ETH zürich

ETH Library

How does Acceptance of Densification Differ among Neighborhood Types?

Working Paper

Author(s):
Wicki, Michael; Kaufmann, David

Publication date:
2021

Permanent link:
https://doi.org/10.3929/ethz-b-000478720

Rights / license:
In Copyright - Non-Commercial Use Permitted

This page was generated automatically upon download from the ETH Zurich Research Collection.
For more information, please consult the Terms of use.

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

SPUR
Spatial Development and Urban Policy
https://spur.ethz.ch

How does Acceptance of Densification Differ among Neighborhood Types?

Working paper, DOI: 10.3929/ethz-b-000478720

Authors: Michael Wicki*×, David Kaufmann*

*ETH Zürich, Zürich, Switzerland

×Corresponding author: wimi@ethz.ch, ETH Zürich, Institute for Spatial and Landscape Development, Stefano-Franscini-Platz 5, 8093, Switzerland

Abstract[1]

Around the world, centrally-located land is scarce, making the sustainable use of available land a necessity. As a consequence, policymakers worldwide pursue strategies that aim to densify existing settlements. However, concrete densification projects tend to provoke (local) opposition. We examine how individuals assess general and local densification in Switzerland. The Swiss case is particularly interesting due to its high population density and recent spatial planning policy shifts towards densification. We base our analysis on a choice experiment that relies on a representative sample of 3003 residents. The results indicate that residents support general densification but reject such projects within their neighborhoods, leading to substantial shifts in support for densification. However, opposition to densification differs depending on the neighborbood type individuals live in and on project-related factors. These differences point to possible opportunities for increasing the acceptance of densifying our settlements.

Keywords: urban politics; adaptive conjoint; urban densification; public opinion

[1] Acknowledgements: The data underlying and supporting the findings of this study was provided by the Canton of Zurich and Anovum, who collected the data in the context of the publicly available report "Akzeptanz der Dichte" in 2014. We are furthermore grateful for their valuable comments, specifically by Christian Egger (Anovum), Benjamin Meyer (Office for Spatial Development of the Canton of Zurich), Peter Moser (Statistical Office of the Canton of Zurich), and Stefan Ruf (Anovum).

1 Introduction

Land in densely populated regions is scarce and requires the efficient use of available land and space. There is a broad public and scholarly consensus that densifying settlements can create multiple sustainable benefits for our society (e.g. Boyko and Cooper 2011; Einstein, Glick, and Palmer 2020; Manville, Monkkonen, and Lens 2020). First, densification aims to protect undeveloped land that may otherwise be consumed by urban sprawl (Angelo and Wachsmuth 2020; Artmann, Inostroza, and Fan 2019; Siedentop and Fina 2012). Second, densifying metropolitan regions can reduce carbon emissions, given that denser settlements shorten commuting distances, thus reducing energy consumption and CO2 emissions from the transportation sector (Angelo and Wachsmuth 2020). Moreover, higher densities also make it possible to improve urban infrastructures' energy efficiency (Skovbro 2001). Third, densification provokes other (in-)direct socioeconomic effects (Ahlfeldt and Pietrostefani 2019; Freemark, Steil, and Thelen 2020; Trounstine 2020). Densification has, for example, the potential to ensure housing affordability on a wider metropolitan scale by increasing housing supply (Angelo and Wachsmuth 2020; Dembski et al. 2020; Ooi and Le 2013). While increasing density alone will certainly not be enough to address critical challenges of our time, densifying our settlements is a crucial part of sustainability transformations and to ensure housing affordability (Angelo and Wachsmuth 2020; Dembski et al. 2020; Einstein, Glick, and Palmer 2020).

Given its multiple potential benefits, policymakers worldwide have begun to formulate densification policies that aim to enhance optimal and intensive land use (Dembski et al. 2020; Duany et al. 2011; Elmqvist et al. 2019; Freemark 2020). People generally tend to accept densification policies. However, concrete densification projects are prone to generating vocal resistance from existing residents (Dunham-Jones 2005; Einstein 2019; Lewis and Baldassare 2010; Monkkonen and Manville 2019). This dualism in accepting densification projects points to classic "Not in my backyard" (NIMBY) behavior. Nimbyism means that residents oppose densification developments in their neighborhood but would accept similar developments elsewhere (Esaiasson 2014; Wolsink 1994). Such local resistance tends to be fueled by perceived negative effects of densification such as gentrification (Rice et al. 2020), loss of green spaces in central areas (Haaland and van den Bosch 2015), and changes in traffic volume (Williams, Burton, and Jenks 2010). Thus, slow rates of urban densification and urban housing production are linked to lack of public acceptance and politics (Manville, Monkkonen, and Lens 2020; Monkkonen and Manville 2019; Whittemore and BenDor 2018). Therefore, it is crucial to understand where and why citizens accept and oppose densification for realizing the widespread densification of our settlements and unleashing potential sustainability benefits.

This paper seeks to understand how individuals assess densification strategies in general as well as within their own neighborhood. Acceptance of changes in the built environment and NIMBY behavior has been studied with different kinds of local unwanted land use (LULUs) such as for high-speed railways (Mannarini, Roccato, and Russo 2015), social housing (Nguyen, Basolo, and Tiwari 2013), or wind energy plants (Bidwell 2013). Concerning densification, most studies focus on explaining public opposition to densification in urban or metropolitan areas (Stewart 2020). We add to this literature that we examine resistance to or acceptance of densification projects across urban, suburban and rural neighborhood types. This is crucial because the densification of our settlements has to be achieved in centrally-located places, but throughout different settlements and neighborhood types. Additionally, people tend to have misperception of how dense their own settlement is, especially in Switzerland (Ströbele and Hunziker 2017).

To assess individuals' view on densification, we use data from an experimental online survey of residents in Switzerland (N=3003) (Canton of Zürich 2014). Residents were asked to assess different densification project scenarios for their own neighborhood. This approach allows us to examine whether project related factors can enhance the acceptance of densification and how the acceptance of densification differ across neighborhood types. We therefore specifically focus on how individuals assess the transformation and densification of existing settlements, i.e., the so-called inward or infill development (Scholl 2014). Two research questions drive the analysis:

1) How do project related factors influence how residents assess local densification scenarios in their own neighborhood?
2) How does residents' assessment of local densification scenarios differ across neighborhood types?

Our study goes beyond the existing literature in three ways. First, we employ an experimental measurement for acceptance of densification by using an adaptive conjoint design. Second, we compare attitudes towards densification across different neighborhood characteristics. While Nimbyism has predominantly been studied in cities, there has been no study so far on resistance to densification projects across urban, sub-urban and rural neighborhood types. Third, the focus on Switzerland allows us to test whether well-known predictors from empirical studies of U.S. cities also hold in a different case (Switzerland). This geographical focus is also practically relevant as densification has become the current Swiss spatial planning paradigm for the whole country (Debrunner, Hengstermann, and Gerber 2020) with the goal ot compating urban sprawl (Weilenmann, Seidl, and Schulz 2017), even intensifying land use conflicts around neighborhood development (Von Der Dunk et al. 2011).

We find that acceptance of or opposition to densification projects is related to how such projects unfold through project related factors and their perceived negative or positive effects. However, the perceived negative effects loom larger than positive effects which points to the human tendency to value the status quo over future changes. We also find that densification as a general paradigm receives a solid popular majority whereas a vast majority of respondents feel negatively affected when such densification projects occur within their own neighborhood. Yet, there are significant differences in how individuals assess densification depending on their neighborhood: Whereas individuals in urban neighborhoods tend to accept densification, individuals living in other types of settlements generally oppose densification. Yet, the type of project related factors that they assess as important differ. Policymakers need to consider different neighborhood settings and perceived effects of project-related factors and may want to accompany densification projects with ancillary policy measures that can increase public acceptance.

The remainder of the paper is structured as follows. We first discuss the existing literature on factors explaining densification acceptance, then we present the theoretical arguments on why and how individuals may support or reject densification strategies. Next, we describe the acquisition of the data used followed by the applied methodological approaches. We then present the study design and the empirical findings, followed by a discussion and an outlook for future research.

2 What Can Explain the Acceptance of Densification?

The existing literature offers various definitions of public support and social acceptance (Dermont et al. 2017; Wicki 2020). While the literature often uses the terms "support" and "acceptance" interchangeably, there are distinct differences among them that are of specific interest for this paper (Batel, Devine-Wright, and Tangeland 2013; Dreyer and Walker 2013; Zvěřinová, Ščasný, and Kyselá 2014). Acceptance suggests passive evaluation while public support implies an active behavioral component (Batel, Devine-Wright, and Tangeland 2013).

Lack of public acceptance and politics are central obstacles to attaining denser metropolitan regions (Manville, Monkkonen, and Lens 2020; Whittemore and BenDor 2018). Public support is essential for enacting and implementing policies, producing high costs and radical changes for individuals such as densification projects (Huber, Wicki, and Bernauer 2020). We know that policymakers consider public opinion when designing policies and projects(Burstein 2003). It seems that policymakers fear political backlash when pushing disputed projects through. However, some scholars argue that this potential resistance to densification is mainly a misperception of the loud-voiced resistance of a minority group of residents (Einstein 2019).

Whereas there is general acceptance and support for densification, concrete densification projects tend to generate vocal resistance from existing residents who live close to a densification project (Einstein 2019; Monkkonen and Manville 2019). We thereby define densification as the process of increasing the number of housing units within existing areas (Debrunner, Hengstermann, and Gerber 2020). The intense nature of conflicts arising from this contradiction and the challenges they pose to policymakers and the provision of public goods have fueled animated political debates and have been studied widely (Mannarini, Roccato, and Russo 2015). NIMBY behavior is often described as predominantly self-interested local opposition that consists of rather irrational conduct and selfish attitudes. There is also criticism of this characterization of Nimbyism as self-interested behavior. Some scholars argue that attitudes toward a project do not depend on knowledge of its details nor on the distance from the mobilized area of residence and egoistic interests are not among the main reasons for mobilization (Takahashi and Gaber 1998). NIMBY behavior can also be about place protection (Devine-Wright 2013). This place-protective behavior can be a form of conservatism (status quo tendency) as people tend to overestimate how a negative shock will affect their happiness. People who prefer to maintain the status quo are willing to pay more to keep it the way it is (Glaeser 2011). Thus, individuals who are already powerful and rich tend to oppose the status quo changes (Einstein 2019; Hankinson 2018). Overall, these ambivalent empirical findings indicate that NIMBY behavior requires a more intense examination and goes beyond pure individual and egoistic interests (Wolsink 2000).

The existing literature identifies *project related factors* to have the potential to influence resistance or acceptance of densification projects. *Project related factors* refer to specific (potential) outcomes of densifying projects or scenarios. These outcomes can directly refer to the project itself, such as the type of facility (Esaiasson 2014) or to the (potential) positive and negative spillover effects that may affect the surrounding area (Weilenmann, Seidl, and Schulz 2017). Aesthetic improvement of the area, updated infrastructure, and new green spaces and parks may lead to positive spillover effects (Ooi and Le 2013). Negative spillover effects may include, but are not limited to, loss of open space, change in neighborhood character, increase in local traffic, increased pollution, and overcrowding (Esaiasson 2014). Project related factors affect individual assessments of a project through the *amenity* and *supply effect*. The *amenity effect* relates to how individuals perceive the neighbourhood's overall appeal (Wen, Zhang, and Zhang 2015) and how they evaluate how the densification project will change these amenities in the neighborhood. The *supply effect* summarizes the positive and negative effects of urban development projects on the property and rental prices (Ooi and Le 2013).

3 Theoretical Expectations

We formulate three hypotheses to test our theoretically derived expectations. For project related factors, supply and amenity effects play a role in the acceptance of densification. Yet, the literature shows that the individuals' perception of the effect that densifying certain areas might have on their surrounding areas drives their assessment of the development project. We thus argue that how these effects may unfold and affect individuals in the future are main drivers of how they assess densification within their direct proximity. Based on rational choice theory, we expect that individuals prefer project related factors that bring along expected supply and amenity effects. On the contrary, residents are reluctant to accept a deterioration of the status quo that may come with project-related factors.

H1: The more (less) project related factors improve (deteriorate) the status quo, the more residents are willing to accept local local densification projects in their neighborhood.

The existing literature shows that people tend to overestimate how their happiness would be affected by a negative shock (Glaeser 2011). We expect that individuals fear losses from local densification more than they believe they will gain from potential project benefits (either in the form of direct infrastructure renewals or indirect economic gains) because individuals are risk adverse (Kahneman and Tversky 1979).

H2: Deteriorating the status quo has a stronger effect than improving the status quo.

Contrary to the literature's predominant expectation that homeowners will mainly be affected by the supply effect, we expect instead that these differences will depend on where individuals live. Specifically, the choice of residential location not only depends on well-known predictors such as proximity to workplace and the socioeconomic environment, it also depends on the built environment (Guidon et al. 2019; Schirmer, van Eggermond, and Axhausen 2014). Research shows that individuals also choose their residential location based on their individual preferences for urban density (Walker and Li 2007). Urban residents may appreciate, or are used to, the ongoing changes, complexities and chaos that urban life entails (Kaufmann and Sidney 2020). Thus, we argue that individuals that live in dense urban areas are more used to density or that individuals with higher preferences for urban density already select to live in more urban neighborhood types and are thus more likely to accept local densification projects.

H3: If residents live in relatively denser neighborhood types, then they are more likely to accept local densification projects.

4 Methodological Approach

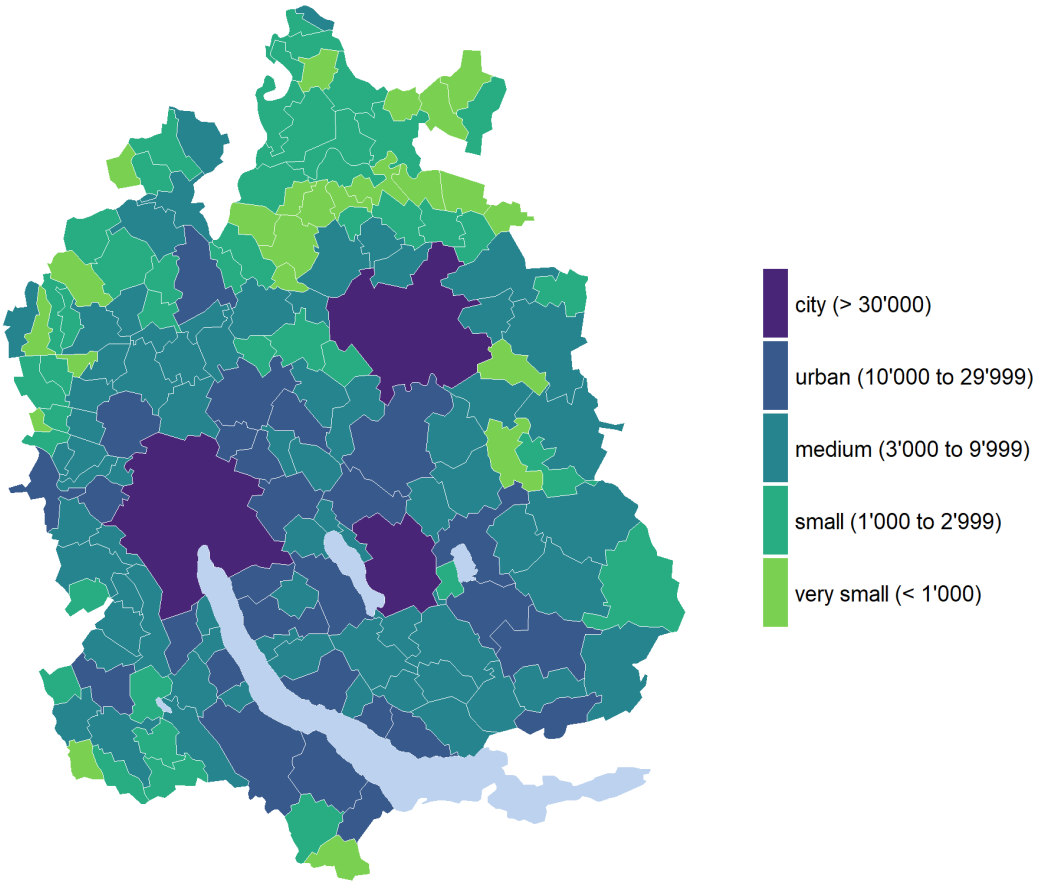
This section describes the empirical case, the survey, the experimental design, the operationalization of various variables, and the multinomial regression analysis displayed in Figure 5. We employed a three-step methodological approach that fits our research questions and hypotheses. First, based on an adaptive conjoint experiment, we analyzed how project related factors affect individuals' assessments of densification scenarios. Second, we developed a categorization of population groups based on their general and local attitudes towards densification, which resulted in four categories: (1) general supporters, (2) general resisters, (3) NIMBYs, and (4) OIMBYs. Third, we used these four categories to run a multinomial regression to identify differences in attitudes and characteristics between these population groups and different neighborhood types.

The study design used in this paper also has some limitations that future research can address. First, conjoint experiments do not necessarily demonstrate what a majority of people would vote for. Thus, we cannot ensure that the measured acceptance ratings would transfer to actual policy support for densification policies or projects. However, we are able to show that there is a gap between general support for densification and densification that occurs close to where individuals live. Still, it would be highly interesting for future research to vary proposed densification developments by distance to people's homes, ranging from very close to their home to somewhere else in the city.

Empirical Study Setting

We assess our theoretical expectations using the example of the Canton of Zurich, one of 26 subnational units in Switzerland. Switzerland's direct-democratic and federalist political tradition and its concomitant high local autonomy, together with the country's high degree of urbanization, makes it an interesting case for studying densification. Furthermore, Switzerland's three-tier federal system (municipal, cantonal, federal) is characterized by a high degree of fragmentation (Wicki et al. 2019). The Canton of Zurich itself also represents an excellent and interesting case due to its size and settlement variation. As the most populous Swiss canton, Zurich includes a wide variety of municipalities (N=162 in 2019), ranging from around 350 inhabitants (Volken) to up to 400,000 (City of Zurich) (see Figure 1). This variety allows us to consider any possible effects that may arise from a high variation in municipality size and different urban, suburban and rural settlement conditions.

Figure 1: Municipality strata Canton of Zurich by population



Densifying existing settlements and spatial planning are generally of high political importance in Switzerland. Densification is the core strategy in Swiss spatial planning for fulfilling the Swiss Federal Constitution's mandate "to ensure the appropriate and economic use of the land" (Art. 75.1) (Bundesversammlung 2012). Cantons and municipalities are responsible for implementing spatial planning measures. Since over the past decades urban sprawl continually grew in Switzerland, the revised Swiss Federal Spatial Planning Act of 2014 requires the mobilization of inward development by filling gaps between buildings, densifying settlements, and converting brownfield sites (Scholl 2014). The cantons must take measures to promote inward development, while simultaneously reducing the size of oversized building zones (Federal Office for Spatial Development (ARE) 2014). The revision of the Swiss Federal Spatial Planning Act represents a move toward active land policy that regulates land use and distribution. As a result, today's Swiss spatial planners are centrally confronted with land scarcity and the challenge of densification (Von Der Dunk et al. 2011; Gerber, Hartmann, and Hengstermann 2018).

Empirical Data

The survey data used in this paper was provided by the Canton of Zurich, which Anovum collected in the context of a publically available report named "Akzeptanz der Dichte" (Canton of Zürich 2014). The wider study context aimed to develop a long-term spatial development strategy for the Canton of Zurich, which was part of a whole series of different studies. In 2014, they conducted an online survey experiment using a representative random sample of 19,000 addresses from the Canton of Zurich's population registry to assess the acceptance of building densification (Canton of Zürich 2014). This type of probability sample performs better than other sampling strategies more or less irrespective of the response rate (Dutwin and Buskirk 2017). All respondents were 18 years or older and received an invitation letter with a web address and an individual access code for the online survey. From the initial sample, a total of 3003 respondents concluded the questionnaire, resulting in an approximate response rate of 16%.

The survey procedure's central assumption is that results are more realistic if the assessment is based on a situation where individuals are personally involved. The respondents' acceptance of densification was thus not determined based on a hypothetical situation. Instead, it was always based on a hypothetical change in the individual's own neighborhood. The survey consisted of six parts: (1) sociodemographic data (age, income, marital status, etc.); (2) a description of the individual housing situation (type of housing, ownership, classification into one of seven types of neighborhood); (3) an individual valuation of neighborhood amenities; (4) attitudes towards densification; (5) an assessment of the individual housing situation (according to the 15 factors); (6) an adaptive conjoint experiment.

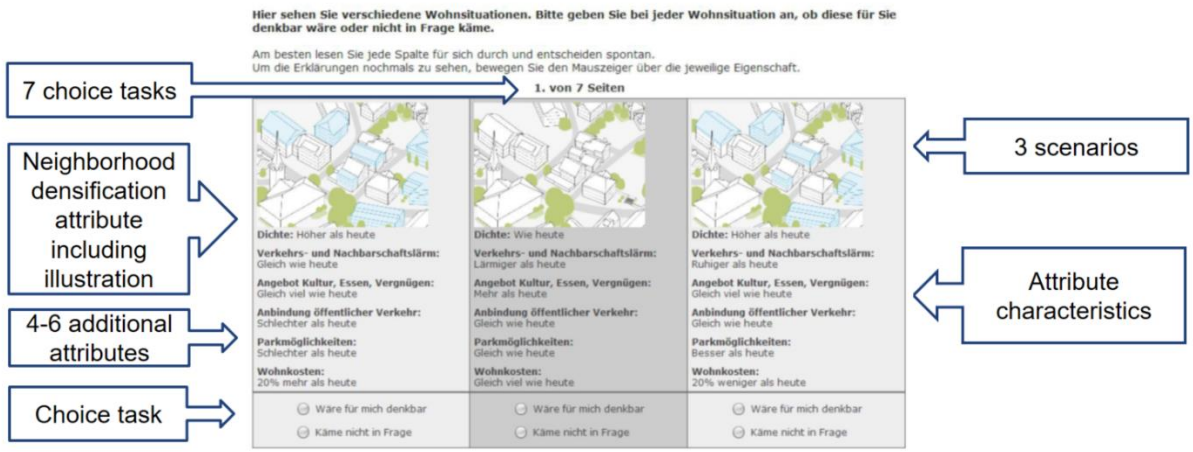
Measuring the Acceptance of Densification and Project Related Factors

To measure the acceptance of densification as our dependent variable, we employ an experimental survey approach. This approach allows us to add descriptive evidence to the literature about who exhibits Nimbyism by overcoming well-known survey research challenges, such as the social desirability bias, which may otherwise conflict with directly asking respondents about densification within their own neighborhood.

Specifically, we use an adaptive conjoint experiment to assess how respondents evaluate densification in their own neighborhood experimentally and determine their preference structures (see Figure 2 for an illustrative example). Adaptive conjoint experiments are survey experiments that are customized for each respondent and are designed for situations in which the number of attributes exceeds what can reasonably be measured using more traditional methods (Chapman et al. 2009; Cunningham, Deal, and Chen 2010). The adaptive choice-based conjoint (ACBC) analysis stimulates individual preferences towards packages of various attributes (Shin et al. 2015).

Preferences are evaluated as part-worth utility scores that measure the contribution of a specific attribute to the total utility of an alternative (Toubia, Hauser, and Garcia 2007). A hierarchical Bayesian method estimates aggregated and individual utility scores to determine part-worth scores that identify differences between individual utilities and the entire sample's mean utility (Rao 2014). ACBC analysis produces more accurate measurements of individuals' preferences with lower standard errors, and it mimics real-world decisions better than comparable conjoint methods (Toubia, Hauser, and Garcia 2007). Despite their complexity and long completion time, ACBC surveys are considered to be more engaging and are considered to yield better quality data than conventional conjoint experiments (Chapman et al. 2009; Cunningham, Deal, and Chen 2010). For our case, we used the adaptive approach to tailor the questionnaire to the current living situation of each individual respondent, thus focusing on individual project related benefits.

Figure 2: Example of an adaptive conjoint task



Note: Design of the adaptive conjoint experiment as provided in the official report(Canton of Zürich 2014). The order of attributes is kept constant per respondent. The attribute characteristics are inserted randomly. Each respondent completes five to seven choice tasks. Respondents are asked to choose between three densification scenarios.

This survey design allows us to determine the extent to which respondents are willing to accept higher density if in return they are offered project related benefits that are important to them. To compare the various densification scenarios in the adaptive conjoint part, respondents had to evaluate scenarios that included the densification attribute plus four to six additional attributes that were previously introduced based on their previous responses. More specifically, respondents had to state their neighborhood type and the factors that they deem to be most important to them. *Building density* was set as a default attribute that could have two characteristics (same as status quo or denser) and was thus present in every conjoint comparison. The 14 *project related factors* presented in the experiment fall into the three overarching categories:

1. *Mobility aspects*: Availability of parking facilities; quality of public transportation connections; level of traffic and neighborhood noise (three project related factors)
2. *Amount and diversity of leisure activities*: Availability of shopping facilities; supply of culture, food, entertainment; offer of sports and local recreation; accessibility of childcare (four project related factors)
3. *Individual living requirements*: Availability of public recreation areas; availability of private outdoor space; living space size; degree of privacy; share of foreigners; housing costs; neighborhood contacts (seven project related factors)

The experiment aimed only to compare factors that were relevant to the respondents. The experiment gradually determined respondents' preferences by repeatedly querying choices (see Figure 2) of fictitious scenarios with varying degrees of five to seven of the 14 factors: If the respondent's choice was revealed to depend on a certain attribute (i.e., certain values of a factor), respondents would be allowed to chose these attributes in all subsequent scenarios (e.g., if a respondent always chose options with the same or better public transportation connections, only scenarios with the same or better public transportation connections were offered in the following scenario).

Measuring Individual Factors that Explain the Acceptance of Densification

To assess the individual factors that may explain the acceptance of (local) densification, the survey presented several non-experimental questions. While we aimed to categorize these questions along the lines of our theoretical expectations, these boundaries were not clear-cut and may overlap. We measure respondents' economic commitment to a place according to the existing literature, i.e., by assessing individuals' housing situation as homeowners or renters. We also included sociodemographic characteristics that the literature often highly correlates with individuals' economic commitment to a place, namely income, age, and gender.

We also measure individuals' social commitment to a place through three different questions. First, we asked respondents how important it is for them to stay in their current neighborhood. Second, respondents had to assess their individual social network within their neighborhood on a three-point scale from no contact, to some contact, to intensive contact. Finally, respondents had to evaluate the general feeling of social contacts within their neighborhood and whether they would say that it is a good neighborhood and whether people know one another. Besides, we included two measurements that assess how connected respondents are to their neighborhood as a place. First, we aimed to control for the satisfaction with the neighborhood status quo by including a four-point scale question on whether respondents feel comfortable within their neighborhood.

Second, respondents had to indicate whether they would like to stay in their neighborhood based on a four-point scale ranging from yes to no.

We distinguished between different *neighborhood types* based on how respondents answered the question regarding their current neighborhood characteristics. Respondents had to choose one of seven perceived neighborhood types: (1) sparse single-family houses, (2) dense single-family houses, (3) sparse apartment buildings, (4) dense apartment buildings, (5) a mixed-use neighborhood close to the center, (6) mixed use neighborhood in a village, and (7) an urban neighborhood mixed with residential and commercial uses, stores and services. We categorized these neighborhood types into four overarching categories; (1) and (2) as "single-family houses," (3) and (4) as "apartment buildings," (5) and (6) as "mixed-use, central," and finally, (7) "urban."

Individual characteristics and attitudes may moderate the effects of other individual factors like economic and social commitment to a place and neighborhood type. For this reason, we also collected information on respondents'(perceived) affectedness to densification and general policy attitudes. Whether existing densification projects in individuals' vicinity (directly) affect them may affect their general attitude. The study controls for political ideology and general attitudes towards densification, which are factors that are independent from factors on exact geographic location.

To control for affectedness, we asked respondents whether they had already been affected by a development project within their neighborhood. More specifically, we also asked whether they had already been affected by a development project in their neighborhood that was explicitly set to densify their area. They were given three possible responses: 1) they do not know of any project, 2) they know such a project but are not affected, and 3) they are directly affected by such a project.

To measure individuals' general policy attitudes towards densification, we analyzed the answers they provided at the beginning of the survey regarding how they would vote on a local ballot on the topic of generally densifying existing settlement areas. They could answer using a four-point Likert scale, including *yes*, *rather yes*, *rather no*, and *no*. We also used this question later on to categorize respondents into four different categories according to their local densification utility, which describes different population groups depending on how they assess both general and local densification.

To further analyze how individuals differ across the four groups (NIMBYs, general resistance, OIMBYs, general support) regarding different individual factors, we applied a multinomial regression. Multinomial regression analysis is a useful method to estimate a corresponding probability for group membership (Fahrmeir et al. 2013).

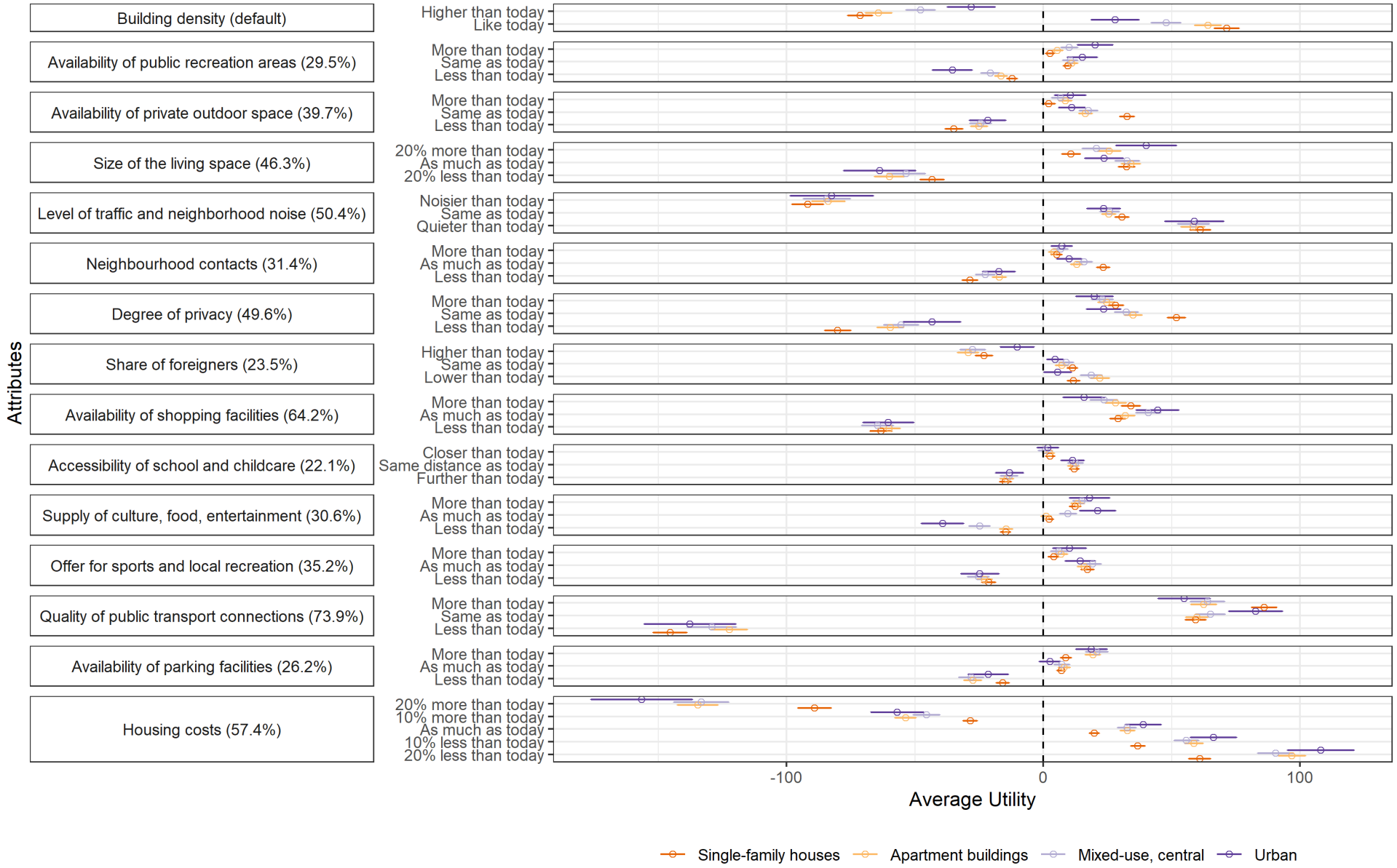
5 Results

We employed a three-step methodological approach. First, we analyzed an adaptive conjoint experiment consisting of a local densification scenario and 14 additional factors that address both amenity and supply effects. Second, we categorized the 3003 respondents into four categories that identify them as population groups with different assessments of densification at both the general and the local level. Third, we also used these four categories to run a multinomial regression to identify differences in attitudes among different neighborhood types.

Figure 3 displays the results from the adaptive conjoint experiment according to four different neighborhood types. The percentage tied to each project related factor (attribute) is the share that respondents preselected the attribute in the adaptive conjoint process, thus indicating its relative importance compared to the other attributes. The most important project related factor by far is public transportation accessibility (73.9%), followed by the availability of shopping facilities (64.2%), and housing costs (57.4%). With just above 20%, the least important attributes are accessibility to school and childcare, the share of foreigners, and availability of parking facilities. However, these preselected criteria depend heavily on individual characteristics such as an individual's number of children, age, mobility behavior, and neighborhood type.

Overall, the path worth utilities of all attributes follow the expected directions of our hypotheses and we can confirm H1. Decreasing facilities, such as recreational areas and shopping facilities, lead to lower utilities, while increasing facilities raises the average utility. We observe similar results for housing characteristics, such as size of living space (the more the better) and housing costs (the less the better). We also find that respondents appear to be rather reluctant to deteriorate the quality of the status quo (e.g., less public transportation connections), whereas improving the quality of the status quo (e.g., more public transportation connections) does not necessarily increase the utility. As a result, the relative utility increase from deteriorating to the status quo is larger for every attribute than the relative utility increase from improving the status quo, which is in line with our status quo tendency argument in H2.

Figure 3: Adaptive conjoint experiment results displaying average path worth utilities for all attributes by the type of neighborhood respondents live in

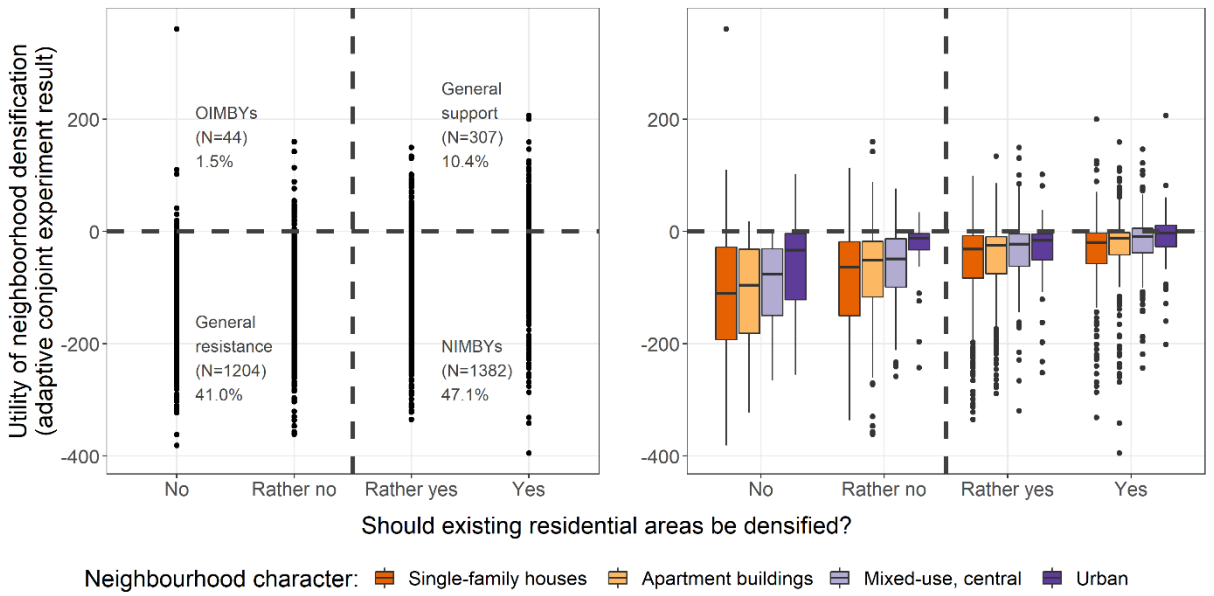


Note: Results of the adaptive conjoint experiment by neighborhood types. The percentages following each attribute summarize the share of times respondents preselected them. The average utility summarizes the part-worth utility scores measuring the contribution of a specific attribute to the total utility of an alternative over all respondents. Error bars display 95% confidence intervals.

Breaking down these utility results by respondents living in different neighborhood types reveals some noteworthy differences. First and foremost, residents in urban settings tend to have a lower utility loss when it comes to increasing density compared with respondents in other neighborhood types. This supports H3. Interestingly, respondents from urban areas have a higher utility loss when it comes to a decrease in amenities within their neighborhood, such as the amount of recreation areas and the supply of culture, food and entertainment. Individuals living in single family houses seem to value their degree of privacy much more when compared with respondents from more densely populated neighborhoods. Somewhat surprising are the results regarding housing costs. Contrary to the literature's predominant expectation that homeowners will mainly be affected by the supply effect, it appears instead that individuals within urban neighborhoods fear an increase in their individual housing costs.

Figure 4 displays the correlation between general and local densification attitudes by plotting the individual local densification utility on the y-axis with general acceptance of densification on the x-axis. The x-axis summarizes individuals' responses to the survey question of whether they are generally in favor of densifying existing settlement areas.

Figure 4: Local densification utility and general the acceptance of densification



Note: The y-axis displays the estimated utility based on the adaptive conjoint experiment for densification within individuals' neighborhood. If the measure is positive, individuals receive a higher utility from densifying their neighborhood compared with keeping the status quo and vice versa. The graph to the left displays all respondents together whereas the graph to the right summarizes the results by neighborhood characteristics as a box plot.

Overall, there is a clear positive correlation between the two measurements of the general acceptance of densification and the utility of neighborhood densification. To put this result in perspective, we grouped the 3003 respondents into four groups: (1) *general resisters* that are against densification in general ('no' and 'rather no') and within their own neighborhood (N=1204); (2) *general supporters* that are in favor of densifying existing neighbourhoods and that also generally have a positive utility of higher densification within their neighborhood (N=307); (3) *NIMBYs* who do not oppose densification in general but who oppose densification in their neighborhood (N=1382); and (4) *OIMBYs* (only in my backyard) that are against densifying existing settlements overall but received a positive utility from densifying their own neighborhood (N=44).

Overall, Figure 4 displays the often-described dualism that indicates a majority shift in public attitudes when studying densification acceptance on a general and a local level. While a solid majority of respondents favour general densification (57.5%), a clear majority of respondents (88.1%) have a negative utility of densifying their own neighborhood and are thus rather likely to reject such proposals. The lower right quadrant is especially important as it displays the so-called NIMBYs.

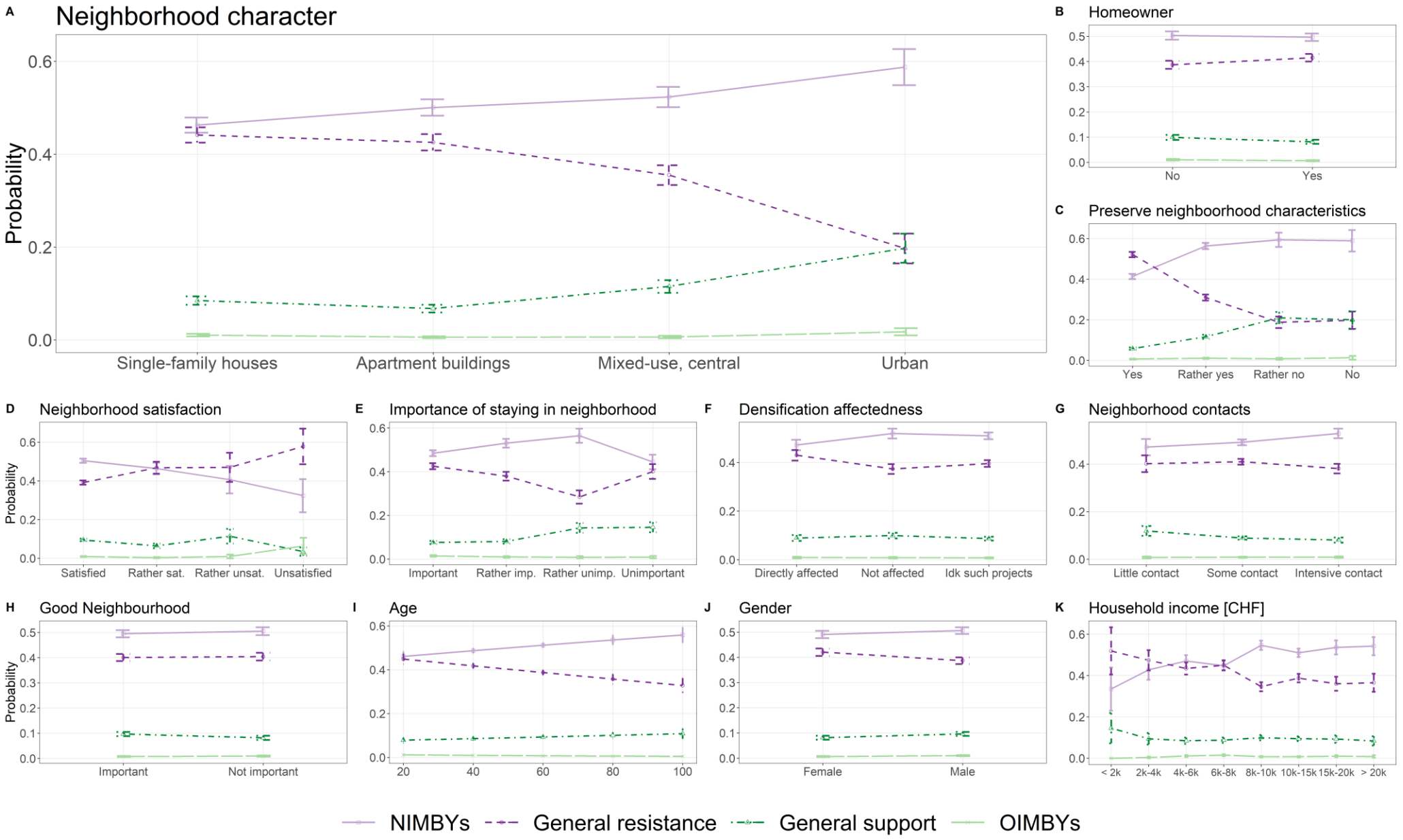
To further characterize these four groups, we ran a multinomial regression analysis to identify potential differences among them. Table 1 summarizes the multinomial regression analysis results (also displayed graphically in Figure 5) of the multinomial regression analysis for the four different groups in the main body. Results are stable and running the usual diagnostics for multinomial models did not yield to specific problems. The baseline group that the other three groups are compared to is the one characterized as NIMBYs. Several variables support the previous literature's findings. For example, older citizens are more likely to be NIMBYs (5I). Individuals who indicate a relatively higher preference for preserving their neighbourhood characteristics tend to be more opposed to densification (5C). Furthermore, NIMBYs seem to be more satisfied with their neighborhood (5D) and have a higher income (5K). However, we could not find differences among the often discussed differentiation between homeowners and non-homeowners (5B). The analysis also revealed some noteworthy differences between the groups in terms of the neighborhood type each belong to. Urban residents are significantly less likely to be part of the general resistance group, instead tending to be characterized as general supporters or NIMBYs (5A). While these individuals generally like to keep the status quo of their neighborhood, they also tend to generally be part of the general resisters to densification. Generally, they show lower support for both general and local densification.

Table 1: Multinomial model for different support groups (Baseline: Nimby-opposition)

	Dependent variable: Local densification utility (Baseline=NIMBYs)		
	General resistance	General support	OIMBY
	(1)	(2)	(3)
Neighborhood satisfaction (ref.: Satisfied)			
Rather satisfied	0.261+ (0.139)	-0.304 (0.218)	-0.913 (0.756)
Rather not satisfied	0.397 (0.329)	0.400 (0.401)	0.251 (1.076)
Unsatisfied	0.835* (0.414)	-0.570 (0.690)	2.393** (0.786)
Not specified	-17.233*** (0.000)	-16.343*** (0.000)	-12.449*** (0.00000)
Preserve neighborhood characteristics (ref.: Yes)			
Rather yes	-0.832*** (0.091)	0.383* (0.151)	0.176 (0.341)
Rather no	-1.384*** (0.202)	0.921*** (0.211)	-0.148 (0.649)
No	-1.326*** (0.286)	0.878** (0.302)	0.330 (0.778)
Not specified	-0.880* (0.408)	0.895+ (0.458)	0.648 (1.076)
Homeowner	0.083 (0.104)	-0.182 (0.168)	-0.400 (0.405)
Household income (ref.: below 2000 CHF)			
2000 CHF to 4000 CHF	-0.335 (0.543)	-0.679 (0.732)	4.521*** (0.964)
4000 CHF to 6000 CHF	-0.517 (0.517)	-0.883 (0.676)	5.455*** (0.434)
6000 CHF to 8000 CHF	-0.431 (0.513)	-0.799 (0.668)	5.846*** (0.357)
8000 CHF to 10,000 CHF	-0.895+ (0.512)	-0.869 (0.662)	4.974*** (0.405)
10,000 CHF to 15,000 CHF	-0.713 (0.510)	-0.854 (0.659)	5.012*** (0.386)
15,000 CHF to 20,000 CHF	-0.835 (0.525)	-0.922 (0.681)	5.273*** (0.502)
More than 20,000 CHF	-0.833 (0.539)	-1.036 (0.712)	5.068*** (0.677)
Do not know/not specified	-0.600 (0.514)	-1.117+ (0.676)	5.027*** (0.460)
Age	-0.006* (0.003)	0.002 (0.005)	-0.013 (0.011)
Female	0.114 (0.084)	-0.140 (0.135)	-0.390 (0.328)
Importance of staying in neighborhood (ref.: Important)			
Rather important	-0.204+ (0.106)	-0.029 (0.170)	-0.480 (0.410)
Rather unimportant	-0.556*** (0.167)	0.480* (0.218)	-0.706 (0.663)
Unimportant	0.028 (0.166)	0.739*** (0.224)	-0.376 (0.611)
Not specified	0.646 (0.396)	1.865*** (0.478)	-21.808*** (0.000)
Good neighborhood	0.011 (0.095)	0.192 (0.155)	-0.187 (0.363)
Neighborhood contacts (ref.: No contact)			
Some contact	-0.023 (0.161)	-0.331 (0.215)	0.092 (0.550)
Intensive contact	-0.169 (0.185)	-0.505+ (0.264)	0.043 (0.649)
Densification affectedness (ref.: directly affected)			
Aware of project, not affected	-0.237+ (0.128)	0.008 (0.198)	-0.153 (0.468)
Not aware of any project	-0.160 (0.110)	-0.106 (0.177)	-0.203 (0.418)
Do not know/not specified	0.128 (0.179)	-0.104 (0.294)	0.223 (0.635)
Neighborhood character (ref.: Single-family house)			
Apartment buildings	-0.115 (0.107)	-0.309+ (0.187)	-0.642 (0.438)
Mixed-use, central	-0.341** (0.122)	0.181 (0.184)	-0.630 (0.489)
Urban/city	-1.046*** (0.226)	0.604* (0.245)	0.277 (0.540)
Constant	1.495** (0.572)	-0.944 (0.771)	-6.951*** (0.893)

Note: Table entries represent the results of the multinomial analysis based on the four categories displayed in Figure 3, using NIMBY opposition as the baseline. Estimated standard errors are displayed in parentheses. ***p < 0.001, **p < 0.01, *p < 0.05, +p < 0.1.

Figure 5: Visualized predictions for the multinomial regression results



Note: The figures represent the visualized prediction for the multinomial model in Table 1. Each graph displays the predicted probability of respondents belonging to the respective category, categorized by four support groups displayed in Figure 2. For example, urban residents have almost a 60% chance (0.6) being categorized as Nimbys (A). Error bars display 95% confidence intervals.

6 Synthesis and Conclusion

This paper aims to identify how project-related factors and individual factors and the type of neighborhood people live in affect local acceptance or opposition to densifying settlements. We specifically add to the literature by highlighting the importance of incorporating neighborhood types into public opinion studies of urban development and urban densification. We focused on Switzerland, a particularly interesting case due to its high population density and recent shifts in policy that focus on densification (also called inward development or infill development in other contexts). Our analysis is based on an adaptive selection-based conjoint experiment based on a representative sample of 3003 residents from the Canton of Zurich, the most populous Swiss subnational unit.

Table 2: Test of the hypotheses

		Hypothesis supported?
H1:	The more (less) project related factors improve (deteriorate) the status quo, the more residents are willing to accept local local densification projects in their neighborhood.	Yes
H2:	Deteriorating the status quo has a stronger effect than improving the status quo.	Yes
H3:	If residents live in relatively denser neighborhood types, then they are more likely to accept local densification projects.	Yes

Table 2 provides an overview of our tested hypotheses. We find that opposition to densification projects is more than simply rejecting higher density within one's own neighborhood. Instead, it is related to how such projects unfold through the amenity and supply effect. Specifically, decreasing amenities, such as recreational areas and shopping facilities, leads to lower utilities, while increasing them increases the average utility. Overall, these results indicate that the perceived negative effects of densification may be compensated by positive externalities that may occur because of changes to the built environment, whether intentional or not. However, the perceived loss of existing amenities looms larger than an improvement. This finding may have to do with the human tendency to value the status quo over future changes (Glaeser 2011).

The results related to the cleavage in the NIMBY literature between homeowners and non-homeowners (Hankinson 2018) appears to be somewhat arbitrary in terms of our findings. While homeowners do, overall, reject local densification more than renters, homeowners are not more likely to be categorized as NIMBYs than renters are. We find that urban residents are more likely to reject development projects due to higher housing costs. This indicates that housing affordability is a specific urban concern (Debrunner, Hengstermann, and Gerber 2020). As with cities and

metropolitan areas worldwide (Phillips 2020), there is a high demand for housing in Swiss cities (Theurillat, Rérat, and Crevoisier 2015). Thus, fears of the socioeconomic consequences of densification may trigger resistance to densification. Ancillary planning policies, such as inclusionary zoning or rent control, may alleviate this resistance.

Our categorization of the four groups, (1) general resisters, (2) general supporters, (3) NIMBYs, and (4) OIMBYs, empirically reveals the often described dualism that leads to a shift in public majority support when studying the acceptance of densification on a general and a local level. Specifically, densification as a general paradigm receives a solid popular majority whereas a vast majority of respondents feel predominantly negatively affected when such densification projects occur within their own neighborhood. This four-tier categorization and its seemingly contradictory dualism that serves to illustrate why densification projects often fail; it does not dash against a lack of general public support, but due to the opposition of directly affected residents (Einstein, Glick, and Palmer 2020).

We also found significant differences within these four groups regarding how they can be categorized by their assessment of densification. First and foremost, how individuals assess general densification and local densification differs depending on if they live in urban neighborhoods or in comparably more rural areas. Individuals from the former are generally more accepting of densification but have a higher share of so-called Nimbyists, whereas the latter more generally oppose settlement densification. This may be because individuals that live in dense urban areas are more used to density or because individuals with higher preferences for density self-select to live in more urban neighborhoods.

The paper contributes to the existing literature in three ways. First, it provides a robust indicator of how individuals assess densification within their own neighborhood and overcomes well-known survey biases. It does this by measuring the acceptance of densification using an experimental survey approach. Specifically, we use an experimental measurement for our dependent variable by using an adaptive conjoint design. Second, we compare attitudes towards densification across different neighborhood characteristics. While Nimbyism has predominantly been studied in cities or metropolitan regions, there has been no study so far on resistance to densification projects across urban, sub-urban and rural regions and across different neighborhood types. Third, we test whether well-known predictors from empirical studies of U.S. cities also hold in a different case (Switzerland) and whether the existing knowledge is thus generalizable.

Our findings are highly relevant to other fields of planning. Local opposition is based on factors linked to conserving the status quo, and local resistance varies across neighborhoods types. Generally, this means that, to ensure public support, planners must communicate the general and

individual project related benefits that may emerge due to densifying existing settlements. More specifically, although there are similar patterns across different neighborhood characteristics, there are essential differences with regard to project-related preferences that need to be considered for future planning.

Overall, our results indicate that opposition to both general densification strategies and densifying specific neighborhoods is more complex than often described. Various factors drive opposition. Nuancing the exact way that these effects interact is thus also highly relevant for future research. Doing so offers an interesting research venue that examines how the acceptance of and support for the necessary densification of our settlements can be obtained by making strategic use of place-sensitive and project-specific benefits and their accompanying local policy and planning measures.

List of References

Ahlfeldt, Gabriel M., and Elisabetta Pietrostefani. 2019. "The Economic Effects of Density: A Synthesis." *Journal of Urban Economics* 111: 93–107.

Angelo, Hillary, and David Wachsmuth. 2020. "Why Does Everyone Think Cities Can Save the Planet?" *Urban Studies* 57(11): 2201–21. http://journals.sagepub.com/doi/10.1177/0042098020919081 (August 31, 2020).

Artmann, M, L Inostroza, and P Fan. 2019. "Urban Sprawl, Compact Urban Development and Green Cities. How Much Do We Know, How Much Do We Agree?" *Ecological Indicators* 96(2): 3–9.

Batel, Susana, Patrick Devine-Wright, and Torvald Tangeland. 2013. "Social Acceptance of Low Carbon Energy and Associated Infrastructures: A Critical Discussion." *Energy Policy* 58: 1–5. https://www.sciencedirect.com/science/article/pii/S0301421513001729 (August 24, 2019).

Bidwell, David. 2013. "The Role of Values in Public Beliefs and Attitudes towards Commercial Wind Energy." *Energy Policy* 58: 189–99.

Boyko, C T, and R Cooper. 2011. "Clarifying and Re-Conceptualising Density." *Progress in Planning* 76(1): 1–61.

Bundesversammlung. 2012. 1954 Gesetze *Bundesgesetz Über Die Raumplanung*.

Burstein, Paul. 2003. "The Impact of Public Opinion on Public Policy: A Review and an Agenda." *Political Research Quarterly* 56(1): 29–40. https://doi.org/10.1177/106591290305600103.

Canton of Zürich. 2014. *Akzeptanz Der Dichte*. Zürich. https://www.zh.ch/content/dam/zhweb/bilder-dokumente/themen/planen-bauen/raumplanung/dokumente/strategien-konzepte-der-raumplanung/langfristige-raumentwicklungsstrategie/akzeptanz_dichte_2014.pdf.

Chapman, Christopher N et al. 2009. "CBC vs. ACBC: Comparing Results with Real Product Selection." *Sawtooth Software Research Paper Series* 98382(360): 1–8. www.sawtoothsoftware.com (September 4, 2020).

Cunningham, Charles E., Ken Deal, and Yvonne Chen. 2010. "Adaptive Choice-Based Conjoint Analysis: A New Patient-Centered Approach to the Assessment of Health Service Preferences." *Patient* 3(4): 257–73. https://link.springer.com/article/10.2165/11537870-000000000-00000 (September 4, 2020).

Debrunner, Gabriela, Andreas Hengstermann, and Jean David Gerber. 2020. "The Business of Densification: Distribution of Power, Wealth and Inequality in Swiss Policy Making." *Town Planning Review* 91(3): 259–81.

Dembski, Sebastian, Thomas Hartmann, Andreas Hengstermann, and Richard Dunning. 2020. "Introduction Enhancing Understanding of Strategies of Land Policy for Urban Densification." *Town Planning Review* 91(3): 209–16.

Dermont, Clau, Karin Ingold, Lorenz Kammermann, and Isabelle Stadelmann-Steffen. 2017. "Bringing the Policy Making Perspective in: A Political Science Approach to Social Acceptance." *Energy Policy* 108: 359–68. http://www.sciencedirect.com/science/article/pii/S0301421517303531.

Devine-Wright, Patrick. 2013. "Explaining 'NIMBY' Objections to a Power Line: The Role of Personal, Place Attachment and Project-Related Factors." *Environment and Behavior* 45(6): 761–81.

Dreyer, Stacia J, and Iain Walker. 2013. "Acceptance and Support of the Australian Carbon Policy." *Social Justice Research* 26(3): 343–62. https://doi.org/10.1007/s11211-013-0191-1.

Duany, Andres, Jeff Speck, Mike Lydon, and Ethan Goffman. 2011. "The Smart Growth Manual." *Sustainability: Science, Practice and Policy* 7(2): 89–90.

Dunham-Jones, E. 2005. "Suburban Retrofits, Demographics, and Sustainability." *Places* 17(2).

Von Der Dunk, Andreas, Adrienne Grêt-Regamey, Thomas Dalang, and Anna M. Hersperger. 2011. "Defining a Typology of Peri-Urban Land-Use Conflicts - A Case Study from Switzerland." *Landscape and Urban Planning* 101(2): 149–56.

Dutwin, David, and Trent D. Buskirk. 2017. "Apples to Oranges or Gala versus Golden Delicious?" *Public Opinion Quarterly* 81: 213–49.

Einstein, Katherine Levine. 2019. "The Privileged Few: How Exclusionary Zoning Amplifies the Advantaged and Blocks New Housing—and What We Can Do About It." *Urban Affairs Review* 1078087419.

Einstein, Katherine Levine, David M Glick, and Maxwell Palmer. 2020. "Neighborhood Defenders: Participatory Politics and America's Housing Crisis." *Political Science Quarterly* 135(2): 281–312.
Elmqvist, Thomas et al. 2019. "Sustainability and Resilience for Transformation in the Urban Century." *Nature Sustainability* 2(4): 267–73. https://doi.org/10.1038/s41893-019-0250-1.
Esaiasson, Peter. 2014. "NIMBYism -- a Re-Examination of the Phenomenon." *Social Science Research* 48: 185–95.
Fahrmeir, Ludwig et al. 2013. "Regression Models." In *Regression*, Berlin, Heidelberg: Springer, 21–72. https://link.springer.com/chapter/10.1007/978-3-642-34333-9_2 (December 16, 2020).
Federal Office for Spatial Development (ARE). 2014. *Bundesrat Setzt Revidiertes Raumplanungsgesetz Auf Den 1. Mai 2014 in Kraft*. Bern, Switzerland. https://www.are.admin.ch/are/de/home/medien-und-publikationen/medienmitteilungen/medienmitteilungen-im-dienst.msg-id-52521.html (September 23, 2020).
Freemark, Yonah. 2020. "Upzoning Chicago: Impacts of a Zoning Reform on Property Values and Housing Construction." *Urban Affairs Review* 56(3): 758–89.
Freemark, Yonah, Justin Steil, and Kathleen Thelen. 2020. "Varieties of Urbanism: A Comparative View of Inequality and the Dual Dimensions of Metropolitan Fragmentation." *Politics and Society* 48(2): 235–74.
Gerber, Jean David, Thomas Hartmann, and Andreas Hengstermann. 2018. Instruments of Land Policy: Dealing with Scarcity of Land *Instruments of Land Policy: Dealing with Scarcity of Land*. eds. Jean David Gerber, Thomas Hartmann, and Andreas Hengstermann. Abingdon and New York: Routledge.
Glaeser, Edward L. 2011. "The Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier and Happier." *Translated into Swedish by SNS F{"o}rlag* 2012.
Guidon, Sergio, Michael Wicki, Thomas Bernauer, and Kay W Axhausen. 2019. "The Social Aspect of Residential Location Choice: On the Trade-off between Proximity to Social Contacts and Commuting." *Journal of Transport Geography* 74: 333–40. http://www.sciencedirect.com/science/article/pii/S0966692318305854.
Haaland, Christine, and Cecil Konijnendijk van den Bosch. 2015. "Challenges and Strategies for Urban Green-Space Planning in Cities Undergoing Densification: A Review." *Urban Forestry and Urban Greening* 14(4): 760–71.
Hankinson, Michael. 2018. "When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism." *American Political Science Review* 112(3): 473–93. https://doi.org/10.1017/S0003055418000035 (September 3, 2020).
Huber, Robert A., Michael L. Wicki, and Thomas Bernauer. 2020. "Public Support for Environmental Policy Depends on Beliefs Concerning Effectiveness, Intrusiveness, and Fairness." *Environmental Politics* 29(4): 649–73.
Kahneman, Daniel, and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 47(2): 263–92.
Kaufmann, David, and Mara Sidney. 2020. "Toward an Urban Policy Analysis: Incorporating Participation, Multilevel Governance, and Seeing Like a City." In *PS - Political Science and Politics*, , 1–5.
Lewis, Paul G, and Mark Baldassare. 2010. "The Complexity of Public Attitudes toward Compact Development." *Journal of the American Planning Association* 76(2): 219–37.
Mannarini, Terri, Michele Roccato, and Silvia Russo. 2015. "The False Consensus Effect: A Trigger of Radicalization in Locally Unwanted Land Uses Conflicts?" *Journal of Environmental Psychology* 42: 76–81.
Manville, Michael, Paavo Monkkonen, and Michael Lens. 2020. "Its Time to End Single-Family Zoning." *Journal of the American Planning Association* 86(1): 106–12. https://www.tandfonline.com/doi/abs/10.1080/01944363.2019.1651216 (June 26, 2020).
Monkkonen, Paavo, and Michael Manville. 2019. "Opposition to Development or Opposition to Developers? Experimental Evidence on Attitudes toward New Housing." *Journal of Urban Affairs* 41(8): 1123–41.
Nguyen, Mai Thi, Victoria Basolo, and Abhishek Tiwari. 2013. "Opposition to Affordable Housing in the USA: Debate Framing and the Responses of Local Actors." *Housing, Theory and Society* 30(2): 107–30. http://www.tandfonline.com/doi/abs/10.1080/14036096.2012.667833 (November 23, 2020).
Ooi, Joseph T.L. L, and Thao T.T. T Le. 2013. "The Spillover Effects of Infill Developments on Local Housing Prices." *Regional Science and Urban Economics* 43(6): 850–61.
Phillips, Shane. 2020. *The Affordable City: Strategies for Putting Housing Within Reach (and Keeping It There)*. Island Press. https://books.google.ch/books?hl=de&lr=&id=LDrtDwAAQBAJ&oi=fnd&pg=PP1&ots=F2kXsLZ5a4&sig=p-AmP7HnU3mec1jP7b33_gBVbQs#v=onepage&q&f=false (November 23, 2020).
Rao, Vithala R. 2014. 9783540877 Applied Conjoint Analysis *Applied Conjoint Analysis*.
Rice, Jennifer L., Daniel Aldana Cohen, Joshua Long, and Jason R. Jurjevich. 2020. "Contradictions of the Climate-Friendly City: New Perspectives on Eco-Gentrification and Housing Justice." *International Journal of Urban and Regional Research* 44(1): 145–65. https://onlinelibrary.wiley.com/doi/abs/10.1111/1468-2427.12740 (November 11, 2020).
Schirmer, Patrick M, Michael A.B. van Eggermond, and Kay W Axhausen. 2014. "The Role of Location in Residential Location Choice Models: A Review of Literature." *Journal of Transport and Land Use* 7(2): 3–21. http://doi.org/10.5198/jtlu.v7i2.740 (November 11, 2020).
Scholl, Bernd. 2014. "Innenentwicklung Vor Außenentwicklung." *Schweizer BauJournal* 79(2): 36–37.
Shin, Jungwoo et al. 2015. "Consumer Preferences and Willingness to Pay for Advanced Vehicle Technology Options and Fuel Types." *Transportation Research Part C: Emerging Technologies* 60: 511–24.
Siedentop, Stefan, and Stefan Fina. 2012. "Who Sprawls Most? Exploring the Patterns of Urban Growth across 26 European Countries." *Environment and Planning A* 44(11): 2765–84.
Skovbro, Anne. 2001. "Urban Densification: An Innovation in Sustainable Urban Policy." *Area based initiatives in contemporary urban policy* (May): 1–14. http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Urban+densification+:+An+innovation+in+sustainable+urban+policy+?#6.
Stewart, Nuala. 2020. "Urban Green Space, Social Equity and Human Wellbeing." In *Urban Ecology*, Elsevier, 111–27. https://linkinghub.elsevier.com/retrieve/pii/B9780128207307000070 (September 7, 2020).
Ströbele, Maarit, and Marcel Hunziker. 2017. "Are Suburbs Perceived as Rural Villages? Landscape-Related Residential Preferences in Switzerland." *Landscape and Urban Planning* 163: 67–79.
Takahashi, Lois M., and Sharon Lord Gaber. 1998. "Controversial Facility Siting in the Urban Environment." *Environment and Behavior* 30(2): 184–215. http://journals.sagepub.com/doi/10.1177/0013916598302004 (September 3, 2020).
Theurillat, Thierry, Patrick Rérat, and Olivier Crevoisier. 2015. "The Real Estate Markets: Players, Institutions and Territories."

Urban Studies 52(8): 1414–33.

Toubia, Olivier, John Hauser, and Rosanna Garcia. 2007. "Probabilistic Polyhedral Methods for Adaptive Choice-Based Conjoint Analysis: Theory and Application." *Marketing Science* 26(5): 596–610. http://pubsonline.informs.org610.https//doi.org/10.1287/mksc.1060.0257http://www.informs.org (September 4, 2020).

Trounstine, Jessica. 2020. "The Geography of Inequality: How Land Use Regulation Produces Segregation." *American Political Science Review* 114(2): 443–55.

Walker, Joan L., and Jieping Li. 2007. "Latent Lifestyle Preferences and Household Location Decisions." In *Journal of Geographical Systems*, , 77–101. https://ui.adsabs.harvard.edu/abs/2007JGS.....9...77W/abstract (November 11, 2020).

Weilenmann, Barbara, Irmi Seidl, and Tobias Schulz. 2017. "The Socio-Economic Determinants of Urban Sprawl between 1980 and 2010 in Switzerland." *Landscape and Urban Planning* 157: 468–82.

Whittemore, Andrew H, and Todd K BenDor. 2018. "Reassessing NIMBY: The Demographics, Politics, and Geography of Opposition to High-Density Residential Infill." *Journal of Urban Affairs*: 1–20.

Wicki, Michael. 2020. "Ambitious Mobility Policies and Public Opinion: Doomed to Fail?" ETH Zurich.

Wicki, Michael, Sergio Guidon, Thomas Bernauer, and Kay W Axhausen. 2019. "Does Variation in Residents' Spatial Mobility Affect Their Preferences Concerning Local Governance?" *Political Geography* 73: 138–57. https://www.sciencedirect.com/science/article/pii/S0962629818303792 (May 27, 2019).

Williams, Katie, Elizabeth Burton, and Mike Jenks. 2010. "Achieving the Compact City through Intensification: An Acceptable Option?" In *The Compact City:*, , 83–96.

Wolsink, Maarten. 1994. "Entanglement of Interests and Motives: Assumptions behind the NIMBY-Theory on Facility Siting." *Urban Studies* 31(6): 851–66.

———. 2000. "Wind Power and the NIMBY-Myth: Institutional Capacity and the Limited Significance of Public Support." *Renewable Energy* 21(1): 49–64.

Zvěřinová, Iva, Milan Ščasný, and Eva Kyselá. 2014. "What Influences Public Acceptance of the Current Policies to Reduce GHG Emissions." *Prague: Charles University, Environment Center. Retrieved April* 9: 2015.