Neighborhood Stereotypes and Interpersonal Trust in Social Exchange: An Experimental Study

Article *in* City & Community · June 2015

DOI: 10.1111/cico.12112

3 authors, including:

Jens Ambrasat
Humboldt-Universität zu Berlin
31 PUBLICATIONS **150** CITATIONS

SEE PROFILE

Christian von Scheve
Freie Universität Berlin
137 PUBLICATIONS **2,209** CITATIONS

SEE PROFILE

Neighborhood stereotypes and interpersonal trust in social exchange: An experimental study

Lidia Gorbunova, Jens Ambrasat, Christian von Scheve
Freie Universität Berlin

Article in press in *City & Community*

Author Note

Lidia Gorbunova, Department of Sociology, Freie Universität Berlin, Berlin, Germany; Christian von Scheve, Department of Sociology, Freie Universität Berlin and German Institute for Economic Research (DIW), Berlin, Germany; Jens Ambrasat, Department of Sociology, Freie Universität Berlin, Berlin, Germany. We thank Gesche Schauenburg and Katrin Lippmann for valuable assistance. Correspondence concerning this article should be addressed to Christian von Scheve, Department of Sociology, Freie Universität Berlin, D-14195 Berlin, Germany. E-mail: scheve@zedat.fu-berlin.de

Abstract

Residential segregation is characteristic of most modern cities. Recent research indicates that segregation is, in addition to many other undesirable consequences, negatively associated with social capital, in particular generalized trust within a community. This study investigates whether an individual's residential neighborhood and the stereotypes associated with this neighborhood affect others' trusting behavior as a specific form of social exchange. Using an anonymous trust game experiment and five districts of the German capital, Berlin, as contextual variables, we show that trusting is contingent on others' residential neighborhood rather than on deliberate assessments of trustworthiness. Participants show significantly greater trust towards individuals from positively stereotyped neighborhoods with favorable socio-demographics than to persons from negatively stereotyped neighborhoods with unfavorable socio-demographics. Importantly, when stereotypes and socio-demographics point in opposite directions, participants' trust decisions reflect stereotype content instead of socio-demographics.

Keywords

Residential segregation, diversity, trust, stereotypes

Neighborhood stereotypes and interpersonal trust in social exchange:

An experimental study

Modern cities are characterized by residential segregation and research on segregation has become one of the most active areas of inquiry in the social sciences. The reasons for this flourishing are manifold, but the growing understanding of spatial arrangements as analytical categories in sociology and the increasing size and complexity of cities in contemporary societies are amongst the most evident (e.g., Logan, 2012). Moreover, despite a number of legislative and cultural initiatives aimed at desegregation (Smets and Salman, 2008), it tends to persist in most urban areas, with racial and income segregation as the most obvious forms (Massey and Denton, 1993; Ellen, 2000).

Past research has documented the various detrimental individual, social, and economic outcomes of segregation, in particular in terms of poverty, violence, health outcomes, educational attainment, and the stability of social networks (e.g., Quillian, 2012; Galster, 1988; Charles, 2003; Acevedo-Garcia, Lochner, Osypuk, and Subramanian, 2003). At the same time, some studies have highlighted socially and economically desirable effects of segregation, for instance from urban structuring and suburbanization (see Cutler and Glaeser, 1997; Alba, Logan, Stults, Marzan, and Zhang 1999) and homophily in social networks. For example, new immigrants often start building social networks through contacts with peers from similar ethnic, religious, or language groups who are more likely to provide valuable resources than others (see, e.g., Edin, Fredriksson, and Aslund, 2003; Glitz, 2012; Damm, 2009).

Although a majority of contemporary segregation research relies on large scale survey and panel data, one of the pioneering studies in the field focused on the "micromotives" related to segregation, modeling individual preferences in neighborhood choice based on the racial composition of a neighborhood (Schelling, 1971). On this micro-level of segregation, race, ethnicity, and other factors of neighborhood composition have been shown to become associated

with *neighborhood stereotypes* that affect various behaviors in the urban context, from housing decisions to trusting behavior (Uslaner, 2010). Neighborhood stereotypes and associated prejudices that are rooted in deeply held stereotypes about racial and ethnic groups and transferred to entire neighborhoods have been shown to be a driving force behind the persistence of segregation (Squires, Friedman, and Saidat, 2002). This includes, for example, the effects of stereotypes on perceptions of safety (Semyonov, Gorodzeisky, and Glikman, 2012) and the consequences of segregation for generalized trust (Uslaner, 2011).

Although much has been written about the mechanisms of racial neighborhood stereotypes involved in segregation processes, in particular concerning stereotypes related to Blacks and Whites in the U.S. (Ellen, 2000; Massey and Denton, 1993; Quillian and Pager, 2001), comparably little is known about the effects of stereotypes that are based on factors other than a neighborhood's racial and ethnic composition, for example its historical development, economic prosperity, or prevalence of specific social milieus and lifestyles. This is all the more surprising since neighborhood stereotypes are frequently used to describe neighborhoods in everyday culture, for example in literature, media, and travel guides.

Referring to Bruch's and Mare's (2009, p. 272) claim that "segregation processes result from interdependence between the actions of individuals and the characteristics of groups", we were interested in the general question of how neighborhood stereotypes influence social interactions, in particular exchange relations, between individuals from different neighborhoods. More specifically, we were interested in the question whether an individual's residential neighborhood is associated with his or her trustworthiness in an otherwise anonymous social exchange situation. In other words, we looked at the potential of activated neighborhood stereotypes to serve as a signal in decisions to trust or distrust. To this end, we devised an anonymous bargaining game experiment with a neighborhood stereotype manipulation to investigate how stereotypes affect trusting behavior and decision-making in social exchange.

We will first briefly review studies on the causes and consequences of residential segregation and then discuss research that has investigated the influence of segregation on social interactions and exchange relations. Here, we are particularly interested the consequences of segregation on interpersonal trust. We then describe the rationale of our study, its design and the methods we used. Subsequently, we present the results and discuss our findings.

Residential segregation: causes and consequences

Residential segregation is widely perceived to be detrimental in terms of individual and social outcomes. On the structural level, segregation is associated with the unequal provision of public goods, for example schooling institutions and health care (Fernandez and Levy, 2008; Alesina, Baqir, and Easterly, 1999), pronounced disparities in housing prices (Cutler, Glaeser, and Vigdor, 1999), differences in crime and violence rates (Akins, 2007), educational attainment (Frankenberg, 2009), and school drop-out rates (Orfield and Lee, 2005). Segregation has also been shown to be linked to an increased isolation of individuals and groups, reduced interactions between groups, lower levels of inclusion into social clubs, associations, and civic engagement, and an overall reduction of communal values and a threatening of social cohesion (Cutler and Glaeser, 1997). Also, access to social networks and occupational opportunities is limited in many segregated neighborhoods and ethnic enclaves (Cutler and Glaeser, 1997).

Although residential segregation is spurred by a multitude of (often recursively) interacting factors, a number of mechanisms have been repeatedly studied and are now well-established in the literature. A key factor contributing to residential segregation are individuals' preferences for other groups and individuals (Clark, 1986, 1988). This is best seen by looking at racial and ethnic segregation. For example, Blacks in the U.S. for decades tended to prefer living in black or mixed neighborhoods, despite changes in racial attitudes and various legislative initiatives (Thernstrom and Thernstrom, 1997). Racial or ethnic self-selection, which may be linked to the provision of "local private goods" (Waldfogel, 2008), therefore significantly

contributes to the emergence of specific urban enclaves. Likewise, Boustan (2012) argues that either collective or individual actions of White homeowners contribute to racial segregation. These actions encompass organized strategies to exclude non-Whites from certain residential areas as well as the preferences of Whites to leave neighborhoods that are increasingly populated by Blacks (Farley et al., 1994; Card, Mas, and Rothstein, 2008; see also Boustan, 2012). Farley and colleagues (1994) have argued that these preferences to a great extent arise from stereotypes towards other groups, for example in terms of taking care of one's home. Even though many homeowners may not endorse these stereotypes, they still might be motivated to relocate out of a neighborhood because they assume that others hold these stereotypes and that the value of their homes will successively decrease.

Moreover, discriminating practices in the housing market are closely tied to individual preferences on the institutional or organizational level (Galster and Kenny, 1988). Many studies have shown that discriminating behavior of real estate brokers and lenders is one of the main reasons for segregation (e.g., Munnell, Tootell, Browne, and McEneaney, 1996; Farley et al., 1994). Although major legal changes since the 1960s have put an end to legitimized discrimination in the housing market in U.S. American cities, discrimination practices towards ethnic minorities continue to be an issue and still contribute to segregation (Boustan, 2012). Research indicates that minority groups receive less information on housing, a lower quality of service from real estate brokers, pay higher fees, and mortgage applications are more complicated and yield higher chances of denial than for Whites (Yinger, 1998, as cited in Charles, 2003). In addition, geographical steering is usually involved in marketing of real estate agencies, whereby Whites are provided with more negative information on mixed neighborhoods and ethnic minorities are presented with rather positive features (Yinger, 1998).

Another major factor contributing to residential segregation are socio-economic and demographic differences amongst households and individuals (Darroch and Marston, 1971;

Massey, 1979). Although these differences are highly correlated to racial and ethnic factors, income and educational attainment have more recently been shown to make an independent contribution to explaining segregation, in particular in European cities (Semyonov, Raijman, and Gorodzeisky, 2008). For example, Harsman and Quigley (1995) have shown that spatial segregation by race or ethnicity is mostly unrelated to economic factors underlying segregation, such as income class or demographic grouping. Using innovative survey data at the micro-neighborhood level for Germany, Sager (2012) shows that that income, education, language proficiency, and city size account for a substantial amount of residential isolation among four immigrant groups.

Segregation in European cities

Compared to the North American tradition, research on residential segregation in Europe has only emerged relatively recently (Musterd, 2005; Musterd and van Kempen, 2009; Glikman and Semyonov, 2012; Iceland, 2014). Generally, segregation in European cities is supposed to be less pronounced than in North America (e.g., Musterd, 2005). However, it has reached substantial levels, in particular in large multi-cultural conglomerations (Glikman and Semyonov, 2012). Segregation in Europe is mainly driven by immigration-related processes and is focused more on ethnic rather than racial segregation. Ethnicity, religion and language, often along with economic inequalities, seem to be the main determinants of segregation in Europe (Glikman and Semyonov, 2012). Compared to segregation processes in North America, self-segregation into specific neighborhoods seems to be more pronounced in Europe and discrimination based on residential neighborhood is a common issue across European countries (ibid.). In summarizing previous studies, Glikman and Semyonov (2012, p. 199f) state that European cities differ substantially regarding the composition of ethnic minorities and the rates of segregation based on ethnicity. Moreover, patterns of segregation have changed over time, although segregation rates

have generally remained stable. Rates vary between different ethnic groups as well as across countries and cities within one country for specific groups.

Regarding the consequences of segregation, European research is much less focused on violence, gang-, and drug-related crimes, as is the case in the US, but has primarily looked at social mobility, discrimination, and the integration of migrant populations (Musterd, 2005). At large, existing research suggests that the integration immigrants differs across countries and groups, although immigrants from other European countries are substantially less isolated than those from the Middle East, Asia, and Africa (Glikman and Semyonov, 2012). For example, studies have shown that immigrants in segregated neighborhoods report ethnic discrimination more frequently (Dill and Jirjahn, 2014), that ethnic diversity can negatively affect collective efficacy (Kleinhans and Bolt, 2014), and that the size of some ethnic neighborhood minorities is linked to less positive attitudes towards those minorities (Havekes, Coenders, Dekker, and van der Lippe, 2014).

Neighborhoods as symbolic boundaries

Mostly irrespective of European or North American contexts, a common mechanism underlying many of the established processes of segregation is that it promotes the creation of spatial and symbolic boundaries between neighborhoods and patterns of in-group and out-group behavior based on such boundaries. According to this view, first elaborated by Hunter (1974), residential segregation does not only constitute spatial zones and boundaries, but also leads to the emergence of "cognitive frameworks" (Hwang, 2007) guiding everyday behavior towards individuals in specific neighborhoods that is largely unrelated to immediate concerns of housing and residential location. Importantly, these cognitive frameworks need not be driven by discrimination based on racial or ethnic factors, but may encompass other characteristics that likewise contribute to the formation of stereotypes and prejudice, such as class, status, gender, sexual orientation, or lifestyle.

In a similar way, Semyonov and Glikman (2009, p. 695) argue that "individuals possess a 'cognitive map' of communities and neighborhoods" and organize "city-neighborhoods on hierarchical scale of desirability according to their social status and ethnic composition". This implies that individuals usually attribute certain features to neighborhoods and urban areas that are related actual or assumed characteristics of their inhabitants. Hence, neighborhood stereotypes become signals for others to behave in a certain way towards inhabitants of a neighborhood. These cognitive maps tend to categorize neighborhoods according to their stereotypical characteristics to be, for example, "dangerous" vs. "safe", "black" vs. "white", or "poor" vs. "rich". Striking examples are provided by extensive research on the links between the ethnic composition of neighborhoods and fear of crime (e.g., Chiricos, McEntire, and Gertz, 2001; Semyonov et al., 2012). It therefore seems plausible to extend this conjecture to also cover associations between cognitive maps and trusting behavior, i.e. stereotypical perceptions of whether individuals from certain neighborhoods are more trustworthy than from other neighborhoods.

Trust, diversity and segregation

On the micro level of social behavior and interaction, generalized trust as a specific form of social capital has been primarily investigated with respect to the ethnic composition of neighborhoods. Putnam's (2007) well-known argument states that ethnic diversity in residential neighborhoods leads to a decline in trust and solidarity because people tend to become isolated from one another and to "hunker down", i.e. "to pull in like a turtle" (Putnam, 2007, p. 149). Although a great number of studies has more or less confirmed Putnam's conjectures (e.g., Gundelach and Traunmüller, 2014; Schaeffer, 2013; Koopmans and Veit, 2014), other studies have failed to support his hypotheses, primarily in settings outside the U.S. (e.g., Gijsberts, van der Meer, and Dagevos, 2011; Gundelach and Freitag, 2013; Sturgis, Brunton-Smith, Read, and Allum, 2011). Hence, the evidence on the effects of ethnic diversity on trust, solidarity, and

other forms of social behavior is at best mixed (e.g., Hooghe, Reeskens, Stolle, and Trappers, 2009; Laurence, 2011; Stolle, Soroka, and Johnston, 2008). At the same time, ethnic diversity has been linked to a number of positive outcomes, for instance increased wages and higher prices for rental housing in diverse metropolitan areas (Ottaviano and Peri, 2005).

Aside from the mixed evidence, Putnam's (2007) thesis has been challenged on conceptual grounds. Uslaner (2010) argues that it is not diversity per se that is responsible for declines in trust, cohesion, and solidarity, but rather residential segregation. He holds that, firstly, "diversity is largely a proxy for large non-white populations rather than an 'intermingling' of different ethnic and racial groups" (Uslaner, 2011, p. 223) and, secondly, that "when people of different backgrounds live apart from each other, they will not develop the sorts of ties or attitudes that lead to trust" (Uslaner, 2011, p. 223). According to this view, segregation shapes the overall trusting propensity of individuals, promoting particularized trust at the expense of generalized trust (e.g., Rothwell, 2010; Portes, 1998). Generalized trust refers to the propensity to trust in previously unknown individuals whereas particularized trust only involves trust in members of one's own group.

In sum, research on the links between urban organization and trust has focused on the effects of the ethnic composition of a neighborhood and the degree of ethnic or racial segregation on residents' propensity for generalized trust. While extant research has clearly identified robust links between urban organization and trust, the underlying mechanisms of this linkage are much less clear. Studies using diversity measures as the main independent variable focus on trust *within* a neighborhood or some other spatially defined area and tend to neglect the potential effects of various group-related processes underlying trust or mistrust. In contrast, research using segregation indicators captures the effects of segregated groups on trust. However, these group-related processes usually remain implicit in the pertinent studies since surveys seldom provide dedicated data on intergroup relations. Hence, although the effect of segregation on trust is

mainly investigated on aggregate and community levels, this research suggests that low levels of trust are – also – brought about by a lack of trust *between* segregated groups.

To our knowledge, only one study has so far specifically addressed trusting behavior between individuals from more or less segregated groups, i.e., neighborhoods. Falk and Zehnder (2013) conducted a trust experiment in the city of Zurich, Switzerland, in which participants could condition their investments in a bargaining game on the residential neighborhood of their co-players. The study shows that participants differentiate investments according to the Zurich neighborhood in which the co-player lives. The main determining factor of a district's trust reputation is its economic status as measured by the median per capita income. Other variables, such as the fraction of foreigners living in a neighborhood or religious fragmentation of districts, are correlated with a district's trust reputation, but are not robust when controlling for income.

The study shows that residents hold particular beliefs about the trustworthiness of specific neighborhoods and that these beliefs are accurately mirrored by their actual trusting behavior. The study likewise suggests that in social exchange relations characterized by limited information on interaction partners, individuals resort to stereotypical knowledge about statistically identifiable groups. These stereotypes involve, for instance, beliefs about crime tendencies and income inequalities (Farley et al., 1994). This view tallies with Semyonov's and Glikman's (2009) view that citizens represent communities and neighborhoods in hierarchically structured cognitive maps based on, for example, social status and ethnic composition. Possible explanations for the links between neighborhood stereotypes and trust might be found, for example, in the stereotype content model (Fiske, Cuddy, and Glick, 2007) or in more general research on the links between trust and social structure (see, e.g., Wuthnow, 2004).

Neighborhood stereotypes and generalized trust in the German capital

The research summarized above suggests, first, that neighborhood stereotypes and corresponding cognitive frameworks influence individual preferences and social interactions and

exchange with individuals living in specific neighborhoods. Second, this research suggests that ethnic diversity and segregation most likely affect interpersonal trust and other forms of prosocial behavior within specific neighborhoods. In this study, we sought to combine these insights and investigated the question whether neighborhood stereotypes affect interpersonal trust between individuals from different neighborhoods. More specifically, we analyzed whether one's neighborhood acts as a signal affecting social interactions amongst otherwise unknown individuals (strangers). We hypothesized that (H1) neighborhood stereotypes are confirmed in trusting behavior towards strangers, i.e. that individuals show less trust towards individuals from negatively stereotyped neighborhoods than towards those from neutral or positively stereotyped districts. Moreover, and in line with previous research on trust in social exchange, we hypothesized (H2) that trusting behavior should very generally concur with individuals' judgments of others' trustworthiness. However, and more specifically, we also hypothesized (H3) that judgments of others' trustworthiness are not essential for trusting behavior in the urban context and that, rather, neighborhood stereotypes motivate actual decisions to trust. This hypothesis is motivated by two conjectures. First, trust in many cases cannot (entirely) be explained by rational and well-informed considerations regarding others' trustworthiness but needs to rely on alternative, often emotional or affective, cues (Lahno, 2001). Hence, in many situations, actors resort to stereotypical images and their emotional associations when making decisions to trust, as shown in research on intergroup relations (e.g., Cuddy et al., 2009). Second, inferential knowledge of neighborhoods that may inform judgments of trustworthiness, for instance regarding a neighborhood's socio-demographics or actual crime rates, is often insufficient to solve decision problems in social exchange because this information can be inconsistent, even pointing in opposite directions, or be entirely unavailable. Although stereotypes to some extent certainly do reflect neighborhoods' objective living conditions, they

also include social and cultural prejudice and bias and need not coincide with the "objective" characteristics.

To test these assumptions, we conducted a laboratory experiment in which participants from the city of Berlin, Germany, played a trust game, i.e. a bargaining game in which two anonymous players can maximize their payoffs when trusting one another (see Berg, Dickhaut, and McCabe, 1995, for a detailed description). We modified the original game by adding context to the decision situation, i.e. by including a neighborhood manipulation. Specifically, we presented participants with information on the neighborhood in which the other players live.

Berlin is an ideal case for various reasons. Berlin is the capital of the Federal Republic of Germany with approximately 3.4 million inhabitants in 2013. It was a state-divided city between 1948 and 1990 and also physically divided by the Berlin Wall from 1961 to 1989. Until 2001, Berlin was organized into 23 neighborhoods (*Ortsteile*) that have been merged into the current twelve administrative districts (*Bezirke*). Aside from scholarship looking at the general transformation of the city after German reunification in 1990 (e.g., Cochrane and Jonas, 1999), segregation is mostly discussed with regard to ethnicity and immigration (Kemper, 1998). Currently, 23 percent of the Berlin population have an immigration background and the largest immigrant group is of Turkish origin. Other notable minorities include immigrants from Russia, Poland, former Yugoslavia and various Arab and European countries (see Koopmans and Veit, 2014, p. 385f, for a detailed exposition).

Important to our study, many of Berlin's neighborhoods have – often for decades – been imbued with pronounced and well-known stereotypical attributes that are frequently reproduced and reinforced in everyday culture, for example in Berlin's city guides and magazines, daily newspapers, theater plays, cabarets, social and broadcast media. Moreover, since Berlin is the German capital and one of Europe's historically most noticeable cities, these stereotypes as well

as factual information on many of the city's neighborhoods are perpetuated not only in local, but also in national and international media.

Methods

Participants

Sixty-eight individuals (37 females; M_{age}= 40.5; SD_{age}= 12.4) living in 19 different neighborhoods of Berlin took part in the study. Participants were almost evenly distributed across these 19 neighborhoods (see Table 1 for details) so that their own residential area is unlikely to confound our results (see below). Participants were recruited using e-mail lists, announcements in internet forums, and word-of-mouth advertising.

< insert Table 1 about here >

Measures

We measured trusting behavior using a well-established bargaining game, the trust game (Berg et al., 1995). In this game, two randomly matched players (A and B) gamble sequentially. Both players are informed of the rules and know the payoffs. Player A (the *sender*) decides how much of a given endowment (nothing to all) she wants to transfer to player B (the *receiver*). This amount is tripled "on the way" to player B. Subsequently, B has to decide how much of the tripled amount she wants to keep and how much she wants to send back to player A. B's payoff consists of the amount not sent back to A, while the payoff for player A is the sum of the formerly kept amount plus the amount sent back by player B. Since B is also free to keep all the money and does not need to send anything back, the decision of A to send a positive amount is considered trusting behavior. Thus, the tripling is an incentive for a risky decision and functions as a reward for trusting.

We implemented a computerized version of this game using the *z-Tree* software (Fehr and Gächter, 2000), where participants only had to play the role of A. The game was modified so that participants were led to believe that they interact anonymously with other receiving players

whose decisions to all possible monetary transfers were previously recorded. In fact, however, all receivers were simulated by the z-tree software using the following decision parameters (zero transaction yields zero returns; a non-zero transaction of *T* yields a rounded down to integers expression of *(T*2)*R+1*, where *R* is a random number from a [0;1] interval). Each participant played five successive rounds of the trust game with 5 different receivers (from 5 different neighborhoods) and was endowed with 5 Euros for each round. Participants were then provided with information on the neighborhood in which the receiver currently lives (see *Materials* for details) and asked how much of the 5 Euros (0, 1, 2, 3, 4, 5) to transfer to the receiver. Specifically, players saw the on-screen question: "Your partner lives in <*neighborhood*>. How much do you want to transfer?" Participants were asked to enter the amount on the keyboard. At the beginning of the procedure, participants were instructed that once the five rounds are completed, they can select one of these rounds as their reimbursement payoff. After this decision was made, participants were presented on-screen with the amounts returned by the receivers in each round.

In addition to behavioral trust, in which actual monetary stakes are involved, we also assessed participants' judgments of receivers' trustworthiness, i.e. their expressed expectations of back-transfers. Immediately after the transfer decision was made, we asked "How much do you expect to get back from your partner?" The expected amount was entered on the keyboard. We take this post-hoc judgment of trustworthiness as a deliberate estimation of receivers' willingness to reciprocate and act pro-socially, possibly based on participants' available knowledge of the respective neighborhoods. This judgment of trustworthiness is likely to be highly correlated with actual trusting behavior, but need not be its single best predictor.

Materials

We aimed at activating neighborhood stereotypes as our main predictor variable by presenting the name of the neighborhood in which the receivers (allegedly) lived as the only

available information about the receivers. We selected five Berlin neighborhoods based on three criteria. First, we acquired stereotypical depictions of neighborhoods as they are frequently constructed and reproduced in everyday culture, e.g., in theater ("Gutes Wedding, Schlechtes Wedding"), music, literature, weekly magazines, travel literature, or documentaries (e.g., "Kreuzberg 36" by Angeliki Aristomenopoulou, "Berlin Prenzlauer Berg 1990" by Petra Tschoertner). These cultural representations include, for example, depictions of lifestyles, typical occupations and family structures, age, ethnic composition, nightlife and entertainment, socio-economic status, and crime rates. Second, we looked at objective segregation data such as age structure, ethnic composition, income, and unemployment rates available from official statistics that to some extent may represent individuals' declarative knowledge about a neighborhood. Third, because the divide of Berlin between the former German Democratic Republic (East Germany) and the Federal Republic (West Germany) still yields marked cultural differences, we selected neighborhoods that belonged to both states during that time.

<insert Table 2 about here>

Based on these characteristics, we selected two unambiguously favorable neighborhoods in terms of stereotypes and socio-demographic structure, one unambiguously unfavorable neighborhood, and two ambiguous cases, one with positive stereotypes but unfavorable socio-demographics and one with negative stereotypes but rather favorable socio-demographics. Two neighborhoods that are associated with predominantly positive stereotypes (e.g., in terms of cultural and leisure activities) and have a favorable socio-demographic structure (e.g., in terms of income and education) are *Charlottenburg* (West) and *Prenzlauer Berg* (East). Charlottenburg is usually portrayed as prosperous, safe, and settled. It is one of the wealthiest neighborhoods not only in Berlin but across Germany (Brandt, 2011) and known for luxury shopping, museums, and architecture (Dörre, 2011; Pearson, 2013b, Frommer's, 2013). As shown in Table 2, socio-demographics largely mirrors these stereotypical attributions. Charlottenburg scores high (0,26)

on the Social Index, a composite measure provided by the official statistics of the city of Berlin covering 25 variables related to stratification and inequality, for example unemployment, social welfare, life expectancy, educational attainment, and income (range: -3 to 3). It also has the highest monthly net income of the selected neighborhoods and a low unemployment rate.

Likewise, Prenzlauer Berg is mostly portrayed as expensive, bourgeois, and "hip" in everyday culture. Residents are described as wealthy, international, "yuppie bohemians" (Pearson, 2013b). Many British and American immigrants live here and travel guides describe the neighborhood as relaxed, streets being full of organic food cafes and shops, restaurants, yoga clubs, and trendy clothing boutiques (Frommer's, 2013). Looking at the socio-demographic data in Table 2, it is evident that the proportion of children and adolescents is comparably high, the neighborhood has a relatively high income and a relatively low unemployment rate (8,5%) and is ethnically not particularly diverse (based on the fraction of inhabitants with a migration background). However, it bears a comparably low Social Index (-0,60). Taken together, both neighborhoods can be characterized by high levels of cultural and economic capital, i.e. they are positively stereotyped and comparably well-off.

We selected *Wedding* (West) as a neighborhood that is often associated with negative stereotypes and has a relatively unfavorable socio-demographic structure. Wedding is typically described as "Berlin at its most multicultural; it's edgy and arty" (Pearson, 2013a), although, historically, the "arty" component is a very recent result of gentrification. Wedding is often portrayed as a traditional working class borough with a diverse multiethnic population (many from Turkey and Arab countries). It is still one of the poorest neighborhoods of Berlin and widely considered crime-ridden. This is largely mirrored in Wedding's socio-demographics, Table 2 showing a high unemployment rate (15,9%), a high proportion of migrants (53,1%) and a low Social Index (-2,10).

Marzahn (East), on the other hand, is negatively stereotyped but bears acceptable socio-demographics. It is often described as an "archetypical tower-block monstrocity" (see, e.g., Wanted in Europe, 2013), its inhabitants portrayed as almost "White trash" lower educated and living on little income with a high proportion of primarily Russian and Eastern European immigrants. As the German newspaper *taz* writes, "Marzahn is synonymous for ghetto and social decline to many Berliners".[1] This stereotypical image is caricatured by comedian "Cindy aus Marzahn", who has gained nation-wide TV prominence. Marzahn's overall socio-demographics, however, point a notably different picture. Only a comparably small fraction of inhabitants has a migration background (14,1%), Marzahn has an acceptable Social Index (0,02) and a relatively acceptable unemployment rate (11,3%).

We included *Kreuzberg* (West) as the reverse example of an ambiguous neighborhood. On the one hand it is praised for its cultural diversity, leisure time activities, liveliness, and cosmopolitan urban character. Residents are described as bourgeois, gritty, anarchic, international, and "anti-establishment" and its atmosphere is said to be arty, eco, low-key, alternative, and family-friendly (Pearson, 2013b). Kreuzberg is one of the most attractive nightlife areas and a popular tourist destination. However, socio-demographics, as shown in Table 2, reveal a notably different picture. Kreuzberg has a high level of ethnic diversity (49,6 % of residents have a migration background) and the lowest Social Index (-2,31) of the neighborhoods we selected. However, it has an unemployment rate similar to that of Marzahn (11,8%).

Results

Our analyses focused on two questions. First, we sought to establish whether trusting behavior, i.e. participants' decisions on which proportion of their initial endowment to transfer to the receivers, are linked to the residential neighborhood of the receiver. To do so, we compared

[1] http://www.taz.de/!98193/ ; own translation

whether average transfers vary depending on the (alleged) neighborhood of the receiver. Second, we investigated whether information on receivers' residential neighborhood or deliberate judgments of receivers' trustworthiness predict participants' trusting behavior. To this end, we analyzed associations between expected return transfers (as judgments of trustworthiness) and participants' actual trusting behavior. Given that trusting behavior can be predicted by judgments of receivers' trustworthiness, it is likely to be (although does not have to be) informed by objective neighborhood characteristics. If trusting behavior cannot be predicted by judgments of trustworthiness, we assume stereotypes and associated prejudices to play a central role. Although this may already provide insights into the relevance of neighborhood stereotypes as compared to judgments of trustworthiness, the effect of stereotypes is then further identified by specifically looking at trust behavior towards neighborhoods that are ambiguous in terms of stereotypes and socio-demographics.

Descriptive analyses

The mean transfer across all participants and neighborhoods was 3.61 Euros, which corresponds to 72% of participants' initial endowment. Compared to other studies using anonymous trust games, this is a relatively high proportion. One reason might be that most of the participants and all of the receivers (allegedly) lived in Berlin and that information on the greater residential area is sufficient to induce above average levels of trust as a consequence of a general in-group projection.

<insert Figure 1 about here >

In a second step, we analyzed whether average transfers varied by neighborhood. Figure 1 shows mean transfers separately for each of the five neighborhoods. We find that receivers said to live in Charlottenburg (M= 3.78, SD=1.33), Kreuzberg (M= 3.82, SD=1.22), and Prenzlauer Berg (M= 3.72, SD=1.14) received mean transfers above 3.7 Euros, whereas receivers from Wedding (M= 3.37, SD=1.33) and Marzahn (M= 3.38, SD=1.43) received transfers not

exceeding 3.4 Euros on average. Using two-tailed t-tests and pairwise comparisons, we find that comparing Wedding and Marzahn to Charlottenburg and Kreuzberg yields significant differences (p= .01) as does comparison with Prenzlauer Berg (p= .05). In sum, descriptive analyses lend support to our hypothesis H1 that participants show significantly lower trusting behavior towards the negatively stereotyped neighborhoods.

In addressing the second question, we first analyzed whether participants' evaluations of expected returns differ by other players' residential neighborhood. Since expected returns are highly correlated with participants' transfers (r= 0.65), we examined expected return ratios, i.e. the expected return on investment,

$$ERR = ER / I,$$

where *ERR* is the expected return ratio, *ER* is the expected return (in Euros) and *I* is the investment, i.e. the amount transferred to the receiver (in Euros).

<insert Figure 2 about here >

Figure 2 shows the average expected return ratios separately for each of the five neighborhoods. Interestingly, all return ratios are greater than 1, which implies that no neighborhood is assumed to back-transfer less money than the amount received. Moreover, and less surprisingly, the differences in return ratios roughly mirror the differences in transfers. Highest returns depending on the amount transferred are expected from players living in Kreuzberg (*ERR*= 1.25). This means that participants expect to receive returns from players living in Kreuzberg to be 25% above the amount transferred to these players. Returns from Charlottenburg (*ERR*= 1.18) are expected to be 18% higher, from Prenzlauer Berg (*ERR*= 1.17) 17% higher, from Wedding (*ERR*= 1.13) 13%, and Marzahn (*ERR*= 1.11) 11% higher than the transfers. However, pairwise comparisons using two-tailed t-tests show that only the difference between Kreuzberg and Wedding (p= 0.009) is significant. In sum, these results lend some support to our hypothesis H2 since investments and expected returns point in the same direction,

even if only one difference proves to be significant. We will test the robustness of this finding using multivariate analyses in the following section.

Multivariate analyses

Although the results of our descriptive analyses are suggestive in terms of our hypotheses, they are insufficient to actually explain whether and how the expected returns are decisive for the investment decision. To this end, we specified fixed-effects regression models. We opted for fixed-effects models because they allow to account for the repeated-measures design and to control for unobserved and time-invariant interindividual heterogeneity (Wooldridge, 2010). We used the amount transferred to the receivers as our dependent variable and expected returns and neighborhoods as our main predictor variables. We did not include subject-specific control variables such as age, gender, or dispositional trust since unobserved interindividual heterogeneity is accounted for by the fixed-effects model in that this model relies solely on mean-centered person-specific variance across all games played by a participant.

<insert Table 3 about here >

Model one in Table 3 shows that expected return ratios are not associated with participants' transfer decisions, i.e. trusting behavior. Instead, model two indicates that receivers' neighborhood is a significant predictor of transfer decisions. Using Kreuzberg as the reference category, the fixed-effects regressions show that participants transfer significantly lower amounts to players from Wedding and Marzahn. However, and in line with our expectations, participants do not discriminate between the three neighborhoods Charlottenburg, Kreuzberg, and Prenzlauer Berg. Moreover, as shown in model three, neighborhood effects are stable when controlled for expected returns. Taken together, this supports our hypothesis H1, i.e., that individuals show less trust towards individuals from negatively stereotyped neighborhoods than towards those from neutral or positively stereotyped neighborhoods. Also, the analyses support H3 that actual trusting behavior in otherwise anonymous exchange relations is not driven by deliberate

judgments of trustworthiness. Although we cannot directly measure neighborhood stereotypes, the behavior we observe for those districts for which objective living conditions and stereotypes point in opposite directions (Marzahn, Kreuzberg) suggests that stereotypes motivate actual trusting behavior in which monetary stakes are at play.

Discussion

This study investigated how cultural neighborhood stereotypes influence social interaction, in particular social exchange, between residents of different neighborhoods in the city of Berlin, Germany. Previous works have shown that generalized trust as an important behavioral propensity is significantly affected by segregation. Existing studies, however, mainly investigated the effects of ethnic segregation and have seldom explicitly focused on actual trust decisions involving individuals from different neighborhoods. Hence, our study looked at the role of neighborhood stereotypes in decisions to trust individuals from different neighborhoods. Our study is based on the assumption that trust decisions can be informed in two ways. First, through stereotypical images and "cognitive maps" (Semyonov and Glikman, 2009) of neighborhoods, and, second, through deliberate (or possibly "rational") expectations of others' trustworthiness based on knowledge of the "objective" living conditions in a neighborhood. Although evidently both processes go hand in hand, we assumed that whereas stereotypes are usually clear-cut images of a neighborhood, knowledge of living conditions, such as socio-demographics, can point in different directions or might be unavailable for a decision-making problem at hand. Hence, we assumed that expectations of trustworthiness cannot fully explain neighborhood trust and that neighborhood stereotypes instead play a decisive role.

Results of our study show that participants exhibit lower levels of trust towards predominantly negatively stereotyped neighborhoods (Wedding, Marzahn) than towards neighborhoods carrying mostly positive connotations (Prenzlauer Berg, Charlottenburg, Kreuzberg). A second key finding is that participants' trust decisions are not based on their

assessments of trustworthiness of different neighborhoods. Instead, the neighborhood to which transfers are made is the sole significant predictor of trusting decisions. This supports the view that neighborhoods have a specific "trust reputation" signature (Falk and Zehnder, 2013) and that stereotypical attitudes associated with neighborhoods are likely to play a decisive role in people's decision to trust or mistrust. At the same time, our findings suggest that (knowledge of) certain socio-demographic characteristics of a neighborhood, which are likely to inform expectations of trustworthiness, seem to be less important for otherwise anonymous social exchange. Hence, trust discrimination between neighborhoods cannot be explained by instrumental rationality (as reflected by judgments of trustworthiness) but critically involves cultural and social psychological factors. This is underlined by opposite trust patterns towards players from Marzahn (negatively stereotyped, acceptable socio-demographics) and Kreuzberg (positively stereotyped, unfavorable socio-demographics) as well as by non-discrimination between Prenzlauer Berg, Charlottenburg (both positively stereotyped with favorable socio-demographics), and Kreuzberg. These results, however, have to be interpreted with care given the limitations of our study. First, our findings are based on a comparably small sample size and, second, we did not directly measure neighborhood stereotypes.

Nevertheless, our study contributes to current segregation theory and research in different respects. First, extending studies on the consequences of segregation for social mobility and integration, in particular regarding immigrant populations in European societies (e.g., Dill and Jirjahn, 2014), our findings suggest that behavioral discrimination also exists in dyadic social exchange relations between individuals from different neighborhoods. In addition to evidence regarding generalized trust (Putnam, 2007; Uslaner, 2010, 2011), this finding is important because it refers to trust in specific social exchanges in which both players can be better off when they cooperate. Although our study cannot directly speak to the question of whether diversity or segregation is the most notable predictor of discrimination in a community, it

generally supports the view that the fragmentation of urban areas into clearly stereotyped neighborhoods has potentially detrimental consequences for (cross-neighborhood) social interactions and exchange. This is particularly important in social encounters in which "the first impression counts" and actors initially have little personal knowledge of one another, such as in job interviews, initiating business contacts, or student-teacher relations.

Second, our study offers novel insights into the determinants of discrimination between segregated neighborhoods. Most existing studies have not yet precisely looked at the actual mechanisms underlying the links between segregation and mistrust. They frequently rely on correlational evidence using indicators of, for example, racial or ethnic fragmentation, income or educational attainment to predict generalized trust (Putnam, 2007; Uslaner, 2010, 2011). Regarding decision-making processes, we suggest that not only "objective" information on neighborhoods, but also distinctive stereotypical images influence decisions to trust. This way, we establish links between the social psychology of stereotypes, prejudice, and discrimination on the one hand and sociological research on segregation on the other hand.

The study suggests that the detrimental effects of residential segregation are not only rooted in objective living conditions and socio-demographics, but likewise in discourse and cultural practices and their ramifications for the "cognitive maps" people use to categorize neighborhoods and their residents. Importantly, stereotypes as outcomes of those practices might further reinforce existing detrimental consequences of residential segregation in everyday social interactions. It is not only the distinctive characteristics of neighborhoods, such as racial composition or income levels, that affect whether people tend to trust individuals from these neighborhoods, but also a neighborhood's place in culture. Neighborhood stereotypes and the ways in which they are created or perpetuated in popular culture, significantly affect social behavior.

Finally, a more general implication for segregation research is that in order to assess the consequences of segregation, it is not sufficient to exclusively look at segregation data obtained from surveys or official statistics, but to also look at how neighborhoods are represented in people's minds, for instance in stereotypes, and shape social interaction across neighborhoods. Hence, anti-segregation policies need to be accompanied by changes on the cultural level and a general awareness that the reproduction of negative stereotypes through popular culture and media may reinforce existing disadvantages. Therefore, future studies need to more precisely look at the characteristics of neighborhood stereotypes and investigate their emergence and dynamics of change.

References

Acevedo-Garcia, D., Lochner, K.A., Osypuk, T.L. and Subramanian, S.V. (2003) Future Directions in Residential Segregation and Health Research: A Multilevel Approach, *American Journal of Public Health* 93(2): 215–221.

Akins, S. (2007) Racial Residential Segregation and Crime, *Sociology Compass* 1(1): 81–94.

Alba, R.D., Logan, J.R., Stults, B.J., Marzan, G. and Zhang, W. (1999) Immigrant groups in the suburbs: a reexamination of suburbanization and spatial assimilation, *American Sociological Review* 64(3): 446–460.

Alesina, A., Baqir, R. and Easterly, W. (1999) Public Goods and Ethnic Divisions, *Quarterly Journal of Economics* 114(4), 1243–1284.

Berg, J., Dickhaut, J. and McCabe, K. (1995) Trust, reciprocity, and social history, *Games and Economic Behavior* 10(1): 122–142.

Berlin, Das offizielle Hauptstadtportal, Bezirksamt Charlottenburg-Wilmersdorf (2013) Charlottenburg-Wilmersdorf – the city district of Berlin's west. Available at: http://www.berlin.de/ba-charlottenburg-wilmersdorf/bezirk/lexikon/bezirk.en.html (accessed 12 March 2013).

Boustan, L.P. (2012) Racial Residential Segregation in American Cities. In: Brooks, N., Donaghy, K. and Knaap, G.-J. (eds) *The Oxford Handbook of Urban Economics and Planning*. Oxford: Oxford University Press, pp. 318–339.

Brandt, S. (2011) *Die Charlottenburger Altstadt*. Erfurt: Sutton.

Bruch, E. and Mare, R. (2009) Segregation Dynamics. In: Hedström, P. and Bearman, P. (eds) *The Oxford Handbook of Analytical Sociology*. New York: Oxford University Press, pp. 269-314.

Card, D., Mas, A. and Rothstein, J. (2008) Tipping and the Dynamics of Segregation, *Quarterly Journal of Economics* 123(1): 177–218.

Cochrane, A., Jonas, A. (1999) Reimagining Berlin: World city, national capital or ordinary place? *European Urban and Regional Studies* 6(2): 145-164.

Charles, C.Z. (2003) The Dynamics of Racial Residential Segregation, *Annual Review of Sociology* 29: 167–207.

Chiricos, T., McEntire, R. and Gertz, M. (2001) Perceived racial and ethnic composition of neighborhood and perceived risk of crime, *Social Problems* 48: 322–340.

Clark, W.A.V. (1986) Residential Segregation in American Cities: A Review and Interpretation, *Population Research and Policy Review* 5: 95–127.

Clark, W.A.V. (1988) Understanding Residential Segregation in American Cities: Interpreting the Evidence, *Population Research and Policy Review* 7: 113–121.

Cutler, D.M. and Glaeser, E.L. (1997) Are Ghettos Good or Bad?, *The Quarterly Journal of Economics* 112(3): 827–872.

Cutler, D.M., Glaeser, E.L. and Vigdor, J.L. (1999) The Rise and Decline of the American Ghetto, *Journal of Political Economy* 107(3): 455–506.

Damm, A.P. (2009) Ethnic Enclaves and Immigrant Labor Market Outcomes: Quasi-Experimental Evidence, *Journal of Labor Economics* 27(2): 281–314.

Darroch, G.A. and Marston, W.G. (1971) The Social Class Basis of Ethic Residential Segregation: The Canadian Case, *American Journal of Sociology* 77(3): 491–510.

Dill, V., Jirjahn, U. (2014) Ethnic Residential Segregation and Immigrants' Perceptions of Discrimination in West Germany. *Urban Studies* 51: 3330-3347.

Dörre, S. (2011) Berlin and its "Kieze". Berlin – Fashion, Art and Party Capital, Goethe Institut Online. Available at: http://www.goethe.de/ges/mol/ber/en7897613.htm (accessed 14 April 2013).

Edin, P.-A., Fredriksson, P. and Aslund, O. (2003). Ethnic Enclaves and the Economic Success of Immigrants - Evidence from a Natural Experiment, *Quarterly Journal of Economics* 118(1): 329–357.

Ellen, I.G. (2000) *Sharing America's Neighborhoods*. Cambridge, MA: Harvard University Press.

Falk, A. and Zehnder, C. (2013) A City-Wide Experiment on Trust Discrimination, *Journal of Public Economics* 100: 15–27.

Farley, R., Steeh, C., Krysan, M., Jackson, T. and Reeves, K. (1994) Stereotypes and Segregation: Neighborhoods in the Detroit Area, *American Journal of Sociology* 100(3): 750–780.

Fehr, E. and Gächter, S. (2000) Cooperation and Punishment in Public Goods Experiments, *American Economic Review* 90(4): 980–994.

Fernandez, R. and Levy, G. (2008) Diversity and Redistribution, *Journal of Public Economics* 92: 925–943.

Fiske, S.T., Cuddy A.J., and Glick, P. (2007) Universal Dimensions of Social Cognition: Warmth and Competence, *Trends in Cognitive Science* 11(2): 77–83.

Frankenberg, E. (2009) Splintering School Districts: Understanding the Link between Segregation and Fragmentation, *Law & Social Inquiry* 34(4): 869–909.

Frommer's (2013) Neighborhoods in Brief. Available at http://www.frommers.com/destinations/berlin/743760 (accessed 20 November 2013).

Galster, G. (1988) Residential Segregation in American Cities: A Contrary Review, *Population Research and Policy Review* 7(2): 93–112.

Galster, G.C. and Kenney, W.M. (1988) Race, Residence, Discrimination, and Economic Opportunity: Modeling the Nexus of Urban Racial Phenomena, *Urban Affairs Quarterly* 24(1): 87–117.

Gijsberts, M., van der Meer, T. and Dagevos, J. (2011) Hunkering Down in Multi-Ethnic Neighbourhoods? The Effects of Ethnic Diversity on Dimensions of Social Cohesion, *European Sociological Review* 28(4): 527–537.

Glikman, A., Semyonov, M. (2012) Ethnic Origin and Residential Location of Immigrants in European Countries, *City & Community* 11(2): 198-219.

Glitz, A. (2012) Ethnic Segregation in Germany, *CReAM Discussion Paper* 22: 1–32.

Gundelach, B. and Freitag, M. (2014) Neighbourhood Diversity and Social Trust - An Empirical Analysis of Interethnic Contact and Group-Specific Effects, *Urban Studies* 51(6): 1236-1256.

Gundelach, B. and Traunmüller, R. (2014) Beyond Generalized Trust: Norms of Reciprocity as an Alternative Form of Social Capital in an Assimilationist Integration Regime, *Political Studies* 62(3): 596-617.

Harsman, B. and Quigley, J.M. (1995) The Spatial Segregation of Ethnic and Demographic Groups: Comparative Evidence From Stockholm and San Francisco, *Journal of Urban Economics* 37: 1–16.

Havekes, E., Coenders, M., Dekker, K., and van der Lippe, T. (2014). The impact of ethnic concentration on prejudice: The role of cultural and socioeconomic differences between ethnic neighborhood residents, *Journal of Urban Affairs* 36(5), 815–832.

Hooghe, M., Reeskens, T., Stolle, D. and Trappers, A. (2009) Ethnic Diversity, and Generalized Trust in Europe: A Cross-National Multilevel Study, *Comparative Political Studies* 42(2): 198–223.

Hunter, A.D. (1974) *Symbolic Communities: The Persistence and Change of Chicago's Local Communities*. Chicago: University of Chicago Press.

Hwang, J. (2007) Perceptions and Borders of the Changing Neighborhood: A Case Study in Philadelphia. Available at: http://www.stanford.edu/~mrosenfe/Hwang_thesis_sharing.pdf (accessed 14 April 2013).

Iceland, J. (2014) *Residential Segregation. A Transatlantic Analysis*. Washington: Migration Policy Institute.

Kemper, F.J. (1998) Restructuring of housing and ethnic segregation: Recent developments in Berlin, *Urban Studies* 35(10): 1765-1789.

Kleinhans, R. and Bolt, G. (2014) More than just fear: on the intricate interplay between perceived neighborhood disorder, collective efficacy, and action. *Journal of Urban Affairs* 36(3): 420–446.

Koopmans, R. and Veit, S. (2014) Cooperation in Ethnically Diverse Neighborhoods. A Lost-Letter Experiment, *Political Psychology* 35(3): 379–400.

Lahno, B. (2001) On the emotional Character of Trust. *Ethical Theory and Moral Practice* 4 (2): 171-189.

Laurence, J. (2011) The Effect of Ethnic Diversity and Community Disadvantage on Social Cohesion: A Multi-Level Analysis of Social Capital and Interethnic Relations in UK Communities, *European Sociological Review* 27(1): 70–89.

Logan, J.R. (2012) Making a Place for Space: Spatial Thinking in Social Science, *Annual Review of Sociology* 38: 507–524.

Massey, D.S. (1979) Residential Segregation of Spanish Americans in U.S. Urbanized Areas, *Demography* 16: 553–563.

Massey, D.S. and Denton, N.A. (1993) *American Apartheid: Segregation and the Making of the Underclass*. Cambridge: Harvard University Press.

Munnell, A.H., Tootell, G.M.B., Browne, L.E. and McEneaney, J. (1996) Mortgage Lending in Boston: Interpreting HDMA Data, *The American Economic Review* 86(1): 25–53.

Musterd, S. (2005) Social and Ethnic Segregation in Europe: Levels, Causes, and Effects, *Journal of Urban Affairs* 27: 331–348.

Musterd, S., Van Kempen, R. (2009) Segregation and Housing of Minority Ethnic Groups in Western European Cities, *Journal of Economic and Social Geography* 100: 559–566.

Orfield, G. and Lee, C. (2005) *Why Segregation Matters: Poverty and Educational Inequality*. Cambridge, MA: Civil Rights Project Harvard University.

Ottaviano, G.I.P. and Peri, G. (2005) The Economic Value of Cultural Diversity: Evidence from U.S. Cities, *Journal of Economic Geography* 6(1): 9–44.

Pearson, J. (2013a) Gentrification Alert: Wedding. The Needle: Sharp on Berlin. Available at: http://needleberlin.com/2013/08/31/gentrification-alert-wedding/ (accessed 15 November 2013).

Pearson, J. (2013b) Guide for Moving to Berlin 2014. The Needle: Sharp on Berlin. Available at: http://needleberlin.com/moving-to-berlin-the-needle-guide-2012-edition/ (accessed 15 November 2013).

Portes, A. (1998) Social Capital: Its Origins and Applications in Modern Sociology, *Annual Review of Sociology* 24: 1-24.

Putnam, R.D. (2007) E Pluribus Unum: Diversity and Community in the Twenty-first Century. The 2006 Johan Skytte Prize Lecture, *Scandinavian Political Studies* 30(2): 137–174.

Quillian, L. (2012) Segregation and Poverty Concentration: The Role of Three Segregations, *American Sociological Review* 77: 354–379.

Quillian, L. and Pager, D. (2001) Black Neighbors, Higher Crime? The Role of Racial Stereotypes in Evaluations of Neighborhood Crime, *American Journal of Sociology* 107(3): 717–767.

Rothwell, J. T. (2010) *Trust in Diverse, Integrated, Cities: A Revisionist Perspective* (July 19, 2010). Working paper, http://dx.doi.org/10.2139/ssrn.1358647

Sager, L. (2012) Residential Segregation and Socioeconomic Neighbourhood Sorting: Evidence at the Micro-neighbourhood Level for Migrant Groups in Germany, *Urban Studies* 49(12): 2617–2632.

Schaeffer, M. (2013) Can Competing Diversity Indices Inform us About Why Ethnic Diversity Erodes Social Cohesion? A Test of Five Diversity Indices in Germany, *Social Science Research* 42(3): 755–774.

Schelling, T.C. (1971) Dynamic Models of Segregation, *Journal of Mathematical Sociology* 1: 143–186.

Semyonov, M. and Glikman, A. (2009) Ethnic Residential Segregation, Social Contacts, and Anti-Minority Attitudes in European Societies, *European Sociological Review* 25(6): 693–708.

Semyonov, M, Gorodzeisky, A. and Glikman, A. (2012) Neighborhood ethnic composition and resident perceptions of safety in European countries, *Social Problems* 59(1): 117-135.

Semyonov, M., Raijman, R. and Gorodzeisky, A. (2008) Foreigners' Impact on European Societies: Public Views and Perceptions in a Cross-National Comparative Perspective, *International Journal of Comparative Sociology* 49: 5–29.

Senatsverwaltung für Stadentwicklung und Umwelt (2011) Monitoring Soziale Stadtentwicklung 2011. Available at:

http://www.stadtentwicklung.berlin.de/planen/basisdaten_stadtentwicklung/monitoring/ (accessed 20 November 2013).

Smets, P. and Salman, T. (2008) Countering Urban Segregation: Theoretical and Policy Innovations from around the Globe, *Urban Studies* 45(7): 1307–1332.

Stolle, D., Soroka, S. and Johnston, R. (2008) When Does Diversity Erode Trust? Neighborhood Diversity, Interpersonal Trust and the Mediating Effect of Social Interactions, *Political Studies* 56: 57–75.

Sturgis, P., Brunton-Smith, I., Read, S. and Allum, N. (2011) Does Ethnic Diversity erode Trust? Putnam's 'Hunkering-Down' Thesis Reconsidered, *British Journal of Political Science* 41(1): 57–82.

Squires, G.D., Friedman, S. and Saidat, C.E. (2002) Experiencing Residential Segregation. A Contemporary Study of Washington, D.C., *Urban Affairs Review* 38(2): 155–183.

Thernstrom, S. and Therstrom, A. (1997) *American in Black and White: One Nation, Indivisible*. New York, NY: Simon and Schuster.

Uslaner, E.M. (2010) Segregation, Mistrust and Minorities, *Ethnicities* 10: 415–434.

Uslaner, E.M. (2011) Trust, Diversity, and Segregation in the United States and the United Kingdom, *Comparative Sociology* 10: 221–247.

Waldfogel, J. (2008) The Median Voter and the Median Consumer: Local Private Goods and Residential Sorting, *Journal of Urban Economics* 63: 567–582.

Where to live in Berlin. Wanted in Europe (undated) Available at: http://berlin.wantedineurope.com/where-to-live (accessed 20 November 2013).

Wilson, R.K. and Eckel, C.C. (2010) Trust and Social Exchange. In: Druckman, J.N., Green, D.P., Kuklinski, J.H. and Lupia, A. (eds) *Cambridge Handbook of Experimental Political Science*. Boston: Cambridge University Press, pp. 243–257.

Wooldridge, J.M. (2010) *Econometric Analysis of Cross Section and Panel Data*. Cambridge, MA: MIT Press.

Wuthnow, R. (2004) Trust as an Aspect of Social Structure. In: Alexander, J. (ed) *Self, Social Structure, and Beliefs*. Berkeley, CA: University of California Press, pp. 145-167.

Yinger, J. (1998) Housing Discrimination is Still Worth Worrying About, *Housing Policy Debate* 9: 893–927.

Figures and Tables

Table 1. Distribution of participants' self-reported residential neighborhoods

Berlin neighborhood	Frequency	Percent
Friedrichshain	3	4.62
Hohenschönhausen	2	3.08
Köpenik	1	1.54
Lichtenberg	2	3.08
Mitte	3	4.62
Pankow	1	1.54
Prenzlauer Berg	6	9.23
Treptow	3	4.62
Charlottenburg	5	7.69
Kreuzberg	4	6.15
Neukölln	1	1.54
Schöneberg	8	12.31
Spandau	4	6.15
Steglitz	7	10.77
Tempelhof	2	3.08
Tiergarten	2	3.08
Wedding	1	1.54
Wilmersdorf	5	7.69
Zehlendorf	5	7.69
Total	*65*	*100*

Table 2. Socio-economic and demographic characteristics of the five Berlin neighborhoods

		Charlottenburg	Kreuzberg	Prenzlauer Berg	Wedding	Marzahn
Age in years[1]	>= 65	20,5 %	9,2 %	11,0 %	13,4 %	17,9 %
	<= 6	4,5 %	6,4 %	7,2 %	6,7 %	5,4 %
Social Index[2]		0,26	-2,31	-0,60	-2,10	0,02
Proportion of migrants[3]		36,5 %	49,6 %	17,3 %	53,1 %	14,1 %
Unemployment rate[4]		8,2 %	11,8 %	8,5 %	15,9 %	11,3 %
Crime index[5]		22113	18896	13557	20250	11641
Net income[6]		1675 €	1400 €	1675 €	1475 €	1625 €

[1] Data: Monitoring Soziale Stadtentwicklung 2011, own calculations;

[2] Data: Sozialstrukturatlas Berlin 2003; The *Social Index* is a composite index covering 25 variables related to stratification and inequality, for example unemployment, social welfare, life expectancy, premature death, educational attainment, and income (range: -3 to 3).

[3] Proportion of citizens with migration background; Data: Monitoring Soziale Stadtentwicklung 2011, own calculations

[4] Unemployment rate of citizens aged 15 to 65. Data: Monitoring Soziale Stadtentwicklung 2011, own calculations;

[5] Crime incidents per 100.000 inhabitants in 2011 (=(number of incidents*100.000) / number of inhabitants) (Data: Kriminalitätsatlas Berlin 2011)

[6] Mean net monthly household income in Euros (StatistikBerlinBrandenburg, 2012)

Table 3. Fixed-effects regressions on transfer decisions

	Model 1	Model 2	Model 3
Expected return ratio	0.09 (0.64)		0.00 (0.03)
District (Kreuzberg)		reference	reference
~ Charlottenburg		-0.04 (-0.35)	-0.04 (-0.34)
~ Prenzlauer Berg		-0.10 (-0.81)	-0.10 (-0.80)
~ Wedding		-0.46*** (-3.58)	-0.46*** (-3.54)
~ Marzahn		-0.44*** (-3.46)	-0.44*** (-3.42)

Note. Models 1-3 are estimated using fixed effects specification for participants. Numbers in parentheses denote the t-values. N= 67; number of obs= 332; Significance levels: *: p< 0.05, **: p<0.01 ***: p<0.001; Data: *ACT-Trust 2013*

Figure 1. Mean transfers across neighborhoods

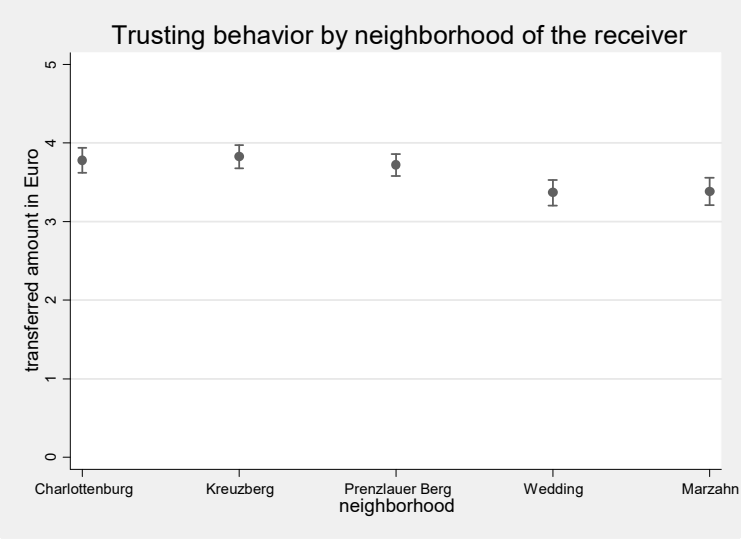

*Figure 2.*Expected return ratios by neighborhood