NIMBYism as Place-Protective Action: The Politics of Housebuilding

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Abstract

Using British data, I argue that opposition to housebuilding primarily arises from a desire to preserve the character of one’s area and existing ways of life, and to protect communities against rapid changes that could result from new housing developments. A wide range of characteristics that lead to these ‘place-protective’ motives, including conservatism and long-term residence in an area, strongly predict opposition to housebuilding. This contrasts with theories emphasising homeowners’ price anxiety as the main driver. A conjoint experiment demonstrates that opposition to housebuilding can be reduced by designing new developments that preserve and protect existing communities, such as providing new public services alongside them. Doing so increases the coalition for housebuilding by raising the support of groups most opposed to housebuilding, without lowering the support of others. This paper also adds a comparative focus to the politics of housebuilding, discussing institutional features that increase the prominence of place-protective motives.

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1. Introduction

Many densely-populated cities, regions and countries face a housing affordability crisis. House prices have risen much faster than incomes, pricing existing residents out of their areas. Overcrowding, plummeting rates of home ownership amongst the young, and an increasing divide between those with access to financial capital to buy a home and those who lack it, have all followed. These new social divisions caused by the housing crisis are linked to increasing wealth inequality, as well as the rise of populism and the Brexit vote (Ansell 2019; Ansell and Adler 2019; Maclellan and Miao 2017). In the United Kingdom, housing has risen to the top of voters' list of concerns and the shortage of affordable housing constitutes an increasingly important source of political conflict.

Building new housing provides one possible solution to this shortage. In August 2020, the ruling Conservative party in the UK launched a major review of the planning process with the aim of increasing housebuilding, and in particular, preventing public opposition from blocking new developments. Referencing concerns about developments' impact on wildlife, Boris Johnson blamed 'newt counting' for the UK's lack of housebuilding.¹ Implicit in this view, and in many other accounts of housing shortages, is that localised public opposition to new housing developments by those directly affected by them – NIMBYism ('Not In My Back Yard') – is a major barrier to housebuilding and an important cause of the housing crisis.

If the housing crisis is, at its heart, a political problem where minorities can block policies that are popular with a majority of voters, then NIMBYism, and the roots of opposition to housebuilding, ought to be important topics for political science. Nonetheless, they have received scant attention not only in the political science literature, but also more broadly in the social sciences. As a recent review from campaigners puts it, "despite much theoretical discussion of opposition to housing, our first finding is, for such an important topic, how astonishingly little actual empirical research has been conducted... the actual level of em-

1. See e.g. <https://www.bbc.co.uk/news/uk-politics-53276461>

pirical quantitative analysis into why people oppose housing and development is stunningly low” (Smith and Toms 2018, pp. 59-60). One exception to this is a set of studies on the US from economics and, more recently, political science, emphasising self-interested opposition amongst existing homeowners, fuelled by price anxiety – a desire to protect the value of their own homes – as a major motivation for opposition to housebuilding (Dehring, Depken, and Ward 2008; Fischel 2005; Hankinson 2018; Marble and Nall 2020). Their findings suggest that NIMBYism is a relatively intractable problem that can only be overcome with institutional changes that prevent homeowners from being involved in local political decisions about new housing developments, or by buying them off with financial compensation in exchange for supporting new housing, a policy that would further exacerbate existing wealth inequalities.

In this paper I argue that there is another important influence on NIMBYism, particularly in the UK. For many people, opposition to housebuilding is motivated by a desire to *preserve* the character of their area and existing ways of life, and to *protect* communities against threats such as the increased competition for public goods and services, or the destruction of green space, that can come with new housing developments. Opposition to new housing therefore also stems from ‘place-protective’ motives, as it has been termed in the planning and geography literature (Devine-Wright 2009). Einstein, Glick, and Palmer (2019a) found that this form of opposition to housebuilding is important in the US too, coining the term ‘neighborhood defenders’ to describe anti-housebuilding campaigners. Conceptualising NIMBYism as place-protective action means taking a broader view of self-interest beyond the preservation of asset values. For homeowners, place-protective motives can exist alongside price anxiety as an explanation for their opposition. But conceptualising it as place-protective action also broadens the scope of political conflict over housebuilding beyond homeowners, to include other groups with strong stakes in their communities and attachments to tradition, such as older people, longer-term residents, rural dwellers and those with conservative values, who also frequently oppose housebuilding.

This paper begins by presenting a theory of NIMBYism as place-protective action, using it to derive hypotheses. Both the British Social Attitudes Survey and an original survey fielded to British respondents demonstrate that a wide range of characteristics that should lead to place-protective motives are positively associated with opposition to housebuilding. A conjoint experiment shows that attributes of housing developments linked to place-protective motives, such as ensuring that new housing is affordable for existing local residents, raise their popularity. The analysis incorporates measures of individual preferences over the attributes themselves, reflecting recent methodological work on conjoint experiments (Abramson, Kocak, and Magazinnik 2019; Hanretty, Lauderdale, and Vivyan 2020). Further tests demonstrate that place-protective features do not raise the popularity of developments by affecting homeowners' price anxiety. Rather, place-protective motives operate separately.

For the UK as a whole, housebuilding in people's local areas is very popular. It enjoys majority support in both surveys analysed in this paper. But in practice, geographically-concentrated minorities that intensely dislike new housing might still succeed in blocking it. With this in mind, I also measure subgroup preferences for the features of housing developments. Politically powerful groups who are more opposed to housebuilding, such as the elderly, conservatives, Brexit supporters and rural dwellers, as well as homeowners, are much more likely to support a housing development that includes place-protective features. At the same time, their inclusion does not make those already favorable to housebuilding any less likely to support a housing development. Thus, recognising place-protection as a motive for NIMBYism could provide a more normatively desirable way to counteract it than shutting homeowners out of local democracy or offering them financial compensation.

Besides offering a novel theory of opposition to housebuilding, I also add a comparative focus to the study of NIMBYism. To date, this has focused mainly on the USA in both political science and economics. I end the paper by discussing ways in which institutional features of countries may shape their politics of housebuilding. For instance, as I emphasise throughout the paper, the British housing crisis is as much a suburban and even rural problem

as much as it is urban. There is strong pressure to build new housing in the UK outside of urban centres, making place-protective NIMBYism, often bound up with protecting ‘green space’ and traditional rural lifestyles, particularly important. This points the way to cross-national studies of attitudes to housebuilding that account for institutional differences, just as the comparative political economy literature has extensively studied variation in attitudes to redistribution, taxation and welfare.

2. Explaining NIMBYism

NIMBYism could arise from homeowners’ fear of price falls, and from broader ‘place-protective’ motives. Here I discuss both theories.

Homeowners’ Price Anxiety and NIMBYism

New housing projects can lower local house prices by increasing housing supply. Homeowners may seek to protect the value of their homes by preventing new construction in their neighbourhoods. Hankinson (2018) shows that in both San Francisco as well as in a national American sample, homeowners are substantially more opposed than renters to new housebuilding. In a conjoint experiment, homeowners’ support also depends strongly on the proximity of planned notional developments. All respondents are more likely to oppose developments that are very close to their property, but homeowners show the largest sensitivity to proximity.² This is suggestive of price anxiety if nearby construction has a particularly negative impact on home values. Marble and Nall (2020) find that homeowners express more opposition to developments in their local area when they are reminded of the potential negative impact on house prices, and again show that homeowners are particularly sensitive to the distance of developments from their homes. Both studies find that the effect of home

2. Hankinson (2018) also finds that renters in high-cost urban areas appear to act like homeowners, also opposing local developments. In dense rapidly-growing urban areas, renters may act like homeowners because an increased supply of housing signals that gentrification is occurring, which is likely to increase future rental prices.

ownership persists even after controlling for ideology. On an issue where holding left-wing opinions ought to predict higher support (if we conceive of housebuilding as a form of wealth redistribution), self-interest acts against underlying political values.

In the UK Coelho, Dellepiane-Avellaneda, and Ratnoo (2017) show that homeowners are amongst the most opposed to new housing, and that the share of homeowners in English local authorities is negatively correlated with the proportion of planning applications that the authorities approve. American studies using behavioural data – from votes on housing developments or from patterns of attendance at local planning meetings that make decisions on new housing developments – also find that homeowners strongly oppose dense housing developments and as a result, participate in local politics more than non-homeowners (Dehring, Depken, and Ward 2008; Einstein, Glick, and Palmer 2019b; Yoder 2020).

Home-owners, motivated by price anxiety, may therefore defend their economic interests through strong opposition to new housing. New construction could prove politically difficult due to a coalition of both conservative *and* left-wing middle-class homeowners. This is in contrast to other policies with redistributive effects that often attract support from the affluent but left-wing middle classes. It also suggests that building new homes in expensive areas may require paying financial compensation to homeowners in exchange for their support, or institutional changes that weaken the influence of homeowners in the planning process.

NIMBYism as Place-Protective Action

Home-owners exhibit spatially-dependent preferences for new housing and are more opposed to it than non-homeowners. However, it does not necessarily follow that a cleavage between homeowners and non-homeowners caused by price anxiety always lies at the heart of NIMBYism. Price anxiety need not be the key reason why homeowners differ from non-homeowners, and there are other important place-protective motives for NIMBYism.

Starting with the first point, new housing developments in owners' back yards do not always threaten the value of their property. Housebuilding is often a sign of gentrification

or rising demand for housing in an area. Developers concentrate on areas where prices are likely to rise in the near future. New housing developments can then lead to further price rises as growing neighborhoods become more attractive to newcomers, with new businesses and amenities opening up, a phenomenon that Hankinson (2018) terms “supply-induced gentrification.” In this scenario, new construction would probably increase the value of homeowners’ assets. In fact, in the UK there is a vigorous debate amongst housing experts about whether constrained supply is related to high house prices at all. Easier access to credit and the rise of housing as a form of financial speculation linked to capital flows into countries such as the UK, and the hoarding of land by developers and landowners, may instead be to blame for unaffordable housing (Ansell, Broz, and Flaherty 2018; Colenutt 2020). Further evidence from the UK points against price anxiety as the main driver of NIMBYism. An observable implication is that support for housebuilding would rise if people were offered financial compensation in exchange for supporting new developments. Yet only 10-20% of British survey respondents say that compensatory payments would make them more supportive of new housing, and 65% say it would make no difference at all (DCLG 2017; MHCLG 2018; Smith and Toms 2018). Overall, price anxiety surely explains some of homeowners’ NIMBYism, but it need not be the main motivation for it.

Opposition to housebuilding can also arise from a desire to preserve the character of one’s area and existing ways of life, and to protect against threats to communities which housing developments may represent. These are summarised by Devine-Wright (2009) as ‘place-protective’ motives. In a similar vein, Einstein, Glick, and Palmer (2019a)’s recent study of the US argues for a mixed conception of NIMBYism, encompassing both price anxiety and place protection. They call campaigners with such motives “neighborhood defenders”, finding that those who oppose housebuilding often cite concerns about their community rather than about their own homes. New developments “provoke anxiety about one’s community because they comprise rapid and highly visible changes” (p.34).

Opposition to housebuilding in the UK, I argue, predominantly takes this form. The

desire to *preserve* existing communities includes concerns about the visual impact of new developments on existing places, such as potential losses of green space and countryside, but also fears that new homes will be built in a very different style to existing buildings. It also reflects anxiety that new housebuilding could erode the character of an area. People worry that new developments will rapidly alter the quality of life, cohesion and appearance of an area, destabilising established communities and ways of life (Abram, Murdoch, and Marsden 1996; Devine-Wright 2009; Milbourne 1997; Powe and Hart 2011; Sturzaker 2010; Yarwood 2002). The desire to *protect* communities includes fears that new housing may be built for outsiders rather than existing locals, especially when new housing is unaffordable to the average local. In addition, anti-housing campaigners often cite, not wholly unjustifiably, the likely negative impact of new developments on traffic as well as access to schools, healthcare, parks and other local amenities and services (Powe and Hart 2011; Matthews, Bramley, and Hastings 2015). Thus place-protection includes the defense of existing communities from competition for public goods and services. NIMBYism as place-protection still involves residents acting in their self-interest. Self-interest, though, needs to be more broadly conceptualised, beyond the preservation of house prices. It is also in people’s self-interest to preserve their emotional connection to their local area or way of life, and to protect against threats to their quality of life, such as increased competition for access to services and recreational facilities, as Einstein, Glick, and Palmer (2019a) also argue in the USA.

The UK represents a ‘most likely’ case to detect this form of NIMBYism. It features a particularly strong attachment to non-dense and traditional forms of housing, as well as to rural life and landscapes. When asked what type of designs would help them support new housing, Smith and Toms (2018) find strong and near-universal support in the UK for “a more historically-referenced style”: buildings with a traditional character that fit in with existing designs. Non-dense housing, especially building detached houses, is also overwhelmingly popular in the UK. It is seen as both highly desirable and in keeping with tradition (Powe and Hart 2011). Moreover, British anti-housing activists in rural areas often

seek to preserve idealised village and small-town communities, where lifestyles and values are different to urban areas (Abram, Murdoch, and Marsden 1996). Housebuilding in the so-called ‘greenbelt’ outside existing urban centres, or in more rural areas, is overwhelmingly unpopular in the UK, even today when housebuilding is in general very popular (Smith and Toms 2018). But, there is very strong pressure to build new dense housing in precisely those places. Restrictive planning policies have made it difficult to build outside built-up areas, with existing towns and cities lacking new space for housing. Currently, this makes suburban and rural areas prime targets for new construction. Thus the British housing crisis is as much a suburban and rural problem as it is urban (Hilber and Schoni 2016). Desires to preserve and protect communities should be particularly prevalent in the suburban, small-town and rural areas where much British housing supply is both needed and feasible to build.

Implications and Hypotheses

This theory yields four testable implications: for the characteristics that should lead people to oppose housebuilding, for the types of housing developments likely to attract the least opposition, for the mechanism by which these effects occur, and for the reactions of particular groups to the features of housing developments.

Home ownership is not the only characteristic dividing those who oppose and favour new housing. There are multiple characteristics that should lead to place-protective motives. Conservative values, including a desire to avoid change, offer one route to it. Recent survey evidence from the US shows that political conservatism is by far the most important correlate of opposition to dense urban development (Lewis and Baldassare 2010). In the UK, Conservative party voters are more opposed to housebuilding than those of other parties, even amongst homeowners (Coelho, Dellepiane-Avellaneda, and Ratnoo 2017; Matthews, Bramley, and Hastings 2015). Being older, a rural dweller or having long-term ties to one’s community should matter too. Place-protection can plausibly account for opposition amongst a wide range of groups beyond homeowners who are also important in the politics

of housebuilding. Nonetheless, homeowners are often long-term residents of their areas with a strong interest in their community. Place-protection offers an alternative theory for the homeowners' opposition to new construction as well. This leads to:

Hypothesis 1: A range of characteristics beyond home ownership, including older age, holding conservative values, being a rural dweller, and having long-term ties to one's community, are positively associated with opposition to housebuilding.

The theory also implies that housing in people's backyards could be made substantially more popular by designing it with place-protective motives in mind, yielding:

Hypothesis 2: The negative effect of proximity to one's home on the popularity of housing developments can be offset by designing them to include other place-protective features that preserve and protect the interests of existing communities.

What are 'place-protective features'? Table 1 summarises the features that are tested in this paper in a conjoint experiment, with the theoretical rationale for each one. These echo real proposals that are often made to reduce opposition to new housebuilding, and in the UK, some of these features are in practice sometimes included with housing developments. Their effectiveness in reducing NIMBYism, though, has rarely been subjected to rigorous tests. Each of them, in theory, could reduce opposition to new housing by going with the grain of place-protective motives. Some, like the provision of space for new businesses, enhance existing communities and provide new opportunities for existing residents. Others, such as building in a traditional style, limit the impact of new developments on the character of communities. Adding new services, such as schools or improved transport links, lower resource competition that could come in the wake of new housing. Ensuring that homes are designed for locals, and affordable for them too, protects the existing community: new housing is often proposed in areas where the demand for space is soaring and locals are priced out of increasingly expensive housing (Sturzaker 2010; Yarwood 2002).

Confirmation of Hypothesis 2 would provide evidence in favour of the theory of place-

Table 1: Place-Protective features and theoretical rationale for raising the popularity of new housing developments

Place-Protective Feature	Theoretical Rationale
Traditional style of building	Fits with existing traditions and character of community, minimising visual impact
Low-density, detached houses	Strong British preference for detached houses with gardens, in keeping with existing houses and traditional lifestyles
Space for shops and businesses included	Enhances the existing community and protects existing amenities from competition
Improved transport links included	Prevents negative impact of new development on traffic, enhances existing infrastructure
New services provided alongside, e.g. schools	Protects existing services, prevents stronger competition for resources
Designing homes for existing residents	Ensures new housing that fits with values and priorities of existing community
New green space included	Ameliorates potential losses of green space, prevents stronger competition for existing amenities
Affordable for people on average local income	Prevents locals being ‘priced out’ by new development, preserving community

protective motives. But, it leaves open the possibility that some features in Table 1 could also raise the popularity of new housing by protecting local property values. I therefore probe the mechanism with two placebo tests. First, if place-protective motives rather than price anxiety explain the popularity of including place-protective features in housing developments, then first, homeowners and non-homeowners (who, by definition, cannot suffer from price anxiety) should not differ in their responses to them. Second, the inclusion of place-protective features in developments should not affect homeowners' price anxiety. For example, homeowners' price anxiety should not fall when a development is built in a traditional style, instead of an alternative. This yields a third hypothesis, in two parts:

Hypothesis 3a: Homeowners and non-homeowners respond similarly to place-protective features

Hypothesis 3b: Homeowners' price anxiety is not reduced by including place-protective features in housing developments.

After these placebo tests, I present a further robustness check by conditioning the joint analysis on respondents' issue positions. Finally, if the theory is correct then the subgroups listed in Hypothesis 1 should be more responsive to place-protective features than their counterparts. Long-term residents will care more about preserving and protecting the character of their area than short-term residents. Conservatives and the elderly will be more concerned with preservation and protection of tradition than left-wingers and young people. Rural dwellers will have greater attachment than city-dwellers to non-dense housing and the protection of green space. Their counterparts are not necessarily unmoved by place-protective features. Clearly, for example, providing new public services and infrastructure should attract widespread support. This is one of the virtues of place-protective features. However, the claim here is about *relative* effects, giving:

Hypothesis 4: Place-protective features of housing developments that preserve and protect the interests of existing communities raise their popularity most amongst the groups covered

by Hypothesis 1.

3. Data

I use two datasets in this paper. First, the British Social Attitudes Survey (BSAS), a long-running gold-standard survey fielded to British adults almost annually since the 1980s. Interviews are conducted face-to-face, and stratified probability sampling is used to ensure a nationally-representative sample. Since 2010, the BSAS has asked respondents “how much would you support or oppose more homes being built in your local area?”, with a five-point response scale with the options “strongly support”, “support”, “neither support nor oppose”, “oppose” and “strongly oppose”. This is used as the dependent variable in the next Section of this paper. I use the most recently available BSAS survey from 2018, when 2510 respondents from England only were asked the question.

Second, I also fielded an original online survey to 1,580 adults from the United Kingdom with the survey firm Dynata³ from 30th October to 4th November 2019. The sample was balanced against the UK census population in terms of age, gender and region of residence.⁴ Thus my survey differs from the BSAS in that it includes Northern Ireland, Scotland and Wales in addition to England. The sample accurately reflected both party support and the leave-remain divide over Brexit at the time of the survey.⁵ Homeowners (outright or with a mortgage) made up 69% of the whole sample and 68% of English respondents, very close to official figures of 65% for the UK from the Labour Force Survey and 64% for England from the English Housing Survey⁶. This is also very similar to home ownership in the 2018 BSAS,

3. Formerly known as Survey Sampling International (SSI)

4. Twelve regions were used: East Anglia, East Midlands, London, North-East England, North-West England, Northern Ireland, Scotland, South-East England, South-West England, Wales, West Midlands, Yorkshire and Humberside

5. The three-question approach that is standard in the British politics literature, and in the British Election Study, was used to measure party support. Respondents who supported a party were 35.5% Conservative supporters, 28.0% Labour, 14.8% Liberal Democrat, 9.4% Brexit Party, 4.3% Green Party and 2.9% Scottish National Party. 15.4% of the sample reported not supporting any party. The sample also consisted of 45.4% leave supporters and 54.6% remain supporters (excluding don’t knows) based on how they would vote if a new referendum were held tomorrow.

6. Figures are for 2017 and 2018 respectively. See Barton (2017) for LFS data and [here](#) for the EHS

Figure 1: Support for Housebuilding in Respondents' Local Area

where 66% of English respondents were homeowners.

At the start of my survey, before the conjoint tasks, respondents were asked the same question on housebuilding as the BSAS. It had a slightly modified response scale: “strongly support”, “somewhat support”, “neither support nor oppose”, “somewhat oppose” and “strongly oppose”. I also use this as a dependent variable in the next Section of this paper. Figure 1 summarises the responses in both surveys; patterns of support were similar. Altogether, 58% of BSAS respondents supported housebuilding with 25% opposing. The corresponding figures are 55% and 23% in the Dynata sample.⁷ The Dynata respondents were slightly more polarised: somewhat more likely to strongly support and to strongly oppose. Both surveys underscore the remarkable popularity of housebuilding in the UK, at least in theory.

4. The Correlates of Opposition to Housebuilding

Here I test Hypothesis 1 using responses to the two questions just described, together with demographic and political attributes. Figure 2 shows differences in mean support for housebuilding in people’s local area, with 95% confidence intervals, between a wide range of demographic characteristics that were measured in the surveys. Differences are shown for three samples: the 2018 BSAS which contained English respondents only; the full Dynata sample; and the Dynata sample of English respondents only, for comparability with the BSAS.

Across all three samples, Figure 2 demonstrates that a wide range of characteristics are associated with opposition to housebuilding, with all three samples mostly offering a consistent picture of the correlates of NIMBYism. The standard deviations of the three response scales range from 1.16 to 1.26. Thus homeowners are between 0.2 and 0.4 standard deviations more opposed to housebuilding than non-homeowners (primarily renters). This gap is notably smaller in the Dynata sample than in the BSAS. Further analysis, shown in

7. The figures for English respondents only – corresponding more directly to the BSAS sample – were 54% and 24%

Figure 2: Differences in mean support for housebuilding (measured on five-point scales: higher=more supportive), with 95% confidence intervals

the Appendix, revealed that much of the difference is due to under-35 homeowners having very different opinions in the two surveys.⁸ High-income people, who are more likely to have a stake in the property market, are also slightly more opposed than those on low incomes.⁹

As expected, a range of characteristics that are plausibly associated with place-protective motives matter too. Being old rather than young, a long-term rather than short-term resident of an area¹⁰ or a rural dweller rather than an urban dweller are also very strongly positively associated with opposition to housebuilding. Political conservatism, whether measured as party support or using attitudinal questions, is robustly associated with NIMBYism too. Compared to the left-wing Labour party, Conservative, UKIP and Brexit Party supporters are much more opposed to building new homes in their local area. The attitudinal questions on support for Brexit and opposition to redistribution capture social and economic conservatism respectively. Both Brexit supporters and those who oppose government redistribution are also much more likely to oppose housebuilding than remainers and redistribution supporters. Finally, compared to the left-wing urban centre of London, those living in certain predominantly rural and conservative-leaning areas such as East Anglia and South-East England exhibit greater NIMBYism, while those in most other areas are similar to Londoners.

This confirms Hypothesis 1. In the UK, age, urban/rural dwelling, length of residence and conservatism are at least as important and in some cases more important than home ownership in predicting opposition to housebuilding. Place-protection offers a coherent theory

8. All subgroups of homeowners in the Dynata sample were more opposed to housebuilding than non-homeowners except for people aged 18-34: 18-34 year-old homeowners were much *more* supportive of housebuilding than non-homeowners (age was measured in categories rather than as a continuous variable, including 18-24 and 25-34). Conversely, 18-34 year-old homeowners in the BSAS were substantially more opposed to housebuilding than 18-34 years-old non-homeowners, as expected. It is difficult at present to accurately survey young people in the United Kingdom, making it uncertain which of the two samples more accurately reflects young homeowners' views. For instance, errors for young voters were partly responsible for the notorious 2015 errors in forecasting the UK General Election. In any case, Figure A1 in the Appendix shows that amongst over-35s only, the difference between homeowners and non-homeowners in the Dynata sample is much closer to the BSAS and all other results are unaffected.

9. Defined here as people earning over £60,000 and under £20,000 per year, although the results are not affected by changing the cutoffs.

10. Long-term residents are defined as those who have lived in their local area for 20 years or more; short-term residents are defined as those who have lived in their local area for 5 years or less. Again, the results are unaffected by changing these cutoffs. This variable was not available in the BSAS

that can explain why all of these disparate characteristics are associated with NIMBYism. The politics of housebuilding therefore encompasses a wide range of important groups in society whose interests can plausibly be explained by place-protective motives.

5. Support for Housing Developments: Conjoint Evidence

In this section I test Hypotheses 2 and 3 using a conjoint experiment. After the initial question on housebuilding, each respondent in my Dynata survey was given a conjoint task. It was repeated three times. In each case they were presented with two notional housing developments in their local area and were asked which one they would prefer to see built, if they had to choose. This provides a total of 9480 conjoint responses. The developments were described using nine attributes, matching those listed in Table 1 with the addition of distance from the respondent’s home. Figure 3 shows an example conjoint task; the full list of possible attribute levels is shown later. These numbers of attributes and tasks have been shown to elicit reasonable responses and are comfortably below the level at which satisficing from respondents begins to occur (Bansak et al. 2018, 2019; Jenke et al. 2020). The order of the attributes was randomised for every task, and all attribute levels had an equal probability of appearance.¹¹

A conjoint design is useful for efficiently estimating the effects of many attributes at once, and is particularly well-suited to a multidimensional policy such as a housing development, with many salient attributes that could affect support. In an experiment with more limited numbers of treatments, confounding could occur whereby respondents use a provided at-

11. Conjoint experiments using uniform distributions for attribute levels sometimes feature unrealistic joint distributions of the features, potentially compromising external validity (De la Cuesta, Egami, and Imai 2020). In this case, however, there is no well-defined population distribution of housing developments that can be used to define the distribution of conjoint profiles. Since this paper aims to demonstrate what types of notional housing developments *would* attract support, it is also not clear that any particular combinations of attributes should be ruled out as unrealistic. The uniform distribution was therefore used, allowing all combinations of attributes to appear with equal probability.

Figure 3: Example Conjoint Task

	Development 1	Development 2
New local services built alongside the development	A new GP Surgery	A new primary school
Usage of the development	Only housing	Housing and space for new shops and local businesses
Style of the buildings	A traditional style, like other local buildings	A traditional style, like other local buildings
Distance from your home	1/4 mile (4-5 minute walk)	200 metres (2-minute walk)
Share of homes affordable for people on average incomes in your local area	75%	None
New public green space built as part of the development	A small new community park	None
Improvements to local transport links included with the development	None	Local roads will be improved
Type of people the homes will be designed for	People from outside the area	Local residents
Type of homes	Detached houses	1-2 bedroom flats

If you had to choose between them, which of these two developments should be built?

Development 1

Development 2

tribute to guess or infer the value of a non-provided attribute. It also provides a much more realistic choice setting than previous studies that have looked at the effect of some of the attributes in my conjoint experiment. For instance, in the few existing policy reports and studies that examine place-protective motives for opposing housebuilding, respondents have simply been asked to list factors that would encourage them to support the building of new houses (Matthews, Bramley, and Hastings 2015; DCLG 2017; Smith and Toms 2018). Here, I instead present people with comprehensive descriptions of housing projects, measuring the effect of each attribute while controlling for the levels of all other included attributes.

The Effects of Attributes of Housing Developments

Testing Hypothesis 2 – that place-protective features of housing developments can offset the unpopularity caused by siting them close to people’s homes – requires measuring the marginal effects of different features of housing developments on their popularity. I first do this using Average Marginal Component Effects (AMCEs). Here an AMCE measures the causal effect of a particular attribute level, relative to a baseline, on the probability of one housing development being chosen over another, averaging over many different housing developments in the experiment (Bansak et al. 2020).¹² It is well-suited to answering a question such as “does building detached houses instead of 1-2 bedroom flats affect the probability of choosing a development as much as increasing the distance of a development from respondents’ homes from 1/2 mile away to 2 miles away?”

Figure 4 shows the AMCEs for all attributes in the experiment. Respondents exhibit clear sensitivity to proximity. They prefer developments to not be directly in their ‘back yard’, mirroring Hankinson (2018)’s findings for the USA. Compared to the baseline level of 1/2 mile (8-10 minute walk) away, the probability of a development only 100 meters (1 minute walk) away being chosen is nearly 0.1 lower, although siting developments further than half a mile away does not increase their popularity. The density of housing strongly

12. Alternatively, it measures the causal effect on the expected vote share that a development would receive in a contest between two developments

Figure 4: Average Marginal Component Effects (with 95% Confidence Intervals) on Support for New Housing Developments

influences developments' popularity too. Compared to 1-2 bedroom flats, detached houses are also nearly 0.1 points more popular on average. This is likely to reflect a preference for more of the houses (predominantly detached and terraced houses) that characterises most of the UK's housing stock and are seen as in keeping with tradition.

The popularity of other attributes also supports Hypothesis 2. Building a development that is aimed at local residents as opposed to outsiders has a slightly larger effect on popularity than moving a development from 100 meters away to half a mile away. The same is true of including a new GP surgery.¹³ Affordability for local people is popular too. Better transport links, either by improving local roads or bus services alongside a new development, is another way to substantially raise the popularity of housing developments. Other features that reflect place-protective motives matter, including new green space, space for new businesses, and building in a traditional style, but not as much as lower density, preserving access to services and ensuring suitability and affordability for existing residents. Overall, all eight attributes listed in Table 1 show effects that are consistent with theoretical expectations.

The negative effect on popularity of siting a development very close to someone's home can therefore be more than overcome by designing it with other features that help to protect and preserve existing communities, as argued by Hypothesis 2. For example, a housing development sited 100 meters from a respondent's home, built in a traditional style with a new park, GP surgery and improvements to local bus services included, consisting of detached houses designed for local people, and 75% affordable for people on the average local income, has a 68% probability of being chosen over another development.

Probing the Mechanism

The inclusion of place-protective features in housing developments can counteract the negative effect on popularity of building homes in people's backyards. But do they do this by cueing place-protective motivations, or could they simply be reducing price anxiety? Better

13. In the UK, this is a universally-recognised term for a local health clinic in the NHS, where virtually all British citizens receive primary healthcare

Figure 5: Marginal Mean Support for Attributes of Housing Developments, amongst Homeowners and Non-Homeowners

Distance from Respondent's Home:

- 100 Meters (1 minute walk)
- 200 Meters (2 minute walk)
- 1/4 Mile (4–5 minute walk)
- 1/2 Mile (8–10 minute walk)
- 1 mile (15–20 minute walk)
- 2 miles (30–40 minute walk)

Style:

- A new modern Style
- Traditional Style

Density and Type of Homes:

- 1–2 bedroom flats
- 3–4 bedroom flats
- Terraced houses
- Detached houses

Usage:

- Housing only
- Space for shops/businesses

Improvements to local transport links:

- None
- Local roads will be improved
- Increased local bus services

New local services:

- No Services
- New primary school
- New GP surgery

Type of people the development is for:

- People from outside the area
- Both
- Local residents

Green space included:

- No green space
- A small community park

Percent affordable:

- 0%
- 25%
- 50%
- 75%

amenities and services may also help to raise local house prices. Here I provide two placebo tests that get at this question, testing Hypotheses 3a and 3b.

First, I examine differences between homeowners and non-homeowners. By definition, the latter group cannot be motivated by a desire to protect the value of their own home, and if anything should prefer lower house prices if they hope to become a homeowner. If place-protective motives rather than reduced price anxiety lie behind these results, then the two groups should not strongly differ in their responses to place-protective attributes. Here, and in all other subgroup analyses in this paper, I measure subgroup preferences using marginal means instead of AMCEs, reflecting the advice of Leeper, Hobolt, and Tilley (2020).¹⁴ That is, I report $P(Y = 1|D = d, X = x)$, where Y is the binary outcome, D are the attribute levels of interest and X are the groups of interest, together with 95% confidence intervals.

Figure 5 displays this for homeowners and non-homeowners.¹⁵ Results for two attributes suggest the presence of some price anxiety amongst homeowners. They are more responsive to the proximity of new developments than non-homeowners, and less responsive to the affordability of new homes for local people. Nonetheless, even homeowners prefer that at least some new housing should be affordable for locals – a preference that goes against their financial self-interest, since building cheaper housing could lower local house prices. Otherwise, with the exception of the style of new housing, patterns of support amongst the two groups are nearly identical. Both groups respond very similarly to less-dense housing, as well as to other place-protective features such as providing new services, green space and designing homes for local people. In almost all cases, people without any financial stake in housing – indeed, who arguably have an interest in *lower* local house prices – respond in a near-identical fashion to place-protective features. Hence these features’ popularity cannot be simply due to perceptions that they will maintain or raise local house prices.

14. They show that the traditional approach of using interaction terms in the AMCE regression can be very misleading when groups have differing preferences over the omitted category in the regression.

15. As discussed earlier, under-35 homeowners in my Dynata sample exhibit different preferences for house-building than their counterparts in the British Social Attitudes Survey. Figure A2 in the Appendix repeats Figure 5 for homeowners aged 35+ only. The results are unchanged.

Figure 6: Expressed price anxiety amongst homeowners: responses to “how likely do think it is that building a new housing development in your area would cause the price of your own home to fall? Imagine a development like the ones you voted on in this survey.”

Second, I directly measured homeowners’ price anxiety after the conjoint experiment. They were asked: “how likely do you think it is that building a new housing development in your area would cause the price of your own home to fall? Imagine a development like the ones you voted on in this survey.” Answers were on a five-point scale and are summarised in Figure 6 as percentages. The survey question specifically referenced ‘a development like the ones you voted on in this survey’, yet respondents of course differed in the profiles that they saw. Here I use this variation to test Hypothesis 3b. Did homeowners express greater price anxiety when they saw developments with place-protective features? For all attributes with only two possible levels, only a tiny handful of homeowners saw six developments with the same level. Thus Table 1 examines attributes with 3 or more levels, regressing the price

anxiety scale on a series of binary variables equalling one if the respondent saw at least one development featuring that level, and zero otherwise. As a second test, Table A1 in the Appendix analyses all attributes including those with only two levels, regressing price anxiety on a series of variables counting the number of times that respondents saw each level.

Table 1 shows that expressed price anxiety is not affected much by the type of development that respondents saw. Respondents who saw at least one development sited 100 metres from their home expressed slightly greater anxiety than those who saw none, an average rise of 0.14 ($p=0.059$) on the five-point response scale. Seeing developments with 0% affordable housing reduced price anxiety by a similar amount. For all other attributes the coefficients are generally very small and are not statistically significant, with the exception of detached houses, which also somewhat reduce price anxiety. Table A1 uses the count of each attribute level and again finds very small effects, with none of them statistically significant. Hypothesis 3b is therefore partly confirmed and partly disconfirmed. Almost all of the place-protective features did not reduce price anxiety, meaning that they must raise homeowners' support for housing in some other way. The results for distance and affordability support the subgroup analysis above. A small part of their effect on homeowners might come through price anxiety, although the effects were small and appeared in only one of the two model specifications. Here, the same is true of detached housing as well. For the other attributes, there is again no evidence that reduced price anxiety is the mechanism behind their popularity.

Finally, it is also worth noting that only a minority of homeowners expressed any price anxiety. As shown in Figure 6, 10.4% thought it was very likely that the value of their home would fall, with a further 18.3% thinking it somewhat likely: just under 29% of homeowners could reasonably be classified as price-anxious. On the one hand, price anxiety seems to characterise only a small group of British homeowners. On the other hand, 29% did express at least some price anxiety, even after seeing a set of housing developments with at least some place-protective features. Price anxiety appears to exist alongside place-protection as motivations for NIMBYism amongst certain homeowners.

Table 1: Relationship between presence of features in conjoint profiles and price anxiety (scale from 1-5)

Attribute	Level	Coefficient
Distance	100 meters	0.14* (0.08)
	200 meters	0.05 (0.07)
	1/4 mile	0.01 (0.07)
	1/2 mile	0.10 (0.07)
	1 mile	0.13* (0.07)
	2 miles	0.07 (0.07)
Density and Type	1-2 bedroom flats	-0.05 (0.09)
	3-4 bedroom flats	-0.02 (0.08)
	Terraced houses	0.08 (0.09)
	Detached houses	-0.17* (0.09)
Transport Links	None	-0.01 (0.12)
	Improved Roads	-0.13 (0.11)
	Increased Bus Services	-0.02 (0.11)
Services	No services	0.03 (0.11)
	Primary school	0.12 (0.12)
	GP surgery	0.06 (0.12)
Type of people	From outside the area	-0.04 (0.11)
	Both	0.16 (0.12)
	Local residents	-0.02 (0.13)
Percent affordable	0%	-0.18** (0.09)
	25%	0.10 (0.08)
	50%	0.11 (0.09)
	75%	0.09 (0.09)
Observations		1088
R ²		0.022

Note: *p<0.1; **p<0.05; ***p<0.01

6. Robustness Checks: Respondents' Issue Positions

Recent work on conjoint experiments shows that the analysis of AMCEs alone may be insufficient. Reflecting those developments, I offer two further robustness checks on the results so far. First, the AMCE is affected by both the direction *and* intensity of preferences. A high AMCE could indicate that a particular attribute level is very popular, or it could mean that a small minority of respondents have a very strong preference for it (Abramson, Kocak, and Magazinnik 2019). To check this, I directly measured respondents' most preferred level of each attribute. For each of the nine attributes in the conjoint experiment, they were asked which of the attribute levels they would most strongly support in a new housing development. They were allowed to choose one level only.

Figure 7 shows the distributions of preferred levels for each attribute. The problem identified by Abramson, Kocak, and Magazinnik (2019) is mostly absent. In most cases the attribute level with the highest AMCE is preferred by a plurality, and in some cases a majority, of respondents. More than three-fifths prefer developments to be sited at one of the longest distances, and to be built in a traditional style. Nearly 70% prefer detached or terraced houses over flats. A majority prefer developments to include shops and businesses, improvements to roads and a GP surgery. More than 90% favor designing them either wholly or partly for local people. Unsurprisingly, almost everyone also prefers to have a new park provided alongside. These all closely mirror the AMCEs in Figure 4. In the case of the people for whom the development is designed, the most popular level (both local people and incomers) does not have the highest AMCE. But building for locals alone, whose AMCE is highest, is far from a minority preference. The one exception is 75% affordability, which is only the third-favourite out of the four options in Figure but has the highest AMCE. Its high AMCE probably results from the minority of respondents who prefer it doing so with a very high level of intensity. Otherwise, a strong consensus exists in favour of place-protective features and the AMCEs do not simply reflect the intense preferences of minorities.

Second, for attributes where support is quite evenly split between the different levels, the

Figure 7: Respondents' Favored Level of Each Conjoint Attribute

AMCE does not necessarily uncover the relative importance of different levels in explaining support for housing developments, defined as the extent to which deviations from a most-preferred level affect political behaviour (Hanretty, Lauderdale, and Vivyan 2020). If half of all respondents intensely loathe homes designed in a modern style and the other half

intensely loathe homes designed in a traditional style, and both groups would base their vote for different developments entirely on this choice, then the AMCE for this attribute would be zero. Switching a development from a traditional design to a modern design would not alter average support for it, despite it being vitally important in individuals' decisions.

As Hanretty, Lauderdale, and Vivyan (2020, p. 4) put it, “we can only recover the average importance respondents attach to an issue from a conjoint experiment if we condition statistical analysis on a measure of respondents' own positions on each issue.” Accordingly, I now provide an additional test of Hypothesis 2 that does exactly that. Using the data from Figure 7, I compared preferences for each attribute level separately for respondents who did and did not most prefer that attribute level, an approach that is very similar to Leeper and Robison (2020). If people care very deeply about traditional versus modern design but the AMCE is low because tradition-lovers and modern-design-lovers cancel each other out, then the preferences of these groups would strongly differ. Alternatively if the design style is not very important for respondents, levels of support between the two groups would be very similar. The extent of divergence between the two groups therefore serves as a test for the importance of individual attribute levels in decision-making.

Figures 8a and 8b show this. In nearly all cases, the AMCEs do not distort our picture of the most important attributes. Attribute levels with the largest AMCEs exhibit the most polarisation in support. Distance is very important to respondents, so much so that amongst respondents who most favour developments being two miles away, there is a 63% probability that they will select a housing development at that distance, regardless of other attributes. The provision of GP surgeries, increased bus services, and housing for local residents also emerge as important, just as they did based on the AMCEs. Again, while still important to respondents, the provision of green space, space for businesses, and building in a local style exhibit polarisation by issue position, but not as much as the other attributes.¹⁶ Making developments 75% affordable to locals is particularly important, but only amongst a minority.

16. It is particularly interesting that a traditional style is less important compared than other attributes, since self-reported preferences have suggested that it is vitally important (e.g., Smith and Toms 2018)

Figure 8a: Marginal Mean Support for Attributes of Housing Developments, Conditional on Respondent's Issue Positions

Figure 8b: Marginal Mean Support for Attributes of Housing Developments, Conditional on Respondent's Issue Positions (cont.)

Those who favour it (less than 30% of respondents, as Figure 7 demonstrates) have a very high probability of voting for 75% affordable developments, but it is not especially popular amongst those who do not favour it (a large majority). Likewise, the tiny minority who prefer 0% of homes to be affordable for the average local also feel very strongly about it. Creating developments that are 50% affordable for locals, the most popular option in Figure 7, would be much less controversial and in any case, has a very similar AMCE.

To conclude, with the likely exception of developments that are 75% affordable for respondents on the average local income, place-protective features substantially raise the popularity of housing developments amongst large groups of people. They enjoy very high, often majority, support.

7. Variation by Group

Finally, I test hypothesis 4. If these attributes make housebuilding more popular by cueing place-protective motives, then they should most strongly affect subgroups who are more likely to hold place-protective motivations. Accordingly, Figure 9 displays differences between long-term and short-term residents of their area. Figure 2 showed that long-term residents are much more opposed to housebuilding than short-term residents. Figure 9 demonstrates that both groups' preferences are structured quite similarly. However, long-term residents are more strongly affected by place-protective features, particularly building in a traditional style, non dense housing, including a new GP surgery and green space, as well as ensuring affordability for locals on an average income. This provides evidence in favour of Hypothesis 4: the groups who are more opposed to housing are more strongly affected by place-protective features. Notably, all of these attributes can be included without *negatively* affecting the support of short-term residents. In most cases, their responses go in the same direction as long-term residents, and in other cases, such as for style, changing the attribute makes little or no significant difference but does not lower support. Figure 10 shows the same thing

Figure 9: Marginal Mean Support for Attributes of Housing Developments, amongst Long-term and Short-term Residents

Distance from Respondent's Home:

- 100 Meters (1 minute walk)
- 200 Meters (2 minute walk)
- 1/4 Mile (4–5 minute walk)
- 1/2 Mile (8–10 minute walk)
- 1 mile (15–20 minute walk)
- 2 miles (30–40 minute walk)

Style:

- A new modern Style
- Traditional Style

Density and Type of Homes:

- 1–2 bedroom flats
- 3–4 bedroom flats
- Terraced houses
- Detached houses

Usage:

- Housing only
- Space for shops/businesses

Improvements to local transport links:

- None
- Local roads will be improved
- Increased local bus services

New local services:

- No Services
- New primary school
- New GP surgery

Type of people the development is for:

- People from outside the area
- Both
- Local residents

Green space included:

- No green space
- A small community park

Percent affordable:

- 0%
- 25%
- 50%
- 75%

Figure 10: Marginal Mean Support for Attributes of Housing Developments, amongst Urban and Rural Dwellers

Distance from Respondent's Home:

- 100 Meters (1 minute walk)
- 200 Meters (2 minute walk)
- 1/4 Mile (4–5 minute walk)
- 1/2 Mile (8–10 minute walk)
- 1 mile (15–20 minute walk)
- 2 miles (30–40 minute walk)

Style:

- A new modern Style
- Traditional Style

Density and Type of Homes:

- 1–2 bedroom flats
- 3–4 bedroom flats
- Terraced houses
- Detached houses

Usage:

- Housing only
- Space for shops/businesses

Improvements to local transport links:

- None
- Local roads will be improved
- Increased local bus services

New local services:

- No Services
- New primary school
- New GP surgery

Type of people the development is for:

- People from outside the area
- Both
- Local residents

Green space included:

- No green space
- A small community park

Percent affordable:

- 0%
- 25%
- 50%
- 75%

for urban and rural dwellers. Again, rural dwellers are more responsive to place-protective features but urban dwellers either respond positively or neutrally.

In the Appendix, figures A3-A6 show the same comparisons for other key groups whose support for housebuilding strongly differs: old versus young people, leave versus remain supporters (Brexit), Conservative versus Labour supporters, and those who support and oppose redistribution. This pattern – of subgroups either agreeing, or of the subgroup with greater place-protective motives preferring place-protective features while the other is indifferent – persists across all relevant subgroup comparisons.

8. Discussion

Opposition to housebuilding, particularly in the UK, is to a large extent motivated by desires to preserve and protect existing communities and ways of life. Evidence from two separate surveys showed that a wide range of characteristics that should lead to place-protective motives are at least as important as home ownership for explaining opposition to new building as home ownership, including long-term residence and conservatism. The theory of place-protection explains these patterns, and shows that the politics of housebuilding involves more than simply a pitched battle between homeowners and non-homeowners.

Evidence from a conjoint experiment supported this. Although people do prefer housing to not be situated in their ‘back yard’, the negative effect of proximity can be offset by designing developments that assuage place-protective concerns, including designing them for existing local residents and improving public services alongside them. The popularity of these features was not, for the most part, explained by reduced price anxiety, not least because homeowners and non-homeowners (amongst whom, by definition, price anxiety cannot exist) were affected by them very similarly. The groups most susceptible to NIMBYism to begin with are also the ones whose support for housing was most strongly affected by place-protective features. Amongst homeowners, conservatives, rural dwellers, long-term residents,

and the elderly, place-protective features make them more likely to support a given housing development. Their counterparts who are more supportive of housebuilding to begin with were less responsive to these features, but were not put off by them.

Thus NIMBYism certainly exists but can, at least in principle, be reduced by designing developments with place-protective motives in mind. Providing new public goods alongside housing developments could prove expensive, but is more normatively desirable than adding further to the wealth of homeowners or trying to reduce citizens' influence over local political decisions. Indeed, explicitly involving local communities in the planning process from the beginning, and designing new developments with their needs and preferences in mind, may be very sensible.

Nonetheless, the analysis uncovered a minority of homeowners who did express price anxiety. Place-protective designs may very substantially reduce NIMBYism but cannot be expected to remove it altogether. Some price anxiety clearly exists alongside place-protective motivations. This is important because despite place-protective features making housing much more popular, and housebuilding in local areas enjoying majority support in the UK (Figure 1), NIMBYism is often a minority phenomenon. Small groups of highly-motivated citizens might still succeed in blocking new housing projects when a majority want them built. Even developments designed with place-protective motives could still attract opposition from a small and vocal minority of price-anxious homeowners. Uncovering what affects NIMBYism amongst the people who, in practice, campaign and lobby against developments in the real world should be a priority for future research. Measuring the spatial concentration of NIMBYs is another promising avenue. Figure 2 showed that people in certain areas with high demand for housing are more opposed to housebuilding, but this could be extended to the more local levels where housing conflicts typically play out. More generally, as with any study using surveys and survey experiments, support expressed in a survey may not correspond perfectly with political behaviour in the real world. It would therefore be worthwhile to test place-protective motives with behavioural data.

Finally, this paper has also extended the study of opposition to housebuilding outside the USA, where most previous studies have focused. Many studies from both economics and political science have highlighted price anxiety as the main driver of opposition in the USA (Dehring, Depken, and Ward 2008; Fischel 2005; Hankinson 2018; Marble and Nall 2020). Einstein, Glick, and Palmer (2019a), on the other hand, argue for a more mixed conception of opposition to housebuilding, encompassing price anxiety as well place-protective motives. My findings for the UK are much more in line with the latter view, although home ownership and price anxiety appear to be less important overall than in the US.

The study of NIMBYism should continue to be expanded to other cases beyond the USA and the UK, just as political scientists have carefully documented cross-national variation in support for other policies such as redistribution and welfare provision. My findings suggest some institutional features that might lessen or heighten the salience of price anxiety versus place-protection in different contexts. NIMBYism as place protection provides an especially plausible account of opposition to housebuilding in the UK, where new construction rarely threatens the value of existing homes and much new building needs to take place in rural or suburban areas, in a country with a very strong attachment to rural landscapes and ways of life. Thus in other places where new housing is targeted at traditional communities that are unused to rapid change, place protection may be particularly important.

There are also important institutional differences between the UK and the US that might raise the salience of price anxiety and homeownership in the latter. British local authorities, who control much of the day-to-day planning process and have some powers to approve new housing developments, are larger than the equivalent local governments in the US. They also have a relatively blunter set of tools to affect housing supply, and those tools that they do have are often decided behind closed doors with less community involvement than in the US. Local governments in the US have many policy instruments of ‘exclusionary zoning’ that directly influence local house prices. These include stipulating minimum lot sizes, maximum neighborhood density, height restrictions, historical preservation orders and other measures

that constrain supply. They operate at a highly localised scale and are often subject to ballot initiatives. This tends to increase the salience of local housing politics in the US, drawing homeowners into political battles, and has been blamed for rising house prices in supply-constrained areas (Fischel 2005; Glaeser, Gyourko, and Saks 2005; Mangin 2014; Metcalf 2018).

It may be that in other places with a lot of local policy instruments affecting house prices, price anxiety and homeownership are also more salient. Further research is needed into whether these patterns hold more broadly across the world. Many advanced democracies face a crisis of housing affordability that requires political solutions – and, therefore, more work from political scientists to help solve it.

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Appendix for “NIMBYism as Place-Protective Action: The Politics of Housebuilding”

Table A1: Relationship number of times a feature appears in conjoint profiles and price anxiety (scale from 1-5)

Attribute	Level	Coefficient
Distance	100 meters	0.0005 (0.05)
	200 meters	-0.06 (0.05)
	1/4 mile	-0.04 (0.05)
	1 mile	0.005 (0.05)
	2 miles	-0.04 (0.05)
Style	Traditional	-0.02 (0.03)
Density and Type	3-4 bedroom flats	0.08** (0.04)
	Terraced houses	0.06 (0.04)
	Detached houses	-0.02 (0.04)
Usage	Space for businesses	0.02 (0.03)
Transport Links	Improved Roads	-0.004 (0.03)
	Increased Bus Services	-0.01 (0.03)
Services	Primary school	0.008 (0.03)
	GP surgery	0.04 (0.03)
Type of people	Both	0.02 (0.03)
	Local residents	-0.004 (0.03)
Green Space	Small Community Park	-0.02 (0.03)
Percent affordable	0%	-0.03 (0.04)
	50%	-0.01 (0.04)
	75%	0.007 (0.04)
Observations		1088
R ²		0.017

Note: *p<0.1; **p<0.05; ***p<0.01

Figure A1: Differences in mean support for housebuilding with 95% confidence intervals, excluding respondents aged under 35 from Dynata Sample

Figure A2: Marginal Mean Support for Attributes of Housing Developments, amongst over Homeowners and Non-Homeowners aged 35+

Figure A3: Marginal Mean Support for Attributes of Housing Developments, amongst Respondents aged 18-34 and 65+

Figure A4: Marginal Mean Support for Attributes of Housing Developments, amongst Conservative and Labour Supporters

Figure A5: Marginal Mean Support for Attributes of Housing Developments, amongst Leave and Remain Supporters (Brexit)

Figure A6: Marginal Mean Support for Attributes of Housing Developments, amongst Respondents who Support and Oppose Redistribution