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Similarity vs. homogeneity: contextual effects in explaining trust

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Diversity has powerful advantages, but may also generate internal tensions and low interpersonal trust. Despite extensive attention to these questions, the relationship between diversity and trust is often misunderstood and findings methodologically flawed. In this article, we specify two different mechanisms and adherent hypotheses. An individual might base her decision to trust on her perceived social similarity in relation to others in the community, that is, a similarity hypothesis. However, in a homogenous context, she might expect trustworthy behavior irrespective of her own social position due to signals of low degrees of social conflict and dense social networks, that is, a homogeneity hypothesis. Prior research has pinpointed only one of these mechanisms. The homogeneity hypothesis has not been explicated, and when the intention has been to test the similarity hypothesis, the homogeneity hypothesis has unintentionally been tested instead. The results are straightforward. While the homogeneity hypothesis is strongly supported, the findings speak against the similarity hypothesis.

Keywords: trust; contextual effects; inequality; homogeneity

Introduction

Accelerating economic growth and increases in immigration have created more diverse communities all over the world. This fact is crucial not only for current societies but also for future generations. While it is true that diversity can give rise to powerful benefits (Putnam, 2007), diverse societies also have to deal with internal tensions which can become serious. Among other things, recent research has shown that citizens in countries with greater ethnic heterogeneity and/or income inequality trust each other less (Delhey and Newton, 2005; Rothstein and Uslaner, 2005; Putnam, 2007; Gustavsson and Jordahl, 2008). These findings constitute a major challenge for politicians, as well as for researchers (Letki, 2008), since it has also been shown that high levels of trust have extensive positive societal effects (Zak and Knack, 2001; Alesina and La Ferrara, 2002; Uslaner, 2002).

However, to be able to deal with these challenges, we need to better understand the mechanisms that generate trust in more homogeneous communities (Putnam, 2007),

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which is our aim in this article. In our view, the relationship between diversity and trust is often misunderstood, mainly because the origins of trust are under-theorized and/or estimations of contextual effects on trust methodologically flawed. In fact, the individual-level mechanisms have rarely been explicitly discussed in previous research. Very often, it is only *assumed* that individuals generally trust other citizens if they think that most others are similar to them in some crucial sense. A prominent example is Robert Putnam:

> Social psychologists and sociologists have taught us that people find it easier to trust one another and cooperate when the social distance between them is less. 'When social distance is small, there is a feeling of common identity, closeness, and shared experiences. But when social distance is great, people perceive and treat the other as belonging to a different category (Putnam, 2007: 159; referring to Alba and Nee, 2003).

As a matter of fact, as Mark Hooghe has also noted, it is striking that research with very different definitions of trust 'tends to converge on the notion that resemblance is an important element in the creation of trust' (Hooghe, 2007: 717). There are lots of examples from leading scholars in the field. Messick and Kramer (2001: 100) argue that we trust those 'whom we believe to be similar to ourselves'; Delhey and Newton (2005: 324) have found that 'generalized trust is strongest where we have something in common with others'; Alesina and La Ferrara (2002: 225) hold that 'individuals prefer to interact with others who are similar to themselves in terms of income, race, or ethnicity'. Hence, they all agree that to be in a similar position to other individuals in the community is crucial in being a high-truster.

Bo Rothstein and Eric Uslaner disagree with Putnam on important points. However, they too emphasize that, in order to be a high-truster, 'the assumption that others share your fate' is important (Rothstein and Uslaner, 2005: 47). This can be interpreted as an assumption that individuals reason that 'I trust people in a community when I perceive that they have *a similar fate to mine*'. However, Rothstein and Uslaner also argue that 'social solidarity and the perception of a shared fate among citizens' are key to an understanding of trust, and that 'social trust is a measure of how people evaluate the moral fabric of their society' (Rothstein and Uslaner, 2005: 43). This indicates another mechanism that might explain individual-level trust: 'I trust people in a community when I perceive it to be a homogeneous community where *most people share the same fate*'.

We argue that in order to understand the relationship between diversity and trust, we must specify these two *different* mechanisms. Following the earlier research, we agree that an individual might base her decision to trust others on an estimation of her own position in relation to the others in the community – the so-called resemblance or similarity hypothesis. But she might *also* decide whether to trust or not depending on how she perceives other actors in the community relate to each other – what might be called a homogeneity hypothesis. This second

hypothesis emanates from the argument (elaborated in the next section) that a homogenous context signals a community with a low degree of social conflicts and dense social networks. Most people believe (correctly) that in such a context, individuals are more likely to base each decision to trust on community norms instead of evaluations of every counterpart's interests. Commonly, it is appropriate according to community norms to behave in a trustworthy manner: for example, to keep promises. Consequently, an individual who perceives the context as homogenous expects other persons to act trustworthily toward her, irrespective of her own social position – that is, it is less important whether she is *similar* to others as regards, for example, ethnicity or income and more important if the community is *homogenous*.

The main problem in earlier research, we argue, is twofold. First of all, as outlined above and explicated below, only one of the two possible mechanisms connecting diversity to trust has been pinpointed. In the theoretical part of this paper, we provide a reasonable theoretical mechanism, lacking in earlier research, to explain why the composition of the context as such should be expected to influence levels of trust. That is, we explicate what we call a homogeneity hypothesis. Second, prior research has not tested the suggested similarity hypothesis in a proper manner. As will be discussed below, previous empirical findings in studies intended to test the similarity hypothesis have instead unintentionally tested and supported the homogeneity hypothesis.

The paper is structured as follows. First, we specify our understanding of trust as a relational concept (based on common interest and moral commitment). Second, the mechanisms of similarity and homogeneity are explained and the hypotheses outlined. Next, we explain how we use income inequality *and* ethnic fractionalization as indicators of diversity, and how we measure effects in two different contexts: workplaces and neighborhoods. The results of the analysis are quite straightforward. While the homogeneity hypothesis is strongly supported, the findings speak against the similarity hypothesis. These findings also have important policy implications. The influence of contextual composition on trust leads us to emphasize some specific political measures to handle the negative effects of diversity. In essence, it involves fostering a shared sense of community.

Trust: others' interest and moral commitment

It is well established that trust and cooperative behavior are strongly related to people's individual characteristics. Individual characteristics which reflect power resources, such as education or income, or an individual's experience of security or misfortune, seem to be good predictors of attitudes of trust or trusting behavior toward strangers (Newton, 1999; Whiteley, 1999; Putnam, 2000; Alesina and La Ferrara, 2002). The second approach focuses on how the institutional context influences trust. These studies demonstrate how impartial, uncorrupted, and equality-enhancing institutions matter in generating relationships of trust (North, 1990;

Ostrom, 1990, 2000; Delhey and Newton, 2003; Cook *et al*., 2005; Rothstein and Uslaner, 2005; Oskarsson *et al*., 2009a, b). However, as a result of the challenge of multiculturalism, increasing ethnic diversity, and social heterogeneity in modern societies, a growing body of research is focusing on the importance of neighborhoods and local contexts for how an individual acts, irrespective of individual features, and of institutions. These studies mostly suggest that there is a negative correlation between trust and diversity (Delhey and Newton, 2005; Putnam, 2007; Stolle *et al*., 2008). This paper follows in the tracks of this research. Hence, the main focus is on the effects of diversity on trust.

However, to fully understand this empirical relationship, we first have to be clear about what is meant by the two concepts in focus – contextual diversity and trust. Following Uslaner (2002), we should draw a clear distinction between two different kinds of trust. According to the first conception, some people have a *disposition to trust* (Rotter, 1980; Uslaner, 2002). The disposition to trust is a default expectation of other individuals' goodwill. Thus, it is a character trait which leads people to believe that the world is a benevolent place and other people have benign intentions (Miller and Mitamura, 2003). As such, it is not based upon ongoing personal relationships and remains more or less stable no matter what the individual's experiences are. People learn to be more or less trusting as a result of experiences during early childhood.

A disposition to trust is first and foremost a characteristic of the individual and has less to do with assessments of the trustworthiness of others. Inquiries into the trustworthiness of those trusted are instead at the heart of the second conception of trust – the *relational view of trust* (Hardin, 2002; Cook *et al*., 2005). According to this account, trust is seen first and foremost as a property of a social relationship between two or more individuals or actors (Hardin, 1993; Yamagishi and Yamagishi, 1994; Hardin, 1998; Ullmann-Margalit, 2002). Trust results from information about and past experience with the trustee and the situation at hand and is a prediction about another person's behavior. My trust in you hinges on my belief that you will respond trustworthily.

As will be elaborated below, the mechanisms connecting diversity with trust are based on an individual's experience with and expectations about the behavior of people in the nearby contexts. Consequently, the main focus in this paper will be on the relational element of trust.[1] Two contrasting approaches to relational trust can be found in the literature. First of all, trust can be understood as encapsulated interest (Hardin, 2002; Levi, 2003; Cook *et al*., 2005). I trust you since I believe that you encapsulate my interests in your own and that you value the continuation of our relationship. Hence, it is in your interest to behave trustworthily toward me. According to the second approach, trust instead hinges on beliefs about the moral commitments of the potentially trusted actor (Williamson, 1993; Becker, 1996;

[1] This is also well in line with the results in Soroka *et al*. (2006) indicating that contextual factors have a far greater impact on measures of relational trust than on indicators of dispositional trust.

Braithwaite, 1998; Tyler, 1998; DiMaggio, 1999). Thus, I trust you, irrespective of my beliefs about your specific interests, since I believe that you are morally committed to act trustworthily toward me (in this specific matter).

We believe that this sharp dividing line between trust as encapsulated interest and trust based on moral commitments should be avoided. There is no apparent reason why we should assume that people's trust rests on either assessments about others' interests or moral commitments alone. Instead, we argue that people can be trustworthy for both of the above reasons. Therefore, we say that someone is trustworthy if he/she encapsulates our interests and/or is morally committed to doing so.[2]

Contextual effects: similarity to others and/or evaluation of group homogeneity

Given this conceptualization of trust, how should we understand the relationship between contextual diversity and trust? More precisely, why should we expect an individual residing in a more diverse setting – be it an ethnically heterogeneous or an economically highly unequal context – to be less trusting toward his/her fellow human beings? Following our focus on relational trust, we should pinpoint how a diverse context might affect an individual's expectation about someone else's interest in and/or moral commitment to act trustworthily. In this paper, we suggest that contextual diversity can affect trust through two possible routes. First, an individual's trust can be influenced by his/her position within a context. That is, we are more inclined to trust people we know or people who are similar to ourselves. Second, an individual's trust can also be affected by the contextual setting itself, irrespective of the individual's position within it. In this scenario, we would expect a person residing in a more homogenous context to be more trusting, even if he/she has very little in common with the rest of the individuals comprising the context.

The first of these mechanisms – the similarity hypothesis – is well known from previous research. Earlier studies have almost exclusively referred to the social-psychological literature on inter-group relations when suggesting a causal mechanism driving the relationship between contextual diversity and trust (Hooghe, 2007: 717; Stolle *et al.*, 2008). The logic here is quite straightforward. Trusting someone is a matter of the individual's attitude toward someone else. It seems logical and there is also empirical evidence from different strands of research, which shows that we tend to trust people we know or, if the other people in question are strangers, we trust others *similar* to ourselves more than we trust those with dissimilar traits. It is easier to trust people we know. When we meet strangers, we base our judgment on signals of similarity (Messick and

[2] The assumption underlying this argument is that most people do not act on the basis of a single rational utility maximizing function. Instead, individuals weigh their self-interest against their commitment to adhere to moral values in a dual utility function (Levi, 1991; Rothstein, 2001; Oskarsson *et al.*, 2009a, b).

Kramer, 2001; Putnam, 2007; Stolle *et al*., 2008). Or, more precisely, if people in our surroundings are similar to ourselves in terms of ethnicity, income, education, and so on, we are more likely to believe that they will act trustworthily toward us. Furthermore, this belief can be based on an assessment of others' interest in acting as well as a moral commitment to act trustworthily.

In line with this thinking, a growing number of empirical studies have shown a persistent negative relationship between ethnic heterogeneity and income inequality, on the one hand, and interpersonal trust, on the other (Hero, 2004; Delhey and Newton, 2005). In our view, the best contribution so far in this genre is Stolle *et al*.'s (2008) investigation of trust in US and Canadian localities. In short, they argue that diversity in itself decreases interpersonal trust, while interaction may have counteracting positive effects or at least may mediate the strong negative effect of diversity on trust (Stolle *et al*., 2008: 61, 70–71).

Following this strand of research, the first hypothesis to be tested in this study focuses on how individual characteristics relate to the contextual characteristics:

H1: The similarity hypothesis: Similarity between the individual and the context strengthens trust (and dissimilarity drives down trust).

However, we argue that the earlier research on the relationship between diversity and trust is somewhat flawed. First, by focusing narrowly on the similarity hypothesis, earlier research has missed a plausible mechanism connecting diversity and trust. Second, the empirical tests of the similarity hypothesis have, to date, missed the target. As will be argued below, the empirical relationships between income inequality and ethnic heterogeneity, on the one hand, and trust, on the other, found in previous studies support a mechanism different from the one suggested by the similarity hypothesis. We will return to the second problem in the next section and deal with the first one here.

The similarity hypothesis, underpinned by the socio-psychological mechanism, is, strictly speaking, not an argument for a pure contextual effect. The expectation that we tend to trust those similar to ourselves more than 'others' rather refers to an interaction between the individual and the context (cf. Johnson *et al*., 2002: 221). That is, my trust in others is directly linked to the comparison of my own position or characteristics with the aggregation of the other's characteristics. Take, for example, trust among employees at a workplace. If I find myself to be the only non-native employee at my workplace, I am generally likely to distrust others. However, if I share this trait with the majority of the workers, my trust in them will be higher.

But this interaction between individual and contextual characteristics is not the only way that diversity may influence people's trust. What we also want to find out is whether there is an effect of the composition of the context on itself, *irrespective of the individual's position within it*. Thus, this second contextual mechanism is not a matter of the individual's feeling of being similar or dissimilar to others. The mechanism (at the individual level) by which the context influences the individual's trust in others is rather based on how the individual evaluates the whole context,

which usually consists of a complex web of relations (Coleman 1994: 43; cf. Cook *et al*., 2005; Svensson and Öberg, 2005; Öberg and Svensson, 2009).

But why, then, should a person consider a homogenous context in itself to be more trustworthy than a diverse context, that is, how should we understand the alternative (or complementary) mechanism? Or, put differently, why should we expect a homogenous context to influence an individual's perceptions about someone else's interest in acting and/or moral commitment to act trustworthily? We argue that a homogenous context signals a community characterized by a low degree of social conflicts and dense social networks. We know from other research that perceived social conflict – for example, conflict between the rich and the poor, management and workers, and natives and immigrants – is 'most strongly associated with trust' (Delhey and Newton, 2003: 109). Hence, individuals expect actors in a non-conflictual community to deceive each other less, because norms – 'the proper way to behave' – are clearer in dense social networks, where the group 'upholds cherished values and norms' (Williams, 2001: 183), and are 'socialized into a relatively homogenous culture' (Newton, 2007: 348). Sociologist Mark Granovetter (2005: 34) refers to this as the 'oldest argument in social psychology':

> It rests on the fact that the denser a network, the more unique paths along which information, ideas and influence can travel between any two nodes. Thus, greater density makes ideas about proper behaviour more likely to be encountered repeatedly, discussed and fixed: it also renders deviance from resulting norms harder to hide and, thus, likely to be punished (Granovetter 2005: 34).

Hence, people should expect community norms to be established more easily in such a neighborhood. Thus, in a homogenous context, individuals are more likely to follow a logic of appropriateness (March and Olsen, 2006) based on community norms instead of instrumentally evaluating every relationship according to the counterpart's interests: it is appropriate to keep one's word and act trustworthily. When I expect individuals to act according to such a logic of appropriateness, I will also expect them to act trustworthily toward me, irrespective of my own position, for example, independent of ethnicity, education, income, and so on. The reason is that their decision concerning whether to behave trustworthily or not is based on what is appropriate according to community norms and *not* on a calculation of power relations or interests.

James March and Johan Olsen have encouraged research to try to establish under what conditions rules of appropriateness may overpower the logic of consequentiality. A 'promising route may be to differentiate logics of action in terms of their *prescriptive clarity* and hypothesize that a clear logic will dominate a less clear logic' (March and Olsen, 2006: 703). In line with this, we argue that, in a more diverse context, a logic of appropriateness is less expected since what is appropriate in a situation with unclear or conflicting norms is ambiguous. Hence, it is generally more risky to trust others in a diverse context because I am less inclined to believe that there are community norms and guidance for appropriate

behavior in neighborhoods where I see signals that I interpret as indicating less dense networks and more potential conflicts.

Thus, unlike the similarity mechanism, which stated that the assessment of others' behavior is based on the truster's evaluation of the extent to which others have an interest in acting and a moral commitment to act trustworthily, this mechanism is based solely on the latter consideration. The degree of homogeneity/heterogeneity is expected to influence an individual's evaluation of the extent to which others' behavior is influenced by a high-trust community norm. Following this argument, the second hypothesis to be tested in this study is as follows:

H2: The homogeneity hypothesis: Homogeneity fosters trust. This could also be expressed the other way around: Diversity drives down trust.

However, there is an obvious objection against this hypothesis. To take a current example, the homogeneity hypothesis seems to suggest that an individual or a small group of Romani in an otherwise homogenous Hungarian area dominated by Jobbik supporters should be more trusting. Similarly, one might ask whether a South African of color in an Afrikaans-dominated area should expect his/her neighbors to behave trustworthily? More generally, the objection against this hypothesis is that there is a risk that out-groups and strangers will be distrusted (Newton, 2007; Letki, 2008; Stolle *et al.*, 2008), especially in small, well-defined, and homogenous communities (Gambetta, 1988). These objections and examples indicate the plausibility of a third hypothesis stating that the influence of homogeneity on trust is conditional on the degree of similarity.[3] Thus, it is only when an individual is more similar to the others in his/her context that we should expect increases in homogeneity to lead to more trust. The combination of dissimilarity in an otherwise homogenous context should instead undermine the possibility of trusting relationships. In line with this discussion, the third hypothesis of this study states:

H3: The conditional hypothesis: The effect on trust of homogeneity is positive among individuals who are similar to the other persons comprising the context but negative among individuals who are dissimilar to others within their contexts.

Operationalizations and model specification

In order to study the effects of contextual diversity on trust, we rely on an extensive survey of Swedish workplace and neighborhood relations. The survey was conducted in cooperation with *Statistics Sweden* in late spring of 2006.[4] A random sample of 3000 respondents was selected based on a register of all

[3] We would like to thank two anonymous reviewers for pointing out these examples and for hinting at the possibility of a third conditional hypothesis.

[4] The survey – *Work, Trust, and Power in Sweden* – will shortly be publicly available from the Swedish Social Science Dataservice.

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Swedish citizens between 20 and 65 years of age; 1551 individuals answered the postal questionnaire after three reminders, that is, the response rate was 52%. Before we proceed to the analysis, we will explain how our basic concepts are measured and discuss the model specification.

Contexts: neighborhood and workplace

First of all, we need to explain what we mean by contexts in this article. The most straightforward way to define contexts is to see them as geographically distinct social units (Books and Prysby, 1991). Thus, contexts can be thought of as Chinese boxes in which an individual can be placed, at the same time, in a certain neighborhood, in a certain city, in a certain country, and on a certain continent (Strömblad, 2003). Earlier studies of the effects of contexts on social trust have usually, explicitly or implicitly, made this assumption. The most common is to treat the country (Delhey and Newton, 2003, 2005) or states within countries (Putnam, 2000; Rothstein and Uslaner, 2005) as contexts (exceptions include Marschall and Stolle, 2004; Letki, 2008; Stolle *et al.*, 2008).

We have two objections to the assumption that fairly large geographical units are the most appropriate units of analysis. First, we find it reasonable to assume that individuals are more affected by their immediate surroundings than the characteristics of the country as a whole. For example, since we spend most of our time in the neighborhood where we live, the degree of diversity in this particular place should be more important for our attitudes of trust than the aggregate level of diversity in the country as a whole.

Second, not all potentially interesting contexts can be geographically delimited. The defining core of contexts can instead be seen as social interaction, irrespective of its particular spatial extension: 'Contextual effects as construed here are due to social interaction within particular environments, and social contexts are created as a result of these interactions' (Huckfeldt and Sprague, 1993: 289). Thus, a social sphere is a context if its composition of individuals somehow influences the individuals composing the context. This can happen not only in a neighborhood but also within contexts where the social activity is not restricted to a particular location, such as at a workplace or in a voluntary organization.

Diversity: inequality and ethnic fractionalization

Following this argument, this study focuses on two specific contexts – one geographical and one functional – within which the majority of individuals spend most of their time: the neighborhood and the workplace. Empirically, we use register data on the parish within which the individuals live and their place of work to demarcate these contexts.[5]

[5] Since register data on the contextual level are available only after a year and a half, there is a certain time lag between our individual-level variables (measured in late spring of 2006) and our contextual-level

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As outlined in the theoretical section, the main focus of this paper is on the effect of social diversity on trust. In several studies on social diversity, this has been equated with ethnic diversity (Oliver and Mendelberg, 2000; Marschall and Stolle, 2004; Leigh, 2006; Putnam, 2007; Stolle *et al*., 2008). However, social diversity may also be strong in ethnically homogenous settings. Societies characterized by high economic inequality produce highly recognizable differences between people as well, potentially weakening societal bonds and strengthening subgroups. Furthermore, several studies have shown that this has profound effects on social trust (Knack and Keefer, 1997; Alesina and La Ferrara, 2002; Rothstein and Uslaner, 2005). We use both of these different ways to conceptualize diversity. The reasons for including them both are twofold. First, these two versions of diversity stand out as the most important determinants of (dis)trust and appear to be the most crucial challenges for modern societies. Second, this approach makes it possible to say something about diversity in general, not only about ethnic heterogeneity or inequality.

Measuring contextual diversity

The next step is to operationalize the two hypotheses. In the theoretical section, we argued that diversity should be understood in two different ways – as similarity and homogeneity. In this section we have, so far, further clarified what is meant by diversity in this study. Thus, diversity refers to both the income distribution and the ethnic composition of the context. We have also defined two different contextual settings – the workplace and the neighborhood. This means that we should use at least four measures of similarity and homogeneity, respectively: (i) income similarity/homogeneity within neighborhoods; (ii) income similarity/homogeneity within workplaces; (iii) ethnic similarity/homogeneity within neighborhoods; and (iv) ethnic similarity/homogeneity within workplaces.

We start here with the similarity hypothesis. The common way to test the similarity hypothesis in the previous literature on diversity and trust has been to include measures of ethnic fractionalization (e.g. a Herfindahl index across countries, states, or municipalities) and income spread (e.g. Gini coefficients or standard deviations).

Unfortunately, such measures clearly miss the point. The similarity hypothesis focuses on *how individuals are positioned within contexts*. However, indicators such as Herfindahl's indices or Gini coefficients concern the *characteristics of the context itself* and do not say anything about the relations between specific individuals and the surrounding context. Consequently, to test this hypothesis, we need a different set of measures from those used hitherto. More precisely, we should use indicators of the degree to which individuals are close to or far away from the majority within the context with regard to income level and ethnic belonging.

variables (measured in November 2004). However, since it is safe to assume that the contextual characteristics are quite stable over time, this should not entail any serious problems for the analysis.

To capture individuals' similarity with their surrounding workplace and neighborhood contexts, we will employ two variables. First, to measure income similarity, we would ideally have preferred an indicator based on all pairwise relations between an individual's income and the incomes of each and everyone within the context. However, since we have only aggregate information about the income distributions within workplaces and neighborhoods, such as mean values and standard deviations, we employ the best available alternative. Thus, the individual's income in relation to the overall distribution of incomes within the context is measured by the absolute difference between the individual's income and the mean income within the neighborhood or workplace.[6] The larger this difference, the more dissimilar the individual is compared to the majority of the individuals in the context. To find support for the similarity hypothesis, this variable should be negatively related to trust, indicating that dissimilarity breeds distrust.[7]

Second, to measure ethnic similarity, we will include a dummy variable indicating whether or not the respondent belongs to the ethnic majority within the context. Given this coding, we expect the variable to positively influence trust, meaning that people belonging to the ethnic majority in the context will be more trusting.

To test the homogeneity hypothesis we should, instead, employ measures of *characteristics of the contexts themselves*: the degree of ethnic fractionalization and income spread within the neighborhoods and workplaces. That is, the same indicators used in earlier research to test the similarity hypothesis are evident candidates. Consequently, to measure ethnic homogeneity within contexts, we use a Herfindahl index based on register data on the respondents' birth countries. The individuals are categorized as born either in Sweden; in the Nordic countries, apart from Sweden; in the Organisation for Economic Co-operation and Development (North America, Japan, Australia, New Zealand, and Europe apart from the Nordic countries); or in the rest of the world. Thus, the index measures the probability that two randomly selected individuals belong to the same category of birth countries. The higher the index value, the more ethnically homogenous the neighborhood or workplace in question and, consequently, the higher the levels of trust should be among individuals in order to support the homogeneity hypothesis. It should be noted here that the two indicators of ethnic similarity and homogeneity

[6] Fischer and Torgler (2006) use a similar measure when estimating the effect of relative income position on social capital (measured as tax morale, generalized trust, confidence in parliament, and voluntary work for charity organizations). However, since their focus is on the impact of the relative income position, they employ the raw difference and not the absolute difference between the income of the respondent and the mean income. Furthermore, their benchmark or reference group refers to the mean income within the country or region of the respondent, whereas we compare at a more disaggregated level (the parish and the workplace).

[7] To take account of the fact that the income distributions within the neighborhoods and the workplaces are positively skewed, the variable measuring the absolute difference between the individual's income and the mean income within the context is logged.

Table 1. Eight operational hypotheses

	The similarity hypothesis		The homogeneity hypothesis	
	Income	Ethnicity	Income	Ethnicity
Workplace	Absolute difference from mean in workplace (logged) (−)	Dummy for belonging to ethnic majority in workplace (+)	Std. dev. of incomes in the workplace (logged) (−)	Herfindahl's index based on the birth countries of colleagues (+)
Parish	Absolute difference from mean in parish (logged) (−)	Dummy for belonging to ethnic majority in parish (+)	Std. dev. of incomes in the parish (logged) (−)	Herfindahl's index based on the birth countries of parish residents (+)

should be considered as fairly rough proxies. First of all, birth country is of course different from ethnicity. For example, it is perfectly possible for two individuals to be born both in Sweden and in 'the rest of the world', respectively, and still be of the same ethnic origin, for example, Asian. Second, the classification of countries into four broad groups is dictated by the restrictions in the register data. Ideally, we would have wanted measures of ethnic similarity and homogeneity based on perceived ethnicity among all Swedes and according to fine-tuned and highly disaggregated categories. However, such detailed census data are not available, either in Sweden or, as far as we know, in any other country.

Finally, we employ the standard deviation of incomes in the parish and at the workplace, respectively, as our measures of income spread. The empirical homogeneity hypothesis states that the larger the standard deviation of income in the parish and the workplace, the less individuals within these contexts should trust each other.

The discussion on how to measure similarity and homogeneity is summarized in Table 1. As argued above, the two theoretical propositions on the expected effects on trust of similarity and homogeneity break down into eight operational hypotheses. The expected directions of the effects are shown in parentheses.

In the end, then, the above argument leads to an interesting conclusion about the earlier research on diversity and trust: previous studies have pinpointed a theoretical mechanism connecting diversity and trust (the similarity hypothesis) but never tested it properly. Earlier empirical results instead support a causal mechanism (the homogeneity hypothesis) as yet never suggested!

Measuring trust

We also need to discuss the measures of the dependent variable of this study – trust. As argued in the theory section, we should make a clear distinction between two different kinds of trust – a disposition to trust and the relational view of trust.

In the theoretical section, we focused on the relational view of trust when pinpointing how the mechanism between diversity and trust works.

Much of the literature on trust relies mainly on the standard survey research question: 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?' However, it has been shown that this indicator first and foremost taps into the dispositional dimension of trust (Uslaner, 2002; Soroka *et al*., 2006). For example, by showing that the generalized trust question is relatively unaffected by experience and that responses to it are stable over time, Uslaner (2002) holds that the indicator is a measure of the respondent's moral predisposition to trust.

Consequently, and following Stolle *et al*. (2008: 62), we instead opt for 'a measure of trust that is experiential and, if possible, more likely to be affected by context'. In order to capture the relational view of trust, we use two indicators. The most important difference between these indicators and the standard measure of generalized trust discussed above is that the former should pinpoint which individual(s) are to be trusted and ask the respondents to choose between trust and distrust. The starting point here is that we view the two different contexts – the workplace and the neighborhood – as two mini-societies inhabited by colleagues in the first place and neighbors in the second. Thus, the workplace context is expected to affect one's trust toward colleagues, whereas the parish characteristics are assumed to influence trust in one's neighbors.

In line with this argument, we capture trust in colleagues by an index composed of two items. The first is a straightforward question in which the respondent in the questionnaire is asked to what extent he/she trusts his/her colleagues. The second question takes as a starting point the concrete situation after an agreement or contract has been reached, namely the extent to which the employee thinks that his/her colleagues actually keep their word and do what is agreed on. In the analysis to follow, we have combined the two questions into a single additive index on trust.[8]

To measure trust in one's neighbors, we rely on a question which asks the respondent about how likely he/she thinks it is that he/she will get back a purse or wallet containing 1000 Swedish krona lost at the supermarket.[9] This item is modeled after the well-known experiment where wallets containing 50 USD each were dropped in a number of European and US cities, and the number of returned wallets was used as a measure of the trustworthiness of the residents. Similar

[8] The two items read: 'How much do you trust your colleagues?'; 'To what extent do you think that your colleagues will keep their word when you have agreed on something orally?' The response alternatives run from 0 ('Not at all') to 10 ('Completely'). The zero-order correlation between the two measures is 0.803 and Cronbach's α for the scale is consequently reassuringly high (0.890).

[9] The item reads: 'If you lost a wallet or purse at the supermarket that contained 1000 krona, how likely is it that you will get your purse back safely?' The response alternatives run from 0 ('Very unlikely') to 10 ('Very likely'). One thousand Swedish krona is approximately equal to 100 US dollars.

Table 2. Descriptive statistics

	Mean	Std. dev.	Minimum	Maximum
Trust in colleagues	7.45	2.07	0	10
'Wallet trust'	3.86	2.78	0	10
Workplace context				
Size	477	1196	6	8206
Income level	262,000	101,000	95,000	1,564,000
Income spread	133,000	166,000	30,000	3,443,000
Ethnic homogeneity	0.83	0.14	0.31	1
Neighborhood context				
Size	15,793	12,780	84	60,422
Income level	239,000	36,000	121,000	452,000
Income spread	159,000	62,000	94,000	623,000
Ethnic homogeneity	0.79	0.12	0.35	0.98
Control variables (individual level)				
Income	239,000	205,000	0	4,019,000
Income (difference from workplace mean)	90,000	176,000	0	3,775,000
Income (difference from neighborhood mean)	112,000	169,000	0	3,788,000
Born in Sweden	0.87			
Born in the Nordic countries	0.04			
Born in OECD	0.05			
Born in rest of the world	0.04			

survey items have also been used in recent studies on contextual diversity and trust (Letki, 2008; Stolle *et al*., 2008).

Control variables

We will also include a number of control variables in the models. First of all, we want the number of individuals belonging to each context to be approximately the same. As is evident from Table 2, this is not the case. To account for this potential problem, all models will include the size of the parish or workplace as a control variable. Furthermore, when testing the effects of workplace context on trust, we will only include workplaces with more than five employees.

We should expect the aggregate level of incomes within the context to be positively related to trust among individuals (Alesina and La Ferrara, 2002; Letki, 2008: 105). At the same time, there is, almost by definition, a strong positive correlation between the mean level of income and the income spread within the contexts.[10] Thus, to accurately estimate the effect of contextual income spread on levels of trust among individuals, we need to control for the mean income level within the contexts.

[10] The correlation between the mean income and the standard deviation of incomes across parishes in our data set equals 0.89. The corresponding correlation across workplaces is 0.75. Thus, the higher the mean income within the parish or workplace, the more unequal the distribution of incomes.

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The models also include a set of individual-level control variables suggested in earlier research (Putnam, 2000; Newton, 2007; Nannestad, 2008). Thus, age, education, gender, and an index measuring the respondent's involvement in voluntary organizations are entered in all regression equations. The models focusing on the workplace context also include sector of employment (three categories) and occupational status (five categories) as controls. Furthermore, to control for the possible impact of institutional fairness on trust (Rothstein and Uslaner, 2005; Nannestad, 2008), we include an index of political confidence in the models. The index is based on two items measuring the respondent's trust in the parliament and the police, respectively. Descriptive statistics for all measures discussed above are presented in Table 2.

Possible objections

Before proceeding to the analysis, we need to confront some possible objections against our empirical setup. First of all, Sweden is generally considered quite homogenous with regard to ethnicity, has high levels of income equality, and is one of the most high-trusting countries in the world (cf. Newton, 2001; Uslaner, 2002; Rothstein and Uslaner, 2005).[11] The problem here might be that there is too little variation in both social diversity and trust within the Swedish society to detect any relationships. If that is the case, we might end up with inconclusive tests of the hypotheses.

However, based on recent developments in Sweden and the available facts, we argue that this concern is unwarranted. Sweden has experienced some rapid changes in the past two decades in terms of high levels of immigration and increasing income inequality (Palme, 2006). For example, the share of Swedish citizens born abroad has increased steadily, from 7.5% in 1980 to 13.8% in 2008 (Statistics Sweden). Furthermore, both the labor and housing markets in Sweden are quite segregated: 'The pronounced ethnic/racial hierarchy that exists both on the labor market and in housing is one striking feature of the Swedish case, which is furthermore characterized by the distinct multi-ethnic character of all immigrant-dense neighbourhoods' (Andersson, 2007: 69). In line with this, the descriptive statistics in Table 2 display substantial variation in levels of income inequality and ethnic fractionalization across contextual units.

Another possible critique pertains to our way of measuring similarity and homogeneity. More precisely, the indicators of similarity and homogeneity might be strongly correlated, inducing problems with multi-colinearity in the models. For instance, if all my neighbors are native Swedes (i.e. a very homogenous setting), there will automatically be strong similarity. The odds that the respondent will be the only non-Swede in the neighborhood are very small. However, this

[11] Admittedly, the findings of high trust in Sweden mostly concern dispositional and not relational trust. Comparative studies of relational trust including Sweden as a case are much rarer. For a partial exception, see Arai *et al.* (2005) where levels of trust along a number of dimensions are compared between Japanese and Swedish university students.

objection misses the point for two reasons. First of all, the measures of similarity and homogeneity are, as expected, positively correlated but not that strongly. The correlations between the measures of ethnic homogeneity and similarity are 0.29 (workplace) and 0.27 (parish), respectively. The corresponding correlations for income homogeneity and similarity are 0.32 (workplace) and 0.20 (parish). Second, and more importantly, the fact that our measures of similarity and homogeneity are correlated should, if anything, lead to the conclusion that both indicators belong in a well-specified model of contextual effects. If, for example, we do not include any measure of similarity in the empirical model, we cannot know whether an estimated effect of homogeneity is in fact driven by the excluded similarity effect.[12]

At first, it seems the logic of our hypotheses makes multilevel modeling an obvious strategy (Snijders and Bosker, 1999). However, we do not have data that are suitable for multilevel modeling. Thus, the individual respondents are not nested within the contextual units (the parish and the workplace). Instead, the respondents are randomly sampled in a one-stage procedure. Consequently, in the absolute majority of cases, we only have one respondent per contextual unit. Therefore, and following Stolle *et al*. (2008), we will employ a different but still valid strategy for modeling contextual effects. To be able to add information about the contexts within which each individual resides, statistics Sweden provided variables indicating the parish and the workplace of each individual in the sample. Summary statistics for the relevant neighborhoods and workplaces – standard deviation of incomes, proportion of individuals born abroad, and so on – were then matched to all respondents in the sample.

Results

To test the three hypotheses, the following equation will be estimated:

$$\text{TRUST}_i = \beta_0 + \beta_1 S_i + \beta_2 H_i + \beta_3 S_i \times H_i + \sum_{k=4}^{K} \beta_k C_{k_i} + \varepsilon_i \qquad (1)$$

where the subscript i refers to the particular respondent; S indicates measures of similarity and homogeneity within neighborhoods and workplaces; C_k is the set of

[12] This argument is just one version of a general rule when estimating contextual or compositional effects (Huckfeldt and Sprague, 1993). In order to get unbiased estimates of the contextual characteristic (in our case, the homogeneity of the context), one needs to control for the corresponding individual characteristic (in our case, the similarity between the respondent and the individuals comprising the context). An obvious example here is the effect on trust of the mean income level in the respondent's neighborhood. As long as there is some degree of segregation in society, rich people will tend to cluster together in their own neighborhoods. Thus, a higher income will raise the probability that a person lives among other high-income earners. Consequently, when estimating the effect of the mean income level in the respondent's neighborhood on his/her trust in others, one must always control for individual income level. The same goes for our measures of homogeneity and similarity. Or, put differently, our measures of homogeneity and similarity in the neighborhood/workplace are related to each other in the exact same way as the mean income level in one's neighborhood/workplace is related to one's individual income.

Table 3. Trust in colleagues – workplace context (SE in parentheses)

	Model 1	Model 2	Model 3	Model 4
Similarity – income	0.02 (0.06)		0.03 (0.06)	−0.51 (0.41)
Homogeneity – income	−0.66* (0.22)		−0.61* (0.22)	−1.14* (0.49)
Interaction homogeneity × similarity				0.12 (0.09)
Similarity – ethnicity		0.27 (0.24)	0.31 (0.25)	−0.43 (1.17)
Homogeneity – ethnicity		2.18* (0.58)	2.06* (0.59)	1.27 (1.36)
Interaction homogeneity × similarity				0.97 (1.48)
Income level (individual)	0.24* (0.14)	0.21 (0.13)	0.23* (0.13)	0.23* (0.13)
Income level (workplace)	0.76* (0.36)	−0.01 (0.29)	0.56 (0.37)	0.50 (0.37)
Size of workplace	−0.02 (0.04)	−0.00 (0.04)	0.03 (0.04)	0.04 (0.24)
Membership in voluntary org.	−0.11 (0.31)	−0.06 (0.31)	−0.11 (0.31)	−0.12 (0.31)
Political confidence	0.18* (0.04)	0.18* (0.04)	0.18* (0.04)	0.17* (0.04)
N	814	814	814	814
Adjusted R^2	0.08	0.09	0.10	0.10

Significance levels: *<0.05, one-tailed tests.
Note: All income variables and the size variable are logged. All models are controlled for sector of employment, occupational status, educational level, gender, and age.

control variables described above; and ε_i is an independent random error term. The models are estimated using OLS and all significance tests are based on robust heteroskedasticity-corrected standard errors (Huber–White). To take account of the fact that the income distributions within the sample and also within the neighborhoods and the workplaces are positively skewed, all income variables are logged. Likewise, the variables measuring the size of the neighborhood and the workplace are logged.

The results of the analyses are presented in Tables 3 and 4. In Table 3, we focus on the effects of the workplace context on trust in colleagues. Looking first at the similarity hypothesis, the idea that individuals trust those who are similar to themselves in terms of income, race, or ethnicity receives no support from the results. Neither of the two measures tapping similarity between the respondent and the context in terms of income or ethnicity is significantly related to trust in colleagues. This lack of significant similarity effects remains when excluding the homogeneity variables from the analysis (results not shown). Thus, we must conclude that it is not a person's position within the workplace that decides whether they more or less trust their workmates.

Instead, it seems that the quality of the context itself is more important. Given our hypotheses and the operationalizations of the homogeneity variables, we would expect the coefficient of the income spread indicator to be negative, whereas ethnic homogeneity (higher values entail a more homogenous context) should be positively related to trust. This is also the pattern that emerges from Table 3. Looking at Model 1, we can see that income spread is negatively and significantly related to trust. Since the variable is logged, the interpretation of the

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Table 4. 'Wallet trust' – neighborhood context (SE in parentheses)

	Model 1	Model 2	Model 3	Model 4
Similarity – income	0.19* (0.06)		0.19* (0.06)	−1.14 (0.98)
Homogeneity – income	0.52 (0.49)		0.79 (0.49)	−0.42 (1.02)
Interaction homogeneity × similarity				0.26 (0.20)
Similarity – ethnicity		−0.18 (0.23)	−0.20 (0.24)	0.53 (1.17)
Homogeneity – ethnicity		2.12* (0.72)	2.39* (0.73)	3.13* (1.48)
Interaction homogeneity × similarity				−0.99 (1.61)
Income level (individual)	0.10 (0.07)	0.05 (0.07)	0.10 (0.07)	0.10 (0.07)
Income level (workplace)	−0.78 (1.12)	0.25 (0.58)	−1.69 (1.14)	−1.77 (1.15)
Size of workplace	−0.17* (0.08)	−0.05 (0.09)	0.00 (0.09)	0.01 (0.09)
Membership in voluntary org.	0.69* (0.26)	0.73* (0.26)	0.69* (0.26)	0.68* (0.26)
Political confidence	0.38* (0.03)	0.38* (0.03)	0.38* (0.03)	0.38* (0.03)
N	1453	1453	1453	1453
adjusted R^2	0.13	0.13	0.14	0.14

Significance levels: *<0.05, one-tailed tests.
Note: All income variables and the size variable are logged. All models are controlled for educational level, gender, and age.

size of this effect is not straightforward. We can get a sense of the magnitude of the effect by dividing the coefficient by 100. This equals the effect on trust of increasing the income spread by 1%. Thus, an increase in the standard deviation of incomes among the workplaces from the lower (206,000) to the upper quartile (294,000) amounts to a 42.7% increase in the income spread variable. This means that in a more unequal workplace, individuals are estimated to score, on average, 0.28 ($42.7 \times (-0.66)/100$) points lower on the eleven-point trust scale compared to employees in a workplace with more evenly spread incomes.

Turning now to the second model, it is evident that ethnic homogeneity also strongly affects one's trust in colleagues. Once again, we can illustrate this effect by looking at the difference in trust between workers at the lower (0.76) and upper (0.93) quartiles of the homogeneity distribution. This difference amounts to a 0.37 point higher score on the trust scale among employees in more homogenous workplaces. In the third model, we can see that this effect is only marginally affected, as is the impact of income spread, when including all variables in the same regression equation. Consequently, the homogeneity hypothesis is strongly supported by the estimates in Table 3.

To test the third hypothesis, we include interaction terms between the measures of homogeneity and similarity in Model 4. According to this conditional hypothesis, we should expect greater homogeneity to raise trust among individuals who are more similar to the surrounding context, whereas the same increase in homogeneity should lead to less trust among the more dissimilar individuals. Given the operationalization of the variables, the hypothesis is strengthened if we find a negative coefficient for the interaction term involving the two measures of

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income diversity and a positive coefficient for the interaction term involving the indicators of ethnic diversity.[13] Looking at the results in Model 4, it is evident that the hypothesis finds very little support in these data. The first interaction term is both incorrectly signed and insignificant. The second interaction term (between ethnic similarity and homogeneity) is, as expected, positive. However, the size of the standard error in relation to the coefficient stresses the uncertainty of this result.

Two more things are worth noticing about the results in Table 3. First, organizational membership does not seem to influence one's trust in colleagues. However, as we will see in Table 4, when we change the focus of trust to people in one's neighborhood, there is clear positive influence of the organizational membership variable, well in line with several earlier studies on social capital (Putnam, 1993; Stolle, 2007).[14] Second, the consistently positive effect of political confidence on both workplace trust (Table 3) and neighborhood trust (Table 4) lends support to the claim that institutional fairness is an important explanation of social trust (Rothstein and Uslaner, 2005; Nannestad, 2008).

Turning now to the neighborhood context, Table 4 presents four models of 'wallet trust'. Looking at models 2 and 3, we can see that ethnic similarity does not seem to influence the respondent's trust. The estimated effect of belonging to the ethnic majority is far from significant in both models. More interesting is the positive effect of the variable measuring difference from the mean income (Models 1 and 3). This particular result suggests that trust increases when one is *less* similar to others. Thus, it speaks against the idea stemming from socio-psychological research that '[t]rust seems easier to develop when we are familiar with the people around us, and particularly when they appear similar to ourselves' (Stolle *et al*., 2008: 58–59). Once again, we can conclude that the similarity hypothesis receives no support from these estimates.

Looking instead at the homogeneity hypothesis, the results here are not as clear-cut as in the previous table. On the one hand, and mirroring the models of trust in colleagues, the estimated effect on trust of ethnic homogeneity within the parish is positive and significant. According to Model 2, an increase in the ethnic homogeneity variable from the lower (0.72) to the upper (0.88) quartile will result in a 0.34 (0.16×2.12) step increase in the level of trust. Moreover, this effect remains in the full model (3). On the other hand, the effect of income spread is incorrectly signed but insignificant. Thus, it seems that income differences within the

[13] In the first place, a negative interaction term would signal a situation where the effect of increasing income spread on trust becomes more and more negative the more dissimilar the individual's income is compared to the average income in the surrounding context. In the second place, a positive interaction term would mean that the effect of a more ethnically homogenous context is more positive for those who are themselves similar to the majority of the context with regard to ethnicity.

[14] The organizational membership variable is an additive index of the respondent's membership in six different types of voluntary organizations (political parties, unions, interest organizations, solidarity organizations, religious organizations, and lifestyle organizations). The resulting index has been rescaled to the 0–1 range.

neighborhood, as opposed to income differences within the workplace, are unrelated to trust.[15]

Lastly, the estimates of Model 4 once again speak against the third hypothesis. The coefficients of the two interaction terms are both incorrectly signed and far from significant. However, it should be noted here that data across Swedish neighborhoods and workplaces might not be optimal for testing hypothesis 3. The examples used to illustrate the hypothesis in the theoretical section – the trust among a group of Romani in an otherwise homogenous Hungarian area dominated by Jobbik supporters or the trust of a South African of color in an Afrikaans-dominated area – are quite extreme and have no obvious counterparts in the data we employ here. In the end, a more fine-tuned test of the conditional hypothesis presupposes more sensitive data. Before such data are at hand, we suggest that a firm conclusion about hypothesis 3 must wait.

Before concluding, a few remarks on the robustness of these results are necessary. First, we tested whether the relative income position of the respondents could explain the unexpected result in Table 4, indicating that trust increases when one is less similar to others. However, measuring positive and negative deviances from the mean income separately showed that both those with higher and lower incomes compared to the average income in the neighborhood were more trusting. Second, we also tested for interaction effects between ethnicity and income (both at the individual and contextual levels, and across levels) without detecting any interpretable patterns. Third, we tried a different operationalization of ethnic homogeneity and similarity based on the birth country of the respondent's father (instead of the own birth country). The only change in result was that the effect of ethnic similarity at the workplace was in line with the similarity hypothesis – a positive and significant effect. However, the overall pattern of results still tell the same story – the support for the homogeneity hypothesis is still quite strong (correctly signed and significant coefficients for three out of four indicators), whereas the support for the similarity hypothesis is scant at best (the effect of only one of four variables is correctly signed and significant).

Finally, a possible objection against the results is that trust can be the result of ongoing relationships, for example, in workplaces. More precisely, as labor markets in Western countries tend to be two-tiered, we could find ethnic homogeneity (in this case, workers of Swedish background) in more stable jobs, in which relations are more enduring, and trust therefore more likely. By contrast, in less stable jobs, workers' ethnic backgrounds will be more diverse, and, at the same time, relations more sporadic, and trust less common. In sum, the association

[15] One possibility here is that both ethnic belonging and income differences are highly visible among colleagues in a workplace. Among neighbors, on the other hand, only ethnic belonging is evident, whereas income differences are less obvious. This would explain the insignificant effect of income homogeneity within neighborhoods on trust. However, to substantiate such a claim, further research is needed.

between ethnic homogeneity in the workplace and trust could be spurious.[16] To test this, we added a variable measuring the number of years the respondent has been employed at the present workplace in all models of workplace trust. The estimated effect of this variable was substantially small and far from significant in all models. More importantly, our main results were unaffected by the inclusion of employment duration in the equations.

Conclusions

In light of the two mechanisms pinpointed in the theoretical section, the empirical results presented above are clear-cut. The first hypothesis held that it is the degree of similarity between the individual and the context that matters. The more similar the individual's income and ethnicity are to the income level and ethnic composition of his/her workplace and neighborhood, the higher we should expect his/her trust to be. The second hypothesis instead focused on the 'pure' contextual effect and said that homogeneity fosters trust. Thus, irrespective of the individual's own characteristics and relation to the overall composition of the context, more egalitarian and ethnically homogenous workplaces and neighborhoods should enhance trust levels.

The results of the empirical analysis provided quite strong support for the homogeneity hypothesis. At workplaces characterized by an inegalitarian income distribution, trust in colleagues is lower. Furthermore, the analysis shows that ethnic homogeneity positively influences trust in both colleagues and neighbors. Looking instead at the variables measuring similarity between the individual and the surrounding context, the estimates are either insignificant or incorrectly signed (the effect of income difference from the mean in Table 4). Thus, according to these empirical results, the social-psychological idea that similarity fosters trust is mistaken. Rather, homogeneity, social as well as ethnic, seems to foster trust, irrespective of the individual's distance from or similarity to the 'others'.

We did not find any significant support for a third hypothesis that proposed an interaction effect between the homogeneity and similarity mechanisms. The reason might be that data from Swedish communities are not suitable for the test. Hopefully, future research can include complex multi-interaction modeling across divergent contexts with varying degrees of (historical) conflicts.

These findings have implications for policy as well as for the interpretation of earlier studies on the relationship between diversity and trust. Starting with the latter, on the surface our empirical results square well with the findings in much of the earlier research, showing that ethnic diversity and economic inequality negatively affect trust (Alesina and La Ferrara, 2002; Hero, 2004; Delhey and Newton, 2005; Rothstein and Uslaner, 2005; Hooghe, 2007; Putnam, 2007;

[16] Our thanks go to an anonymous reviewer for making this point.

Letki, 2008; Stolle *et al.*, 2008). Our contribution in relation to this research is twofold. First, we have provided a reasonable mechanism, lacking in earlier research, with regard to why the composition of the context as such should be expected to influence levels of trust. The important thing here is to distinguish between two different mechanisms, both conceptually and empirically. An individual's trust can be affected by the degree of similarity between the individual and the context (individual-level mechanism), as well as the characteristics of the context itself (contextual-level mechanism). Second, this distinction has implications for how the relationship between diversity and trust should be empirically evaluated. Thus, we have to be clear about what we are referring to when speaking about context (individual level similarity or the context as such).

As for policy implications, the influence of contextual diversity on trust leads us to emphasize a number of specific political measures for handling the negative effects of diversity. At the core, it is about fostering a shared sense of community or 'shared citizenship'. In a general sense, Putnam argues in the same manner. He emphasizes the importance of similarity and therefore holds that policies should focus on ways of reconstructing identities over time, through assimilation and trying to play down the importance of differences through policies that support 'interaction across ethnic lines' (Putnam, 2007: 164). As identities change very slowly, he also concludes that there is a clear trade-off between diversity and community in the short run.

We are absolutely not against these measures. However, they miss the importance of how trust is actually shaped in interaction between the individual and the network and therefore also miss more immediate political action. In the same manner as equal and fair treatment in policies and local administration 'mirror the moral standing of the "others"' (Kumlin and Rothstein, 2007: 18; cf. Oskarsson *et al.*, 2009a, b), it seems to be the case that the properties of the network, such as equality and homogeneity, in themselves function as signals of the moral standard, moral commitment, or the degree of trustworthiness that applies. The fact that individuals also perceive the 'others' to be less egoistic and more trustworthy within egalitarian and homogenous social contexts supports this interpretation. Therefore, it also seems less risky to trust in these environments even if you yourself are different from the majority, the 'others'. In terms of policies, this indicates that one should promote income equality and counteract tendencies toward segregation where minority groups have less chance of experiencing the 'others'. As Kumlin and Rothstein hold, minority groups should not be 'too large or dominant in particular geographical areas' (2007: 18) in order to be included in meaningful encounters with 'others'.

The melting pot in a form in which a sense of shared citizenship thrives may not come into being easily. In order to take steps in this direction, society has to implement policies in terms of which everybody is treated fairly, and which foster equality and build upon the sense of community already in place at the homogenous cores.

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References

Alba, R. and V. Nee (2003), *Remaking the American Mainstream: Assimilation and Contemporary Immigration*, Cambridge, MA: Harvard University Press.

Alesina, A. and E. La Ferrara (2002), 'Who trusts others?', *Journal of Public Economics* **85**: 207–234.

Andersson, R. (2007), 'Ethnic residential segregation and integration processes in Sweden', in K. Schönwälder (ed.), *Residential Segregation and the Integration of Immigrants*. WZB (Wissenschaftszentrum Berlin für Sozialforschung gGmbH), Discussion Paper Nr. SP IV 2007-602, pp. 61–90.

Arai, K., S. Oskarsson, P. Öberg, T. Svensson, I. Yamauchi and S. Hirano (2005), 'The structure and determinants of trust: the cases of Japan and Sweden', *Hitotsubashi Journal of Economics* **46**: 183–204.

Becker, L.C. (1996), 'Trust as noncognitive security about motives', *Ethics* **107**: 43–61.

Books, J. and C. Prysby (1991), *Political Behaviour and the Local Context*, New York: Praeger.

Braithwaite, V. (1998), 'Communal and Exchange Trust Norms: Their Value Base and Relevance to Institutional Trust', in V. Braithwaite and M. Levi (eds), *Trust and Governance*, New York: Russell Sage Foundation, pp. 46–74.

Coleman, J. (1994), *Foundations of Social Theory*, Cambridge, MA: The Belknap Press of Harvard University Press.

Cook, K., R. Hardin and M. Levi (2005), *Cooperation without Trust?*, New York: Russell Sage Foundation.

Delhey, J. and K. Newton (2003), 'Who trusts?', *European Studies* **5**: 93–137.

—— (2005), 'Predicting cross-national levels of social trust', *European Sociological Review* **21**: 311–327.

DiMaggio, P. (1999), 'Review article on trust and governance', *Contemporary Sociology* **28**: 731–732.

Fischer, J. and B. Torgler (2006), 'The effect of relative income position on social capital', *Economics Bulletin* **26**: 1–20.

Gambetta, D. (1988), 'Mafia: the price of distrust', in D. Gambetta (ed.), *Trust: Making and Breaking Cooperative Relations*, Oxford: Blackwell, pp. 158–175.

Granovetter, M. (2005), 'The impact of social structure on economic outcomes', *Journal of Economic Perspectives* **19**: 33–50.

Gustavsson, M. and H. Jordahl (2008), 'Inequality and trust in Sweden', *Journal of Public Economics* **92**: 348–365.

Hardin, R. (1993), 'The street-level epistemology of trust', *Politics and Society* **21**: 505–529.

—— (1998), 'Trust in government', in V. Braithwaite and M. Levi (eds), *Trust and Governance*, New York: Russell Sage Foundation, pp. 9–27.

—— (2002), *Trust and Trustworthiness*, New York: Russell Sage Foundation.

Hero, R. (2004), 'Social capital and racial inequality in America', *Perspectives on Politics* **1**: 113–122.

Hooghe, M. (2007), 'Social capital and diversity generalized trust, social cohesion and regimes of diversity', *Canadian Journal of Political Science* **40**: 709–732.

Huckfeldt, R. and J. Sprague (1993), 'Citizens, contexts, and politics', in A. Finifter (ed.), *Political Science: The State of the Discipline II*, Washington: The American Political Science Association, pp. 291–304.

Johnson, M., P. Shively and R. Stein (2002), 'Contextual data and the study of elections and voting behavior', *Electoral Studies* **21**: 219–233.

Knack, S. and P. Keefer (1997), 'Does social capital have an economic payoff?', *Quarterly Journal of Economics* **112**: 1251–1288.

Kumlin, S. and B. Rothstein (2007), 'Minorities and Mistrust'. Conference Paper, ECPR Joint Session of Workshops, May 7–12, 2007, Helsinki.

Leigh, A. (2006), 'Does Equality Lead to Fraternity?', *Australian National University CEPR Discussion Paper 513*, Australian National University, Canberra, Australia.

Letki, N. (2008), 'Does diversity erode social cohesion?', *Political Studies* **56**: 99–126.

Levi, M. (1991), 'Are there limits to rationality', *Archives Européennes de Sociologie* **32**: 130–141.

—— (2003), 'A state of trust', in V. Braithwaite and M.A. Levi (eds), *Trust and Governance*, New York: Russell Sage Foundation, pp. 77–101.

March, J. and J. Olsen (2006), 'The logic of appropriateness', in M. Moran, M. Rein and R. Goodin (eds), *The Oxford Handbook of Public Policy*, Oxford: Oxford University Press, pp. 689–708.

Marschall, M. and D. Stolle (2004), 'Race and the city', *Political Behavior* **26**: 125–153.

Messick, D. and R. Kramer (2001), 'Trust as a form of shallow morality', in K. Cook (ed.), *Trust in Society*, New York: Russell Sage, pp. 89–118.

Miller, A. and T. Mitamura (2003), 'Are surveys on trust trustworthy?', *Social Psychology Quarterly* **66**: 62–70.

Nannestad, P. (2008), 'What have we learned about generalized trust, if anything?', *Annual Review of Political Science* **11**: 413–436.

Newton, K. (1999), 'Social capital and democracy', in J. Van Deth *et al.* (eds), *Social Capital and European Democracy*, London: Routledge, pp. 3–24.

—— (2001), 'Trust, social capital, civil society, and democracy', *International Political Science Review* **22**: 201–214.

—— (2007), 'Social and political trust', in R. Dalton and H.-D. Klingemann (eds), *The Oxford Handbook of Political Behavior*, Oxford: Oxford University Press, pp. 342–361.

North, D. (1990), *Institutions, Institutional Change, and Economic Performance*, New York: Cambridge University Press.

Öberg, P. and T. Svensson (2009), 'Does power drive out trust?', *Political Studies* **58**: 143–166.

Oliver, E. and T. Mendelberg (2000), 'Reconsidering the environmental determinants of white racial attitudes', *American Journal of Political Science* **44**: 574–589.

Oskarsson, S., P. Öberg and T. Svensson (2009a), 'Making capitalism work', *Economic and Industrial Democracy* **30**: 294–320.

Oskarsson, S., T. Svensson and P. Öberg (2009b), 'Power, trust, and institutional constraints', *Rationality & Society* **21**: 171–195.

Ostrom, E. (1990), *Governing the Commons*, New York: Cambridge University Press.

—— (2000), 'Collective action and the evolution of social norms', *Journal of Economic Perspectives* **14**: 137–158.

Palme, J. (2006), 'Income distribution in Sweden', *The Japanese Journal of Social Security Policy* **5**: 16–26.

Putnam, R. (1993), *Making Democracy Work*, Princeton: Princeton Paperbacks.

—— (2000), *Bowling Alone*, New York: Simon & Schuster.

—— (2007), 'E Pluribus Unum: diversity and community in the twenty-first century', *Scandinavian Political Studies* **30**: 137–174.

Rothstein, B. (2001), 'The universal welfare state as a social dilemma', *Rationality and Society* **13**: 213–233.

Rothstein, B. and E. Uslaner (2005), 'All for all', *World Politics* **58**: 41–72.

Rotter, J. (1980), 'Interpersonal trust, trustworthiness, and gullibility', *American Psychologist* **35**: 1–7.

Snijders, T. and R. Bosker (1999), *Multilevel Analysis*, London: Sage.
Soroka, S., J. Helliwell and R. Johnston (2006), 'Measuring and modelling interpersonal trust', in F. Kay and R. Johnston (eds), *Social Capital, Diversity, and the Welfare State*, Vancouver: UBC Press, pp. 279–303.
Statistics Sweden. 'Befolkningsstatistik i sammandrag 1960–2008'. Retrieved 2 September 2009 from http://www.scb.se/Pages/TableAndChart____26040.aspx
Stolle, D. (2007), 'Social capital', in R.J. Dalton and H-D. Klingemann (eds), *The Oxford Handbook of Political Behavior*, Oxford: Oxford University Press, pp. 655–674.
Stolle, D., S. Soroka and R. Johnston (2008), 'When does diversity erode trust?', *Political Studies* **56**: 57–75.
Strömblad, P. (2003), *Politik på stadens skugga*, Uppsala: Acta Universitatis Upsaliensis.
Svensson, T. and P. Öberg (2005), How are coordinated market economies coordinated?, *West European Politics* **28**(5): 1075–1100.
Tyler, T. (1998), 'Trust and democratic governance', in V. Braithwaite and M. Levi (eds), *Trust and Governance*, New York: Russell Sage Foundation, pp. 269–294.
Ullmann-Margalit, E. (2002), 'Trust, distrust, and in between', in R. Hardin (ed.), *Distrust*, New York: Russell Sage Foundation, pp. 60–82.
Uslaner, E. (2002), *The Moral Foundations of Trust*, Cambridge: Cambridge University Press.
Whiteley, P.F. (1999), 'The origins of social capital', in J. Van Deth *et al.* (eds), *Social Capital and European Democracy*, London: Routledge, pp. 25–44.
Williams, M. (2001), 'In whom do we trust', *The Academy of Management Review* **26**: 377–396.
Williamson, O. (1993), 'Calculativeness, trust, and economic organization', *Journal of Law and Economics* **36**: 453–486.
Yamagishi, T. and M. Yamagishi (1994), 'Trust and commitment in the United States and Japan', *Motivation and Emotion* **18**: 129–166.
Zak, P. and S. Knack (2001), 'Trust and growth', *The Economic Journal* **111**: 295–321.