Household Neighborhood Decisionmaking and Segregation

JUSTIN STEIL AND REED JORDAN

Massachusetts Institute of Technology

ow households make decisions about where to live has obvious implications for residential segregation by both race and class. Technological developments, such as the availability of online search engines, have the potential to change aspects of households' neighborhood decisionmaking process. What do we know about households' decisionmaking processes about neighborhoods, and what are the potential leverage points in those processes

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where intervention can contribute to the creation of more integrated places?

Neighborhoods play a particularly focal role in the housing search process in the United States in part because they significantly shape access to opportunity. They do so largely because the decentralized structure of government in the United States leaves the provision of many goods and services, and the raising of a substantial share of government revenue, to municipal governments.¹ Over fifty years ago, the economist Charles Tiebout proposed a "consumer-voter" model of municipal selection in metropolitan areas with high numbers of distinct localities. In Tiebout's model, residents sort into municipalities by selecting the one that best meets their preferred set of amenities and their desire (or ability) to pay for those amenities through taxes. A substantial literature has extended and critiqued Tiebout's consumer-voter thesis, exploring the interaction of income, race, and socioeconomic status in shaping neighborhood choices.² According to Tiebout's model, the proliferation of smaller municipalities should best meet the needs of consumer-voters by providing a range of taxation levels and public services suited to their varying preferences. In reality, municipal fragmentation has also facilitated exclusionary zoning policies, racial and economic segregation, and opportunity hoarding by wealthier households. The general principle, however, that both household-level characteristics, such as income and race, and municipal or neighborhood-level characteristics, such as school performance or tax rates, affect the decisionmaking process in the choice among neighborhoods is widely accepted.

The extensive range of amenities associated with a neighborhood in the United States extends from shared community resources (e.g., parks), to infrastructure (e.g., public transportation networks), services (e.g., schools), regulatory structures (e.g., zoning), demographic characteristics (e.g., income distribution), social characteristics (e.g., crime rates), environmental factors (e.g., sources of air and water pollution), physical factors (e.g., structure type and age), and tax rates.³ Housing prices then represent not only the value of the structure of the home itself but also the quality of local services and neighborhood conditions that are capitalized into home values.⁴

Neighborhood-level factors have been found to be the strongest determinants of household location choice.⁵ Among the neighborhood-level factors studied, (e.g., crime, property tax, median housing value), school quality exerted the largest influence on household location decisions.⁶ Research using restricted US Census data to examine housing prices along school attendance zone boundaries has similarly found that school performance, as well as neighborhood educational levels and neighborhood racial composition, all exert significant influence on household locational decisions.⁷ As one might expect, higher levels of school district fragmentation within a metropolitan area are therefore associated with higher levels of between-district racial residential segregation.⁸

Given the capitalization of neighborhood attributes, such as school performance, into housing prices, the ability to move into a neighborhood of one's choice depends, of course, on household wealth and income. Over the past four decades, neighborhoods have become more segregated by income. Two-thirds of families in 1970 lived in neighborhoods with a median income similar to that of the region overall — essentially middle-class, mixed income communities.⁹ But today, less than half of households live in mixed-income neighborhoods as more and more live instead in either very poor or very wealthy ones.¹⁰ Part of the reason for this increase in residential segregation by income is the hollowing out of the middle class in general. But local-level factors, such as municipal and school district boundaries and zoning and housing policies, play a significant role in either exacerbating or ameliorating the sorting of households by income.¹¹ Nationwide, the poor, and especially the rich, are increasingly isolated from each other and from the middle class. By concentrating the advantages of wealthy households and the disadvantages of low-income households, income segregation accentuates the differences in neighborhood conditions that households face.

Nevertheless, differences in income by race cannot explain the persistently high levels of residential segregation by race. For instance, the average black household with an income greater than \$75,000 lives in a neighborhood with a higher poverty rate than the average white household with an income *below* \$40,000.¹² Research has consistently found that income differences alone cannot explain either residential

segregation by race or the disparities in neighborhood resources that are correlated with racial segregation.¹³ Analysis of restricted US Census data with precise location information has found that for black-white segregation, observable sociodemographic characteristics, including education, income, language, and immigration status, can explain less than one-third of contemporary levels of residential segregation.¹⁴

THE CONTINUING SIGNIFICANCE OF NEIGHBORHOOD RACIAL COMPOSITION

Notwithstanding the significance of schools and other local amenities, the racial composition of a neighborhood remains a significant determinant in the residential decisionmaking process. As Krysan and Crowder write in this volume, residential segregation is reinforced through a housing search process shaped by neighborhood perceptions and homophilous social networks that are themselves already shaped by segregated residential patterns. Krysan and Crowder emphasize that the housing search process cannot be understood through a neat rational decisionmaking model because 1) housing searchers have significant blind spots created by incomplete, and sometimes inaccurate, information about the range of neighborhoods in a metropolitan area; 2) the gaps in housing searchers' knowledge are shaped by their lived experiences and social networks and may therefore be colored by existing segregated living patterns; and 3) the search process is multi-staged, and a large set of housing options are eliminated in preliminary stages using heuristics rather than a careful rational-choice model and cost-benefit analysis of all possible options. Neighborhood racial composition becomes a common, explicit or implicit, heuristic through which neighborhood choice sets are narrowed throughout the search process.

Not only does neighborhood racial composition matter to homeseekers, it matters differently depending on who the homeseeker is. Whites tend to favor predominately white neighborhoods (estimated at less than 20 percent non-white) and are often reluctant to move into neighborhoods with more than a few non-white households.¹⁵ Black homeseekers prefer significantly more integrated neighborhoods, on average ones that are about 50 percent black.¹⁶ According to black homeseekers, their preference for at least some black presence in their neighborhoods is driven by fear of experiencing white hostility.¹⁷

Research on preferences for neighborhood racial composition has found the existence of a racial hierarchy in preferred neighborhood racial composition. Whites are the most-preferred "out-group"— a race different from the homeseeker — and blacks are consistently the least preferred out-group neighbors. Asians and Latinos are usually located in the center of the hierarchy, with Asians generally more preferred than Latinos.¹⁸

While early studies established that neighborhood racial composition affects homeseeking behavior, more recent work has analyzed whether the observed neighborhood racial preferences are driven by race itself or whether race serves as a convenient proxy for other socioeconomic factors. Existing research has consistently identified independent effects of neighborhood racial composition beyond socioeconomic factors.¹⁹

For example, after controlling for crime rates, school quality, and housing values - commonly cited neighborhood characteristics for which homeseekers may see race as a proxy - the percentage of black and Latino residents continues to have a significant independent impact on whites' likelihood of purchasing a house, while the proportion of Asian households has no effect on white home purchases.²⁰ These findings suggest that race plays an independent role in neighborhood preferences, and, further, that the neighborhood compositions preferred by whites are primarily driven by resistance to living in neighborhoods with substantial shares of black and, to a lesser extent, Latino residents, rather than by a preference for living in white neighborhoods.²¹ Turning to measures of neighborhood satisfaction, subjective neighborhood condition (such as property upkeep) and objective neighborhood conditions (such as poverty rates) have been found to explain little of white residents' self-reported neighborhood satisfaction when compared with neighborhood racial composition.²² In other words, "after accounting for community social characteristics, distinct effects of racial/ethnic composition persist, supporting the idea that there is something about race, above and beyond social class, that propels neighborhood satisfaction."²³

Perhaps the strongest evidence that racial composition matters independently of class or other neighborhood characteristics when whites make housing decisions comes from studies employing experimental methods to directly test the racial proxy hypothesis.²⁴ In one experimental study, researchers showed respondents videos of neighborhoods in which the researchers manipulated the racial and class characteristics of the neighborhood in order to test the independent effects of race and class characteristics on neighborhood preference. For example, researchers would show a video of the exact same neighborhood scene but change the race of visible neighborhood residents or the class valence of their activities. White homeseekers consistently rated all-white neighborhoods as the most desirable. The effect of race was smaller for blacks, who identified racially mixed neighborhoods as the most desirable.²⁵

In addition to differences by race in preferred neighborhood racial composition and neighborhood perception, segregation is exacerbated by the "mismatch" between whites' desired neighborhood racial composition and the composition of neighborhoods in which they perform their housing search. Whites search in neighborhoods with even higher percentages of whites than they say they would prefer. In contrast, black and Latino homeseekers conduct their search in neighborhoods that correspond to their stated preferences.²⁶ While whites mainly search in overwhelmingly white communities, black homeseekers search in communities with a variety of racial compositions.²⁷

Less examined are specific differences in how these racialized patterns of neighborhood-seeking behavior unfold between households seeking to purchase homes versus rent, and how access to mortgage capital may shape housing searches. Moreover, little is known about the experience of recent immigrants, especially those with limited English proficiency, in the neighborhood search process. Hum's research in this volume examines the role of minority-owned community banks in providing credit for foreign-born residents who may not qualify for conventional loans. Hum also identifies the role of those same banks in facilitating property purchases by international investors that may drive up housing costs for other buyers and for renters and contribute to neighborhood change through gentrification.

SOURCES OF INFORMATION IN THE HOUSING SEARCH PROCESS

Given what we know about how neighborhood preferences contribute to residential segregation, it is helpful to look in more detail at the processes through which these preferences are transformed into actual neighborhood search decisions and home purchases. In particular, the sources and information that homeseekers use to support and guide their search have implications for segregation and may suggest points of leverage for pro-integration interventions.

A range of types and sources of information are available to homeseekers when searching for homes and neighborhoods. Formal sources of information include real estate agents, newspaper advertisements, and internet-based real estate services. Informal sources include homeseekers' own experiences with particular neighborhoods as well as information passed by word of mouth through friends, family, coworkers, or other social networks. Research on the differential use by race of sources of information in the home search process has found that, after controlling for relevant demographic factors, including income, education, and type of search (buyer versus renter), blacks and whites generally use the same types of search strategies (e.g., networks, realtors, newspapers). However, some differences in the housing search process do exist. Early studies found that black homeseekers are more likely to rely on networks, such as friends and family, and slightly less likely to use the internet in their search than whites, even after controlling for demographic factors and type of search.²⁸ Much of this research, however, was conducted before use of the internet had become as widespread as it is today.As a result, more research is needed to understand the role of information sources in different types of search processes, with particular emphasis on how the greater availability of data through the internet is changing search processes.²⁹

Such further research on housing searches is particularly important given that years of carefully conducted experimental evidence has shown that black and Latino homeseekers continue to be shown fewer units than similarly situated whites, significantly raising the cost of housing searches for black and Latino buyers and limiting their housing options.³⁰ Previous research has also demonstrated that black renters are often provided less information about units, shown fewer units, and quoted higher rental prices, and that black homebuyers receive less assistance with financing and are steered into lower-income neighborhoods and communities with higher proportions of racial and ethnic minorities.³¹

NEW TECHNOLOGY AND UNANSWERED QUESTIONS IN THE SEARCH PROCESS

In general, homeseekers, regardless of race, increasingly rely on the internet for information about housing decisions. The vast majority of homebuyers in 2015 (87 percent) still turned to real estate agents at some point in the search, but 42 percent of buyers used the web as the first step of their search, and 89 percent used online sources at least once.³² The effect of the increased availability of online real estate information on segregation is not yet clear. Easy access to online listings and neighborhood information may allow consumers to expand the set of neighborhoods considered and avoid segregative steering by informal or formal sources, but formal sources, such as brokers, are governed by the Fair Housing Act and may have the potential to play an integrative role by pointing out neighborhoods that homeseekers might otherwise have ignored.

As McLaughlin and Young write in this volume, greater access to real estate data comes in three general forms: property-specific data, neighborhood-specific data, and "user-customized" data (such as estimates of mortgage borrowing capacity based on information provided by the user, such as household income). Although the increased availability of real estate data will improve the efficiency of the home search process, it could affect residential sorting (and therefore segregation) in two countervailing ways. On the one hand, greater access to data could contribute to larger choice sets of neighborhood options than would have otherwise been considered and ultimately to greater residential integration by race and class. On the other hand, greater access to data, especially regarding neighborhood characteristics such as school performance and public safety, could increase the demand for and price of housing in areas with high levels of access to opportunity. Without a corresponding expansion in supply, price stratification across neighborhoods could increase, contributing to increased segregation by class and also potentially by race.³³

Further, through the provision of different search results tailored to users' IP address location or shaped by users' prior searches and social networks, online searches have the potential to introduce even less visible segregative effects. And in other ways,

online services in the housing market have shown evidence of how new technology can exacerbate, instead of ameliorate, discriminatory effects. For instance, evidence from the short-term rental platform Airbnb is illustrative. Airbnb hosts are less likely to accept guests with distinctively African American names, and black hosts earn less for renting similar apartments than white hosts after controlling for quality, location, and other relevant factors.³⁴

As the examples from Airbnb demonstrate, a primary concern about new technological platforms, algorithmic matching services, and the increased availability of information about consumers is that new forms of discrimination may emerge that have wide-spread impacts but that are hard for individual users to identify. How can new search tools and data sources contribute to residential integration instead of to perpetuating segregation? Municipalities such as Oak Park, Illinois and Shaker Heights, Ohio undertook concerted efforts to encourage the creation and maintenance of racially integrated communities at a time when white flight and blockbusting by realtors was the primary concern. Are there ways to modernize those efforts to encompass the growing use of new, wide-reaching online platforms? Discrimination can at least be partially addressed through the design of online markets — by, for example, limiting the availability of information based on which people discriminate and instituting incentives for users to reduce discrimination. While much recent attention has focused on bias in machine learning and search engines, little has been done to understand how search engines can prevent segregation or even encourage integration.

The literature on neighborhood search processes highlights the fact that whites' general reluctance to move into predominantly minority neighborhoods perpetuates segregation. This fear and stigmatization of black spaces can be cyclical — integration has historically focused on opening up white spaces to black people, which can simultaneously valorize white spaces and stigmatize the black spaces left behind.³⁵ But the experience of high-cost cities also raises the question of what happens when whites move into predominantly black and Latino neighborhoods, initially fostering integration, but, in the long term, contributing to gentrification, displacement, and new forms of segregation. How can we revise integration efforts, often created in response to fears of white flight, for a context where the primary concerns vary from white avoidance of neighborhoods with predominantly black and Latino residents all the way to white displacement of low-income black and Latino residents in gentrifying neighborhoods? The chapters in this section provide a helpful starting point.

Bibliography

- Bayer, Patrick, Fernando Ferreira, and Robert McMillan. 2007. "A Unified Framework for Measuring Preferences for Schools and Neighborhoods." *Journal of Political Economy* 115, no. 4: 588–638.
- Bayer, Patrick, Robert McMillan, and Kim Reuben. 2004. "The Causes and Consequences of Residential Segregation: An Equilibrium Analysis of Neighborhood Sorting." Working Paper. https://pdfs.semanticscholar.org/9332/32 35844af1ff6649dd2f755c091cd646388f.pdf.
- Bayoh, Isaac, Elena G. Irwin, and Timothy Haab. 2006. "Determinants of Residential Location Choice: How Important are Local Public Goods in Attracting Homeowners to Central City Locations?" *Journal of Regional Science* 46, no. 1: 97–120.
- Bischoff, Kendra, and Sean F. Reardon. 2013. "Residential Segregation by Income, 1970– 2009 | Center for Education Policy Analysis." US2010 Project. http://cepa.stanford. edu/content/residential-segregation-income-1970-2009 (accessed March 16).
- Briffault, Richard. 1990. "Our Localism: Part I The Structure of Local Government Law." *Columbia Law Review* 90, no. 1:1–115.
- Charles, Camille Zubrinsky. 2000. "Neighborhood Racial-composition Preferences: Evidence from a Multiethnic Metropolis." *Social Problems* 47, no. 3: 379–407.
- — . 2008. "Who Will Live Near Whom?" Poverty & Race Research Action Council 17, no. 5.
- Dunning, Richard, and Andrew Grayson. 2014. "Homebuyers and the Representation of Spatial Markets by Information Providers." *International Journal of Housing Markets and Analysis* 7, no. 3: 292–306.
- Edelman, Benjamin G., and Michael Luca. 2014. "Digital Discrimination: The Case of AirBnB.com." Working Paper 14–054. Cambridge, MA: Harvard Business School.
- Edelman, Benjamin G., Michael Luca, and Dan Svirsky. 2016. "Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment." Working Paper 16–069. Cambridge, MA: Harvard Business School.
- Ellen, Ingrid G. 2008. "Continuing Isolation: Segregation in America Today." In *Segregation: The Rising Cost for America*, edited by James H. Carr and Nandinee K. Kutty, 261–78. New York: Routledge.
- Ellen, Ingrid Gould, Justin Steil, and Jorge De la Roca. 2016. "The Significance of Segregation in the 21st Century," *City and Community* 15(3):8–13.
- Farley, Reynolds, Elaine Fielding, and Maria Krysan. 1997. "The Residential Preferences of Blacks and Whites: A Four Metropolis Analysis." *Housing Policy Debate* 8, no. 4: 763–800.
- Fennell, Lee Anne. 2001. "Beyond Exit and Voice: User Participation in the Production of Local Public Goods." *Texas Law Review* 80, no. 1:1–87.

- Fischel, William A. 2009. *The Homevoter Hypothesis*. Cambridge, MA: Harvard University Press.
- Fischel, William A., and Wallace E. Oates. 2006. *The Tiebout Model at Fifty: Essays in Public Economics in Honor of Wallace Oates*. Lincoln Institute of Land Policy.
- Frug, Gerald E. 2001. *City Making: Building Communities without Building Walls.* Princeton: Princeton University Press.
- Galster, George. 2001. "On the Nature of Neighbourhood." *Urban Studies* 38, no. 12: 2111-24.
- Ge, Yanbo, Christopher R. Knittel, Don MacKenzie, and Stephen Zoepf. 2016. "Racial and Gender Discrimination in Transportation Network Companies." Working Paper no. 22776. Cambridge, MA: National Bureau of Economic Research.
- Havekes, Esther, Michael Bader, and Maria Krysan. 2016. "Realizing Racial and Ethnic Neighborhood Preferences? Exploring the Mismatches Between What People Want, Where They Search, and Where They Live." *Population Research and Policy Review* 35, no. 1: 101–26.
- Krysan, Maria. 2008. "Does Race Matter in the Search for Housing? An Exploratory Study of Search Strategies, Experiences, and Locations." *Social Science Research* 37: 581–603.
- Krysan, Maria, and Michael Bader. 2007. "Perceiving the Metropolis: Seeing the City Through a Prism of Race." *Social Forces* 86, no. 2: 699–733.
- Krysan, Maria, Mick P. Couper, Reynolds Farley, and Tyrone A. Forman. 2009.
 "Does Race Matter in Neighborhood Preferences? Results from a Video Experiment." *American Journal of Sociology* 115, no. 2: 527–59.
- Krysan, Maria, and Reynolds Farley. 2002. "The Residential Preferences of Blacks: Do They Explain Persistent Segregation?" *Social Forces* 80, no. 3: 937–80.
- Krysan, Maria, Reynolds Farley, and Mick P. Couper. 2008. "In the Eye of the Beholder." *Du Bois Review: Social Science Research on Race* 5, no. 1: 5–26.
- Lewis, Valerie A., Michael O. Emerson, and Stephen L. Klineberg. 2011. "Who We'll Live with: Neighborhood Racial Composition Preferences of Whites, Blacks and Latinos." *Social Forces* 89, no. 4: 1385–1407.
- Logan, John R., and Brian J. Stults. 2011. "The Persistence of Segregation in the Metropolis: New Findings from the 2010 Census." Census Brief Prepared for Project US2010.
- McLaughlin, Ralph, and Cheryl Young. 2017. "Data Democratization and Spatial Heterogeneity in the Housing Market." This volume.

National Association of Realtors. 2015. "2015 Profile of Home Buyers and Sellers." Owens, Ann. 2016. "Inequality in Children's Contexts: Income Segregation of

Households With and Without Children." *American Sociological Review* 81 (3):549–574.

- Owens, Ann. 2017. "Racial Residential Segregation of School-Age Children and Adults and the Role of Schooling as a Segregating Force." *Russell Sage Foundation Journal of the Social Sciences* 3 (2):63–80.
- Pattillo, Mary. 2014. "The Problem of Integration." In *The Dream Revisited*, edited by Ingrid Ellen Gould and Justin Steil. January. http://furmancenter.org/research/iri/essay/the-problem-of-integration.
- Reardon, Sean F., and Kendra Bischoff. 2011. "Income Inequality and Income Segregation." *American Journal of Sociology* 116, no. 4: 1092–1153. doi:10.1086/657114.
- Rhode, Paul, and Koleman Strumpf. 2003. "Assessing the Importance of Tiebout Sorting: Local Heterogeneity from 1850 to 1990." *The American Economic Review* 93, no. 5:1648–77. doi:10.1257/000282803322655482.
- Rothwell, Jonathan T., and Douglas S. Massey. 2010. "Density Zoning and Class Segregation in US Metropolitan Areas." *Social Science Quarterly* 91, no. 5: 1123-43.
- Sampson, Robert J., and Stephen W. Raudenbush. 2004. "Seeing Disorder: Neighborhood Stigma and the Social Construction of "Broken Windows." *Social Psychology Quarterly* 67, no. 4: 319-42.
- Steil, Justin, Jorge De la Roca, and Ingrid Gould Ellen. 2015. "Desvinculado y Desigual: Is Segregation Harmful to Latinos?" *The ANNALS of the American Academy of Political and Social Science* 660, no. 1: 57–76. doi:10.1177/0002716215576092.
- Swaroop, Sapna, and Maria Krysan. 2011. "The Determinants of Neighborhood Satisfaction: Racial Proxy Revisited." *Demography* 48, no. 3: 1203–29.
- Tiebout, Charles M. 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy* 64, no. 5: 416–24.
- Turner, Margery Austin, and Stephen L. Ross. 2005. "How Racial Discrimination Affects the Search for Housing." In *The Geography of Opportunity: Race and Housing Choice in Metropolitan America*, edited by Xavier de Sousa Briggs, 81–100. Washington, D. C.: Brookings Institution Press.
- Turner, Margery Austin, Robert Santos, Diane K. Levy, and Douglas A. Wissoker. 2013."Housing Discrimination against Racial and Ethnic Minorities 2012: Full Report." The Urban Institute.
- Watson, Tara. 2009. "Inequality and the Measurement of Residential Segregation by Income in American Neighborhoods." *Review of Income and Wealth* 55, no. 3: 820–44.
- Yang, Rebecca, and Paul A. Jargowsky. 2006. "Suburban Development and Economic Segregation in the 1990s." *Journal of Urban Affairs* 28, no. 3: 253–73.

Endnotes

- 1 See Briffault (1990); Frug (2001).
- 2 See, for example, Fennell (2001); Rhode and Strumpf (2003); Fischel and Oates (2006); Fischel (2009).
- 3 Galster (2001).
- 4 Dunning and Grayson (2014).
- 5 Bayoh, Irwin, and Haab (2006).
- 6 Ibid.
- 7 Bayer, Ferreira, and McMillan (2007).
- 8 Owens (2017).
- 9 Bischoff and Reardon (2013).
- 10 Ibid.
- 11 Owens (2017); Rothwell and Massey (2010); Watson (2009); Yang and Jargowsky (2006).
- 12 Logan and Stults (2011).
- 13 Ibid.
- 14 Bayer, McMillan, and Reuben (2004).
- 15 Charles,"Who Will Live Near Whom?"; Ellen.
- 16 Krysan and Farley (2002).
- 17 Krysan and Farley (2002); Farley, Fielding, and Krysan (1997).
- 18 Charles (2008); Charles (2000).
- 19 For a summary, see Krysan (2008).
- 20 Lewis, Emerson, and Klineberg (2011).
- 21 Ibid.
- 22 Sampson and Raudenbush (2004); Krysan et al. (2009); Krysan, Farley, and Couper (2008).
- 23 Swaroop and Krysan (2011), 1215.
- 24 Krysan et al. (2009); Krysan, Farley, and Couper (2008).
- 25 Krysan et al. (2009).
- 26 Havekes, Bader, and Krysan (2016).
- 27 Krysan (2008); Krysan and Bader (2007).
- 28 Krysan (2008).
- 29 Ellen (2008).
- 30 Turner et al. (2013).
- 31 Turner and Ross (2005);Turner et al. (2013).
- 32 National Association of Realtors (2015).
- 33 McLaughlin and Young (2017); see also Ellen, Steil, and De la Roca (2016) regarding changes over time in the significance of segregation.
- 34 Edelman, Luca, and Svirsky (2016); Edelman and Luca (2014). See also Ge et al. (2016) on discrimination in Uber.
- 35 Pattillo (2014).