THE DETERMINANTS OF TRUST

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ABSTRACT

Both individual experiences and community characteristics influence how much people trust each other. Using data drawn from US localities we find that the strongest factors that reduce trust are: *i*) a recent history of traumatic experiences, even though the passage of time reduces this effect fairly rapidly; *ii*) belonging to a group that historically felt discriminated against, such as minorities (black in particular) and, to a lesser extent, women; *iii*) being economically unsuccessful in terms of income and education; *iv*) living in a racially mixed community and/or in one with a high degree of income disparity. Religious beliefs and ethnic origins do not significantly affect trust. The latter result may be an indication that the American melting pot at least up to a point works, in terms of homogenizing attitudes of different cultures, even though racial cleavages leading to low trust are still quite high.

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1 Introduction

The economic benefits of interpersonal trust are widely recognized. When people trust each other transaction costs in economic activities are reduced, large organizations function better, governments are more efficient, financial development is faster. As a result, more trust may spur economic success.[1] While a lively recent economic literature has tried to measure the effect of trust on economic outcomes, the determinants of trust are still unclear. This is an important issue, since the level of trust both within the US and across countries varies substantially and the goal of this paper is to shed some light on this matter.

Both individual and social characteristics are likely to influence how much people trust each other. In particular, factors that may reduce trust include: a history of individual misfortunes; belonging to certain groups which are either discriminated against and/or are economically unsuccessful; cultural and/or religious roots which lead to different philosophical attitudes toward social interactions; as for the characteristics of the place in which an individual live, they may include the level of crime and the degree of heterogeneity of the community, under the assumption that one trusts others who are more similar to himself.

We investigate these issues using the information provided by the General Social Survey (GSS) for the United States, 1974-94. We find that the strongest factors that reduce trust are: (i) a recent history of traumatic experiences, even though the passage of time reduces this effect fairly rapidly; (ii) belonging to a group that historically has been discriminated against, such as minorities (black in particular) and, to a lesser extent, women; (iii) being economically unsuccessful in terms of income and education; (iv) living in a racially mixed community and/or in one with a high degree of income disparity. We find instead that religious beliefs and ethnic origin do not significantly affect trust. The latter result may be an indication that the American melting pot at least up to a point works, in terms of homogenizing attitudes of different cultures, even though mistrust across racial lines is still quite high.

Particularly interesting are the results on income and racial heterogeneity of the community. Our prior is that most individuals are less inclined to trust those who are different from themselves, because familiarity bread trust, as pointed out and discussed by Coleman (1990). In heterogeneous communities participation in groups that require direct contact among members is low, (Alesina and La Ferrara (2000)); in particular, in racially heterogeneous communities the individuals who do not participate are those with the strongest views against racial mixing. The same individuals also trust others less, and , more generally trust and participation

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[1]See Coleman (1990), Fukuyama(1995), Putnam (1993) La Porta et al. (1997), Knack and Keefer (1997), Knack and Zak (1999) and Guiso, Sapienza and Zingales (1999).

in social activities are positively correlated, even though the results on participation and trust are far from identical. For instance, while after controlling for other characteristics, blacks participate more in social and political activities, the same group trusts significantly less.[2] Similar considerations apply to women.

The effect of social interactions on trust are likely to imply complementarities leading to a 'two equilibria' phenomenon. In the 'good' equilibrium (more likely to occur in homogeneous communities) individuals trust each other and for that reason more and more trust is built. In the 'bad' equilibrium (more likely to occur in heterogeneous communities) the low level of trust reduces trust building opportunities even more.

The results of the present paper are related to, and consistent with, a recent literature on the effect of racial and ethnic heterogeneity on public polices in US cities. In particular, Alesina Baqir and Easterly (1999) show that public policies are less efficient in more heterogeneous localities in the US. The idea is that heterogeneous groups have more difficulties in sharing the use and the financing of public goods; perhaps, as the present paper suggests, because they do not 'trust' each other. Glaeser, Sheinkman and Shleifer (1995), Poterba (1996), Luttmer (1997) and Goldin and Katz (1999) discuss the effects of racial fragmentation for several specific policy issues. Alesina, Baqir and Hoxby (1999) show that the formation of political jurisdictions is strongly influenced by a desire to reduce racial mixing in public policies. Work on international data leads to similar results. La Porta et al (1999) show that the 'quality of government' is higher in less fragmented societies. Easterly and Levine (1997) show that growth is lower in more ethnically fragmented countries.

The paper is organized as follows. Section 2 discusses some hypotheses regarding what may determine trust. Section 3 presents the data and some simple correlations. Section 4 displays our basic regressions and sensitivity. Section 5 discusses alternative channels that may link fragmentation and trust and explores the role of heterogeneity more in depth. The last section concludes.

2   What determines trust? Hypotheses

The theory of what determines 'trust' is sketchy at best. Here we highlight a few possible channels.

First, trusting others may be a moral or cultural attitude. If this is the case trust should be very strongly influenced by individual characteristics such as the

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[2]The finding that blacks participate more in political activities is also common in the political science literature; see for instance Verba and Nie (1987). Alesina and La Ferrara (2000) find that blacks participate more in a variety of social groups. This finding is not driven only by the higher church participation in the South.

level and type of education received. Also, religious beliefs may be important since different religions may have different attitudes toward social interactions and the 'polity'.

Second, trust may be based on past experience. One trusts others if he is used to be treated fairly by his fellow men. This is a sort of a reciprocity argument for trust. Note that this argument may apply both at an individual level and at a 'group' level. If an individual has been hurt in past interactions with others he may trust less. Also if a group has been discriminated against *de jure* or *de facto*, members of that group will not expect to be treated fairly in the future and therefore will trust less.

Third, one may trust more the people who are more 'similar' to himself, that is family members or members of the same social, racial or ethnic group. In fact family ties are particularly strong in societies were social trust is not very developed.[3] This also underlies some of the findings concerning the development of financial markets in areas where family or kinship ties are particularly strong.[4] For the purpose of this paper this argument is especially relevant because it may imply that trust is lower in communities which are less homogeneous in terms of racial, ethnic or religious composition and in communities with more income inequality.

Fourth, people may trust more others with whom they have had a longer interaction.[5] Also trust may be increased by an expectation of repeated interaction in the future. The possibility of retaliation is a basic requirement for cooperative equilibria, so sporadic interactions should be less conducive to 'trust' in the sense of expecting cooperative behavior.[6] If this is the case, people who have lived longer in a community may be more likely to trust. In the aggregate, the more stable and less 'transient' a community is, the higher is trust.

Fifth, legal institutions may affect trust. In a community where criminal behavior is effectively persecuted, individuals will trust more because they will feel more protected against extreme non cooperative behavior. In our sample legal institutions are invariant although the level of crime is not.

An important question is how much the level of somebody's trust is influenced by the average level of trust in a community. For instance, suppose that somebody's culture, religion or education would lead him not to trust others. Imagine now that this individual is moved (exogenously) to a community where everybody

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[3]See Banfield (1967).

[4]See Guiso, Sapienza and Zingales (1999) for an application to Southern Italy, and La Ferrara (1997) for results on developing countries.

[5]See Coleman (1990) for a convincing argument of why this is the case.

[6]Whether the word 'trust' applies to a situation where cooperation is achieved by reciprocal threat is a semantic issue which we do not discuss here.

trusts others. Will this individual trust more in the new community? If a higher level of social trust leads to more individual trust, we have the making of a multiple equilibria situation, since we have complementarities in trust. An interesting empirical implication of these ideas concerns immigrants in a new country. If the level of trust in the country of origin is different from the one of the country of destination, how does the immigrant's attitude towards trust change?[7]

In summary we can think of five broad factors influencing how much people trust others: 1) individual culture, traditions and religion; 2) how long an individual has lived in a community with a stable composition; 3) recent personal history of misfortune; 4) the perception of being part of a discriminated group; 5) several characteristics of the composition of one's community, including how much trust there is in the community. In our empirical analysis we find that the last three elements matter much more than the first two.

3   Data and descriptive statistics

3.1   Data

Our main data source is the General Social Survey (GSS) for the years 1974-94. This survey interviews about 1,500 individuals every year from a nationally representative sample, and contains a variety of indicators on the respondents' political views, social behavior, and demographic characteristics.[8] In particular, one crucial question for our purposes is the following: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?". We define as *trusting* those individuals who answer that "most people can be trusted", and non-trusting those who say that "you can't be too careful" or that "it depends". This will be the key variable which we want to explain. We will also make use of other questions concerning how much the respondent trusts not other people in general, but certain institutions, like banks and financial institutions,

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[7]Obviously an empirical investigation of this point would need to tackle issues of self selection of immigrants. In any case, we will not be able to address this point because our data do not contain information on the place of birth of the respondent, nor on the state from which he or she may be coming from (if the respondent has moved at some point).

[8]This survey is being more and more often used not only by sociologists but also by economists. For detailed information about the GSS, see Davis and Smith (1994). Here we only mention that our sample will be smaller than the 'nominally available' sample for a variety of reasons. First, there were three years (1979, 1981 and 1992) in which the survey was not conducted. Second, the variable 'trust' (to be defined below) is missing for about one third of the years. Finally, as it will be explained below, not every respondent can be matched with the geographic area of residence, so when we control for community characteristics we are forced to further restrict the sample.

the Congress, the army, public officials, medical doctors, etc. Other variables of particular interest for us are those that measure individual attitudes toward racial mixing, because they may capture positive or negative feelings towards individuals of a different race or ethnicity.

As it is generally the case with survey data, one has to be aware of how the responses reflect actual behavior. A respondent may feel 'good' about himself if he answers affirmatively to the question about trusting others, even though in his actual behavior he may not be a trusting person. This may induce an upward bias in the number of affirmative answers, and this motivates our choice of categorizing as non trusting the answer "it depends". The critical question is however whether this bias is correlated with our right hand side variables, and this is far from obvious. The fraction of 'no' to the question of trusting others is .6; thus, even if there were a bias in the negative answers, we still have more than half of the respondent saying that they do not trust.

A more subtle issue is raised by Glaeser et al (2000). They find that answering yes to a question about trusting others is more correlated to being trustworthy in experiment than to being trusting. These experiments suggest two things. The first is that we have to be cautious in interpreting answers to questions on trust in surveys. The second is that perhaps individuals who say they trust feel that they have to be trustworthy to reciprocate.

Among the explanatory variables we include several individual characteristics like education, income, marital status etc. The GSS contains also information about the recent and not so recent 'history' of the respondent. In particular we can check how recent *traumas* like divorce, diseases, accidents, financial misfortune, affect people's trust. As we discuss below, some of these events are clearly exogenous (e.g., accidents), while others may be endogenous to trust (e.g., divorce). In addition we can also check whether individuals' mobility and changes of community of residence affect their level of trust.

As for community variables we are especially interested in the degree of income inequality and of racial and ethnic fragmentation. One can identify the MSA/PMSA of the respondent for about 2/3 of the total number of the respondents in the GSS. To measure income inequality we use the Gini coefficient for the MSA/PMSA computed using family income for 1970, 1980 and 1990. We obtained the remaining years by interpolation and extrapolation. Our racial fragmentation index is, by now, standard in the literature and represents the probability that two randomly drawn individuals in an MSA/PMSA belong to two different races. The index is therefore increasing in heterogeneity and it is computed as follows:

$$Race_i = 1 - \sum_k s_{ki}^2 \qquad (1)$$

where i represents an MSA/PMSA and k the following races: i) Whites; ii) Black;

iii) American Indian, Eskimo, Aleutian; *iv*) Asian and Pacific Islander; *v*) Other. The Census does not identify the category Hispanic; however the category "Other" has a correlation of point 0.9 with the category Hispanic obtained with different sources. Therefore, for all practical purposes, other means "Hispanic". Each term s_{ki} represents the share of race k in the total population of MSA/PMSA i.

Our ethnic fragmentation index is computed in a way analogous to (1) but instead of using race we use the fraction of individuals in an MSA/PMSA with the same ethnic/national origin. The original ancestry data reported in the 1990 Census break down ethnicity in 35 categories or countries of origin. We aggregate them in 10 categories in order to avoid giving the same weight to very similar countries of origin (say Sweden and Norway) and to very different ones (say Ireland and India).[9]

We use our index of racial fragmentation (*Race*) and of ethnic fragmentation (*Ethnic*) for 1990. We do not interpolate as we did with *Gini* for two reasons. First racial and ethnic composition of MSAs/PMSAs are stable over relatively short periods of times, much more so than measures of income inequality. Second, the 1970 and 1980 Censuses report different racial and ancestry breakdowns than the 1990 one and some adjustments would have been necessary. The Appendix reports definitions and sources of all the variables used in the present paper.

3.2   Descriptive statistics

Figure 1 displays the national distribution of our variable of interest, *Trust*.

[Insert figure 1 here]

This picture shows high values of trust in the north/north west and low values in the south east.[10]   The state with the highest percentage of respondents who "generally trust others" is North Dakota; the state with the lowest percentage is Delaware. In the 'top 5' list for trust we also find Montana, Minnesota, South Dakota, and Wyoming. These states are all very homogeneous in terms of racial and ethnic composition of the population, and display relatively low levels of inequality. Among the five states with the lowest average trust there are instead Mississippi, Alabama, Arkansas, and North Carolina, all states with a racially and ethnically fragmented population and with a very unequal distribution of income. As we will argue below, we believe there is something systematic in this pattern of correlations between trust and heterogeneity of the population.

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[9]More details regarding the construction of this index can be found in the Appendix. Our results are not sensitive to reasonable changes in the aggregation rules for nations of origin.

[10]This pattern is similar to findings about participation in social activities (Alesina and La Ferrara (2000)) and aggregate measures of 'social capital' (Putnam and Yonish (1998)).

[Insert table 1 here]

Table 1 describes our variables of interest. The first column displays sample averages, which for the trust variables represent the fraction of respondents who say that they trust other people or institutions (as listed in each row). On average, 40 percent of the respondents say that "most people can be trusted", and the trend is generally declining from the 1970s to the 1980s and 1990s.[11] When we move from trust in people to trust in institutions, we find a lot of variation across types of institutions. The highest degree of confidence is attributed to relatively 'impersonal' categories like "medicine" and the "scientific community". The lowest degree of confidence is that in "organized labor", followed by "congress" and at the fourth place by the "executive branches of the federal government". Interestingly the media, as represented by television, also enjoy an extremely low level of trust (15 percent).

The second column of table 1 reports the correlation between *Trust* and confidence in the different institutions (the full correlation matrix between confidence in all types of institutions is reported in the Appendix). The variables that display the highest positive correlation with trust in people are confidence in science, in major companies, and in the supreme court. However, even these correlation coefficients are fairly low, in the range of .12-.15. This is not too surprising because trusting an institution is quite a different thing from trusting a person: for instance, trusting an institution like trade unions may be correlated with political beliefs, while trusting others should be less so. *Trust* is also positively correlated with confidence in public officials, religious institutions, and financial institutions, but the coefficients are even smaller. An interesting exception stands out: trusting people is inversely correlated with confidence in the army. Perhaps individuals who do not trust others rely on the army as an institution that can protect them in an world that cannot be trusted. Finally, note that trusting others is inversely related to trusting television. This is consistent with Putnam's argument that the diffusion of television viewing reduces social capital (Putnam and Yonish (1998)). It is however interesting that very few people say that they have confidence in TV despite the widespread use of this medium.

In the last three rows of table 1 we report the sample mean of our three heterogeneity variables, *Gini*, *Race*, and *Ethnic*, and their correlations with *Trust*. We can see that trusting others is negatively and significantly correlated with all three measures of heterogeneity, though the coefficient on the variable *Ethnic* is smaller in absolute value than the other two. In the following sections we turn to multivariate analysis to better investigate this link.

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[11]This figure includes people who answer affirmatively the trust question, but not those who say that "it depends".

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4   Econometric evidence

4.1   Individual characteristics

[Insert table 2 here]

We begin in Table 2 by regressing the variable *Trust* on a set of individual characteristics of the respondent, plus year and state dummies. Column 1 reports our 'minimal' specification. First, the variable *Cohort* is negative and significant, indicating a trend toward a reduction in the amount of trust in society. This result is consistent with Putnam's (1995) argument that 'social capital' is declining in the US. The variables capturing the age structure indicate that trust becomes lower in older age. Two particularly interesting coefficients are those on women and black: they are both negative and highly significant, especially the one on the latter. The size of the black coefficient is very large in absolute value: a black person is 23 per cent less likely to trust others that a non black. This is evidence consistent with the view that being part of a group (blacks and, to some extent, women) that historically has been discriminated against leads to lower trust. Note that while blacks trust less, they participate more in political and social activities, indicating that our result on trust does not capture some generic attitude towards anti-social behavior. Women participate less in social activities, but because of a time constraint. In fact, women vote more than men, since voting is an act of participation that does not require a significant amount of time.[12]

Income and education are positively correlated with trust; a successful professional experience is likely to make individuals more prone to trusting others.[13] The effect of education is large: the difference in the probability of an affirmative answer between a respondent with less than 12 years of education and one with more than 16 is about 0.32. On the other hand, marital status is uninfluential. Note, for future reference, that this result implies that it does not seem to be the case that people who trust more also tend to marry more easily, which would imply, by reverse causation, a positive coefficient on the variable married. Part time work has a small positive effect. The time dummies, not shown, do not display a particular pattern; remember, however, that the declining trend in trust is captured by the variable cohort.

In column 2 of table 2 we add a few more controls which have to do with past experience of the respondent. All the coefficients on the other variables capturing

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[12]For all these results on participation of blacks and women see Alesina and La Ferrara (2000). That paper shows that respondents with young children participate significantly less in social activities, probably because of a binding time constraint. This interpretation is confirmed by the insignificant coefficient on the same variable in this regression for trust.

[13]We have thoroughly investigated for non linear effects on income, but we did not find anything of interest to report. Results are available.

individual characteristics discussed above remain very stable. The variable capturing whether the respondent is divorced or separated is significant and negative, although this effect is much smaller than the effect of education or of being black. It has the same order of magnitude of the effect of getting older. In addition, this coefficient may be plagued by a reverse causality problem.[14] The variable *Trauma*, which captures whether an individual has suffered a major negative experience in the past year, has a negative coefficient. *Trauma* includes occurrences which are clearly exogenous (diseases) and some that may be partially endogenous (divorce). However, we believe endogeneity should not be a particular concern in this case, because we verified that the occurrence of traumas to close relatives had similar effects on the respondent's trust to his or her own traumas. When we analyzed the occurrences one by one, we noted that the financial misfortune was the strongest determinant of low trust. We also verified the effect of the occurrence of a traumatic experience in the previous 5 years, rather than one year. This variable had no effect on trust. This result may suggest that traumas are forgotten relatively quickly. However, given the very large number of respondents who had suffered at least one trauma in that 5 year period, it is difficult to draw robust inferences on this point.[15]

In column 3 we add variables that capture the religious affiliation of the respondent. Interestingly, these variables are totally insignificant. Results are similar when we use the religion of the respondent at age 16, as opposed to current religion. Other researchers (La Porta et al (1999)) working on cross country samples have found that religious affiliation sometimes influences the quality of government. One explanation for that finding relies on the attitude of different religions toward the common good and the social interaction with others, especially those of a different religion.[16] Our results on the US suggest that the American 'melting pot' works, or, to put it more generally, it suggests that social interaction more than philosophical/religious attitudes influences trust. In other words, our results suggest that it is not the religious beliefs per se but the organized forms of religion in different parts of the world that may influence differently social behavior.

4.2 Heterogeneity and trust

[Insert table 3 here]

In table 3 we focus on characteristics of the MSA/PMSA where the respondent lives. We have added to the regression of column 2 of Table 2 a set of variables

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[14]If we leave this variable out, none of the other coefficients is affected in any significant way.

[15]All these results are available upon request.

[16]Note, however, that these authors find that the level of per capita income often overshadows the effect of religious affiliation.

capturing various features of the communities. We do not report all the coefficients on the individual characteristics discussed above since they remain very stable. As always, Regressions in table 3 also include year and state dummies. Column 1 includes the size of the place, median family income in the MSA/PMSA, and an index of crime. Column 2 adds the Gini coefficient. Column 3 and 4 add one at a time the two variables of racial and ethnic fragmentation. The last column includes all the variables together. First, note that both the size of the place and crime are not significant. These two variables are positively correlated , but even if we drop size of place from this regressions, crime remains insignificant.[17]

Second, when we introduce our three measures of heterogeneity one at a time we find that *Gini* and *Race* are significant, while *Ethnic* is not, even though it has the expected sign. Inequality and racial fragmentation are positively correlated, and when we add them both in the last column of the table we find that *Race* remains highly significant while *Gini* looses significance. This suggests that *Race* is a stronger determinant of trust than *Gini*. The magnitude of the effect of *Race* is substantial. Moving form the most homogeneous MSA where Race=0.06 to the most heterogeneous where racial fragmentation is 0.61, trust would fall by about 12 percentage points, i.e. about 30 per cent of the mean. Starting from the sample mean, an increase by one standard deviation in *Race* decreases the probability of trusting others by 3 percentage points, i.e. almost 10 per cent of the mean value. This effect is larger than the effect of having had a traumatic experience in the last year, and almost the same size as the effect of being divorced or separated. Similar considerations apply for income inequality: an increase in Gini by one standard deviation decreases the likelihood of trust by 2.5 percentage points.

We have tested for the robustness of these coefficients by eliminating influential observations through the DFbeta method (Belsley et al. (1980)). Our results got actually stronger: while maintaining statistical significance, the marginal impact of a one standard deviation in *Race* became a decrease in the probability of trust of more than 5 percentage points namely 12.5 per cent of the mean, and that for *Gini* a decrease of 3 percentage points i.e. about 10 percent of the mean.[18]

Regarding potential concerns for the endogeneity of the variable *Gini* (e.g., because communities with higher levels of trust may offer better opportunities for the advancement of relatively poor people), we have estimated our regression using two stage least squares. We used three instruments for *Gini*: the number of municipal

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[17]This result seems a bit surprising. We wonder whether it may have to do with poor data quality on crime. In fact, the FBI data from which our variable is constructed rely on the *voluntary* contribution of crime statistics by law enforcement agencies. Not all agencies contribute data for every month of the year. Furthermore, as explained in the Appendix, we are forced to convert the FBI county level data into an index at the MSA/PMSA level, and this is likely to introduce some noise.

[18]Results are available from the authors.

and township governments in 1962 (NGOV62), the percentage of revenues from intergovernmental transfers in 1962 (REVIG62) and the share of the labor force in the manufacturing sector in 1990 (MANSHR). The rationale behind the use of these instruments is the following. Metropolitan areas that were fragmented in many jurisdictions in 1962 are likely to be more unequal due to possible differences in policies and public good provision among those jurisdictions. Receiving transfers from higher levels of government is also likely to affect inequality, although it is not clear that the direction of causality would not go the other way.[19] Finally, where a large fraction of the labor force is employed in manufacturing, we expect the level of inequality to be lower. Overall, the instrument in which we have most confidence is NGOV62, but we will experiment with various combinations of the three.

[Insert table 4 here]

Table 4 displays the coefficients on *Gini* from the two stage least squares model (top panel), and those on the instruments in the first stage regression (bottom panel). The first column reports the linear probability model, for comparison. We can immediately see that compared to the coefficient in column 1, when we instrument we find a stronger negative effect of inequality on trust. This is consistent with the hypothesis that people who are intrinsically more inclined to trust others are also less averse to living around people with different income levels, which would imply a downward bias of the OLS coefficient on *Gini* (in absolute value). In any case, standard tests do not seem to indicate the need for instrumentation.[20]

In summary, table 3 has shown that racial and income heterogeneity strongly influence trust, and, amongst the two, racial fragmentation of a community has the strongest effect. In other words, people are more likely to trust others in an unequal city than in a racially fragmented one. Table 4 has shown that the negative impact of income heterogeneity survives, and is even reinforced, when we account for the potential endogeneity of *Gini*.

4.3 Mobility and trust

One of the possible determinants of trust that we had conjectured in section 2 was geographical mobility. On the one hand, an individual who has not been living

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[19]For example, if intergovernmental transfers are directed to more unequal MSAs, this instrument would be imperfect.

[20]In three out of four cases, the Hausman test fails to reject the hypothesis of weak exogeneity of *Gini* at the 5 percent level. Furthermore, the Sargan test suggests that our instruments are valid (especially NGOV62 and REVIG62).

in the current place of residence for long may be less inclined to trust others, because he or she may not know other people enough. On the other hand, living in a community in which everyone is 'transitory', in the sense of not permanently residing in the community, should lower trust because the scope for repeated interaction, hence for retaliation and enforcement of cooperative equilibria, is reduced. In table 5 we test these effects with the information available in the GSS. We add various measures of mobility to the specification in column 3 of table 3, which includes in addition to individual controls and state dummies the characteristics of the community in terms of income, size and racial fragmentation.

[Insert table 5 here]

The first and second column add to our basic specification a dummy taking value 1 if the respondent has been living in the same state or in the same city, respectively, since the age of sixteen. Both variables are interacted with the age of the respondent to account for the fact that residential stability should not have the same impact on a 17 years old and on a 65 years old person who have been living in the same place since they were 16. As we can see, both variables have the expected sign but neither is statistically significant.

In the subsequent columns we introduce various measures of residential stability in the community where the respondent lives, constructed from Census data. In column 3 we add the fraction of residents in the MSA/PMSA who were born in the same state where they currently live. This variable has a positive and significant impact on trust. In column 4 we use the fraction of people who were living in the same county five years before 1990. Though positive, the coefficient on this variable is not statistically significant. In the last column, we introduce a similar variable, but more tightly linked to the stability of the 'neighborhood', which ideally is the notion we would like to capture. This is the fraction of people in the MSA/PMSA of the respondent who were living in the same *house* five years before 1990. As we can see, this variable has a strong positive effect on trust, and is statistically significant at the 1 percent level. Overall, the results in table 5 seem to suggest that, as far as mobility is concerned, what matters most for an individual's inclination to trust is not his or her own mobility, but the stability of the community in which he or she lives. Interestingly, the effects of 'stability' of a community become much less significant if we do not include our measure of racial fragmentation, while the reverse is not true.[21] This suggests that amongst the two types of variables, mobility and fragmentation, the latter set seems more robust

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[21]In particular, the only variable that retains a positive and significant coefficient is the fraction of people *born* in the same state where they live, while the residential variables are still positive but no longer statistically significant.

and important. There is also an interesting interaction between these two variables. Rappaport (1999) finds that after controlling for many other factors, more ethnically fragmented counties have lost population and the more homogeneous one have gained it. Our measures of mobility capture the influx of new residents; thus more homogeneous counties are also, ceteris paribus, more mobile. This effect may contribute to explain why mobility tends to loose significance if the degree of racial fragmentation is not controlled for in the regression.[22]

Finally, notice that the GSS does not contain information on the place of origin of the respondent, neither in terms of birth nor in terms of previous residential location. This implies that we cannot exploit data on trust or fragmentation in the place of origin for migrants to assess whether it is the 'initial imprinting' that an individual receives or the current location that affect trust in the most significant way.[23]

5 Why does heterogeneity matter for trust?

The previous section shows two results relating race and trust. One is that minorities trust other people less, and the other is that more racially fragmented communities display a lower level of trust. These two results viewed together are compatible with two, non mutually exclusive, interpretations. One is that people distrust those who are dissimilar from themselves; therefore, in more heterogeneous communities since interracial contacts (and contacts across income brackets) are more frequent then trust is lower. We shall refer to this interpretation as the "aversion to heterogeneity" explanation. A second interpretation has to do with complementarities in individuals' willingness to trust. If an individual is surrounded by non-trusting people, he or she may be less inclined to trust others, and vice versa. According to this line of reasoning, our result on fragmentation could be interpreted as follows. In more racially mixed communities the percentage of minorities (especially blacks) is higher. Since this group has a lower propensity to trust, average trust in the community is lower, and therefore everybody trusts less as an equilibrium response to a low trust environment. A similar argument applies to heterogeneity in income, since the poor trust less and the fraction of people living in poverty is, ceteris paribus, higher in more unequal communities. We shall refer to the second interpretation as the "local interaction" one. In this section we try to distinguish between these two hypotheses and we conclude that the first is almost certainly present, while the available data make it difficult to

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[22]Rappaport (1999) used county level data and not MSA so this comparison of results should be taken with caution.

[23]A test along these lines is performed for Italian regions by Guiso et al. (1999).

reach a definitive conclusion on the second.

Ideally, to discriminate between the "aversion to heterogeneity" and the "local interaction" interpretation, one would want to control for the average level of trust in the area where an individual lives. We cannot do this because the General Social Survey (which is the only available source with data on trust for our sample period) is *not* representative at the MSA/PMSA level. We therefore resort to a variety of additional tests which, overall, seem to allow us to reach at least partial conclusions.

First, we used as a proxy for average trust in the place where the respondent lives some community level characteristics that can be constructed from Census data. Since we saw in table 2 that ceteris paribus low income people and blacks trust less, we introduced in the regressions with income inequality and racial fragmentation (columns 2 and 3 of table 3) respectively the fraction of families below poverty and the percentage of blacks in the MSA/PMSA where the respondent lives. In both cases the heterogeneity measure used (*Gini* or *Race*) retained a negative coefficient, significant at the 1 percent level.[24] Although this test does not allow us to discriminate among the two hypotheses, it should reduce the doubt that heterogeneity is simply capturing some average characteristic of the community.

Secondly, we have repeated the regressions of Table 3 only for black respondents. This is a stronger test, because if the "local interaction" interpretation were correct, racial fragmentation should not, in principle, affect respondents differently according to their race. Even if it did, it should lead black people to trust relatively less than white people when the community is more fragmented, because on the basis of intra-racial networks, blacks should be the ones who interact the most with other low-trusting blacks. We find exactly the opposite result, namely racial heterogeneity is insignificant in the regressions in which the sample is restricted to black respondents only.[25] In addition, this result shows that it is the level of trust *of whites* that goes down in more heterogenous communities.

A third test explores how individuals answer questions concerning trust not in other people but in certain institutions.

[Insert table 6 here]

In table 6 we report the results of regressions identical to those of table 3, but the left hand side variable is now the response to questions about confidence in a variety of different institutions. Each cell of column 1 reports the coefficient on *Gini* from a separate regression in which the dependent variable is confidence in the institution listed by row, and that includes all the usual individual and community

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[24]Results are available.

[25]Results are available.

controls. Columns 2 and 3 display, respectively, the coefficients on ethnic fragmentation and on the individual black dummy variable for an analogous pattern of regressions. The important result here is that the variable *Race* is never negative and significant, in stark contrast with the results of table 3. If racial fragmentation were proxying for the low average trust of black people in the area, we should still find a negative coefficient on this variable, because column 3 shows that the lower propensity to trust of blacks still holds for many institutions. Instead, looking down column 2 we find nine positive coefficients on *Race* (one even statistically significant) and only three negative (and statistically insignificant). This suggests that racial fragmentation affects how much people trust other individuals but it does *not* influence in a generic sense the overall level of trust. Analogous results hold for income inequality: none of the coefficients on *Gini* in column 1 is negative and significant. We find this an indirect but rather strong confirmation of the first interpretation both for racial and income heterogeneity. On the side, notice that while from column 3 black respondents have a lower level of trust in public institutions, there is an important exception constituted by educational ones. This is an interesting result because it is consistent with the literature showing that blacks are more supportive than whites of public education, even after controlling for income.[26] In summary, racial and income heterogeneity influence interpersonal trust, but *not* some generic notion of trust in institutions. Thus, heterogeneity of a community influences that component of trust which has to do with interpersonal interactions.

Finally, to better assess the role of racial fragmentation we explored other responses that identify the attitude of individuals toward racial mixing. The GSS asks several questions about individual attitudes towards racial relations, such as "have you had a person from the opposite race home from dinner?", "would you vote for a black president?", "would you send your children to school with children of the opposite race?", etc. We build binary variables that separate individuals 'averse' to the opposite race from 'non averse' ones, and estimate the impact of racial heterogeneity separately for these two categories of people.[27] We have used responses to nine questions concerning racial relations. These are essentially all the usable questions in the GSS concerning racial relations.[28]

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[26]See Rubinfeld, Shapiro and Roberts (1987) for a survey and additional references.

[27]We are estimating the following equation $Y_{ic}^* = X_{ic}\beta + H_c I^A \gamma^A + H_c I^N \gamma^N + \varepsilon_{ic}$ where Y_{ic}^* is the latent variable underlying the probit model for trust, X_{ic} represents all other controls, H_c is racial fragmentation in the community, I^A is a dummy equal to 1 if individual i is 'averse to the opposite race', and $I^N = 1 - I^A$. The coefficient γ^A therefore captures the impact of racial fragmentation on trust for 'averse' individuals, while γ^N captures the impact of heterogeneity for non averse ones.

[28]Some questions could not be used because the responses were to skewed toward yes or no. We dropped a few other questions because they were minor variations around one of the nine

[Insert table 7 here]

The regressions estimated in table 7 are simple trust regressions (i.e. the dependent variable is *Trust*) including all the usual individual and community controls. Each row refers to a separate regression in which the coefficient on *Race* is estimated separately for individuals who answer 'Yes' to the question listed by row and those who answer 'No'. The first column displays the estimated coefficient on racial fragmentation for 'averse' individuals, and the second column for 'non averse' ones. The last column reports the fraction of respondents who answered 'Yes' to the question. If the "aversion to heterogeneity" hypothesis were true, we should observe a significant difference between the two sets of coefficients, with those in the first column being more negative. This is precisely what we find. In addition, column 3 shows that the difference between the coefficients is statistically significant in most cases. We find this test particularly compelling, because it captures differences in the impact of heterogeneity on trust among individuals *within the same MSA*, hence the results cannot depend on omitted city-specific characteristics. Overall, we believe this table shows overwhelming support for the view that the variable *Race* affects the level of trust much more for individuals that are averse to racial mixing. Once again this is consistent with the first interpretation proposed above.

6 Conclusions

Trust seems to be explained by three main factors: *i*) individual characteristics, including education, income and the occurrence of recent 'misfortunes'; *ii*) belonging to groups which traditionally claim to have been discriminated against, especially women and minorities (blacks in particular); and *iii*) the characteristics of the community: interpersonal trust is lower in more racially heterogeneous communities, in those with higher income inequality, and to a lesser extent, in more transient communities. The effect of heterogeneity on trust is at least in part due to the fact that individuals trust those more similar to themselves.

While we have found some convincing evidence that racial and income fragmentation reduce trust in communities, we cannot exclude that a second and non mutually exclusive channel is also operative, namely a link between the average level of trust in a community and individuals' attitude toward trust. This second channel leads directly to complementarities and multiple equilibria. Thus if both channels (fragmentation and complementarities effects) are present then we can draw the following picture. In more heterogeneous communities the average trust

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presented and the responses were, in fact, extremely correlated with one of the nine that we present. More details available upon request.

is lower, and this induces people to trust even less, leading to a low trust self enforcing equilibrium. In more homogeneous communities the opposite self enforcing equilibrium materializes.

References

[1] Alesina A. R. Baqir and W. Easterly (1999), "Public Goods and Ethnic Divisions", *Quarterly Journal of Economics,* November, 1243-84.

[2] Alesina A. R. Baqir and C. Minter-Hoxby (1999), "Political Jurisdictions in Heterogeneous Communities", unpublished

[3] Alesina A. and E. La Ferrara (2000), "Participation in Heterogeneous Communities", *Quarterly Journal of Economics,* forthcoming.

[4] Banfield E. (1967), *The Moral Basis of a Backward Society,* New York: Free Press.

[5] Belsley, D.A., E. Kuh, and R.E. Welsch (1980), *Regression Diagnostics,* New York: John Wiley and Sons.

[6] Coleman J. (1990), *Foundations of Social Theory,* Cambridge MA: Harvard University Press.

[7] Cutler D. E. Glaeser and J. Vigdor (1999), "The rise and Decline of the American Ghetto", *Journal of Political Economy,* 107 (3), 455-506.

[8] Davis, J.A. and T.W. Smith (1994), *General Social Surveys, 1972-1994,* Machine-readable data file, Chicago: National Opinion Research Center (producer), Storrs, CT: The Roper Center for Public Opinion Research (distributor).

[9] Easterly W. and R. Levine (1997), "Africa's Growth Tragedy:Policies and Ethnic Divisions", *Quarterly Journal of Economics,* 1203-50.

[10] Fukuyama, F. (1995), *Trust,* New York: Free Press

[11] Glaeser E., D. Laibson, J. Scheinkman and C. Soutter (2000), "What is Social Capital?", *Quarterly Journal of Economics,* forthcoming.

[12] Glaeser E., J. Sheinkman J. and A. Shleifer (1995), "Growth in a Cross Section of Cities", *Journal of Monetary Economics, 36, 117-43.*

[13] Goldin C. and L. Katz (1999), "Human Capital and Social Capital: The Rise of Secondary Schooling in America 1910 to 1940", *Journal of Interdisciplinary History*, 29, 683-723.

[14] Guiso L. P. Sapienza and L. Zingales (1999), "The role of Social Capital in Financial Development", unpublished.

[15] Knack S. and P. Keefer (1997), "Does social capital have an economic payoff?" *Quarterly Journal of Economics* 112, 1251-73.

[16] Knack S. and P. Zak (1999), "Trust and Growth", unpublished.

[17] La Ferrara E. (1998), "Ethnicity and Reciprocity: A Model of Credit Transactions in Ghana", unpublished.

[18] La Porta R. F. Lopez de Silanes, A. Shleifer and R. Vishny (1997), "Trust in Large Organizations" *American Economic Review, Papers and Proceedings, 333-338.*

[19] La Porta R., F. Lopez de Silanes, A. Shleifer and R. Vishny (1999), "The Quality of Government" *Journal of Law and Economics*, January, 222-278

[20] Luttmer E. (1997), "Group Loyalty and the Taste for Redistribution", unpublished

[21] Poterba J. (1996), "Demographic Structure and the Political Economy of Public Education", NBER Working Paper 5677, July.

[22] Putnam R. (1993), *Making Democracy Work,* Princeton University Press, Princeton NJ

[23] Putnam, R. (1995), "Bowling Alone: America's Declining Social Capital," *Journal of Democracy,* 6 (January), 65-78.

[24] Putnam, R. and S. Yonish (1998), "New Evidence on Trends in American Social Capital and Civic Engagement: Are we Really Bowling Alone?", unpublished.

[25] Rappaport J. (1999), "Local Economic Growth", Ph.D. dissertation, Harvard University

[26] Rubinfeld D., P. Shapiro, and J. Roberts (1987), "Tiebout Bias and the Demand for Local Public Schooling", *Review of Economic and Statistics, 426-437.*

[27] Verba S. and J. Nye (1987) *Participation in America. Political Democracy and Social Equality*, Chicago: The university of Chicago Press.

Appendix

Variable definition

The following is a list of the variables we use and of their sources, followed by summary statistics. The data sources are abbreviated as follows: GSS stands for 'General Social Survey, cumulative file 1972-94'; CensusCD90 refers to the CDrom "CensusCD+Maps" by GeoLytics, Inc. (1996-98) which contains data from the Summary Tape Files 3F of the 1990 Census. In all cases from variables constructed from the GSS, 'no answer' and 'not applicable' were coded as missing values. Unless otherwise stated, the source of a variable is authors' calculation on GSS data.

Trust: dummy equal to 1 if respondent says that "most people can be trusted", and to 0 if he or she says that "you can't be too careful" or that "it depends".

Cohort: year of birth of the respondent.

Age<30: dummy equal to 1 if respondent is less than 30 years old.

Age30-39: dummy equal to 1 if respondent is between 30 and 39 years old.

Age50-59: dummy equal to 1 if respondent is between 50 and 59 years old.

Age≥60: dummy equal to 1 if respondent is 60 years old or more.

Married: dummy equal to 1 if respondent is married.

Female: dummy equal to 1 if respondent is female.

Black: dummy equal to 1 if respondent is African American.

Educ<12 yrs: dummy equal to 1 if respondent has less than 12 years of education.

Educ>16 yrs: dummy equal to 1 if respondent has more than 16 years of education.

Children: dummy equal to 1 if respondent has children.

ln(real income): logarithm of respondent's family income (constant 1986 US$).

Full-time: dummy equal to 1 if respondent works full time.

Partime: dummy equal to 1 if respondent works part time.

Divorced/Separ: dummy equal to 1 if respondent is divorced or separated.

Trauma: dummy equal to 1 if the number of traumatic events (deaths, divorces, unemployments, and hospitalizations-disabilities) happening to respondent in the previous year is positive.

Protestant: dummy equal to 1 if respondent is Protestant.

Catholic: dummy equal to 1 if respondent is Catholic.

Jewish: dummy equal to 1 if respondent is Jewish.

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Other religion: dummy equal to 1 if respondent is religious but not Protestant, Catholic, or Jewish.

Size of place: logarithm of the size of place where respondent lives (thousands of people).

Med HH income: logarithm of median household income in MSA/PMSA where respondent lives [Source: authors' calculation on CensusCD90]

Med HH inc.^2: square of the logarithm of median household income in MSA/PMSA where respondent lives [Source: authors' calculation on CensusCD90].

Crime: number of serious crimes per person in the MSA/PMSA where respondent lives, in the year of the interview. Serious crimes are those included in the FBI Crime Index, which reports seven offenses: murder, forcible rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft. The FBI data is at the county level, while the geographic identifiers for our respondents are at the MSA/PMSA level. For the cases in which all the MSA or PMSA belonged to one single county, we have attributed the crime index of the county to that MSA/PMSA. For the cases in which more counties were in the same MSA/PMSA, we have built a weighted average of the crime indexes of those counties, with the weights being the share of the population in the MSA which belongs to a given county. The matching codes and the allocation factors for MSAs, PMSAs, and counties were taken from the MABLE geographic database (http://plue.sedac.ciesin.org/plue/geocorr/). Finally, the FBI data is available yearly for the period 1977-93. We have obtained the remaining years by interpolation and extrapolation. [Source: authors' calculation on CensusCD90].

Gini: Gini coefficient on family income in MSA/PMSA where respondent lives. Actual Gini coefficients were computed for the years 1970, 1980, 1990. The values for the remaining years in the sample were obtained by linear interpolation (and extrapolation for 1991-94). [Source: authors' calculation on IPUMS 1%, Census 1970, 1980, 1990]

Race: racial fragmentation index in MSA/PMSA where respondent lives, defined in expression (1) in the text. The five categories used for the shares are the original Census categories: i) white; ii) black; iii) American Indian, Eskimo, Aleutian; iv) Asian, Pacific Islander; v) other. [Source: authors' calculation on CensusCD90]

Ethnic: ethnic fragmentation index in MSA/PMSA where respondent lives, defined in expression (1) in the text. The 10 categories used for the shares are obtained aggregating the original 'first ancestries' from the Census as follows: (1) Arab; (2) Sub-Saharan African; (3) West Indian; (4) Race or Hispanic origin; (5) Canadian, United States or American; (6) Austrian, Belgian, Dutch, English, French Canadian, German, Irish, Scotch-Irish, Scottish, Swiss, Welsh; (7) Czech, Hungarian, Lithuanian, Polish, Romanian, Russian, Slovak, Ukrainian,

Yugoslavian; (8) French, Greek, Italian, Portuguese; (9) Danish, Finnish, Norwegian, Swedish; (10) other. Each share is computed a share of people in that category over the total population in the MSA/PMSA (excluding people with 'ancestry unclassified' and 'ancestry not reported'). [Source: authors' calculation on CensusCD90]

NGOV62: number of municipal and township governments in the MSA/PMSA in 1962 [Source: Cutler, Glaeser and Vigdor (1999)]

REVIG62: percentage of fiscal revenue from intergovernmental transfers in the MSA/PMSA in 1962 [Source: Cutler, Glaeser and Vigdor (1999)]

MANSHR: share of the labor force employed in manufacturing in the MSA/PMSA in 1990 [Source: Cutler, Glaeser and Vigdor (1999)]

Samecity16: dummy equal to 1 if respondent has been living in the same city since the age of 16.

Samestate16: dummy equal to 1 if respondent has been living in the same state since the age of 16.

% born in state: fraction of the population in the MSA/PMSA who was born in the same state where they currently live [Source: authors' calculation on CensusCD90]

% same county: fraction of the population in the MSA/PMSA who in 1985 was living in the same county as in 1990 [Source: authors' calculation on CensusCD90]

% same house: fraction of the population in the MSA/PMSA who in 1985 was living in the same house as in 1990 [Source: authors' calculation on CensusCD90]

NOMIXMARRIAGE: dummy equal to 1 if respondent is against mixed marriages. Original GSS survey question: "Do you think there should be laws against marriages between blacks and whites?". Prompted answers coded in the GSS variable 'RACMAR': 1=Yes; 2=No; 3=Don't know. Our variable takes value 1 if RACMAR=1 and zero otherwise.

NOBLKDINNER: dummy equal to 1 if respondent has not had a black person home for dinner in past few years. Original GSS survey question: "During the last few years, has anyone in your family brought a friend who was a black home for dinner?". Prompted answers coded in the GSS variable 'RACHOME': 1=Yes; 2=No; 8=Don't know; 9=No answer. Our variable takes value 1 if RACHOME=2 and zero otherwise.

NORACPUSH: dummy equal to 1 if respondent thinks that blacks should not push. Original GSS survey question: "Here are some opinions other people have expressed in connection with black-white relations. Which statement on the card comes closest to how you, yourself, feel? The first one is: Blacks shouldn't push themselves where they're not wanted". Prompted answers coded in the GSS

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variable 'RACPUSH': 1=Agree strongly; 2=Agree slightly; 3=Disagree slightly; 4=Disagree strongly; 8=No opinion; 9=No answer. Our variable takes value 1 if RACPUSH=1 and zero otherwise.

NOHALFSCHOOL: dummy equal to 1 if respondent would not send children to school with half children of the opposite race. Original GSS survey question: "Would you yourself have any objection to sending your children to a school where half of the children are Whites / Blacks?". Prompted answers coded in the GSS variable 'RACHALF': 1=Yes; 2=No; 3=Don't know. Our variable takes value 1 if RACHALF=1 and zero otherwise.

RACTEACH: dummy equal to 1 if respondent thinks that racists should be allowed to teach. Original GSS survey question: "Consider a person who believes that blacks are genetically inferior. Should such a person be allowed to teach in a college or university, or not?". Prompted answers coded in the GSS variable 'COLRAC': 4=Yes, allowed; 5=Not allowed; 8=Don't know; 9=No answer. Our variable takes value 1 if COLRAC=4 and zero otherwise.

NOBLKPRESID: dummy equal to 1 if respondent would not vote for black president. Original GSS survey question: "If your party nominated a Black for President, would you vote for him if he were qualified for the job?". Prompted answers coded in the GSS variable 'RACPRES': 1=Yes; 2=No; 8=Don't know; 9=No answer. Our variable takes value 1 if RACPRES=2 and zero otherwise.

NOBUSING: dummy equal to 1 if respondent opposes busing. Original GSS survey question: "In general, do you favor or oppose the busing of black and white school children from one school district to another?". Prompted answers coded in the GSS variable 'BUSING': 1=Favor; 2=Oppose; 8=Don't know; 9=No answer. Our variable takes value 1 if BUSING=2 and zero otherwise.

NORACDIN: dummy equal to 1 if respondent strongly objects to having opposite race home for dinner. Original GSS survey question: "How strongly would you object if a member of your family wanted to bring a black friend home to dinner? Would you object strongly, mildly, or not at all?". Prompted answers coded in the GSS variable 'RACDIN': 1=Strongly, 2=Mildly, 3=Not at all; 8=Don't know; 9=No answer. Our variable takes value 1 if RACDIN=1 and zero otherwise.

RACSEGR: dummy equal to 1 if respondent strongly agrees that whites have a right to segregated neighborhoods. Original GSS survey question: "White people have a right to keep blacks out of their neighborhoods if they want to, and blacks should respect that right". Prompted answers coded in the GSS variable 'RACSEG': 1=Agree strongly; 2=Agree slightly; 3=Disagree slightly; 4=Disagree strongly; 8=No opinion; 9=No answer. Our variable takes value 1 if RACSEG=1 and zero otherwise.

NORACCHNG: dummy equal to 1 if respondent says that he/she would not try to change racist rules in a club. Original GSS survey question: "If you

and your friends belonged to a social club that would not le whites/blacks join, would you try to change the rules so that they could join?". Prompted answers coded in the GSS variable 'RACCHNG': 1=Yes; 2=No; 3=Wouldn't belong to club; 8=Don't know; 9=No answer. Our variable takes value 1 if RACCHNG=2 and zero otherwise.

RACSPEAK: dummy equal to 1 if respondent thinks that racist people should be allowed to speak in public.

Original GSS survey question: "Consider people who believe that whites are racially superior to all other races. Should such a person be allowed to hold public meetings to express their views?". Prompted answers coded in the GSS variable 'RACSPEAK': 1=Definitely allowed; 2=Probably allowed; 3=Probably not allowed; 4= Definitely not allowed; 8=Don't know; 9=No answer. Our variable takes value 1 if RACSPEAK=1 and zero otherwise.

RACLIBR: dummy equal to 1 if respondent thinks that racist books should be allowed in library.

Table A1: Summary statistics

	Mean	Std. Dev.	No. obs.
Trust	.400	.499	9364
Cohort	1941.25	17.844	9323
Age<30	.242	.428	9323
Age30-39	.245	.430	9323
Age50-59	.126	.332	9323
Age≥60	.217	.413	9323
Married	.537	.499	9362
Female	.561	.496	9364
Black	.169	.375	9364
Educ<12 yrs	.234	.423	9344
Educ>16 yrs	.221	.415	9344
Children	.398	.490	9299
ln(real income)	10.014	.936	8585
Fulltime	.516	.500	9364
Partime	.102	.302	9364
Divorced/Separ	.159	.366	9362
Trauma	.382	.486	8068
Protestant	.598	.490	9345
Catholic	.263	.440	9345
Jewish	.025	.158	9345
Other religion	.026	.158	9345
Size of place	4.283	2.174	9364
Med HH income	10.374	.144	9364
Med HH inc^2	107.640	2.993	9364
Crime	.059	.019	9219
Gini	.416	.027	9364
Race	.355	.147	9364
Ethnic	.670	.073	9364
NOMIXMARRIAGE	.179	.383	5245
NOBLKDINNER	.631	.483	4550
NORACPUSH	.301	.459	2473
NOHALFSCHOOL	.177	.381	4679
RACTEACH	.435	.496	4558
NOBLKPRESID	.116	.320	4642
NOBUSING	.752	.432	5026
NORACDIN	.067	.250	1745
RACSEGR	.074	.262	4558
NORACCHNG	.278	.448	2562
RACSPEAK	.629	.483	4561
RACLIBR	.666	.472	4563

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Table 1: Descriptive statistics

	Means	*Correlations with Trust*
	[1]	[2]
Trust	.40	1
Confidence in banks & fin. institutions	.27	.06*
Confidence in major companies	.25	.14*
Confidence in organized religion	.30	.04*
Confidence in education	.32	.01
Confidence in exec. branch of fed. gov.	.17	.06*
Confidence in organized labor	.12	-.03*
Confidence in press	.19	.01
Confidence in medicine	.49	.06*
Confidence in television	.15	-.04*
Confidence in supreme court	.32	.12*
Confidence in scient community	.40	.15*
Confidence in congress	.14	.02
Confidence in military	.35	-.03*
Gini	.41	-.10*
Racial fragmentation ('Race')	.36	-.10*
Ethnic fragmentation ('Ethnic')	.67	-.03*

Notes: * denotes significance at the 1 percent level.

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Table 2: Individual determinants of trust

	Marg. Probit coeff.[a] [1]	Std. error[b]	Marg. Probit coeff.[a] [2]	Std. error[b]	Marg. Probit coeff.[a] [3]	Std. error[b]
Cohort	-.004**	(.001)	-.004**	(.001)	-.004**	(.001)
Age<30	-.036	(.028)	-.052*	(.030)	-.053*	(.030)
Age30-39	-.027	(.020)	-.030	(.020)	-.030	(.021)
Age50-59	-.049*	(.025)	-.054*	(.027)	-.053*	(.027)
Age≥60	-.074*	(.042)	-.068	(.042)	-.065	(.042)
Married	-.004	(.013)	-.020	(.016)	-.022	(.017)
Female	-.037**	(.013)	-.027**	(.013)	-.028**	(.013)
Black	-.236**	(.015)	-.240**	(.016)	-.245**	(.017)
Educ<12 yrs	-.138**	(.016)	-.128**	(.016)	-.128**	(.017)
Educ>16 yrs	.180**	(.012)	.180**	(.013)	.180**	(.014)
Children	.004	(.013)	.013	(.013)	.013	(.014)
ln(real income)	.056**	(.008)	.055**	(.008)	.056**	(.008)
Fulltime	-.002	(.017)	-.001	(.018)	-.001	(.018)
Partime	.052**	(.023)	.057**	(.025)	.057**	(.025)
Divorced/Separ			-.044**	(.021)	-.045**	(.021)
Trauma			-.023*	(.012)	-.023**	(.012)
Protestant					.020	(.028)
Catholic					-.005	(.030)
Jewish					-.011	(.045)
Other religion					-.001	(.045)
STATES	Yes	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes	Yes
No. obs.	8500		7321		7313	
Pseudo Rsq	.10		.11		.11	
Observed P	.42		.42		.42	
Predicted P	.40		.40		.40	

Notes: * denotes significance at the 10 percent level, ** at the 5 percent level.

(a) Marginal probit coefficients calculated at the means.

(b) Standard errors corrected for heteroskedasticity & clustering of the residuals at the MSA level.

Table 3: Heterogeneity and trust

Dependent variable: Trust

	[1]	[2]	[3]	[4]	[5]
Size of place	-.003	-.002	-.001	-.003	-.001
	(.004)	(.004)	(.004)	(.004)	(.004)
Med HH income	7.071**	6.036**	7.873**	6.924**	7.897**
	(2.695)	(2.696)	(2.435)	(2.663)	(2.779)
Med HH inc. ^2	-.334*	-.286**	-.371**	-.327**	-.374**
	(.129)	(.129)	(.117)	(.128)	(.133)
Crime	-.070	-.040	-.018	-.077	.012
	(.461)	(.442)	(.441)	(.457)	(.439)
Gini		-.966**			-.373
		(.306)			(.449)
Race			-.217**		-.232**
			(.047)		(.090)
Ethnic				-.085	.211
				(.140)	(.159)
INDIV CONTROLS[a]	Yes	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes
No. obs.	7196	7196	7196	7196	7196
Pseudo Rsq	.11	.11	.11	.11	.11
Observed P	.42	.42	.42	.42	.42
Predicted P	.40	.40	.40	.40	.40

Notes: * denotes significance at the 10 percent level, ** at the 5 percent level.
Marginal probit coefficients calculated at the means. Standard errors
corrected for heteroskedasticity and clustering of the residuals at the
MSA/PMSA level.
(a) Individual controls: all those listed in col. 2 of Table 2.

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Table 4: Instrumenting Gini

Panel A: 2SLS		Dependent variable: Trust			
			Instrument set:		
		NGOV62	NGOV62 REVIG62	NGOV62 MANSHR	NGOV62 REVIG62 MANSHR
	OLS				
	[1]	[2]	[3]	[4]	[6]
Gini	-.888**	-4.302**	-3.383**	-4.724*	-3.551**
	(.268)	(1.969)	(1.576)	(2.534)	(1.784)
No. obs.	7064	7064	7064	7064	7064
R sq.	.13	.12	.13	.12	.13
Hausman (p-value)		.055	.154	.038	.106
Sargan (p-value)			.074	.534	.063

Panel B: First Stage		Dependent variable: Gini			
		[7]	[8]	[9]	[11]
NGOV62		.0001**	.0001**	.0001**	.0001**
		(.000)	(.000)	(.000)	(.000)
REVIG62			.137**		.160**
			(.056)		(.069)
MANSHR				-.038	-.049
				(.073)	(.076)
No. obs.		7064	7064	7064	7064
R sq.		.66	.66	.66	.67
CONTROLS[a]	Yes	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes

Notes: (a) Controls include all the individual controls listed in col. 2 of Table 2 and the community variables listed in col. 1 of Table 3.

Table 5: Mobility and trust

Dependent variable: Trust

	[1]	[2]	[3]	[4]	[5]
Same state16	-.021				
	(.033)				
Age*same state16	.001				
	(.001)				
Samecity16		-.003			
		(.033)			
Age*samecity16		.000			
		(.001)			
% born in state			.150**		
			(.075)		
% resid. same county				.127	
				(.143)	
% resid. same house					.467**
					(.194)
CONTROLS[a]	Yes	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes
No. obs.	7272	7272	7321	7321	7321
Pseudo Rsq	.10	.10	.11	.11	.11
Observed P	.42	.42	.42	.42	.42
Predicted P	.40	.40	.40	.40	.40

Notes: ** denotes significance at the 5 percent level.

Marginal probit coefficients calculated at the means. Standard errors corrected for heteroskedasticity and clustering of the residuals at the MSA/PMSA level.

(a) Controls: all those listed in col. 2 of Table 2 and col. 3 of Table 3.

Table 6: Confidence in institutions

Dependent var is Confidence in	Marg.Probit coeff.[a] on		
	Gini [1]	*Race* [2]	*Black* [3]
Banks & fin. inst.	.501	.151**	-.008
	(.310)	(.061)	(.021)
Major companies	.149	.063	-.140**
	(.278)	(.052)	(.016)
Organ. religion	-.256	-.028	.016
	(.249)	(.054)	(.018)
Education	.232	.029	.099**
	(.345)	(.080)	(.020)
Exec. branch of fed. gov.	.117	.074	-.074**
	(.267)	(.050)	(.014)
Organized labor	.064	.026	.041**
	(.171)	(.027)	(.011)
Press	.333	-.037	-.035**
	(.313)	(.050)	(.013)
Medicine	.080	-.014	-.020
	(.275)	(.061)	(.019)
Television	.248	.021	.003
	(.237)	(.050)	(.011)
Supreme court	.011	-.120	-.078**
	(.569)	(.090)	(.019)
Scient community	.127	.001	-.141**
	(.404)	(.081)	(.019)
Congress	.370*	.063	-.032**
	(.213)	(.050)	(.013)
Military	-.064	.038	-.047**
	(.279)	(.061)	(.021)

Notes: * denotes significance at the 10 percent level, ** at the 5 percent level.
Marginal probit coefficients calculated at the means. Standard errors corrected
for heteroskedasticity and clustering of the residuals at the MSA level.
Each cell reports the marginal probit coefficient on the variable listed in the
column heading from a regression in which the dependent variable is membership
in the type of group described in the row heading.
(a) Controls include the individuals controls listed in col. 2 of Table 2 and the
community variables listed in col. 1 of Table 3, plus State and Year dummies

Table 7: Trust and aversion to racial mixing

Dependent variable: Trust	Probit coeff. on Race for those who answer		Test $\beta_1 = \beta_0$ (p-value)	Fraction of Yes
	Yes	No		
[1] Would favor a law against mixed marriages (NOMIXMARRIAGE)	-.660** (.010)	-.281** (.082)	.00	.18
[2] Have not had black home for dinner in last few years (NOBLKDINNER)	-.341** (.084)	-.211** (.084)	.00	.63
[3] Think that blacks should not push[a] (NORACPUSH)	-.394** (.151)	.058 (.157)	.00	.32
[4] Oppose your children going to school with half opposite race (NOHALFSCHOOL)	-.351** (.077)	-.125* (.073)	.00	.18
[5] Racist has right to teach (RACTEACH)	-.250** (.090)	-.321** (.078)	.10	.43
[6] Would oppose black president[a] (NOBLKPRESID)	-.490** (.131)	-.136* (.071)	.00	.13
[7] Oppose busing (NOBUSING)	-.151** (.063)	-.125 (.082)	.56	.85
[8] Strongly object black for dinner (NORACDIN)	-.567** (.206)	-.080 (.154)	.01	.07
[9] Whites have right to segreg neighbourhood (RACSEGR)	-.622** (.107)	-.237** (.082)	.00	.07
[10] No change racist rules in club (NORACCHNG)	.221** (.090)	-.052 (.091)	.00	.28
[11] Racists have right to speak (RACSPEAK)	-.234** (.083)	-.375** (.082)	.00	.63
[12] Allow racist books in library (RACLIBR)	-.219** (.082)	-.435** (.095)	.00	.67

Notes: *denotes significance at the 10 percent level, ** at the 5 percent level.

a) Sample includes non-blacks only.

Figure 1: Trust

Trust

▉	0.519 to 0.66
☐	0.435 to 0.519
☐	0.399 to 0.435
☐	0.32 to 0.399
☐	0.13 to 0.32
▨	missing