives where within the urban form, and with what resources and choices, may be more critical to making urban communities work" (Bramley and Power 2009, 46).

A link between urban/housing density and crime has been revealed in a number of studies, but the findings of these studies are mixed. For example, some link detached properties to increased risk of burglary (Winchester and Jackson 1982; Hillier and Sahbaz 2009). Others associate multi-unit dwellings with higher perceived vulnerability to burglary (Cozens, Hillier, and Prescott 2001a, 2001b, 2002), to concerns about safety among families living in apartments (Lowry 1990) and to safety as a concern among residents in high rise apartments (Fowler 2008; Yuen *et al* 2006). However, it is argued that "appropriately designed" higher density, mixed use housing developments/areas can enhance safety (e.g. Bentley *et al* 1985; Petherick 1991; Poole and Donovan 1991) and that higher quality housing developments are not necessarily associated with more crime (Armitage, Rogerson, and Pease 2013). Key features of this "appropriately designed" housing include: streets and squares in medium and low-rise housing; public fronts and private backs; perimeter blocks with immediate access to the ground floor; and a view of central open space. The mixed use element increases the presence of people throughout the day and night which can increase perceptions of safety among residents of the area (Petherick 1991; Poole and Donovan 1991).

Some studies from Britain, Ireland and New Zealand suggest greater transience among residents of inner city apartments (MacLaren and Murphy 1997; Howley 2010; Howley et al 2009) and that they may not be sustainable for families (Carroll, Witten, and Kearns 2011; Mace, Hall, and Gallent 2007). MacLaren and Murphy (1997) and Howley (2010) found that the majority of residents in their surveys of inner city apartments wished to move to lower density housing areas. This high residential turnover and the popularity of lower

density housing may be linked to the quality and nature of higher density housing. Problems identified in such studies include inadequate size and storage space, noise, affordability, designs for single or two person households rather than families, and lack of open space (Carroll, Witten and Kearns 2011; Dixon and Dupuis 2003; Howley 2010). It is important to note that internal housing space standards can vary significantly across countries (see for example Gallent, Madeddu, and Mace 2010). Carroll, Witten and Kearns argue (2011, 364) that "it cannot be concluded that apartment living per se is bad for families" and that good planning and design can result in more family friendly, higher density housing. In the interim, they contend that in Auckland, New Zealand "poorer families are struggling to make the best of what is clearly a second best option with regard to the traditional, if increasingly elusive 'quarter acre' suburban lifestyle". (Carroll, Witten, and Kearns 2011, 365)

Some of the features of higher density housing and compact cities mentioned above, such as child- and pedestrian-friendly streets and squares, have been linked to social sustainability in the form of a higher quality of life (Elkin *et al* 1991). For example, it is argued "urban villages" provide space for social interaction and community development. However, much of the literature on housing density fails to examine quality of life and, in her critique of data and measures of urban compaction, Burton (2002, 245) specifically calls for research on the link between urban compactness and quality of life. In particular, there is some concern about quality of life in compact cities and areas with higher housing density. Higgins and Campanera's (2011) study of 63 matched English cities distinguishes between Northern and Southern cities with quality of life being higher in Southern rather than more compact Northern ones on a range of indicators. They conclude that "sustainable quality of life corresponds closely with the prevailing level of economic development or that further distinctive conceptualisation needs to be taken to disentangle underlying sustainability issues from other related concerns". (2011, 296)

Much of this literature and research on the topic is limited as it is based on single or a small number of case studies, generally from Australia, Britain, Ireland, and New Zealand, countries which do not have a strong tradition of multi-family dwellings. This paper explores the extent to which these concerns are evident in a broad range of European urban areas, including ones with a tradition and culture of multi-family residence. Specifically, using a high quality comparative data set, the paper examines the following questions for nineteen European urban settings:

1. What proportion of urban residents lives in multi-family dwellings?

2. Are they residing in lesser quality dwellings and neighbourhoods than those who live in detached dwellings?

3. What are the socio-demographic characteristics of those living in multi-family housing?

4. Is their quality of life lower than the quality of life of those living in detached dwellings?

3. Data and methods

The main source of data on which this paper is based is Round 2 of the European Social Survey (ESS) fielded in 2004/05.[i] This survey has a number of important advantages. First, it is a very high quality data set containing a range of relevant variables to test the aforementioned research questions. The key variable of interest, dwelling type, was not asked in the main survey. However, the ESS requires interviewers to complete contact files for each interview. In the 2004/05 survey, these files included information on dwelling type, and the quality of the housing and neighbourhood. The author merged these data with the main survey data to enable an analysis of the questions listed above. Second, the dateset enables a cross-national analysis of these issues for nineteen EU member states, including some from Eastern, Western, Northern and Southern Europe. Other crossnational data sets were considered but they have important limitations. For example, the EU Survey on Income and Living Conditions does not ask about quality of life while the European Quality of Life Survey has no measure of dwelling or house type. The broad range of countries and covariates, combined with the high quality of the data, make this strand of the ESS an excellent source of data to examine if the findings from some of the national case studies apply in other contexts.

One of the core aims of the ESS has been to improve the standard of cross-national surveys. It does this by requiring participating countries to adhere to standards with particular attention to the following indicators of survey quality: sampling; translation; improving question quality by pre-testing and piloting; analysing response and non-response; interviewer training and analysis of interviewing quality and effects. The high quality of the dataset is revealed through the use of strict random probability sampling, a minimum target response rate of 70 percent and rigorous translation protocols. This paper is based on an analysis of urban residents aged 18 years in 19 countries, that is, 35,511 individuals. Urban includes those living in: a big city; suburbs or outskirts of a big city; and town or small city. It excludes those living in student accommodation, sheltered/retirement housing and house-trailers/boats. Of the countries examined, the minimum urban sample size is 1,188 cases (Denmark).

Data are weighted according to the ESS protocol (for more information, see European Social Survey, 2014). Finally, ESS data is collected via one hour, face-to-face interviews.

Dwelling type is the dependent variable or focus of this analysis. It consists of detached houses, semi-detached houses, terraced houses, and multi-unit houses/flats. The quality of the buildings and dwellings in the area were assessed by the interviewers using the following scale: very good, good, satisfactory, bad or very bad state. Interviewers also recorded the extent to which there was a problem with a) litter and b) vandalism in the area, using a scale ranging from very common, fairly common, not very common, to not at all common. As these issues were not that prominent in many of the urban areas under study, most tables concentrate on those where they were not very/not at all common. The final indicator of housing and neighbourhood quality used in this paper is based on responses to a question respondents were asked about how safe they feel walking alone in the local area after dark: very safe, safe, unsafe, very unsafe. Housing tenure is examined via responses to a question on whether or not the dwelling is owned by the inhabitants. The paper also examines whether the respondent has children living with them in their multi-unit housing. Burton (2002) has hypothesised that their presence can be an indicator of the success of a housing development. Furthermore, it is often assumed that having children increases one's life satisfaction.

Quality of life is measured by a question on life satisfaction. Respondents were asked to indicate how satisfied they were with life as a whole, measured on a scale of 0-10, with 0 representing extremely dissatisfied and 10 extremely satisfied. Life satisfaction is relatively high in this group of countries. For most of the analysis, the paper focuses on those who are "very satisfied", namely those with scores of 8 and above. Global life satisfaction scales such as this, have been used by researchers for many decades, and have been subjected to considerable testing regarding their reliability, validity and sensitivity. The most recent review finds that they have high levels of both reliability and validity (Diener, Inglehart, and Ta 2013).

A range of socio-economic factors commonly associated with quality of life are included in the analysis: age, income, employment status, and marital status. Studies frequently find that those with higher levels of life satisfaction include: older people; married people; the employed/retired, and those on higher incomes (see for example Fahey 2007). Respondent's age is recoded into four categories: 18-34 years; 35-49; 50-64 and 65 years plus. Household net annual income, originally 12 categories, is recoded into the following four categories for most of the analyses: <€6,000; €6,000-<€24,000; €24,000-<€60,000; €60,000 and over. Marital status is

categorised as: married; separated/divorced; widowed; and never married. Finally, employment status consists of four categories: employed; unemployed; retired; and home duties.

4. Findings

4.1. Multi-family residence in the EU

Table 1 presents data on the type of housing occupied by urban residents in the countries under examination. It reveals that in almost half of the countries (9 of the 19), detached dwellings are the most common type of housing. This is the case in Austria, Belgium, Denmark, Finland, France, Ireland, Luxembourg, Portugal, and Slovakia. However, multi-unit housing is dominant in the urban areas of 8 of the 19 countries, namely Germany, some Eastern European (Czech Republic, Hungary, Estonia, Poland) and some Southern European countries (Spain, Greece, and Italy). Overall, the data highlight the considerable cross-national variations in the extent to which urban residents live in multi-unit housing, ranging from a high of 70 percent in Italy and Estonia to a low of one percent in the Republic of Ireland. It is noteworthy that this form of urban housing is the least common form of housing in both the Republic of Ireland and the UK, two locations from which some of the negative commentary and research evidence emerges.

Table 1 about here

4.2. Dwelling type by quality of the housing and neighbourhood

Housing and neighbourhood quality are key dimensions of urban sustainability. However, Table 2 reveals that multi-unit housing is less likely than detached housing to be designated as very good quality in all but two countries examined here. The exceptions are Austria and Greece where multi-unit housing is considered higher quality than the detached form. Multi-unit housing quality was highest in Belgium, but even then just under a third of this type of housing was categorised as very good there. At the other end of the scale, the quality of multi-family dwellings was lowest in the Republic of Ireland with 1 percent of this type of housing categorised as very good quality. Table 3 presents data on neighbourhood quality for those living in multi-family and detached housing. Specifically, it examines perception of safety, litter and vandalism. In each country, residents of multi-unit housing are less likely to say they feel very safe/safe after dark than those living in detached housing. However, there are significant differences between countries in perceptions of safety among residents

of this type of housing, with high perceived safety in Austria (81 percent), Finland (81 percent) and Denmark (79 percent). By contrast, safety concerns in multi-unit housing are particularly problematic in Republic of Ireland (46 percent), Estonia (48 percent) and Slovakia (51 percent). Litter is not a significant problem in the urban areas under examination but it is more problematic for those living in multi-unit than in detached housing, with the exception of Portugal where it is a slightly more prominent issue for residents of detached housing. Finally, in each country, vandalism is more common in multi-unit than in detached dwellings.

Tables 2-3 about here

4.3. Resident characteristics of multi-family dwellings

Given some of the critique of higher density building forms from case study research, it is interesting to examine the socio-demographic characteristics of those living in this type of urban housing in a broad range of countries. First, with regard to age Figure 1 reveals that younger people are more likely than older people to be living in multi-unit housing in all but one country examined here. The exceptional case is Belgium where older people are slightly more likely to be residents of this form of housing. Furthermore, in Italy the differences between the oldest and youngest age groups are not significant. The unemployed are over-represented in multi-family dwellings in 14 of the 19 countries (see Figure 2). However, employed people are somewhat more likely than the unemployed to reside in multi-unit housing in three of the Mediterranean countries (Spain, Greece, and Italy) and Slovakia.

Figures 1-2 about here

In almost half of the countries, those in the two lowest income groups are more likely to reside in multi-family dwellings than those in the higher income groups (see Figure 3). However, in some countries residents of multi-unit dwellings are somewhat more likely to be those on higher rather than lower incomes (Spain, Portugal, Slovakia). Home ownership rates among residents of multi-unit dwellings vary significantly by country. They are relatively high in some countries such as Italy (89 percent), Estonia (73 percent), Poland (62 percent), Spain (61 percent), Hungary (58 percent), and Greece (50 percent). By contrast they are relatively low

in the Republic of Ireland (1 percent), France (8 percent), the UK (10 percent), Denmark (10 percent) and Belgium (13 percent) (Figure 4).

Figures 3-4 here

With regard to marital status , those who are separated/divorced and the "never married" are over-represented in multi-unit housing in almost all of the countries examined here (Figure 5). However, there are significant cross-national variations in the extent to which residents of multi-family housing have children living in the dwelling. It is a very common occurrence in Italy (90 percent), Estonia (73 percent), Poland (65 percent), Spain (64 percent), and the Czech Republic (60 percent), but also relatively common in Greece (58 percent), Hungary (53 percent) and Germany (50 percent) (Figure 6). By contrast, children are much less likely to be found living in multi-unit housing in the Republic of Ireland, France, Denmark, the UK, and Belgium. The findings for the UK and Ireland support the findings of some case study research which suggests this form of higher density housing may not be appropriate, or considered appropriate, in its current format for families with children in those locations (e.g. Howley 2010; Mace, Hall and Gallent 2007).

Figures 5-6 here

4.4. Dwelling type and life satisfaction

Existing research reveals significant variations in life satisfaction by country. The final research question in the paper examines whether or not there is a relationship between dwelling type and life satisfaction in the urban areas of the countries analysed here. In 15 of the 19 countries, those living in multi-unit housing are somewhat less likely to say they are very satisfied with life compared with those living in detached dwellings (see Figure 7). The differences are relatively large in Luxembourg, the UK, Belgium, Germany, Italy, and the Netherlands. By contrast, in Portugal and Hungary those residing in multi-unit accommodation are somewhat more likely to say they are very satisfied with life than those living in detached dwellings. Finally, in Spain and Slovakia, there is almost no difference in life satisfaction between residents of the two housing types.

Figure 7 here

5. Conclusions

Despite the not inconsiderable environmental and economic arguments for higher density urban housing forms, some case studies suggest there may be some social disadvantages for residents. This central aim of this paper was to extend the evidence base on this topic to nineteen European urban areas. It explores some key issues such as dwelling and neighbourhood quality, but also the quality of life of residents. The analysis was made possible by the discovery that the key variable of interest (housing type) was available in interviewer contact files from the 2004/05 tranche of the European Social Survey. The merger of this data with the main survey data represents an innovative use of data to shed light on this important topic and enable an evaluation of urban planning policies and/practices regarding housing in a large number of EU member states.

The results of this cross-national analysis reveal both diversity of experiences on some indicators and commonality on others. The first significant point of note is that, while the detached dwelling is the most common urban built form in almost half of the countries examined, multi-unit housing is the most common form of urban housing in a large proportion of states. The paper reveals that those living in multi-family dwellings have a number of important concerns regarding housing and neighbourhood quality. In all but two countries examined, multi-unit housing is less likely to be designated as very good quality compared with detached housing. In addition, compared with those living in detached dwellings, residents are less likely to feel safe in their neighbourhoods after dark. These findings provide support for some of the case studies discussed earlier in the paper (e.g. Bramley and Power 2009; Cozens et al 2001a; Howley 2010). In combination these findings suggest that residents of multi-unit housing are those who cannot afford other housing options rather than being those for whom it is a desirable built form in which they choose to live in the long-run. Some of the findings on resident characteristics support this hypothesis. For example, in many countries those living in multi-unit dwellings are more likely to have lower incomes. Furthermore, in a large majority of countries, the unemployed are over-represented in multi-unit housing.

Some of the evidence suggests that multi-unit residence may be a step in the housing career. For example, in all but one country, younger people are more likely than older people to be living in this form of housing. Similarly, those who have children living with them are somewhat less likely to be living in multi-unit dwellings than in detached dwellings, although in a significant number of countries the proportion of people living with children in multi-unit accommodation is relatively high. It suggests that urban housing in some countries is not designed for families and children and supports the findings from British and Irish case studies which highlight this issue (e.g. Mace, Hall and Gallent 2007; Howley 2010). If residing in multi-unit housing is a stage in one's

housing career, this analysis provides some support for the view that housing careers may be disrupted by separation/divorce (Lersch and Vidal 2014). Those who are separated or divorced are overrepresented in multi-unit residence in almost all of the countries examined.

Studies of life satisfaction or quality of life frequently fail to incorporate important housing variables, including built form/house type. This research has shown that, in many countries, life satisfaction is lower for those living in multi-family dwellings than it is for those in detached dwellings. Furthermore, in some countries this difference is relatively large. This highlights the importance of this and other housing variables being included in future research on urban quality of life. In addition to the variables typically examined that research, it should include an examination of both the independent and relative contributions to life satisfaction of the built form, housing and neighbourhood quality, and housing tenure.

The findings in this paper highlight important issues relating to the social sustainability of multi-unit housing in urban areas. It would appear that planning and housing professionals in many countries have some distance to travel in order to ensure the quality of this form of housing if it is to be a desirable, sustainable option for individuals and families. In addition, the data indicates that there is scope in most countries to increase the construction of terraced housing as a form of higher density urban housing, provided it is of high quality. From a natural resource planning and management perspective, it may be an attractive and sustainable option. Indeed, future research might explore the quality of terraced housing in the EU, along with the quality of life of its residents. Improvements in the quality of urban housing are important for so many reasons, environmental and social, and it is worth emphasising that the creation of more sustainable urban communities may help to stem unsustainable housing and consumption patterns such as counter-urbanisation.

References

Armitage, R., M. Rogerson and K. Pease. 2013. "What is Good about Good Design? Exploring the Link between Housing Quality and Crime." *Built Environment* 39(1), 140-161.

Barrett, G. 1996. "The Transport Dimension." In *The Compact City: a Sustainable Urban Form?*, edited by M. Jenks, E. Burton and K. Williams, 171-180. London: Spon.

Barton, H, ed. 2000. *Sustainable Communities: the Potential for Eco-neighbourhoods*. Second Edition. London: Earthscan.

Barton, H. & D. Kleiner. 2000. "Innovative Neighbourhood Projects." In *Sustainable Communities: the Potential for Eco-neighbourhoods, edited by* H. Barton, 66–85. London: Earthscan.

Bramley, G. and S. Power, S. 2009. "Urban Form and Social Sustainability: the Role of Density and Housing type." *Environment and Planning B* 36(1): 30-48.

Breheny, M. and R. Rockwood. 1993. "Planning the Sustainable City Region." In *Planning for a Sustainable Environment*, edited by A. Blowers, 150-189. London: Earthscan.

Burgess, R. and N. Skeltys. 1992. *The Findings of the Housing and Location Choice Survey.* Background paper for the National Housing Strategy. Canberra: Department of Health, Housing and Community Service.

Burton, E. 2002 "Measuring Urban Compactness in UK Towns and Cities." *Environment and Planning B: Planning and Design* 29:219-250.

Burton, E. and L. Matson. 1996. "Urban Footprints: Making Best Use of Urban Land and Resources – Rural Perspective." In *The Compact City: a Sustainable Urban Form?,* edited by M. Jenks, E. Burton and K. Williams, 298-301. London: Spon.

CABE (Commission for Architecture and the Built Environment). 2005a. *What Home Buyers Want: Attitudes and Decision Making among Consumers.* London: CABE.

CABE (Commission for Architecture and the Built Environment). 2005b. *What's it Like to Live There? The Views of Residents on the Design of New Housing*. London: CABE

Calthorpe, P. 1993. *The Next American Metropolis: Ecology, Community and the American Dream.* NY: Princetown Architechtural Press.

Carroll, P., K. Witten, and R. Kearns. 2011. "Housing Intensification in Auckland New Zealand: Implications for Children and Families." *Housing Studies* 26(3): 353-367.

Costello, L. 2005. "From Prisons to Penthouses." *Housing Studies* 20(1): 49-62.

Cozens, P., D. Hillier and G. Prescott. 2001a. "Crime and the Design of Residential Property – Exploring the Perceptions of Planning Professionals, Burglars and Other Users, Part 2." *Property Management* 19(4): 222-248.

Cozens, P., D. Hillier and G. Prescott. 2001b. "Defensible Space: Burglars and Police Evaluate Urban Residential Design." *Security Journal* 14: 43-62.

Cozens, P., Hillier, D. and Prescott, G. 2002. "Criminogenic Associations and Characteristic British Housing Designs*." International Planning Studies* 7(2): 119-136.

Davy Smith, G. and C. Hart. 1998. "Socio-economic Factors and Determinants of Mortality." *Journal of the American Medical Association* 280(20): 1744-1745.

DETR. 1999. *A Better Quality of Life. A Strategy for Sustainable Development in the UK*. London: Department of Environment, Transport and Regions.

Dixon, J. and A. Dupuis. 2003. "Urban Intensification in Auckland, New Zealand: a Challenge for New Urbanism." *Housing Studies* 18(3): 353-368.

Diener, E., R. Inglehart and L. Ta. 2013. "Theory and Validity of Life Satisfaction Scales." *Social Indicators Research* 112: 497–527.

Duany, A. and E. Plater-Zyberk. 1991. *Towns and Town-making Principles*. New York: Rizzoli International.

Elkin, T., D. McLaren, and M. Hillman. 1991. *Reviving the City: Towards Sustainable Urban Development.* London: Friends of the Earth.

European Social Survey Round 2 Data. 2004. Data file edition 2.0. Norwegian Social Science Data Services, Norway – Data Archive and distributor of ESS data.

European Social Survey. 2014. Weighting European Social Survey Data. http://www. Europeansocialsurvey.org/

Fahey, T. 2007. "How do we Feel? Economic Boom and Happiness." In *Best of Times? The Social Impact of the Celtic Tiger*, edited by T. Fahey, H. Russell and C. Whelan, 11-26. Dublin: IPA.

Fanning, D. 1997. "Families in Flats." *British Medical Journal* 4(5576): 382-386.

Fincher, R. 2004. "Gender and Life Course in the Narratives of Melbourne's High-rise Housing Developers." *Australian Geographic Studies* 42(3): 325-338.

Fowler, E. 2008. "Faulty Towers." *Alternative Journal* 34(1): 24-26.

Gallent, N., M. Madeddu and A. Mace. 2010. "Internal Housing Space Standards in Italy and England." *Progress in Planning* 74 (1): 1-52.

Galobardes, B., M. Shaw, D. Lawlor, J. Lynch and G. Davey Smith. 2006. "Indicators of Socioeconomic Position (part 1)." *Journal of Epidemiology and Community Health* 60(1): 7-12.

Gifford, R. 2007. “The Consequences of Living in High-rise Buildings.” *Architectural Science Review* 50(1): 2-17.

Gillis, A. 1977. “High-rise Housing and Psychological Strain.” *Journal of Health and Social Behaviour*, 18(4): 418-431.

Graham, H. 2000. *Understanding Health Inequalities*. Buckingham: Open University Press.

Gwilliam, M., C. Bourne, C. Swain, and A. Prat. 1999. *Sustainable Renewal of Suburban Areas.* Report for Joseph Rowntree Foundation. York: York Publishing Services.

Hall, P. 2003. “Smart Growth on Two Continents.” In *Urban Villages and the Making of Communities*, edited by P. Neal, 33–48. London: Spon Press.

HATC. 2006. *House Space Standards*. A Report by HATC Ltd. for the Greater London Authority. London: GLA.

Higgins, P. and J. Campanera. 2011. “(Sustainable) Quality of Life in English City Locations.” *Cities* 28: 290-299.

Hillier, B. and O. Sahbaz. 2009. “Crime and Urban Design: an Evidence Based Approach.” In *Designing Sustainable Cities*, edited by R. Cooper, G. Evans, and C. Boyko. Chichester: Wiley-Blackwell.

Howley, P. 2010. “Sustainability Versus Liveability: An Exploration of Central City Housing Satisfaction.” *International Journal of Housing Policy* 10(2): 173-189.

Howley, P., M. Scott and D. Redmond. 2009. “Sustainability versus Liveability: an Examination of Neighbourhood Satisfaction.” *Journal of Environmental Planning and Management* 52(6): 847-864

Jenks, M., E. Burton, and K. Williams, eds. 1996. *The Compact City: A Sustainable Urban Form?* London: Spon.

Jowell, R. and the Central Co-ordinating Team. 2005. *European Social Survey 2004/2005: Technical Report.* London: Centre for Comparative Social Surveys, City University.

Lersch, P. and S. Vidal. 2014. “Falling Out of Love and Down the Housing Ladder: A Longitudinal Analysis of Marital Separation and Home Ownership.” *European Sociological Review* 30(4): 512-524.

Llewelyn-Davies. 1997. *Sustainable Residential Quality: New Approaches to Urban Living*. London: Report for the GOL, DETR and LPAC, LPAC.

Lowry, S. 1990. "Families and Flats." *British Medical Journal* 300(6719): 245-247.

Mace, A., P. Hall & N. Gallent. 2007. "New East Manchester: Urban Renaissance or Urban Opportunity?" *European Planning Studies* 15(1): 51–65.

MacLaren, A and L. Murphy. 1997. "The Problems of Taxation-induced Inner-city Housing Development - Dublin's Recipe for Success?" *Irish Geography* 30 (1): 31-36.

McCarthy, S., S. Maciver and A. Sooman. 1993. "Area, Class and Health: Should we be Focusing on Places or People?" *Journal of Social Policy* 22: 213-234.

Neal, P. ed. 2003. *Urban Villages and the Making of Communities.* London: Spon Press.

Newman, P. 1992. "The Compact City – an Australian Perspective." *Built Environment* 18: 285-300.

Newman, P. and J. Kenworthy. 2000. "Sustainable Urban Form: The Big Picture." In *Achieving Sustainable Urban Form*, edited by K. Williams, K. Burton and M. Jenks. London: E & FN Spon.

Newton, P., S. Tucker, and M. Ambrose. 2000. "Housing Form, Energy Use and Greenhouse Gas Emissions." In *Achieving Sustainable Urban Form*, edited by K. Williams, K. Burton and M. Jenks, 74-83. London: E & FN Spon.

Owens, S. 1992. "Energy, Environmental Sustainability and Land-use Planning." In *European Research in Regional Science 2. Sustainable Development and Urban Form,* edited by M. Breheny, 79-105. London: Pion.

Power, A. and J. Houghton. 2007. *Jigsaw Cities: Big Places, Small Spaces*. Bristol: Policy Press.

Reid, H. 1994. "Demand for Housing Types in the Sydney Regions." *Urban Futures* 3(3).

Sherlock, H. 1991. *Cities are Good for Us. The Case for High Densities, Friendly Streets, Local Shops and Public Transport*. London: Paladin.

Southworth, M. 1997. "Walkable Suburbs? An Evaluation of Traditional Communities at the Urban Edge." *Journal of the American Planning Association* 63(1): 28-44.

Troy, P. 1996. “Urban Consolidation and the Family.” In *The Compact City: a Sustainable Urban Form?*, edited by M. Jenks, E. Burton, and K. Williams, 155-165. London: Spon.

Urban Task Force. 1999. *Towards an Urban Renaissance*. London: E & FN Spon.

Wilkinson, D. 1999. *Poor Housing and Ill Health: a Summary of Research Evidence.* Edinburgh: Central Research Unit, the Scottish Office.

Williams, K. 2009. “Space Per Person in the UK: A Review of Densities, Trends, Experiences and Optimum Levels.” *Land Use Policy* 26S: S83-S92.

Williams, K., E. Burton, and M. Jenks, eds. 2000. *Achieving Sustainable Urban Form*. London: Spon.

Winchester, S. and H. Jackson. 1982. *Residential burglary: The Limits of Prevention*. London: Home Office.

Yuen, B., A. Yeh, S. Appold, G. Earl, J. Ting and L. Kwee. 2006. “High-rise Living in Singapore Public Housing.” *Urban Studies* 43(3): 583-600.

Table 1. House type by country (% within house type).

	Detached house %	*Semi-detached %*	*Terraced %*	*Multi-unit %*	*Total %*
Austria	47.5	5.5	4.4	42.7	100
Belgium	37.8	19.4	26.5	16.2	100
Czech	35.5	2.7	8.9	52.9	100
Germany	36.4	9.6	7.4	46.6	100
Denmark	58.5	2.5	12.2	26.7	100
Estonia	23.9	2.6	3.4	70.1	100
Spain	34.7	2.1	5.4	57.8	100
Finland	46	2.4	15.8	35.8	100
France	62.8	22.4	0	14.8	100
UK	26.2	33.1	30	10.9	100
Greece	32.6	20.9	3	43.4	100
Hungary	37.9	5	1.2	55.9	100
Ireland	48.1	29.7	21.2	0.9	100
Italy	6.8	8.9	14.1	70.2	100
Luxembourg	38.9	17.5	21.7	21.9	100
Netherlands	16.4	30.1	34.4	19.1	100
Poland	29.9	3.1	2	65	100
Portugal	50.2	6.5	5.4	37.9	100
Slovakia	54.1	2.9	0.8	42.3	100

Table 2. Very good housing quality (%) by house type and country.

	Detached	*Semi-detached*	*Terraced*	*Multi-unit*
	%	*%*	*%*	*%*
Austria	7.5	5.7	15.5	22.9
Belgium	50.6	23.3	20.1	32.2
Czech	41.5	57.3	26.9	22.5
Germany	41.5	38.3	42.2	17.6
Denmark	37	20	29.9	20.3
Estonia	19.1	6.8	16.1	3
Spain	21.8	3.1	42.7	17.4
Finland	29	40.5	27.3	15.5
France	55.8	29.5	--	26.2
UK	51	23.3	12.8	16.8
Greece	11.4	6.6	18.2	14.7
Hungary	25	34.8	50	11.6
Ireland	61.7	28.6	8.6	1.1
Italy	25	12.3	20.6	7.9
Luxembourg	47.1	32.1	16.2	24.4
Netherlands	53.6	30.2	14.8	17.4
Poland	26.3	13.5	34.8	13.8
Portugal	12.1	18.9	6.8	10.9
Slovakia	29.9	34.2	50	9.6

Table 3. Neighbourhood quality by house type and country.

	Very safe/safe %		*Litter not very/not at all common* %		*Vandalism not very/not at all common* %	
	Detached	Multi-unit	Detached	Multi-unit	Detached	Multi-unit
Austria	84.8	80.8	99.1	93.6	99.6	95
Belgium	83.2	67.1	98	82.4	100	83.1
Czech	70.2	59	92.8	75.4	94.4	77.6
Germany	77.2	71.9	97.3	91.1	99.4	94.5
Denmark	89.8	79.4	98.1	85.5	99.7	87.1
Estonia	72	48.3	92.9	74.9	96	71.2
Spain	83.5	71.6	97.5	88.6	98.5	88.2
Finland	93.1	80.8	97.8	92.3	99.6	92.8
France	75.7	67.5	99.5	94.8	99.9	93.1
UK	79	56.6	97.6	69.8	99	83.7
Greece	75.9	65.9	88.3	74.2	93.8	76.9
Hungary	75.5	63.2	93.1	72.7	96.9	76.2
Ireland	70.6	46.2	98.2	84.6	99.4	84.6
Italy	78.3	67.9	92.5	85	95.7	87.3
Luxembourg	75.3	67.4	96.6	92.7	99.8	91
Netherlands	88	70.2	99.6	93.7	100	95.9
Poland	73.1	56.5	94.3	93.4	99.1	86.5
Portugal	84.5	69.9	84.2	89.1	95.7	92.2
Slovakia	66.4	51.1	92.2	79	96.6	76.9

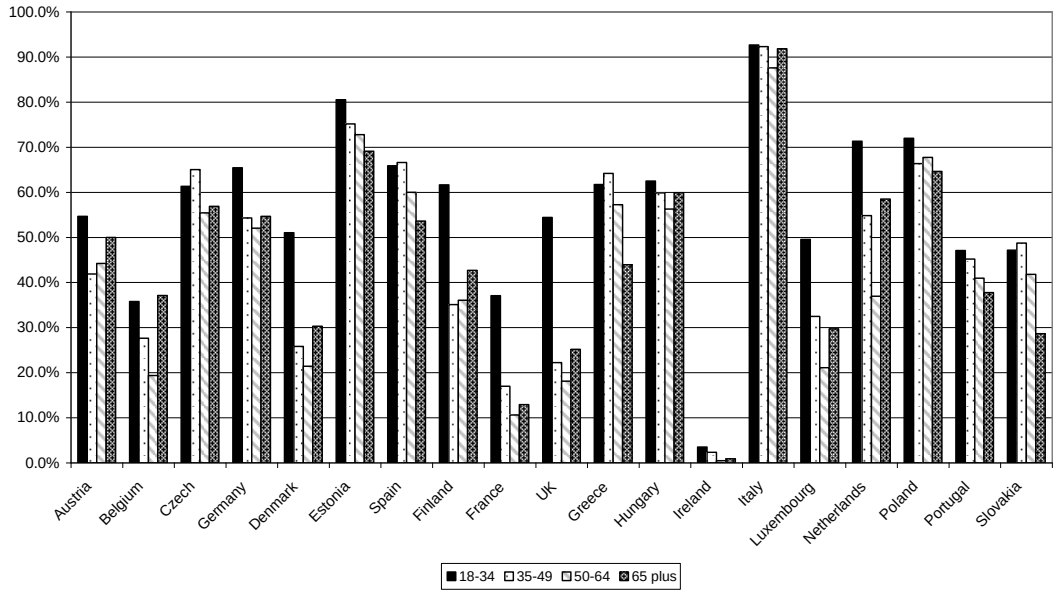

Figure 1. Multi-unit residence by age and country (%).

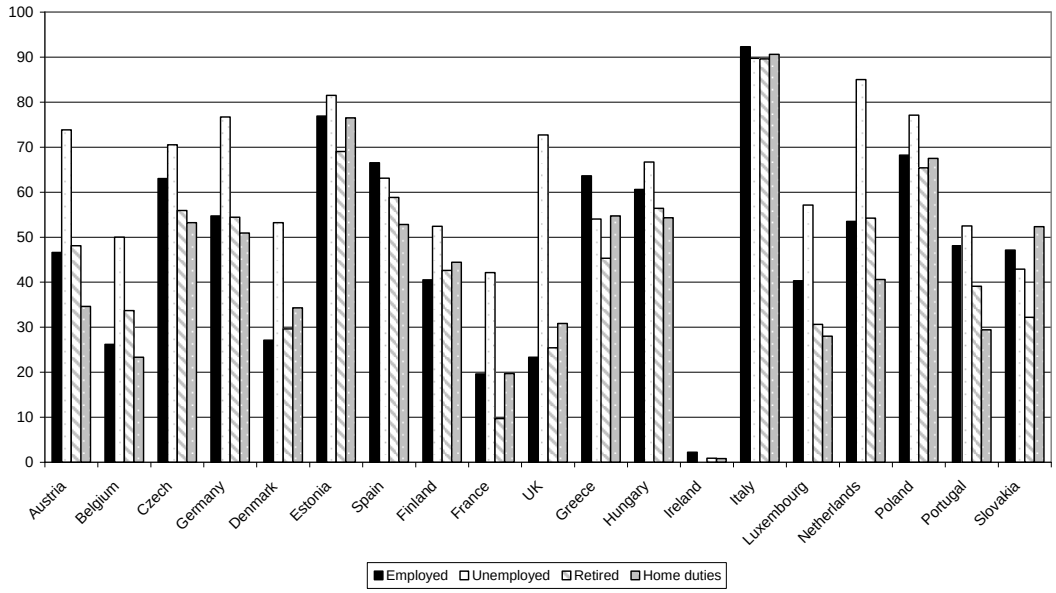

Figure 2. Multi-unit residence by employment status and country (%)

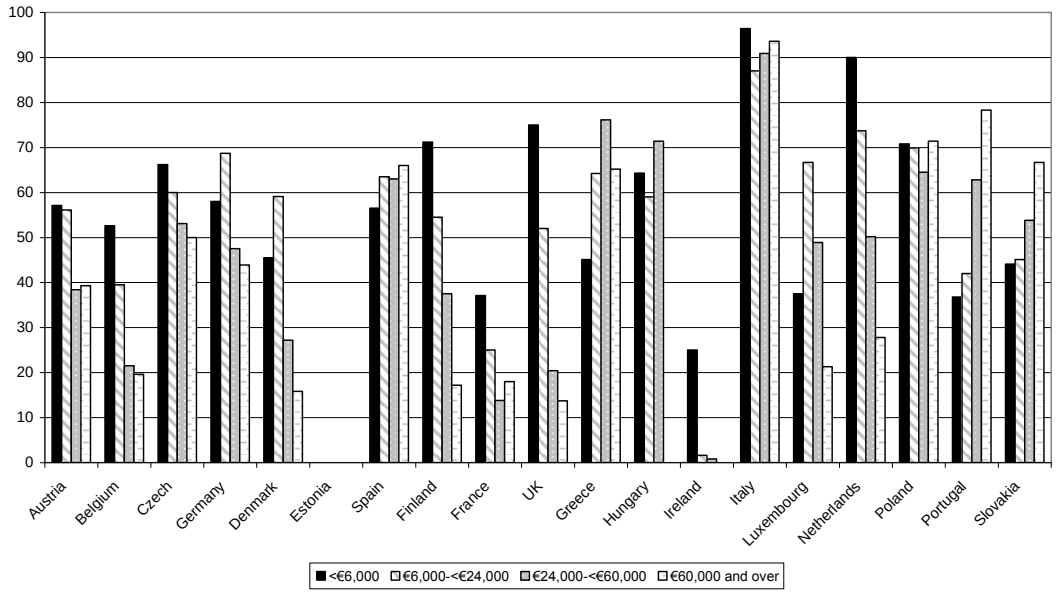

Figure 3. Multi-unit residence by income (household net annual) and country (%).

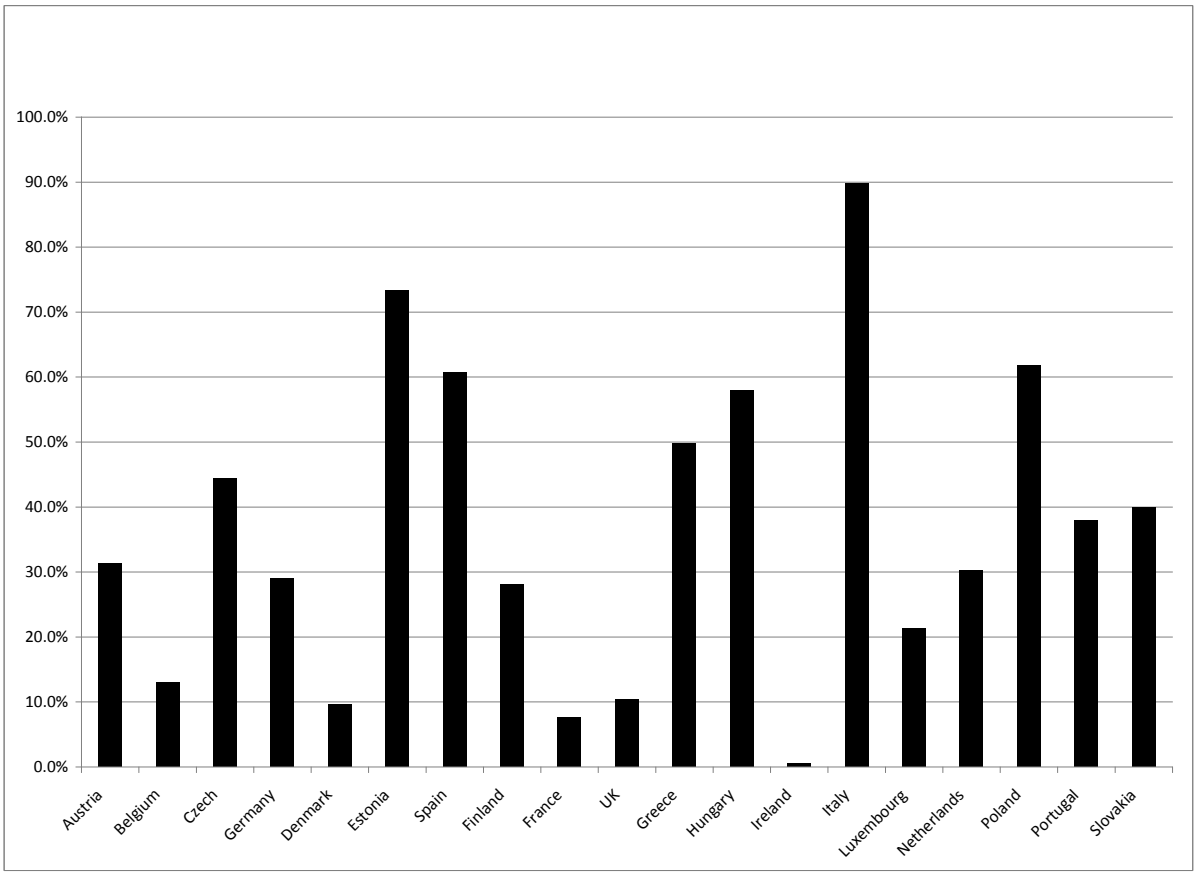

Figure 4. Multi-unit residence by home ownership and country (%).

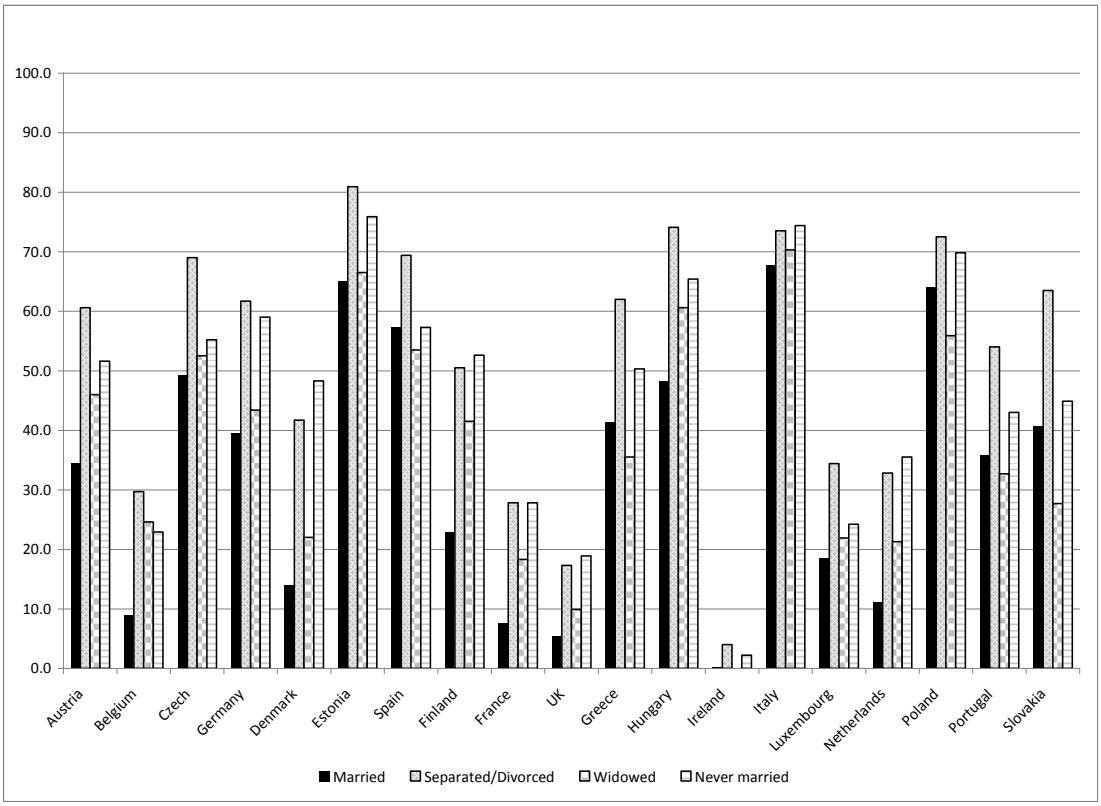

Figure 5. Multi unit residence by marital status and country (%).

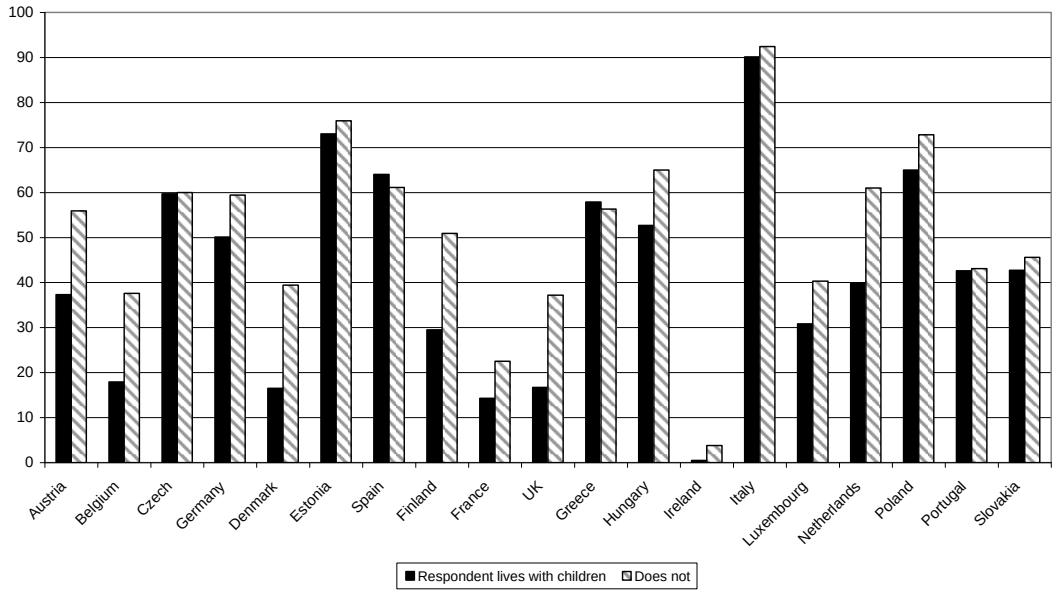

Figure 6. Multi-unit residence by presence of children and country (%).

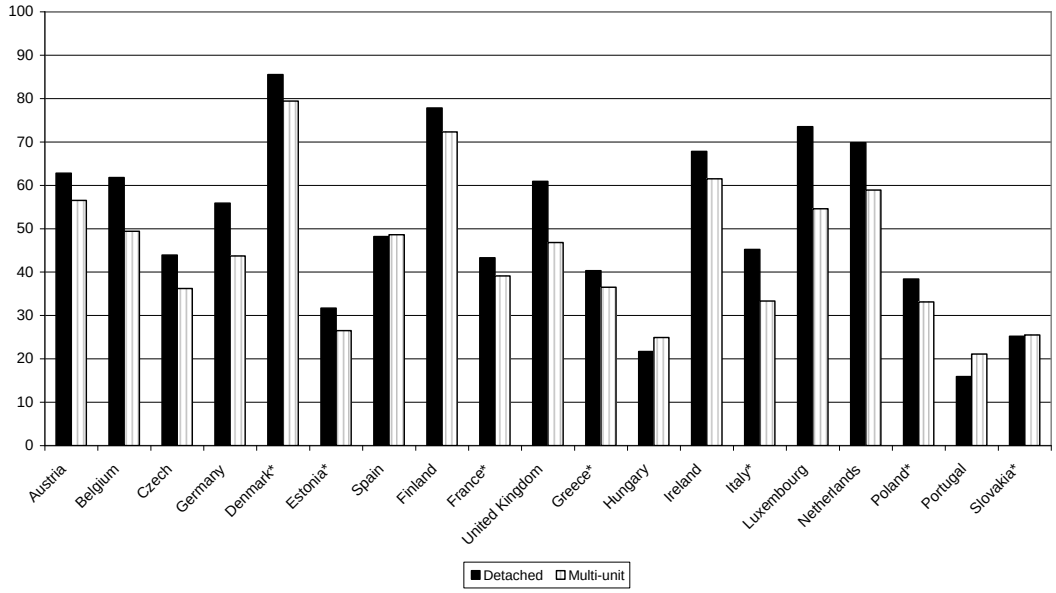

Figure 7. Percent very satisfied with life by house type and country.

[i] For more information on this dataset, see Jowell and the Central Co-ordinating Team (2005). The data was made available via the Norwegian Social Science Data Services (NSD) as the data archive and distributor of the ESS data.