Effect of neighborhood stigma on economic transactions

Max Besbris[1], Jacob William Faber, Peter Rich, and Patrick Sharkey

Department of Sociology, New York University, New York, NY 10012

Edited by Greg J. Duncan, University of California, Irvine, CA, and approved March 10, 2015 (received for review July 25, 2014)

The hypothesis of neighborhood stigma predicts that individuals who reside in areas known for high crime, poverty, disorder, and/or racial isolation embody the negative characteristics attributed to their communities and experience suspicion and mistrust in their interactions with strangers. This article provides an experimental test of whether neighborhood stigma affects individuals in one domain of social life: economic transactions. To evaluate the neighborhood stigma hypothesis, this study adopts an audit design in a locally organized, online classified market, using advertisements for used iPhones and randomly manipulating the neighborhood of the seller. The primary outcome under study is the number of responses generated by sellers from disadvantaged relative to advantaged neighborhoods. Advertisements from disadvantaged neighborhoods received significantly fewer responses than advertisements from advantaged neighborhoods. Results provide robust evidence that individuals from disadvantaged neighborhoods bear a stigma that influences their prospects in economic exchanges. The stigma is greater for advertisements originating from disadvantaged neighborhoods where the majority of residents are black. This evidence reveals that residence in a disadvantaged neighborhood not only affects individuals through mechanisms involving economic resources, institutional quality, and social networks but also affects residents through the perceptions of others.

neighborhoods | stigma | discrimination | transactions

Cities in the United States are characterized by high levels of racial segregation and by concentrated pockets of poverty and of affluence (1, 2). The stratification of American neighborhoods means that individuals living in disadvantaged communities are exposed to fewer economic opportunities, lower quality institutions, greater levels of crime and environmental pollution, and less advantaged social networks (3–6). However, extreme neighborhood inequality may also affect individuals through processes of association, perception, and stigma.

The hypothesis of neighborhood stigma predicts that individuals who reside in areas known for high crime, poverty, disorder, and/or racial isolation embody the negative characteristics attributed to their communities, and experience suspicion and mistrust in their interactions with strangers when their neighborhood of residence is revealed (7–11). Similar to other forms of stereotype, the consequences of neighborhood stigma arise when negative perceptions of a place are attached to individuals, leading to systematic disapproval, discrimination, and/or exclusion (12, 13). Assumptions about residents from disadvantaged neighborhoods could have consequences in the form of lost job opportunities, suspicion by law enforcement, or mistrust in market transactions. Through all of these pathways, the stigma of place may be an important mechanism through which neighborhood segregation reinforces social inequality (5, 14–19). Despite the strong theoretical support for this concept, no previous studies have estimated the effects of neighborhood stigma. This article provides an experimental test of how neighborhood stigma affects individuals in one domain of social life: economic transactions.

To evaluate the neighborhood stigma hypothesis, this study adopts an audit design in a locally organized, online classified market, using advertisements for used iPhones and randomly manipulating the stated neighborhood of origin of the seller. The primary outcome under study is the number of responses generated by sellers from disadvantaged relative to advantaged communities. This approach assesses the effect of neighborhood stigma in a real-life setting instead of relying on stated perceptions of different communities under survey conditions (20, 21). By focusing on aggregated rates of responses to items posted for sale, the study design avoids making inferences about individual discriminatory attitudes or intentions, and captures instead the full penalty of neighborhood stigma as experienced by individuals within disadvantaged neighborhoods. Importantly, the effect of neighborhood stigma encompasses both assumptions about the individual and the community from which he or she originates. These assumptions may pertain to the race or ethnicity of the individual, the economic status of the individual, the potential criminality of the individual, or some other dimension of the community that is attached to the individual seller. Although these potential assumptions are not parsed in this study, the design allows for a causal estimate of the total impact of neighborhood stigma, arising from any and all aspects of the community, on economic interactions. In this sense, the design captures, in its purest form, the full effect of neighborhood stigma as reflected in community names.

Randomized Audit Design

A randomized audit study, or experimental field study, allows the researcher to observe actual market behavior across a predetermined range of variables under controlled conditions. This approach provides a more realistic test of neighborhood stigma

Significance

Although previously theorized, virtually no rigorous empirical evidence has demonstrated an impact of neighborhood stigma on individual outcomes. To test for the effects of neighborhood stigma on economic transactions, an experimental audit of an online classified market was conducted in 2013–2014. In this market, advertisements were placed for used iPhones in which the neighborhood of the seller was randomly manipulated. Advertisements identifying the seller as a resident of a disadvantaged neighborhood received significantly fewer responses than advertisements identifying the seller as a resident of an advantaged neighborhood. The results provide strong evidence for an effect of neighborhood stigma on economic transactions, suggesting that individuals carry the stigma of their neighborhood with them as they take part in economic exchanges.

Author contributions: M.B., J.W.F., P.R., and P.S. designed research, performed research, analyzed data, and wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

[1]To whom correspondence should be addressed. Email: mbesbris@nyu.edu.

This article contains supporting information online at www.pnas.org/lookup/suppl/doi:10.1073/pnas.1414139112/-/DCSupplemental.

than survey methods because it observes what people do as opposed to what they say (22). Audits have previously been used in research on discrimination in service provision, housing, and job applications (23–26). Recent analyses have studied racial discrimination in online markets (27–31), but the method has not yet been applied to test for the effects of neighborhood stigma in economic transactions.

The experiment in this study entailed posting advertisements on an active online market using titles and texts that reflect common advertisements for used iPhone 5's (Apple, Inc.), listed at competitive prices in 12 different large urban markets throughout the United States. The iPhone 5 was selected because it is a well-known product with an active online secondary market. The cities were selected to represent a geographically diverse set of large cities across the country featuring communities with high levels of disadvantage and unique racial and ethnic profiles.

Each posted advertisement revealed a seller's neighborhood of residence, which was experimentally manipulated to represent communities that provide stark variation in the level of disadvantage. Disadvantaged and advantaged communities were identified by aggregating tract-level census data on racial composition and poverty to Zillow neighborhood boundaries (www.zillow.com), which define neighborhoods in US cities by name. Zillow neighborhood names were cross-referenced with frequency of search results in news articles on LexisNexis to confirm that they are commonly used neighborhood names and that the selected neighborhoods are generally portrayed as either advantaged or disadvantaged.

The particular online market was selected because sellers commonly indicate their neighborhood of residence in their classified advertisements (additional information on sellers revealing their geographic location is provided in *SI Text*, section 3.2). The colloquial use and validity of the chosen neighborhood names in each city were verified with searches for advertisements posted by other sellers in the same online marketplace that also used the same neighborhood names.

To account for any potential effect of proximity and local market conditions on response variation, the experiment included two proposed meeting locations: one in the buyer's neighborhood of choice and a second in a central meeting location roughly equidistant to the advantaged and disadvantaged communities. By directly proposing a meeting location in the advertisement that is independent of the seller's neighborhood of residence, the experiment ensured that any effects of neighborhood disadvantage were not attributable to the extra distance that would have to be traveled by potential buyers or by variable levels of consumer demand in the advertising seller's neighborhood. Each advertisement included a randomized combination of text indicating the seller's neighborhood, the suggested meeting location, the locally adjusted price, and one of several equivalent versions of posting language used to convey identical information about the product.

Results

From October 2013 to April 2014, 664 advertisements were posted for iPhone 5's on the online market, 49 (7.38%) of which were flagged and removed by the administrators of the market or other users. The analysis was restricted to the posts that were not flagged, because flagging typically occurred within 1 h of the post submission. (Advertisements might be flagged by other sellers seeking to thin the local market, by the online market's site administrators, or by other users for a variety of reasons, including suspicion of a scam or repetitious posting of the same advertisement. Results were substantively the same when flagged posts were included. Only five flagged posts received any responses.) The analysis sample of nonflagged posts generated an average of 3.72 responses within 60 h of posting. (No differences in results were found in models assessing the effect of neighborhood disadvantage on the number of posts within 12, 24, or 60 h or when there was no time limit.) Fig. 1 shows that the large majority (75%) of posts generated five or fewer responses, with a small minority generating 15 or more responses. One hundred three posts (15.51%) did not generate any responses.

Fig. 2 shows the average number of responses within 60 h of posting, grouped by city and by neighborhood disadvantage. In all but three cities (Los Angeles, NY Manhattan, and Seattle), posts from disadvantaged neighborhoods received fewer responses on average. However, the samples within cities were small, and the difference in average responses between advantaged and disadvantaged communities was statistically significant only in Atlanta, where posts from sellers in disadvantaged neighborhoods received fewer than half as many responses as posts from sellers in advantaged neighborhoods ($P < 0.01$).

Table 1 presents results from negative binomial models estimating the number of responses received within 60 h as a function of neighborhood disadvantage. All models included city fixed effects and controls for variation in post details and market characteristics (full results are shown in *SI Text*). Results are displayed as incident rate ratios (i.e., exponentiated coefficients). Model 1 revealed that, controlling for all other factors, posts from sellers in disadvantaged neighborhoods received ~83.9% as many responses as posts from sellers in advantaged neighborhoods ($P < 0.001$). Model 2 assessed whether the effect of neighborhood disadvantage varies depending on the proposed meeting location, and found no statistically significant interaction between neighborhood disadvantage and the proposed meeting location.

Models 3 and 4 estimated the effect of neighborhood disadvantage in neighborhoods that are predominantly African American, limiting the sample to include only the cities where the selected disadvantaged neighborhood was majority-black (Atlanta; Baltimore; Boston; Chicago; Los Angeles; NY Brooklyn; NY Manhattan; Philadelphia; Seattle; and Washington, DC). Results in model 3 showed that neighborhood disadvantage reduced the number of responses by ~21% when the disadvantaged community was majority-black, and model 4 indicated that this result did not vary depending on the proposed meeting location. Models 5 and 6 showed the same results for cities where the disadvantaged community was majority-Latino (Philadelphia, Phoenix, and San Antonio), and found no effect of neighborhood disadvantage. Notably, estimates from models 3 through 6 were substantively similar when estimated for the full sample ($n = 615$). Additional estimates (see *SI Text*) show that the main findings hold even after excluding the city with the largest disparity

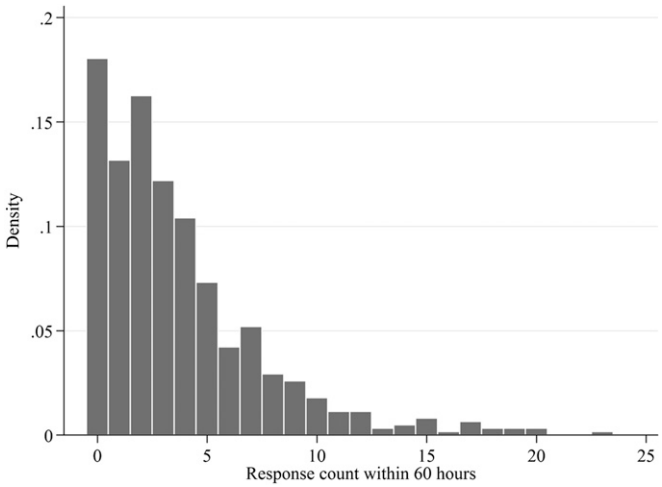

Fig. 1. Distribution of the number of responses to posts within 60 h of posting.

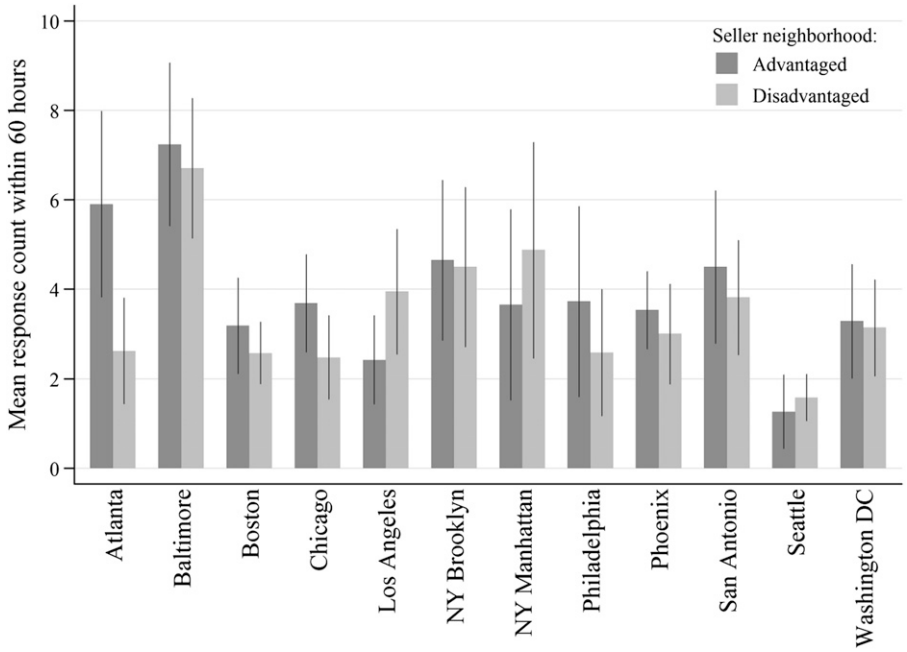

Fig. 2. Average number of responses within 60 h of posting by city and neighborhood disadvantage.

between advantaged and disadvantaged neighborhoods (Atlanta) from the sample.

To assess whether neighborhood stigma affected other aspects of the economic interaction, the same models were estimated using alternative outcome measures. No statistically significant effects were found in models predicting whether a post was flagged; whether a post received any responses at all; the mean, minimum, or maximum price counteroffers; or the proportion of responses with direct price counteroffers.

Discussion

In spatially differentiated cities marked by racial and socioeconomic segregation, neighborhoods come to be known and recognized in terms of their institutions, the level of crime and disorder, their appearance, and their population characteristics (4). All of these characteristics of neighborhoods may influence the life chances of residents directly, but the stigma attached to the name of the community itself also may affect the daily experiences of residents. Processes of selection and sorting make it difficult to identify the effect of neighborhood conditions or neighborhood stigma through traditional observational methods, creating the need for new methods to understand the full set of consequences of neighborhood stratification. The randomized audit design used in this study is one approach that provides leverage to overcome the problem of selection bias and to assess the role of neighborhood stigma arising from a community's name on economic transactions in an open, online marketplace.

This audit study provided experimental evidence that individuals from disadvantaged neighborhoods bear a stigma that influences their prospects in potential economic exchanges. The effect of neighborhood stigma varied across the 12 different geographical markets, but the pooled estimate strongly supports the neighborhood stigma hypothesis. Specifically, advertisements from disadvantaged neighborhoods received ∼16% fewer responses than those advertisements claiming to be from advantaged neighborhoods. This disparity was greater (∼21% fewer responses) for black, disadvantaged neighborhoods, and it was not present in disadvantaged neighborhoods that were majority-Latino. These findings are descriptive. One interpretation is that the stigma of neighborhood disadvantage is dependent on the racial composition of the neighborhood. Another interpretation, however, is that the effects of neighborhood disadvantage may be amplified by other features of the neighborhood that could be correlated with racial composition,

Table 1. Negative binomial model estimates of the effect of neighborhood disadvantage on number of responses to posted advertisements within 60 h

	Full sample (n = 615)		Sample of cities with black neighborhoods (n = 462)		Sample of cities with Latino neighborhoods (n = 204)	
Treatment definition	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Disadvantaged neighborhood	0.839*** (0.044)	0.892 (0.066)				
Disadvantaged neighborhood × central location		0.885 (0.092)				
Black disadvantaged neighborhood			0.794*** (0.050)	0.831* (0.072)		
Black neighborhood × central location				0.912 (0.113)		
Latino disadvantaged neighborhood					0.981 (0.097)	1.088 (0.153)
Latino neighborhood × central location						0.809 (0.168)
Central meeting location	0.937 (0.048)	0.991 (0.069)	0.977 (0.060)	1.016 (0.082)	0.894 (0.091)	0.979 (0.132)

This table displays exponentiated coefficients with SEs in parentheses. *$P < 0.05$; ***$P < 0.001$ (two-tailed tests).

Table 2. Neighborhood advantage and disadvantage, by city

City	Neighborhood	Classification	Poverty rate,* %	Selected racial composition,* %	Observations†
Atlanta	Midtown	Advantaged	9.1	70.2 white	32
	Oakland City	Disadvantaged black	35.4	87.5 black	25
Baltimore	Canton	Advantaged	11.8	75.4 white	27
	West Baltimore	Disadvantaged black	37.9	83.7 black	27
Boston	Back Bay	Advantaged	9.7	86.0 white	26
	Dorchester	Disadvantaged black	18.8	45.8 black	28
Chicago	Lincoln Park	Advantaged	11.6	82.5 white	34
	North Lawndale	Disadvantaged black	41.8	91.7 black	23
Los Angeles	Century City	Advantaged	9.7	76.8 white	28
	Crenshaw	Disadvantaged black	25.3	68.9 black	24
NY Brooklyn	Cobble Hill	Advantaged	4.3	71.2 white	28
	Bedford-Stuyvesant	Disadvantaged black	29.6	77.3 black	28
NY Manhattan	Upper East Side	Advantaged	6.0	81.2 white	28
	East Harlem	Disadvantaged Latino	35.5	56.6 Latino	24
Philadelphia	Fox Chase	Advantaged	8.9	78.9 white	25
	Nicetown	Disadvantaged black	32.2	93.8 black	14
	Juniata	Disadvantaged Latino	39.3	52.1 Latino	18
Phoenix	Ahwatukee Foothills	Advantaged	6.1	73.3 white	32
	Central City	Disadvantaged Latino	44.2	64.4 Latino	23
San Antonio	North Central	Advantaged	3.8	74.0 white	29
	Southwest San Antonio	Disadvantaged Latino	38.8	92.2 Latino	28
Seattle	Madrona	Advantaged	4.4	74.8 white	17
	Leschi	Disadvantaged black	18.1	36.2 black	27
	International District	Disadvantaged Asian	43.1	49.0 Asian	12
Washington, DC	Dupont Circle	Advantaged	11.1	73.6 white	28
	Anacostia	Disadvantaged black	31.6	97.1 black	29

*Source: Authors' compilation, derived from Zillow neighborhood boundaries and aggregated 2007–2011 American Community Survey tract-level data.
†Forty-nine posts were flagged for removal, and were not included in the main regression analysis in Table 1.

such as the degree of concentrated poverty, the prevalence of public housing, or the crime rate. The interaction between neighborhood disadvantage and racial/ethnic composition warrants additional research designed specifically to disentangle the effects of racial composition and concentrated disadvantage.

The online classified marketplace provided an ideal case for testing neighborhood stigma because buyers with limited information were forced to discriminate between advertisements based not only on the price, convenience, and quality of the product but also on their willingness to transact with each potential seller in the market. Sellers from disadvantaged neighborhoods may have attracted fewer responses because buyers used residence to infer the seller's race or ethnicity, economic status, trustworthiness, or dependability. The total effect measured here invites future research to evaluate these potential underlying dimensions of discrimination and to understand whether neighborhood stigma operates in addition to these attributes or if it serves as a proxy in lieu of more information about seller characteristics. Further research might also investigate whether market actors are aware of neighborhood stigma and, if so, whether they use management strategies to minimize its negative effects. Finally, the results presented here justify additional empirical inquiry into the salience of neighborhood stigma in other social arenas where initial perceptions matter and where individuals must signal their neighborhood of origin, such as in employment application screening, mate selection, credit applications, and judicial processing.

Evidence for the effect of neighborhood stigma reveals that residence in a disadvantaged neighborhood not only affects individuals through mechanisms involving economic resources, institutional quality, and social networks but also affects residents through the perceptions of others. Individuals embody the characteristics of their communities, with tangible consequences when they enter the marketplace. In this way, the stigma of place represents an important, and frequently overlooked, byproduct of residential segregation.

Materials and Methods

The experiment for this study was conducted on one of the largest online classified markets in the country. The market provided multiple advantages for deploying an experimental audit. First, listings were posted at the city-wide level, allowing them to be searched by anyone looking for a particular product in a given city. Second, it is common for sellers to mention their location or preferred site of transaction in their advertisements; this fact ensures that the tests of neighborhood stigma do not introduce an artificial signal. Third, the website permitted advertisers to control the content, including the advertisement's title, text, and price listing of any item. Control over advertisement titles and content allowed for the posting of similar advertisements revealing only the iPhone 5 specifications, the price, and the location without revealing any other characteristics of the seller.

Cities were selected using multiple criteria. First, cities were chosen for geographical spread across the United States. Second, cities with large secondhand iPhone 5 markets were selected (note that the boroughs of NY Manhattan and NY Brooklyn were considered independent markets). Because the price of an iPhone 5 varies across cities and over time, the median price within each city's iPhone 5 market was calculated on the first of every month in all 12 cities and advertisements were adjusted accordingly. Third, cities with geographically proximal advantaged and disadvantaged neighborhoods were used. Neighborhoods were operationalized as geographic subareas within each city that had a recognizable name. Zillow neighborhood boundaries with names and aggregated census tract data were used to guide neighborhood selection. All neighborhoods (aggregated census tracts) had a population of at least 5,000 residents. Zillow neighborhood names were verified by searching local newspaper articles. Any neighborhood names that did not come up repeatedly when searching in local newspaper archives were ruled out. Each of these neighborhood names was additionally cross-referenced by searching the local markets where posting would occur (further details are provided in *SI Text*, section 3.2). The neighborhoods for each city in the study are identified in Table 2.

Advantaged and disadvantaged neighborhoods were defined based on a combination of concentrated white vs. minority populations and low vs. high poverty rates. Calculations were made from the 2007–2011 American

Community Survey (32). Because levels of racial segregation and poverty differ across cities, the thresholds that were used were based on the distribution of neighborhoods within each city. Specifically, advantaged neighborhoods had a poverty rate at the low end of the poverty distribution within each city. The poverty rate for advantaged neighborhoods ranged from 4.3–11.8%. Alternately, disadvantaged neighborhoods had high poverty rates within their respective cities, ranging from 25.3–43.1%. Because economic disadvantage is consistently conflated with race in US neighborhoods (33, 34), neighborhoods with a high concentration of black, Latino, or Asian residents were selected. In fact, the neighborhood with the highest poverty in each city was black or Latino, with the exception of NY Brooklyn. Although all selected disadvantaged neighborhoods are majority nonwhite, it was difficult to identify specific black-majority neighborhoods in Boston and Seattle that also met the poverty and distance criteria necessary for the study; in those cities, neighborhoods with a high black resident composition relative to other neighborhoods in the same cities were chosen. In Phoenix, San Antonio, NY Manhattan, and Philadelphia, disadvantaged Latino neighborhoods ranging from 52.1–96.6% Latino were also selected, as was a disadvantaged Asian neighborhood (49.0% Asian) in Seattle.

Once appropriate neighborhoods were located and prices were calculated, two advertisements per week in each city were posted. All advertisements contained the same information in the title and text; however, these features were varied superficially to avoid detection by return buyers. The advertisements randomly varied both whether the seller originated from an advantaged or disadvantaged neighborhood and also the proposed meeting location (i.e., either in the buyer's neighborhood of choice or at a central location). The central meeting locations in each city were identified as heavily trafficked commercial centers where two individuals might reasonably meet to conduct an iPhone 5 sales transaction (most often "downtown") and that reflected local nomenclature (in Philadelphia, for example, this location is called "Center City" instead of downtown).

Advertisements were posted between October 2013 and April 2014 at noon local time, and all email responses from buyers were collected, coded, and linked to each original post.

ACKNOWLEDGMENTS. We thank Jeremy Yang for his research assistance. J.W.F. and P.S. received support from William T. Grant Foundation Grant 182875.

1. Logan J, Stults B (2011) The persistence of segregation in the metropolis: New findings from the 2010 Census. *Census Brief prepared for Project US2010*. Available at www.s4.brown.edu/us2010/Projects/Reports.htm Accessed June 29, 2012.
2. Reardon SF, Bischoff K (2011) Income inequality and income segregation. *AJS* 116(4): 1092–1153.
3. Massey DS, Denton NA (1993) *American Apartheid: Segregation and the Making of the Underclass* (Harvard Univ Press, Cambridge, MA).
4. Sampson RJ (2012) *Great American City: Chicago and the Enduring Neighborhood Effect* (Univ of Chicago Press, Chicago).
5. Sharkey P, Faber JW (2014) Where, when, why, and for whom do residential contexts matter?: Moving away from the dichotomous understanding of neighborhood effects. *Annu Rev Sociol* 40:559–579.
6. Wilson WJ (1987) *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy* (Univ of Chicago Press, Chicago).
7. Anderson E (1992) *Streetwise: Race, Class, and Change in an Urban Community* (Univ of Chicago Press, Chicago).
8. Bauder H (2001) Work, young people and neighbourhood representations. *Soc Cult Geogr* 2(4):461–480.
9. Bauder H (2002) Neighbourhood effects and cultural exclusion. *Urban Stud* 39(1): 85–93.
10. Tilly C, Moss P, Kirschenman J, Kennelly I (2001) Space as a signal: How employers perceive neighborhoods in four metropolitan labor markets. *Urban Inequality: Evidence From Four Cities*, eds O'Connor A, Tilly C, Bobo L (Russell Sage Foundation, New York), pp 304–338.
11. Wacquant L (2008) *Urban Outcasts: A Comparative Sociology of Advanced Marginality* (Polity Press, Malden, MA).
12. Fiske ST (1998) Stereotyping, prejudice, and discrimination. *The Handbook of Social Psychology*, eds Gardner L, Gilbert D, Fiske ST (Oxford Univ Press, Oxford), pp 357–411.
13. Link BG, Phelan JC (2001) Conceptualizing stigma. *Annu Rev Sociol* 27:363–385.
14. Ellen IG, Turner MA (1997) Does neighborhood matter? Assessing recent evidence. *Hous Policy Debate* 8(4):833–866.
15. Galster GC (2012) The mechanism(s) of neighbourhood effects: Theory, evidence, and policy implications. *Neighbourhood Effects Research: New Perspectives*, eds van Ham M, Manley D, Bailey N, Simpson L, Maclennan D (Springer, Heidelberg), pp 23–56.
16. Harding DJ, Gennetian L, Winship C, Sanbonmatsu L, Kling JR (2011) Unpacking neighborhood influences on education outcomes: Setting the stage for future research. *Whither Opportunity?: Rising Inequality, Schools, and Children's Life Chances*, eds Duncan GJ, Murnane RJ (Russell Sage Foundation, New York), pp 277–296.
17. Jencks C, Mayer SE (1990) The social consequences of growing up in a poor neighborhood. *Inner-City Poverty in the United States*, eds Lynn LE, McGeary MG (National Academy Press, Washington, DC), pp 111–186.
18. Neckerman KM, Kirschenman J (1991) Hiring strategies, racial bias, and inner-city workers. *Soc Probl* 38(4):433–447.
19. Small ML, Feldman J (2012) Ethnographic evidence, heterogeneity, and neighbourhood effects after moving to opportunity. *Neighbourhood Effects Research: New Perspectives*, eds van Ham M, Manley D, Bailey N, Simpson L, Maclennan D (Springer, Heidelberg), pp 57–77.
20. Charles CZ (2006) *Won't You Be My Neighbor? Race, Class, and Residence in Los Angeles* (Russell Sage Foundation, New York).
21. Krysan M, Bader M (2007) Perceiving the metropolis: Seeing the city through a prism of race. *Soc Forces* 86(2):699–733.
22. Pager D, Quillian L (2005) Walking the talk?: What employers say versus what they do. *Am Sociol Rev* 70(3):355–380.
23. Bertrand M, Mullainathan S (2004) Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *Am Econ Rev* 94(4): 991–1013.
24. LaPiere RT (1934) Attitudes vs. actions. *Soc Forces* 13(2):230–237.
25. Pager D (2009) *Marked: Race, Crime, and Finding Work in an Era of Mass Incarceration* (University of Chicago Press, Chicago).
26. Yinger J (1995) *Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination* (Russell Sage Foundation, New York).
27. Ayres I, Banaji M, Jolls C (2011) Race effects on Ebay. *SSRN Electron J*. Available at ssrn.com/abstract=1934432.
28. Doleac JL, Stein LCD (2013) The visible hand: Race and online market outcomes. *Econ J* 123(572):F469–F492.
29. Hanson A, Hawley Z (2011) Do landlords discriminate in the rental housing market?: Evidence from an internet field experiment in US cities. *J Urban Econ* 70(2-3):99–114.
30. Hogan B, Berry B (2011) Racial and ethnic biases in rental housing: An audit study of online apartment listings. *City Community* 10(4):351–372.
31. Zussman A (2013) Ethnic discrimination: Lessons from the Israeli online market for used cars. *Econ J* 123(572):F433–F468.
32. Bishaw A (2012) *American Community Survey Briefs* (US Department of Commerce: Economics and Statistics Administration, Washington, DC).
33. Harris DR (1999) "Property values drop when blacks move in, because...": Racial and socioeconomic determinants of neighborhood desirability. *Am Sociol Rev* 64(3):461–479.
34. Krysan M, Farley R, Couper MP (2008) In the eye of the beholder: Racial beliefs and residential segregation. *Du Bois Rev* 5(1):5–26.