Gentrification Causes Social Class Disparities in Belonging

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Abstract

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Gentrification impacts nearly every major metropolitan area in the U.S. One critique of gentrification is that the influx of wealthy newcomers and the associated change to the neighborhood threatens working-class residents' sense of belonging. Using a novel experimental paradigm, we find that relative to stable, working-class neighborhoods, gentrifying neighborhoods reduced belonging for lower social class individuals and increased belonging for higher social class individuals (Study 1). This social class disparity in belonging is primarily mediated by lower social class individuals perceiving themselves to be less similar to other residents and feeling a reduced sense of fit with institutions in the gentrifying neighborhood (Study 2). We discuss implications for equitable urban policy that go beyond housing security and future directions for a social psychology of gentrification.

Gentrification Causes Social Class Disparities in Belonging

There are few urban policy issues that are as contentious as gentrification. Since 2000, gentrification has rapidly accelerated in the U.S. (Richardson et al., 2019), and continues to be a hot button topic for public, political, and academic debate. While a significant focus of prior quantitative literature seeks to understand whether gentrification causes residential displacement, the social psychological consequences and mechanisms are less understood. One major concern is that gentrification threatens working class residents' sense of belonging to their neighborhood, that is, their sense of comfort, attachment, and fit with their neighborhood. Given that reduced neighborhood belonging is associated with decreased civic engagement (Daryanto & Song, 2021; Hyra, 2015; Stefaniak et al., 2017) and worse psychological and physical health (Gonyea et al., 2017; Moyano-Díaz & Mendoza-Llanos, 2021), empirical investigations of gentrification's impact on belonging are critical.

To date, sociologists have dominated gentrification research while social psychologists have remained on the sidelines. Though gentrification naturally begets research methods that sociologists excel in (e.g., longitudinal analyses with Census data, GIS, ethnography), social psychologists' expertise in experimental methods can be valuable for isolating psychological mechanisms, testing causality, and triangulating prior findings. And from a theoretical standpoint, social psychological theories in identity and culture can pave new directions for research on the person-level dynamics of gentrification.

The present research uses an experimental paradigm to examine two key questions regarding gentrification's social psychological impact. First, we examine how people's sense of belonging to gentrifying versus stable neighborhoods varies across social class.[1] Then we test

[1] Although we focus on social class, we would make similar predictions for race. We report analyses by race in the footnotes and further discuss the influence of race in the General Discussion.

several potential mechanisms to explain why there may be social class disparities in belonging within gentrifying neighborhoods.

What is Gentrification

Today, gentrification conjures images of new glass-paneled high rises, Whole Foods, art galleries, and coffee shops (Kern, 2016). Gentrification has been colloquially described as "you know it when you see it," and perhaps due to its immediate recognizability it has gained increasing public attention and calls for intervention (Brown-Saracino, 2017).

Despite its omnipresence, scholars disagree on how to define and measure gentrification (for a review see: Finio, 2021; Preis et al., 2020). Quantitative approaches commonly rely on a mix of population-level metrics aggregated over a geographic tract. For example, changes in median household income, property values, the proportion of college-educated residents, and the proportion of renters, to name a few (Freeman, 2005; Landis, 2016; Richardson et al., 2019). Gentrification scholars are also increasingly recognizing the importance of race when operationalizing gentrification and studying its impacts (Rucks-Ahidiana, 2022). It is not uncommon for researchers to include increasing proportions of White residents as an indicator of gentrification (e.g., Loukaitou-Sideris et al., 2019), and much of qualitative work details gentrification in historically Black and Latinx neighborhoods (e.g., García & Rúa, 2018; Hyra, 2015; Versey, 2018).

From a social psychology perspective, the subjective perception that gentrification is taking place is equally meaningful. In doing so, we join scholars who advocate for research on gentrification to go beyond strictly objective measurements of neighborhood change in order to capture its nuanced impacts on residents (Brown-Saracino, 2017; DeVylder et al., 2019). Thus,

in the present research, we broadly define gentrification as the *perceived* transformation of urban, working-class neighborhoods into more affluent, more White neighborhoods.

Gentrification's Threat to Belonging

Central to the debate around gentrification is whether it causes displacement. While a major focus of prior literature is on residential displacement (Brummet & Reed, 2019; Desmond & Gershenson, 2016; Ding et al., 2016; Freeman, 2005; Freeman et al., 2016), strictly focusing on the physical place of residence overlooks the erosion of residents' sense of *belonging*. Gentrification scholars have also referred to this as indirect displacement or sociocultural displacement (Davidson, 2009; Marcuse, 1985), clarifying that gentrification not only entails the direct displacement of residents via eviction, but also the psychological harm as the neighborhood loses its original working-class identity. Importantly, this can happen regardless of whether or not residents are able to stay in their homes, making it worth studying independently of residential displacement.

Social psychologists have long studied belonging as a fundamental human need and the circumstances that foster or hinder belonging across social class (e.g., Ni et al., 2020; Ostrove & Long, 2007; Stephens et al., 2012; Trawalter et al., 2021). As people navigate their daily lives, they regularly encounter both physical and sociocultural cues that signal which identities are appropriate and welcome. For working-class individuals, navigating a world that is typically designed by and for middle-class constituents means they often face barriers to accessing and thriving in these spaces. Much of this empirical work has been conducted in the education context, where researchers have found that lower-SES students feel less belonging at their universities due to a mismatch between their own interdependent values and the independent

values of the university (Stephens et al., 2012), or even due to feeling a lack of connection with famous physical landmarks and spaces on the campus itself (Trawalter et al., 2021).

In the context of gentrification, where a working-class neighborhood *becomes* more affluent, this threat to belonging is more pronounced. Specifically, gentrification can be understood as a type of identity threat to existing residents (Stephan et al., 2016). Not only is there a realistic threat to the livability and affordability of the neighborhood, but also a symbolic threat to the lifestyle, norms, and values of the working-class community. It may be that gentrifiers initially feel at odds with the working-class character of the neighborhood, but by virtue of their socioeconomic status gentrifiers carry disproportionate economic and political power to shape the neighborhood. In time the neighborhood shifts to serve that of residents with more influence, to the detriment of lower social class residents.

Previous studies demonstrating gentrification's impact on belonging typically rely on correlational evidence and case studies of a few neighborhoods. In a study of Philadelphia neighborhoods from 2000 to 2014, researchers found that community connection was overall lower in neighborhoods that gentrified compared to those that did not gentrify, though they did not examine how this varied with residents' social class (Gibbons et al., 2020). Countless qualitative studies have also detailed longtime residents' experiences of alienation and feeling othered as they witness their neighborhood being transformed. In Versey (2018)'s case study of gentrifying Central Harlem, for example, one longtime resident shares that, "When I step outside this building here, you understand, people pass me and look at me like I'm in the wrong place." Valli (2015)'s interviews with residents in Bushwick echo this, "When you see these new people around, you feel different from how you felt before. You become more aware of yourself, you watch how you behave and how you speak." Such stories highlight the heighted vigilance and

out-of-place feeling that existing residents experience when seeing wealthier newcomers move into their neighborhood.

Why Would Gentrification Create Social Class Disparities in Belonging?

Gentrification could impact belonging through multiple psychological mechanisms. Lower social class individuals may feel less belonging to gentrifying neighborhoods because they perceive less fit with institutions in the neighborhood. For instance, new retail and amenities that cater to the incoming wealthier clientele are often unaffordable nor wanted by existing residents. Meanwhile essential public amenities and accessible social spaces are scaled back. In Hyra (2015)'s ethnography of Shaw/U Street in Washington D.C., one resident encapsulates this, "The newer folks want more of the retail… the sit down restaurants. Uh, you know more of the local nightlife, which is some of the things that older residents… don't necessarily want." As they anticipate their frequented institutions becoming more exclusive or disappearing altogether, lower social class residents may feel increasingly out of place.

Lower social class individuals may also perceive themselves to be less like residents in gentrifying neighborhoods, whereas the opposite would be true for higher social class individuals. According to social identity theories (Hornsey, 2008; Turner & Reynolds, 2011), a particular context may make specific group identities more salient and subsequently highlight group differences. This may explain why prior studies have found that tenants of mixed-income developments have struggled to build community (Chaskin & Joseph, 2010; Chinchilla, 2010) and that ethnic heterogeneity tends to erode overall neighborhood belonging (Newman et al., 2016; van der Meer & Tolsma, 2014; Versey, 2018). In line with this, gentrification would make class differences more salient, leading people to identify with their social class and feel greater belonging to their respective groups.

Lastly, gentrifying neighborhoods may also appear to be less socially cohesive due to the increased turnover of residents. Social cohesion, that is community members' trust and willingness to help each other, requires time and stability. Unsurprisingly, neighborhoods characterized by high rates of residential mobility have been found to be less cohesive (Sampson, 1991; Sampson et al., 1997). While gentrifying neighborhoods may be less socially cohesive than stable neighborhoods overall, lower social class individuals may find gentrifying neighborhoods to be even less cohesive than higher social class individuals in anticipation of themselves or neighbors like themselves being displaced. We examine all these potential mechanisms in the present research.

Present Research

Across two studies we tested whether belonging to gentrifying vs stable, working-class neighborhoods depends on social class. Study 1 first establishes whether gentrification leads to a social class disparity in belonging. Study 2 extends this by examining multiple psychological mechanisms for the link between gentrification and belonging.

Study 1

In Study 1 (preregistered here: https://osf.io/bfha8), participants evaluated two fictitious neighborhood profiles, one depicting a gentrifying neighborhood and another depicting a stable neighborhood. We hypothesized that higher social class would predict greater belonging in the gentrifying neighborhood, but not in the stable neighborhood.

Method

Participants

1210 U.S. adults completed the study on Prolific. As pre-registered, we excluded 8 for failing an attention check, 6 for not providing any socioeconomic status information, 99 for

failing the manipulation check, and 12 for providing low-quality open-ended responses Our final sample was 1085 participants (55.8% women, 41.2% men, 2.9% non-binary or other gender; M_{age} = 39, SD_{age} = 14.08; 75.1% White, 6.8% Asian, 6.2% Black, 4.1% Hispanic and/or Latinx, 7.8% multiracial or other racial group).

Procedure

Participants saw profiles of two neighborhoods, one gentrifying and one stable, neighborhood in random order (a within-subjects design). After viewing the first neighborhood, participants described their general impression of the neighborhood and what a typical day in this neighborhood would be like to help them imagine living there. Participants then reported their sense of belonging to the neighborhood (our primary dependent variable). Then they repeated the process for the second neighborhood. Finally, they provided demographic information about themselves.

Materials and Measures

Neighborhood Profiles. We designed two fictitious neighborhood profiles that were modeled after popular real estate websites (see Figure 1). One represented a gentrifying neighborhood and another represented a stable, low-income neighborhood. The neighborhoods were labeled as either "Neighborhood A" or "Neighborhood B" and were counterbalanced corresponding to the order in which they were presented. Both neighborhoods had similar housing prices (i.e., "Prices are below the Metro City median"), housing availability, and were a similar distance from downtown.

The neighborhood profiles differed in their projected housing market, photos, and resident quotes. The gentrifying neighborhood was projected to "grow a lot in the next few years" whereas the stable neighborhood was projected to "stay the same." The photos we

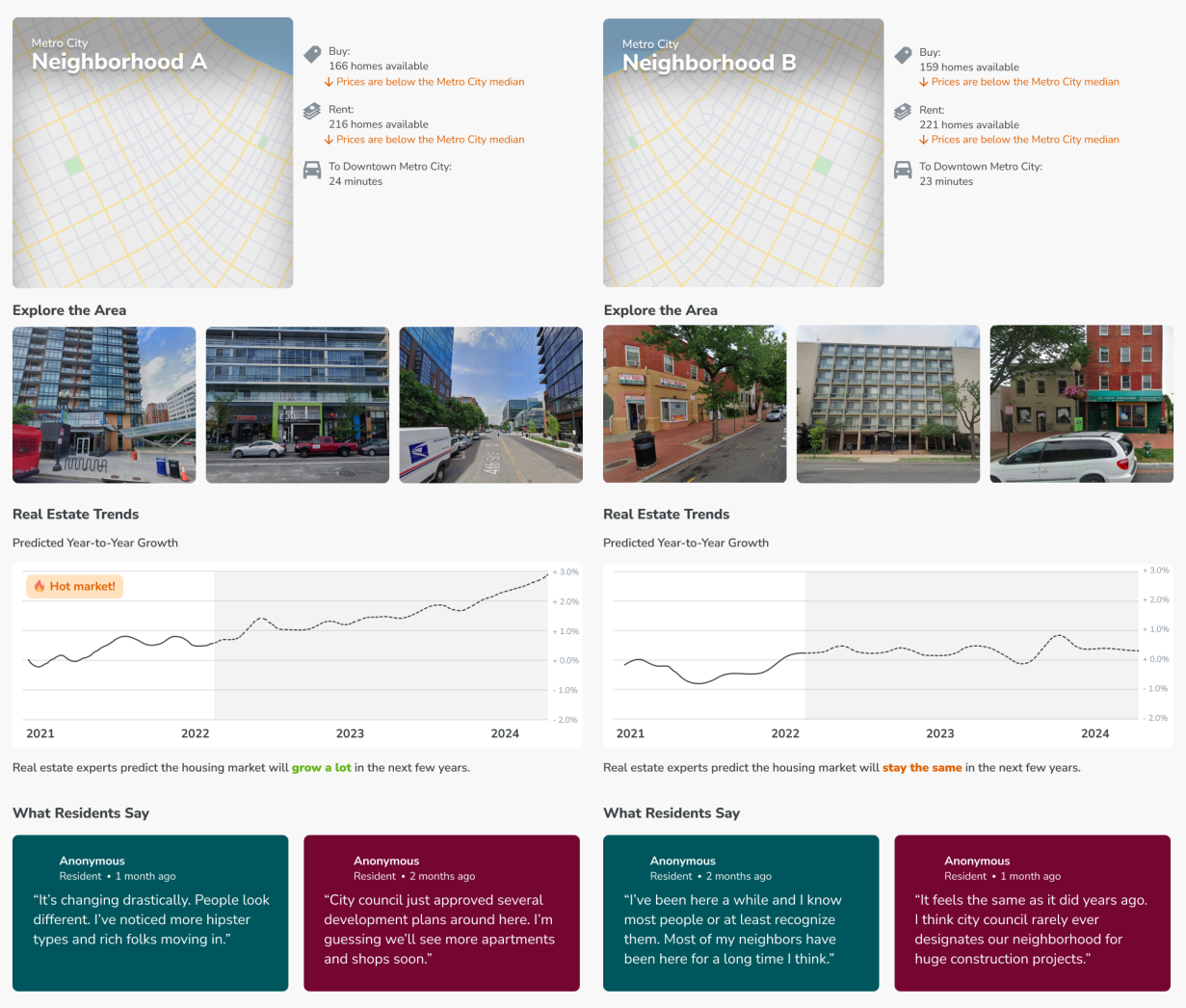
selected came from the Washington DC Navy Yard area, a neighborhood considered to be one of the most gentrified neighborhoods in the U.S. (Institute on Metropolitan Opportunity, 2019). Photos for the gentrifying neighborhood were randomly chosen from blocks that were marked as having visible signs of reinvestment (e.g., trendy restaurants or bars, large scale residential developments), whereas photos that represented the stable neighborhood lacked these visible changes (Golash-Boza et al., 2021; Hwang & Sampson, 2014). We ensured that there were no people visible in each photo. Lastly, resident quotes from the gentrifying neighborhood emphasized the higher social class of newcomers and increasing development, e.g., "I've noticed more hipster types and rich folks moving in" and "City council just approved several development plans around here." whereas the stable neighborhood emphasized the lack of change, e.g., "I've been here a while and I know most people or at least recognize them" and "I think city council rarely ever designates our neighborhood for huge construction projects."

We pre-tested the profiles to ensure that they differed in perceived neighborhood demographics. We expected the gentrifying neighborhood to be seen as having an increasing proportion of upper class and White residents whereas the stable neighborhood would be unchanging and have a smaller proportion of upper class and White residents overall. 100 participants (66 woman, 33 men, 1 non-binary; M_{age} = 37.41, SD_{age} = 12.51; 67 White, 17 Asian, 5 Black, 4 Hispanic and/or Latinx, 7 multiracial or other racial group) saw both neighborhood profiles and estimated what percentage of the *current* and *future* residents were upper class (vs middle or lower class), and White (vs Asian, Black, Latinx, or other racial group). Within-subject ANOVAs confirmed significant interactions (Fs > 19.27, ps < .001). The stable neighborhood was perceived as having fewer upper class and White residents overall, and that this percentage would be the same in the future as in the present (ps > .49) whereas the

gentrifying neighborhood was predicted to have more upper class and White residents in the future than in the present (p values < .001).

Figure 1

Gentrifying and Stable Neighborhood Profiles



Belonging. We used four items adapted from the Sense of Social Fit scale (Walton & Cohen, 2007) to measure sense of belonging in a neighborhood context, specifically. Participants indicated their agreement on a 7-point scale (1 = Strongly disagree, 7 = Strongly agree) to the following: "I would want to live in this neighborhood," "I feel like I would belong in this neighborhood," "I would fit in well in this neighborhood," and "I would feel comfortable in this

neighborhood." The four items were averaged separately for the stable condition (α = 0.95) and gentrifying condition (α = 0.95). Higher scores indicate greater belonging.

Socioeconomic Status (SES). We measured socioeconomic status using a composite of education, income, and savings. Participants self-reported their highest level of education attainment (1 = Less than a high school degree, 6 = Graduate degree), annual income (1 = Less than $5,000, 9 = $200,000 or higher), and total savings (1 = Less than $500, 9 = $500,000 or more). The three measures were standardized and averaged together to form a composite. Higher scores indicate higher SES. Lastly, the composite was standardized again for analyses. See SI for the distribution of education, income, and savings in all studies.

Subjective Social Status (SSS). In addition to objective socioeconomic status, we also measured subjective social status using the MacArthur Subjective Social Status ladder (Adler et al., 2000). Participants were instructed, "Think of this ladder as representing where people stand in the United States. At the top of the ladder are the people who are best off - those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off - those who have the least money, least education, the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top, the lower you are, the closer you are to the people at the very bottom. Where would you place yourself on this ladder?" Participants chose from one of 10 rungs on a ladder, where higher rungs represented higher status. Lastly, scores were standardized for analyses. See SI for the distribution of SSS in all studies.

Covariates. Participants reported their age, gender (-1 = not cisgender man, 1 = cisgender man), race (-1 = not White, 1 = White), and urbanity (-1 = suburban or rural, 1 = urban) of their current neighborhood.

Results

Analysis Plan

Given the study's within-subject design, we treated the data as a two-level nested structure with participants as the clustering variable. We computed linear mixed-effect regression models with random intercepts for participants. Neighborhood condition was effect coded (-1 = stable, 1 = gentrifying), and SES and SSS were standardized. We used the *lmerTest* package in R (Kuznetsova et al., 2017) to estimate models with restricted maximum likelihood using Satterthwaite degrees of freedom for testing fixed effects.

Social Class and Neighborhood Interact to Predict Belonging

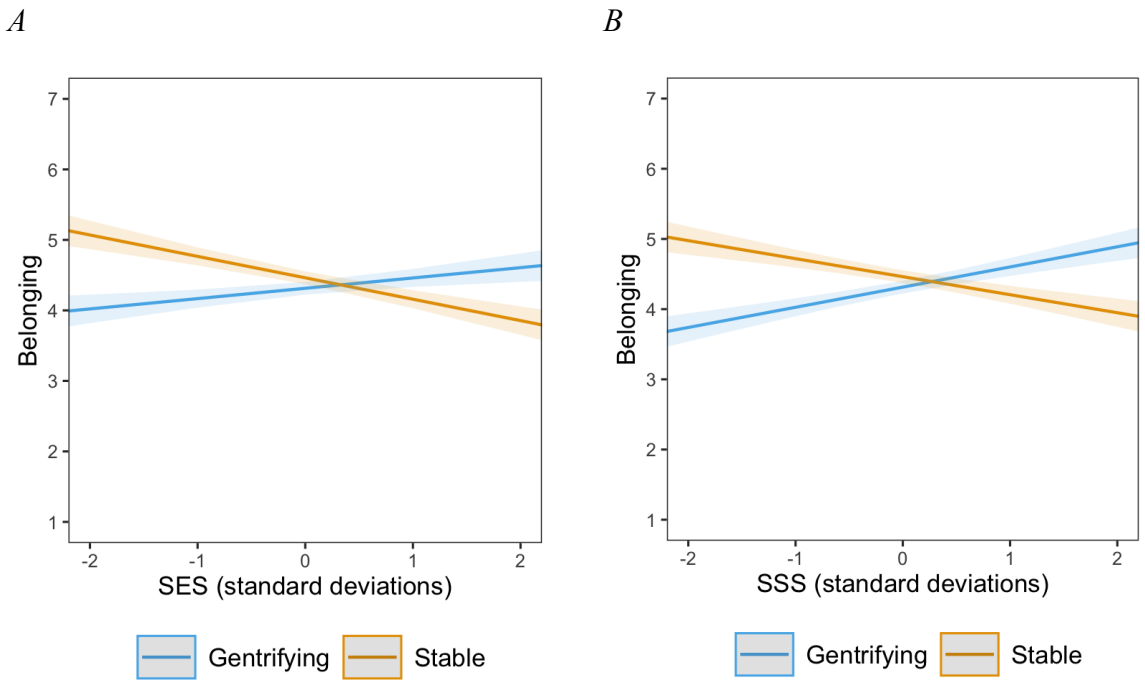
Socioeconomic Status. There was a significant main effect of SES and neighborhood on belonging such that lower SES individuals reported greater belonging overall, b = -.08, SE = .03, 95% CI [-.15, -.01], and participants felt greater belonging to the stable neighborhood overall, b = -.07, SE = .03, 95% CI [-.13, -.01]. Critically, the interaction between SES and neighborhood was significant, b = .23, SE = .031, 95% CI [.16, .29], suggesting that sense of belonging to each neighborhood depended on participant SES. Specifically, simple slope tests revealed that SES was significantly associated with greater belonging in the gentrifying neighborhood, b = .15, SE = .05, 95% CI [.06, .24] and lower belonging in the stable neighborhood, b = -.30, SE = .05, 95% CI [-.39, -.21]. Figure 2 plots the simple slopes for the interaction. The interaction remained significant even after controlling for participant race, gender, age, and urbanity, b = .23, SE = .03, 95% CI [.16, .29].

Subjective Social Status. In addition to objective SES, we computed the same models with SSS. The main effect of SSS on belonging was not significant, b = .02, SE = .03, 95% CI [-.05, .08]. There was a significant main effect of neighborhood such that participants felt greater

belonging to the stable neighborhood overall, b = -.07, SE = .03, 95% CI [-.13, -.01] and there was a significant interaction between SSS and neighborhood, b = .27, SE = .03, 95% CI [.21, .33]. Simple slope analyses revealed that the higher SSS participants felt greater belonging to the gentrifying neighborhood than lower SSS participants, b = .29, SE = .05, 95% CI [.20, .38]. In contrast, higher SSS participants felt less belonging to the stable neighborhood than lower SSS participants, b = -.26, SE = .46, 95% CI [-.34, -.17]). This interaction remained significant even after controlling for participant race, gender, age, and urbanity, b = .27, SE = .03, 95% CI [0.21, 0.33].[2]

Figure 2

Simple Slopes Depicting Belonging to Gentrifying vs Stable Neighborhoods by SES (Panel A) and by SSS (Panel B)



[2] We did not find significant two-way or three-way interactions with race. Neighborhood x Race, b = .052, p = .16, Neighborhood x Race x SES, b = .024, p = .53. Neighborhood x Race x SSS, b = .002, p = .96.

Note. Error bands represent 95% confidence intervals.

Discussion

Study 1 provides evidence that gentrifying and stable neighborhoods produce social class disparities in belonging. Compared to the stable neighborhood, the gentrifying neighborhood reduced belonging for lower social class individuals but increased belonging for higher social class individuals. In Study 2 we sought to test several psychological mechanisms for this social class gap in belonging to gentrifying neighborhoods.

Study 2

Study 2 (preregistered here: https://osf.io/2849w) sought to replicate Study 1 as well as investigate several psychological mechanisms for the social class disparity in belonging. We hypothesized that perceived social cohesion of a neighborhood, fit with neighborhood institutions, and perceived similarity with other residents, would mediate the relationship between social class and belonging to each neighborhood.[3]

Method

Participants

603 U.S. adults completed the study on Prolific. As pre-registered, 18 were excluded for failing an attention check, 54 were excluded for failing the manipulation check, and 21 were excluded for providing low-quality open-ended responses. Our final sample was 510 participants (48.2% women, 49.6% men, 2.2% non-binary; M_{age} = 38, SD_{age} = 13.12; 73.7% White, 8.6% Black, 5.1% Hispanic and/or Latinx, 4.9% Asian, 7.6% multiracial or other racial group).

[3] We also tested three alternative mediators: concerns about affordability, anxious expectations of discrimination, and perceived voice opportunity. Results for these mediators are reported in SI.

Procedure

Study 2 followed a similar procedure to Study 1 where participants first saw two neighborhood profiles, then answered several questions. However, instead of seeing the profiles in a randomized order all participants first saw the stable neighborhood profile followed by the gentrifying neighborhood profile. This was done to strengthen the effect of our manipulation by more closely emulating the process of seeing a stable neighborhood "start to" gentrify. Finally, to reduce survey fatigue, participants were randomly assigned to answer additional questions for just one of the two neighborhoods.

Materials and Measures

Neighborhood Profiles. Participants saw the same profiles that were used in Study 1.

Belonging. Belonging to each neighborhood was measured using the same four items in Study 1 ($\alpha = 0.95$).

Institutional Fit. Institutional fit with the neighborhood was measured by the mean score of four items ($\alpha = 0.92$). Participants first read, "Think about the various institutions that would be in this neighborhood. By 'institutions' we mean the shops, restaurants, schools, parks, places of worship, facilities, and so forth." Then they were asked, "To what extent do you think that the institutions in this neighborhood… would have everything you want," "would be meant for people like you," "would cater to people like you" and "would seem appealing to you." Participants responded on a 5-point scale from 1 = Not at all to 5 = Definitely. Higher scores indicate greater institutional fit.

Similarity With Other Residents. Perceived similarity to residents in the neighborhood was measured by two adapted items ($\alpha = 0.96$) from Craig & Richeson (2012; Study 5). Participants indicated their agreement on a 7-point scale (1 = Strongly disagree, 7 = Strongly

agree) to the following: “I think I’m very similar to most people living in this neighborhood,” and “I would have a lot in common with the average person living in this neighborhood.” Higher scores indicate greater perceived similarity.

Social Cohesion. Perceived social cohesion of the neighborhood was measured by the mean score of four items (α = 0.83) from Sampson et al. (1997). Participants indicated their agreement on a 7-point scale (1 = Strongly disagree, 7 = Strongly agree) to the following: “People around here would be willing to help their neighbors,” “I think this would be a close-knit neighborhood,” “I would trust people in this neighborhood,” and “I would not get along with people in this neighborhood” (reverse-coded). Higher scores indicate more cohesion.

Socioeconomic Status. Socioeconomic status was measured the same way as Study 1 with a composite of self-reported educational attainment, annual income, and savings.

Subjective Social Status. Subjective social status was measured using the same MacArthur ladder from Study 1.

Table 1

Means, Standard Deviations, and Correlations Among Variables in Study 2 (N = 510)

Variable	*M*	*SD*	1	2	3
1. Belonging	4.30	1.49	-		
2. Institutional fit	3.01	1.01	0.75***	-	
3. Similarity w/ other residents	4.04	1.52	0.77***	0.69***	-
4. Social cohesion	4.44	1.17	0.65***	0.38***	0.59***

***$p < .001$

Results

Social Class and Neighborhood Interact to Predict Belonging

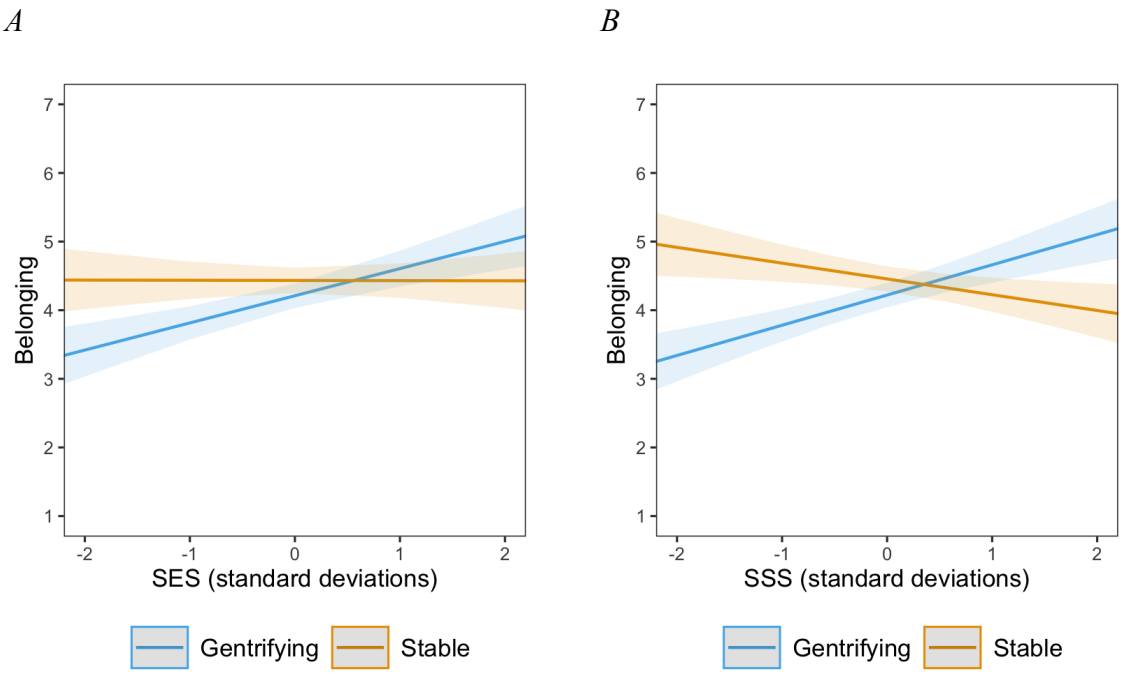
As in Study 1, there was a significant interaction between SES and neighborhood on belonging, $b = .20$, $SE = .07$, 95% CI [.07, .33]. Simple slope analyses showed that SES

predicted greater belonging to the gentrifying neighborhood, b = .40, SE = .09, 95% CI [.22, .57]. However, contrary to our predictions and to the results from Study 1, SES did not significantly predict belonging to the stable neighborhood, b = .00, SE = .09, 95% CI [-.19, .18].

There was also a significant interaction between SSS and neighborhood on belonging, b = .34, SE = .06, 95% CI [.21, .46]. Replicating Study 1, SSS predicted greater belonging to the gentrifying neighborhood, b = .44, SE = .09, 95% CI [.27, .62], and lower belonging to the stable neighborhood, b = -.23, SE = .09, 95% CI [-.41, -.05].[4]

Figure 3

Simple Slopes Depicting Belonging to Gentrifying vs Stable Neighborhoods by SES (Panel A) and by SSS (Panel B)



Note. Error bands represent 95% confidence intervals.

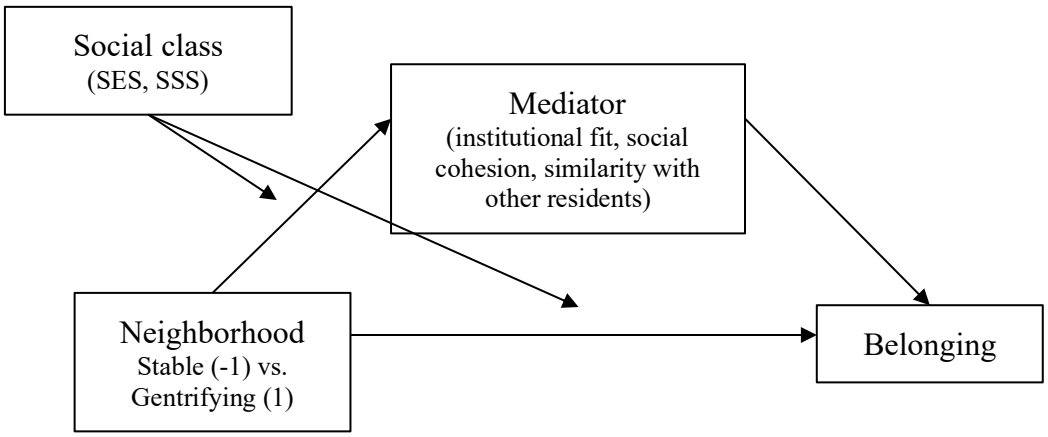
[4] We did not find significant two-way or three-way interactions with race. Neighborhood x Race, b = .009, p = .91, Neighborhood x Race x SES, b = -.003, p = .97. Neighborhood x Race x SSS, b = -.08, p = .31.

Mediation Analysis

To investigate what explains why belonging to the gentrifying versus stable neighborhood depends on social class, we conducted a series of moderated mediation analyses using PROCESS Model 8 with 10,000 bootstrap resamples (see Figure 4 for a diagram of the conceptual model). We used bootstrapping estimation to probe conditional indirect effects (-1 = stable versus 1 = gentrifying). Our key parameter of interest is the index of moderated mediation, which tests whether the conditional indirect effects are significantly different from each other.

Figure 4

Conceptual Moderated Mediation Model Showing the Interaction Between Social Class and Neighborhood Predicting Belonging



Institutional Fit. The interaction between social class and neighborhood on institutional fit was significant (*p*s < .01; see Table 2 for model results). The indirect effect of social class on belonging through institutional fit was moderated by neighborhood condition (see Table 3 and Table 4). Specifically, social class predicted greater institutional fit with the gentrifying (vs. stable) neighborhood which in turn led to more belonging.

Similarity With Other Residents. The interaction between social class and neighborhood on institutional fit was also significant (*p*s < .001; see Table 2 for model results). Social class predicted feeling more similar to residents in the gentrifying (vs. stable) neighborhood which in turn led to more belonging (see Table 3 and Table 4).

Social Cohesion. Lastly, the interaction between social class and neighborhood on social cohesion was significant when social class is operationalized as SSS, $p < .001$, but marginally significant when operationalized as SES, $p = .05$ (see Table 2 for model results). We still proceeded with moderated mediation analyses for both measure and found that the patterns were consistent: SSS predicted perceiving more social cohesion in the gentrifying (vs. stable) neighborhood which in turn led to more belonging (see Table 3 and Table 4).

Table 2

Regression Analysis for Variables Predicting Mediators (Institutional Fit, Similarity with Other Residents, and Social Cohesion) in Study 2 (N = 510)

	Institutional fit				Similarity w/ other residents				Social cohesion			
Predictor	*b*	*SE*	*t*	*p*	*b*	*SE*	*t*	*p*	*b*	*SE*	*t*	*p*
SES	.05	.04	1.1	.27	.15	.07	2.32	.02	.12	.05	2.74	.01
Neighborhood	.21	.04	4.85	<.001	-.22	.07	3.37	<.001	-.56	.05	12.51	<.001
SES x Neighborhood	.11	.04	2.58	.01	.22	.07	3.34	<.001	.09	.05	1.94	.054
SSS	.01	.04	.18	.85	.09	.07	1.35	.18	.10	.05	2.17	.03
Neighborhood	.21	.04	4.80	<.001	-.23	.07	3.46	<.001	-.56	.04	12.57	<.001
SSS x Neighborhood	.17	.04	3.95	<.001	.33	.07	5.00	<.001	.15	.05	3.36	<.001

Note. Neighborhood was effect coded such that stable = -1 and gentrifying = 1. Standardized coefficients are reported.

Table 3

Moderated Mediation Analyses of SES Predicting Belonging at Each Neighborhood in Study 2 (N = 510)

Conditional indirect effects of each mediator	Effect	Boot SE	Boot 95% CI
Institutional fit			
Stable	-.08	.08	[-.23, .07]
Gentrifying	.19	.07	[.06, .33]
Similarity with other residents			
Stable	-.05	.08	[-.20, .10]
Gentrifying	.28	.06	[.16, .41]
Social cohesion			
Stable	.04	.07	[-.10, .18]
Gentrifying	.21	.06	[.09, .33]
Index of moderated mediation	Index	Boot SE	Boot 95% CI
Institutional fit	.40	.11	[.19, .61]
Similarity with other residents	.49	.10	[.29, .69]
Social cohesion	.17	.09	[-.01, .36]

Table 4

Moderated Mediation Analyses of SSS Predicting Belonging at Each Neighborhood in Study 2 (N = 510)

Conditional indirect effects of each mediator	Effect	Boot SE	Boot 95% CI
Institutional fit			
Stable	-.19	.08	[-.35, -.03]
Gentrifying	.21	.07	[.08, .34]
Similarity with other residents			
Stable	-.18	.08	[-.34, -.03]
Gentrifying	.31	.06	[.19, .43]
Social cohesion			

Stable	-.05	.07	[-.19, .08]
Gentrifying	.24	.07	[.12, .37]

Index of moderated mediation	Index	Boot SE	Boot 95% CI
Institutional fit	.40	.11	[.19, .61]
Similarity with other residents	.49	.10	[.29, .69]
Social cohesion	.30	.09	[.11, .48]

Discussion

Study 2 replicated findings from Study 1 where belonging to the gentrifying neighborhood increased with social class. Perceived institutional fit and similarity to other residents independently mediated the interaction between social class and neighborhood on belonging. Social cohesion also mediated the interaction between SSS and neighborhood on belonging. In sum, lower social class individuals anticipated less belonging to the gentrifying neighborhood in comparison to the stable neighborhood via a weaker sense of fit with neighborhood institutions, less similarity with other residents, and perceiving the neighborhood to be less socially cohesive.

Unexpectedly, we found that SES was unrelated to belonging in the stable neighborhood. This could be interpreted in two ways – either higher SES individuals felt more belonging to the stable neighborhood than expected and/or lower SES individuals felt less belonging to the stable neighborhood than expected. From a cultural psychological perspective, higher SES individuals tend to have a more internal locus of control (Stephens et al., 2014; Talhelm et al., 2018) and thus, may be less sensitive to their environments and feel more belonging overall regardless of the neighborhood. What is clearly consistent, however, is that higher social class predicts greater belonging to the gentrifying neighborhood. Moreover, at the extreme upper end of social class,

the gentrifying neighborhood elicits greater feelings of belonging than the stable neighborhood, whereas the reverse is true for the extreme lower end of social class.

General Discussion

Across two studies we find that higher social class predicts greater belonging to gentrifying neighborhoods versus stable neighborhoods. Put differently, gentrification increases a sense of belonging for higher social class individuals at the expense of lower social class individuals. To our knowledge, no other studies have studied gentrification experimentally, making this one of the first pieces of evidence that gentrification can *cause* social class disparities in belonging. This is telling because prior work has been largely descriptive or correlational, leaving open the possibility that gentrification targets neighborhoods whose residents already feel unattached to their communities. Thus, this work helps to dispel the myth that working-class neighborhoods are "blank canvases" (Gregor, 2014) that lack social and psychological resources. This gentrification-induced "belonging gap" is perhaps but another reason why investors are eager to upscale neighborhoods as they wish to cater to affluent consumers who have more spending power. Indeed, gentrification proponents may be right in that it improves the living conditions of a neighborhood, but for whom?

The present research also introduces a subjective measure of social class in tandem with more traditional objective measures of social class. Notably, across both studies we find that the social class disparity in belonging is more pronounced when operationalizing social class with SSS versus SES. This highlights the uniquely psychological experience of social comparison that is exacerbated in gentrifying contexts as different social classes are forced to confront one another.

Lastly, we show that gentrification impacts belonging via multiple psychological mechanisms. We found that lower social class individuals saw the gentrifying neighborhood as having fewer compatible amenities, being less socially cohesive, and having less similar residents to themselves in comparison to the stable neighborhood. These results suggest that policies that aim to protect vulnerable residents should broaden their focus beyond housing security and consider how residents interact with one another and the institutions of their neighborhood. In neighborhoods where gentrification is already taking place, emphasizing a collective identity as a member of the neighborhood may help overcome perceived differences and could act as a gateway for cross-class interactions. Maintaining welcoming and culturally accessible – not just affordable – social spaces can help buffer residents from feeling out of place.

Equitable Investment

It is important to situate gentrification as a product of ongoing structural neighborhood inequality. As such, gentrification is inherently tied to other forms of neighborhood inequality — persistent exclusion in wealthy, predominantly White neighborhoods, concentrated poverty in racial minority neighborhoods, and increasing poverty rates in suburban and rural neighborhoods. Research has increasingly acknowledged that gentrification is driven by more than just individual consumer preferences, but also public and private sector actors seeking to invest in development that will turn a profit (for a review see Hwang & Lin, 2016; Hyra et al., 2020). Just as gentrification is driven by individual and structural-level factors, so too does it require both individual and structural-level interventions.

Upon first glance, the results of this work might suggest that stable, working-class neighborhoods should remain untouched. After all, lower social class individuals report feeling

more belonging in stable neighborhoods and bringing more development could be threatening. However, we forward the argument of gentrification scholars who believe that such a fatalistic view falls into the logic of "false choice urbanism" (Slater, 2014). That is, that neighborhood investment does not automatically lead to the disenfranchisement of existing residents. Such a perspective neglects opportunities that are very much needed in low-income neighborhoods. The challenge, rather, is what that investment looks like and who holds the power and agency to determine it.

Consider alternative models of neighborhood investment. Take for example community land trusts where a group of people or a nonprofit purchases land using a shared-ownership model. Not only do these sites offer permanent affordable housing but they also have control over the types of retail and workspaces that are developed. This allows for a more complete community where residents can live, work, and leisure, rather than an isolated affordable housing unit surrounded by incongruent amenities. This is already a reality in many cities around the U.S., from the New York City Community Land Initiative to Seattle's Homestead Land Trust. Of course, when land and housing remain a market commodity, community land trusts have their drawbacks – they often require immense upfront costs and generate limited equity for homeowners. In the interim, building more housing, expanding rent control, mandating inclusionary zoning, and giving preferential tenancy for community members are all policy interventions that have been pursued (Bellisario et al., 2016; Chapple & Loukaitou-Sideris, 2021; Dorazio, 2022; King County, 2021; Wang & Karlinsky, 2021). Policymakers can pursue a constellation of solutions, some that address urgent crises of affordability and others that address long-term goals of shifting agency to the most vulnerable residents.

The Question of Race

Though our focus in the present work is on social class differences, any discussion on gentrification also warrants discussion on the intersection between class and race. Notably, race did not moderate any of our findings such that people of color reported similar levels of belonging to both neighborhoods and White Americans had a slight preference for the stable neighborhood. Nor did we find a three-way interaction between race, neighborhood, and social class on belonging. This was not entirely unexpected, hence why we did not have clear a priori hypotheses.

For one, heterogeneity within our sample of racial minorities may have diluted any interactions. Approximately 25% of each study sample identified as a person of color (i.e., not monoracial White). When we look at results within each racial minority group, Asian Americans slightly preferred the gentrifying neighborhood over the stable neighborhood in both studies, whereas Latinx Americans preferred the stable neighborhood and Black Americans showed inconsistent patterns. Asian Americans are the most economically divided racial group in the U.S. (Kochnar & Cilluffo, 2018) and thus represent a nebulous demographic as both potential perpetrators and victims of gentrification. Our sample more likely reflects the middle-class Asian American community who are relatively wealthier than Latinx and Black Americans. This may explain why our Asian participants were actually more attracted to the gentrifying neighborhood, thus attenuating any differences between White and racial minority participants.

Limitations and Future Directions

The reality of gentrification is inherently intersectional. Gentrification disproportionately harms lower-income, often older, people of color (Boterman & Hochstenbach, 2018; Buffel & Phillipson, 2019; Crewe, 2017; Hwang & Ding, 2020; Thurber et al., 2021; Versey, 2022). Given

the present work's experimental paradigm, our sampling was adequate to detect our hypothesized social class differences but likely underpowered to detect further crossed interactions. It is worth noting that experimental social psychology's proclivity for factorial designs has been criticized as being unconducive for intersectionality theory which posits that identities are mutually constitutive rather than independent (Settles et al., 2020). As such, while future work can and should aim to intentionally recruit more participants of color to conceptually replicate our experiments, the field should also take seriously suggestions to use mixed methods.

Another limitation of this work is that it attempts to reproduce a process that unfolds over multiple years in an online experiment. Experiencing gentrification first-hand is arguably more threatening and harmful than evaluating an ostensibly fictitious neighborhood than one has no personal stake in. Indeed, part of the psychological harm of gentrification is due to the disruption of longstanding social and cultural ties that residents cultivate over years. That we were still able to find significant, albeit small effects, of neighborhood change on belonging is evidence that the real-world effect may only be magnified. To maintain experimental control while increasing ecological validity, future studies could consider recruiting community samples and designing plausible examples of local development proposals.

Underlying gentrification are processes that social psychologists have studied for decades. Incoming residents may rely on neighborhood demographics and subsequent stereotypes to decide which areas are desirable (Anicich et al., 2021; Bonam et al., 2016). As gentrification occurs, incoming residents may bring about more independent norms and values that foster a cultural mismatch with existing working-class residents (Stephens et al., 2012). And as policymakers appeal to constituents' when pushing for legislation to either support or curb gentrification, social psychologists' understanding of emotions, morality, and social cognition

can reveal overlooked strategies for framing housing policies. Given that gentrification has adverse consequences for lower social class residents' belonging, we can look further downstream at the impact on civic and health behaviors. Understanding psychological displacement can also in part explain physical displacement. If residents no longer feel a sense of connection to a neighborhood that was once their home, they may "choose" to leave even if they can afford to stay.

In turn, gentrification and housing issues more broadly provide real-world tests of social psychological phenomena in a novel domain. In some ways, gentrification challenges conventional knowledge of intergroup anxiety and racial segregation - what draws wealthy residents to poorer, BIPOC neighborhoods that would typically be stereotyped as dangerous, exotic, undesirable places to live? Recent research suggests that White elites actually perceive moderate levels of people of color in a neighborhood to be "authentic," revealing that gentrifiers rely on both positive and negative stereotypes when evaluating neighborhoods (Yoon, 2022). Separately, housing scarcity is a rare bipartisan issue in today's politically polarized climate and deserves further attention from social psychologists. Building more housing is often opposed by homeowners of all political parties (Badger, 2018), prompting future research on what underlying emotions, morals, and attitudes makes housing an exception to the liberal versus conservative divide. In sum, social psychology stands to both benefit and benefit *from* the study of gentrification.

Conclusion

Gentrification is one of the most pressing urban issues today and is particularly concerning for existing working-class residents. The present work provides causal evidence that gentrification reduces belonging for lower social class individuals. Moreover, we show that

belonging is impacted via multiple psychological mechanisms including a reduced sense of social cohesion, similarity with other residents, and sense of fit with neighborhood institutions. In doing so, we join calls for public planning experts to consider more than simply one's place of residence but also a holistic social infrastructure that facilitates trust and cooperation between residents and includes relevant amenities. As cities continue to confront gentrification, it is critical that they attend to both the material and psychological security of their most vulnerable residents.

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Supplementary Information

Table S1.

Distribution of income, savings, educational attainment, and SSS in Study 1 and Study 2

Income	Study 1 (N = 1085)	Study 2 (N = 510)
Less than $5,000	11.4%	7.3%
$5,000 - $19,999	13.5%	13.1%
$20,000 - $34,999	14.2%	14.9%
$35,000 - $49,999	14.5%	11.6%
$50,000 - $74,999	18.6%	16.1%
$75,000 - 99,999	13.0%	10.3%
$100,000 - $149,999	8.1%	8.0%
$150,000 - $199,999	3.9%	1.5%
$200,000 or higher	2.9%	1.8%

Savings	Study 1 (N = 1085)	Study 2 (N = 510)
Less than $500	22.0%	19.2%
$500 - $4,999	20.6%	23.7%
$5,000 - $9,999	11.9%	9.1%
$10,000 - $19,999	8.5%	8.0%
$20,000 - $49,999	10.8%	9.6%
$50,000 - $99,999	8.3%	6.0%
$100,000 - $199,999	5.8%	3.6%
$200,000 - $499,999	6.1%	3.8%
$500,000 or more	6.1%	1.5%

Education	Study 1 (N = 1085)	Study 2 (N = 510)
Less than high school	0.7%	0.5%
High school	11.9%	10.8%
Some college	20.6%	18.7%
2-year degree	9.3%	8.0%
4-year degree	39.4%	33.5%
Graduate degree	18.1%	13.1%

Subjective social status	Study 1 (N = 1085)	Study 2 (N = 510)
1 (lowest status)	1.8%	1.3%
2	5.7%	4.1%

3	11.8%	12.6%
4	16.6%	16.6%
5	19.4%	16.6%
6	20.6%	16.4%
7	16.9%	10.6%
8	5.8%	5.6%
9	1.3%	0.5%
10 (highest status)	0.2%	0.2%

Moderated Mediation Analysis

In moderation models, the predictor (X) and moderator (W) are mathematically interchangeable. For ease of interpretation, we report the moderated mediation results with SES as the predictor and neighborhood as the moderator in the main manuscript. Here, we report the moderated mediation results with neighborhood as the predictor and SES as the moderator as another way of interpreting the data.

Table S2

Moderated mediation analysis of neighborhood predicting belonging at high and low levels of SES in Study 2 (N = 510)

Conditional indirect effects of each mediator at levels of SES	Effect	Boot SE	Boot 95% CI
Institutional fit			
-1 *SD* SES	0.12	0.08	[-.04, .27]
+1 *SD* SES	0.38	0.07	[.24, .52]
Similarity with other residents			
-1 *SD* SES	-0.33	0.07	[-.48, -.19]
+1 *SD* SES	0.00	0.07	[-.13, .13]
Social cohesion			
-1 *SD* SES	-0.65	0.07	[-.78, -.51]
+1 *SD* SES	-0.47	0.07	[-.61, -.34]
Index of moderated mediation	Index	Boot SE	Boot 95% CI
Institutional fit	0.13	0.04	[.03, .24]
Similarity with other residents	0.16	0.05	[.07, .27]
Social cohesion	0.09	0.05	[-.01, .18]

Note. Predictor variable is Neighborhood coded as stable = -1 and gentrifying = 1.

Table S3

Moderated mediation analysis of neighborhood predicting belonging at high and low levels of SSS in Study 2 (N = 510)

Conditional indirect effects of each mediator at levels of SSS	Effect	Boot SE	Boot 95% CI
Institutional fit			
-1 *SD* SSS	0.04	0.07	[-.10, .19]
+1 *SD* SSS	0.44	0.07	[.30, .59]
Similarity with other residents			
-1 *SD* SSS	-0.41	0.07	[-.56, -.27]
+1 *SD* SSS	0.08	0.07	[-.05, .21]
Social cohesion			
-1 *SD* SSS	-0.70	0.07	[-.85, -.57]
+1 *SD* SSS	-0.41	0.07	[-.54, -.28]
Index of moderated mediation	Index	Boot SE	Boot 95% CI
Institutional fit	0.20	0.05	[.10, .31]
Similarity with other residents	0.25	0.05	[.15, .35]
Social cohesion	0.15	0.05	[.05, .24]

Note. Predictor variable is Neighborhood coded as stable = -1 and gentrifying = 1.

Alternative Mediators

We tested a total of six potential mediators. Our three hypothesized mediators (institutional fit, social cohesion, similarity with other residents) are reported in the main manuscript. We also tested three alternative mediators: concerns about affordability, anxious expectations of discrimination, and perceived voice opportunity.

Measures

Concerns About Affordability. We measured concerns about affordability in the neighborhood using two items. Participants indicated how much they agreed to the following statements, "I would worry about the living costs of this neighborhood" and "I could afford to live comfortably in this neighborhood" (reverse coded) where 1 = Strongly disagree and 7 = Strongly agree. Scores were averaged to create a composite ($\alpha = 0.83$). Higher scores indicate greater concerns about affordability.

Voice Opportunity. We measured perceived voice opportunity in the neighborhood, that is, how much they felt like their voice would matter, using two items. Participants indicated how much they agreed to the following statements, "If I lived in this neighborhood, I feel like I would have a voice in this neighborhood," and "If I lived in this neighborhood, I feel like my opinion about this neighborhood would matter" where 1 = Strongly disagree and 7 = Strongly agree. Scores were averaged to create a composite ($\alpha = 0.95$). Higher scores indicate greater perceived voice opportunity.

Expectations of Discrimination. We adapted three situations from the Race-Based Rejection Sensitivity questionnaire (Mendoza-Denton et al., 2002) to assess the degree to which participants were anxious about potentially being discriminated against. Participants were given the following instructions:

> You will read about 3 situations that you might encounter in this neighborhood. Some people might be concerned about these situations because of their social background, and others might not be. Your social background can include things like your financial situation, social class, and racial or ethnic background.

The three situations were as follows:

1) Imagine that you are in a pharmacy, trying to pick out a few items. While you're looking at the different brands, you notice one of the store clerks glancing your way.
2) Imagine that you are standing in line for the ATM machine, and you notice the woman at the machine glances back while she's getting her money.
3) Imagine you're driving down the street, and there is a police barricade just ahead. The police officers are randomly pulling people over to check drivers' licenses and registrations.

After reading about each situation, participants responded to "How concerned/anxious would you be that [the clerk might be looking at you/ she might be suspicious of you / an officer might pull you over] because of your social background?" (1 = Very unconcerned to 6 = Very concerned) and "I would expect that [the clerk might continue to look at me/ she might be suspicious of me/ the officers might stop me] because of my social background" (1 = Very unlikely to 6 = Very likely). The total of six items were then averaged together to form a composite ($\alpha = 0.95$). Higher scores indicate greater anxious expectations of being discriminated against.

Results

There was a significant interaction between SSS and neighborhood on concerns about affordability (see Table S4). Specifically, simple slopes showed that lower SSS predicted greater concerns about affordability in the stable neighborhood condition, $b = -.17$, $SE = .07$, 95% CI [-.31, -.03], and even more so in the gentrifying neighborhood condition, $b = -.50$, $SE = .07$, 95% CI [-.64, -.36]. There was also a significant interaction between SSS and neighborhood on voice opportunity (see Table S4) where greater SSS predicted greater perceived voice opportunity in the gentrifying neighborhood, $b = .35$, $SE = .09$, 95% CI [.17, .53], and SSS was not related to voice opportunity in the stable neighborhood, $b = -.04$, $SE = .10$, 95% CI [-.24, .15]. There were no other significant interactions, thus, we only proceeded with two mediation analyses.

Moderated mediation analyses showed that lower SSS was related to greater concerns about affordability and perceptions of reduced voice opportunity in the gentrifying (vs. stable) neighborhood which in turn led to less belonging (see Table S5-S6).

Table S4

Regression analysis for variables predicting alternative mediators (concerns about affordability, anxious expectations of discrimination, and perceived voice opportunity) in Study 2 (N = 510)

	Concerns about affordability				Anxious expectations of discrimination				Voice opportunity			
Predictor	*b*	*SE*	*t*	*p*	*b*	*SE*	*t*	*p*	*b*	*SE*	*t*	*p*
SES	-.33	.05	6.45	<.001	-.12	.06	2.23	.03	.16	.07	2.42	.02
Neighborhood	1.08	.05	21.41	<.001	.01	.06	.11	.91	-.43	.07	6.44	<.001
SES x Neighborhood	-.08	.05	1.66	.10	-.01	.06	.20	.84	.11	.07	1.58	.11
SSS	-.33	.05	6.66	<.001	-.16	.06	2.89	.004	.15	.07	2.27	.02
Neighborhood	1.08	.05	21.50	<.001	.00	.06	.02	.99	-.43	.07	6.44	<.001
SSS x Neighborhood	-.17	.05	3.30	.001	-.04	.06	.68	.50	.20	.07	2.92	.004

Note. Neighborhood was effect coded such that stable = -1 and gentrifying = 1.

Table S5

Moderated mediation analysis of SSS predicting belonging at each neighborhood in Study 2 (N = 510)

Conditional indirect effects of each mediator	Effect	Boot SE	Boot 95% CI
Concerns about affordability			
Stable	.06	.03	[.01, .12]
Gentrifying	.18	.04	[.11, .26]
Voice opportunity			
Stable	-.03	.06	[-.14, .09]
Gentrifying	.21	.06	[.08, .33]
Index of moderated mediation	Index	Boot SE	Boot 95% CI
Concerns about affordability	.12	.04	[.04, .21]
Voice opportunity	.23	.09	[.07, .40]

Table S6

Moderated mediation analysis of neighborhood predicting belonging at high and low levels of SSS in Study 2 (N = 510)

Conditional indirect effects of each mediator	Effect	Boot SE	Boot 95% CI
Concerns about affordability			
-1 *SD* SSS	-.46	.08	[-.62, -.30]
+1 *SD* SSS	-.34	.06	[-.47, -.21]
Voice opportunity			
-1 *SD* SSS	-.37	.07	[-.50, -.24]
+1 *SD* SSS	-.14	.05	[-.25, -.03]
Index of moderated mediation	Index	Boot SE	Boot 95% CI
Concerns about affordability	.06	.02	[.02, .11]
Voice opportunity	.12	.04	[.03, .20]