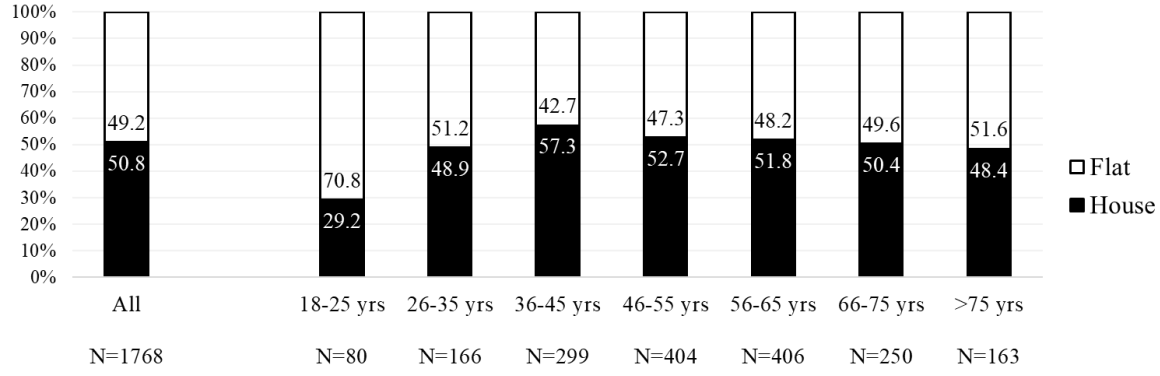
Unfulfilled urban housing preferences: All about a lack of green space and connectivity?

The majority of city dwellers seems to prefer living in detached houses, ideally with a garden (cf. Coolen & Meesters, 2012; Dunse et al., 2013; Gawlak et al., 2021; Horňáková & Špačková, 2024; Wiest, 2011). In contrast, international organisations (e.g., EU, 2017; UN-Habitat, 2017) and local governments (e.g., Greater London Authority, 2021; Stockholms Stad, 2018; Umweltbundesamt, 2017) advocate compact, high-density, mixed-use urban developments. This could lead to a gap between actual urban development and the preferred housing form, suggesting that an increasing number of urban dwellers are not currently living in their preferred housing form. With increasing urbanisation (United Nations, 2023), it is becoming increasingly important for effective urban planning to understand the extent to which the housing preferences of the urban population match their actual housing choices, and to identify the factors that may lead urban dwellers to prefer houses in low-density residential areas to flats in densely built neighbourhoods.

The data come from a primary survey in two large German cities, Cologne and Hamburg, involving a random sample of 1,768 respondents. The main outcome variable indicates whether the respondent would prefer to live in a house or a flat, irrespective of ownership or rental status and current housing situation. This approach provides a more accurate reflection of respondents' true housing preferences, as opposed to assuming that their current housing situation matches their preferences, as is often suggested in studies of revealed housing preferences in economic research (see Coolen & Jansen, 2012 for methods of measuring housing preferences; Dunse et al., 2013). The findings suggest that preferences between houses and flats in cities are fairly balanced (see Figure 1), contrary to general findings at the national level that most individuals prefer to live in houses (Andersen, 2011; Dunse et al., 2013; Gawlak et al., 2021; Jansen, 2014; Wiest, 2011).

Figure 1. Housing preferences in cities by age



Note: Estimates design weighted; survey data from Hamburg/Cologne, collected in 2020/21

While only 30% of young adults aged 18-25 prefer to live in a house, this preference rises to 57% of urban dwellers aged 36-45. This finding is consistent with prior research suggesting that having children correlates with a preference for living in a house or having a garden (Coolen & Meesters, 2012; Dovbischuk & Kley, 2024; Kley & Stenpaß, 2020). After the age of 46, the preference for living in a house in the city starts to decrease

slightly and reaches 48% for adults aged 75 and older, which is in line with previous studies (Abramsson & Andersson, 2012; Egsgaard, 2024; Jancz & Trojanek, 2020).

Perceptions of one's living situation do not always correspond to objective living conditions. Consonance in housing (cf. Zapf, 1984 for consonance and dissonance in well-being) indicates that housing choices and preferences match, while dissonance indicates that they don't (see Table 1). The encouraging finding is that most urban dwellers experience consonance in their housing preferences, with the majority living in flats and preferring to do so. However, a substantial group of urban dwellers currently living in flats would prefer to live in houses. The smallest group consists of those currently living in houses who would prefer to reside in flats. This paper focuses on dissonance as it signals unfulfilled housing preferences in urban areas.

Table 1. Consonance and dissonance in housing preferences

Housing preference	**Housing choice**	
	House	Flat
House	Consonance (House = House) N=327	Dissonance (Flat => House) N=526
Flat	Dissonance (House => Flat) N=122	Consonance (Flat = Flat) N=793

Note: Survey data from Hamburg/Cologne, collected in 2020/21.

The probability of preferring a house to a flat is lower among urban dwellers currently living in a flat if they already own their flat or if their flat is more spacious (see Model 1 in Table 2). Higher attachment to the neighbourhood also reduces the probability of preferring a house among those living in flats in cities. Good public transport connections and proximity to the city centre further reduce the preference for a house over a flat. Conversely, having children increases the preference for a house, which is in line with previous research (Andersen, 2011; Coolen & Meesters, 2012). Environmental disadvantages, such as a lack of nearby green spaces and exposure to traffic noise at home, additionally increase the likelihood of preferring a house over a flat.

The relationship between age and preference for flats among house dwellers appears to be non-linear (see Model 2 in Table 2), which reinforces the earlier findings presented in Figure 1 and is consistent with prior research (Abramsson & Andersson, 2012; Egsgaard, 2024; Jancz & Trojanek, 2020). As people get older, they are less likely to prefer a flat, but at a certain age this trend reverses and older residents are more prone to prefer a flat. In addition, house dwellers are more likely to prefer a flat if they live close to the city centre. Conversely, the probability of wanting to stay in a house increases if they have children and if they have good access to public transport. It appears that city dwellers living in houses in Cologne are more likely to prefer flats than those in Hamburg. This may be due to a tighter housing market for detached and semi-detached houses in Cologne, where the average share of these houses is 59% (Stadt Köln, 2020), compared to 68% in Hamburg (Statistisches Amt für Hamburg und Schleswig-Holstein, 2023). Due to the smaller market for detached and semi-detached houses in Cologne, residents may be more likely than in Hamburg to shift their preferences towards the more readily

available flats. When the Model 2 is repeated for the two cities separately, the key predictors show the same trends for both Hamburg and Cologne.

Table *2*. Relevant predictors for dissonance in housing preferences

	Prefer to live in a house	Prefer to live in a flat
	Model 1 (b)	Model 2 (b)
Age	0.01	-0.12*
Age squared	-0.00	0.00*
Female	-0.10	-0.32
Hamburg (ref.: Cologne)	-0.01	-0.66*
Migration background	-0.01	-0.18
House as a child	0.10	-0.30
Homeownership	-0.31+	0.31
Living space (10 sqm/person)	-0.07+	-0.06
Living with child(ren)	0.35+	-0.83*
Equivalized income (in k)	-0.05	0.02
No private garden	-0.11	0.50
Lack of green in vicinity	0.82**	-0.74
Traffic noise (1 to 7)	0.14**	-0.04
Close to public transport	-0.37*	-0.72*
Close to city centre	-1.06***	1.04**
Health (1 to 7)	0.00	-0.14
Place attachment (1 to 7)	-0.10*	-0.08
Negative influence COVID-19	0.01	-0.10
No. of respondents	1319 (those living in flats)	449 (those living in houses)
McFadden's pseudo R^2	0.083	0.122

Note: Logit regressions, design weighted, robust standard errors applied; + p<0.1, * p<0.05, ** p<0.01, *** p<0.001.

To further illustrate the link between lack of green space and connectivity on housing preferences, Table 3 shows the top five reasons for dissatisfaction with the current housing situation from the open-ended questions. This sensitivity analysis, which combines qualitative insights with quantitative findings, reinforces assumptions about causality, especially in the context of analysing the impact of the built environment on human preferences and behaviour (Næss, 2016).

For those living in flats but preferring a house, the main dissatisfaction factor is the desire for less noise, which is a key reason for dissatisfaction for all four groups in Table 3. Additionally, for those living in high-density dwellings, a shortage of parking space is the next reason for dissatisfaction, potentially driving people towards lower-density dwellings. The lack of green space in the vicinity ranks third among the top dissatisfaction reasons for those living in flats and preferring a house, a much higher concern than for other groups. The lack of green space in the vicinity is even more relevant than the lack of a private garden, which comes fourth. Insufficient living space is another reason for preferring a house to a flat.

Table 3. Top five reasons for dissatisfaction with housing situation based on housing consonance or dissonance

	Dissonance				**Consonance**			
	Flat => House		House => Flat		House = House		Flat = Flat	
1st	Desire for reduced noise	18.2 %	Desire for reduced noise	14.7%	Desire for reduced noise	20.5%	Desire for reduced noise	20.5%
2nd	Shortage of parking space	12.6 %	**Poor transport connectivity**	**9.5%**	Not enough shops nearby	9.9%	Shortage of parking space	12.4%
3rd	**Lack of green space in vicinity**	**9.9%**	High traffic volume	9.0%	Shortage of parking space	8.5%	Housing costs are too high	7.6%
4th	Lacking an own garden	9.1%	Shortage of parking space	8.3%	High traffic volume	7.4%	High traffic volume	7.0%
5th	Small dwelling size	9.0%	Too far from city centre	8.0%	Fear of crime	7.0%	Small dwelling size	5.9%
No. of respondents	526		122		327		793	

Note: Estimates design weighted; survey data from Hamburg/Cologne, collected in 2020/21. The top five factors for housing dissatisfaction are derived from responses to open-ended questions about disliked aspects of the living situation, encompassing reasons for considering relocation, if applicable, and coded using MAXQDA. The percentages indicate the proportion of individuals in each group affected by each dissatisfaction factor.

For city dwellers who live in houses but would prefer to live in a flat, the desire for less noise and poor public transport connections are the top two reasons for dissatisfaction with their current housing situation, which is consistent with previous research showing that good public transport connections are a key housing concern, particularly for older adults (Jancz & Trojanek, 2020) and students (McCartney & Rosenvasser, 2023). High levels of traffic and lack of parking are the next two dissatisfactions for this group. Additionally, the fifth reason for dissatisfaction indicates that these city dwellers often live too far from the city centre, highlighting the importance of connectivity in their dissonance with their housing situation.

Overall, this paper highlights the importance of distinguishing between housing preferences and housing choices, and analyses the predictors that contribute to unfulfilled housing preferences when urban dwellers experience dissonance in their housing situation. For those who live in flats but prefer houses, the lack of green space was identified as one of the main predictors influencing their preference for a house. Conversely, for those who live in houses but prefer flats, access to public transport was identified as one of the key factors influencing their preference to switch from a house to a flat. To improve the well-being of city dwellers and increase consonance in housing preferences, it is important to maintain and plan green spaces, especially in high-density areas. Improving public transport connectivity is also essential, especially in low-density areas. By addressing these factors, urban planners can help to ensure that housing preferences are more likely to be in consonance with housing choices, thereby promoting a higher level of well-being among city dwellers.

References

Abramsson, M., & Andersson, E. K. (2012). Residential Mobility Patterns of Elderly—Leaving the House for an Apartment. *Housing Studies*, *27*(5), 582-604. https://doi.org/10.1080/02673037.2012.697553

Andersen, H. S. (2011). Motives for Tenure Choice during the Life Cycle: The Importance of Non-Economic Factors and Other Housing Preferences. *Housing, Theory and Society*, *28*(2), 183-207. https://doi.org/10.1080/14036096.2010.522029

Coolen, H., & Meesters, J. (2012). Private and public green spaces: meaningful but different settings. *Journal of Housing and the Built Environment*, *27*(1), 49-67. https://doi.org/10.1007/s10901-011-9246-5

Coolen, H. C. C. H., & Jansen, S. J. T. (2012). Housing Preferences. In S. J. Smith (Ed.), *International Encyclopedia of Housing and Home* (pp. 606-612). Elsevier. https://doi.org/10.1016/B978-0-08-047163-1.00638-X

Dovbischuk, T., & Kley, S. (2024). The call of the green: The role of green spaces in residential relocations across the life course in Germany. *Population, Space and Place*, e2810. https://doi.org/10.1002/psp.2810

Dunse, N., Thanos, S., & Bramley, G. (2013). Planning policy, housing density and consumer preferences. *Journal of Property Research*, *30*(3), 221-238. https://doi.org/10.1080/09599916.2013.795992

Egsgaard, A. (2024). Home after widowhood: a longitudinal study of residential mobility and housing preferences following a partner's death. *Housing Studies*, *39*(7), 1581-1606. https://doi.org/10.1080/02673037.2022.2135169

EU, U. A. f. t. (2017). *Sustainable Use of Land and Nature-Based Solutions. Orientation paper* (E. Commission, Ed.).

Gawlak, A., Matuszewska, M., & Pruszewicz-Sipińska, E. (2021). Designing Residential Architecture for Future Societies. The Central and Eastern European Context-On the Basis of the Example of Poland. AHFE 2021 Conference on Human Factors and Ergonomics in Healthcare and Medical Devices, USA.

Greater London Authority. (2021). The London plan: The spatial development strategy for Greater London.

Horňáková, M., & Špačková, P. (2024). Having a garden or being in the city? The trade-offs and strategies of young middle-class families in Prague. *Journal of Urban Affairs*, 1-18. https://doi.org/10.1080/07352166.2023.2293890

Jancz, A., & Trojanek, R. (2020). Housing Preferences of Seniors and Pre-Senior Citizens in Poland—A Case Study. *Sustainability*, *12*(11), 4599. https://www.mdpi.com/2071-1050/12/11/4599

Jansen, S. J. T. (2014). The impact of the have–want discrepancy on residential satisfaction. *Journal of environmental psychology*, *40*, 26-38. https://doi.org/https://doi.org/10.1016/j.jenvp.2014.04.006

Kley, S., & Stenpaß, A. (2020). Intergenerational transmission of housing choice: The relevance of green spaces for moving into a family house across social class. *Population, Space and Place*, *26*(2), 2299. https://doi.org/10.1002/psp.2299

McCartney, S., & Rosenvasser, X. (2023). Affordability is king–with private bedroom: exploring the mismatch of students' housing preferences in constrained housing markets. *Housing Studies*, 1-21. https://doi.org/10.1080/02673037.2023.2224252

Næss, P. (2016). Built environment, causality and urban planning. *Planning Theory & Practice*, *17*(1), 52-71. https://doi.org/10.1080/14649357.2015.1127994

OECD. (n.d.). *What are equivalence scales?* Retrieved 13.07.2023 from https://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf

Stadt Köln. (2020). *Kölner Stadtteilinformationen 2020*.

Statistisches Amt für Hamburg und Schleswig-Holstein. (2023). *Hochbautätigkeit und Wohnungsbestand in Hamburg 2022*.

Stockholms Stad. (2018). *Stockholm City Plan*.

Umweltbundesamt. (2017). *Die Stadt für Morgen* (Umweltschonend mobil–lärmarm–grün–kompakt–durchmischt, Issue.

UN-Habitat. (2017). *Planning compact cities: Exploring the possibilities and limits of densification* (U.-H. a. S. C. Council, Ed.). Global Experts Group Meeting.

United Nations. (2023). *The Sustainable Development Goals Report* (Special edition: Towards a Rescue Plan for People and Planet, Issue.

Wiest, K. (2011). Large-Scale Housing Estates in Central and East European Cities: Between Residential Preferences and Local Housing Market Differences. *Housing, Theory and Society*, *28*(4), 410-431. https://doi.org/10.1080/14036096.2011.592213

Zapf, W. (1984). individuelle Wohlfahrt: Lebensbedingungen und wahrgenommene Lebensqualität. *Lebensqualität in der Bundesrepublik*, 13-26.