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Alberto Alesina and Eliana La Ferrara

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Alberto Alesina, Harvard University and CEPR
Eliana La Ferrara, IGIER, Università Bocconi, Milano and CEPR

ABSTRACT

Who Trusts Others?*

Both individual experiences and community characteristics influence how much people trust each other. Using individual-level data drawn from US localities we find that the strongest factors associated with low trust are: i) a recent history of traumatic experiences; ii) belonging to a group that historically felt discriminated against, such as minorities (blacks 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 role of racial cleavages leading to low trust is confirmed when we explicitly account for individual preferences on inter-racial relationships: within the same community, individuals who express stronger feelings against racial integration trust relatively less the more racially heterogeneous the community is.

Alberto Alesina
Department of Economics
Harvard University
324 Littauer Center
Cambridge MA 02138
USA
Tel: (1 617) 495 8388
Fax: (1 617) 495 7730
Email: aalesina@harvard.edu

Eliana La Ferrara
IGIER
Universitá Bocconi
Via Salasco 5
20136 Milano
ITALY
Tel: (39 02) 5836 3328
Fax: (39 02) 5836 3302
Email: eliana.laferrara@uni-bocconi.it

NON-TECHNICAL SUMMARY

When people trust each other transaction costs in economic activities are reduced, large organizations function better, governments are more efficient, financial development is faster: more trust may spur economic success. A large literature has investigated the (positive) effect of mutual trust, but very little is known about what determines trusts and who is more or less inclined to trust. This Paper attempts to shed some light on this matter.

We use the information provided by the General Social Survey (GSS) for the United States which in 1974–94 asked respondents if they think that 'most people can be trusted'. We find robust results indicating 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; amongst the various types of misfortunes, financial problems appears as the strongest ones in reducing trust; *ii)* belonging to a group that historically has been discriminated against, such as minorities (blacks 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 therefore have 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 results are compatible with two, non-mutually exclusive, interpretations. One is that in more heterogeneous communities trust is lower because people distrust those who are dissimilar from themselves. The second interpretation is that there are complementaries in individuals' willingness to trust and, since in more racially mixed communities the percentage of 'low-trusting minorities' is higher, individuals' low propensity to trust others in such communities is an equilibrium response to a low-trust environment. Our empirical results conclude that the first interpretation is almost certainly warranted, while no definitive conclusion can be reached on the second.

Three tests seem to indicate that the prevalence of low trust in racially fragmented communities may be due to 'aversion to heterogeneity':

a) Racial heterogeneity is insignificant in the regressions in which the sample is restricted to black respondents only (which is not consistent with the 'complementarities' hypothesis);

b) Confidence in *institutions* is not lower in more racially fragmented communities, despite the fact that minorities display a lower degree of confidence in institutions. This may indicate that racial heterogeneity matters for trust when defined in terms of personal interaction;

c) When *preferences for inter-racial contacts* are explicitly taken into account, i.e. the effect of heterogeneity is estimated separately for individuals `averse' to the opposite race and for non-averse ones, the negative impact on trust is found only on the former.

Finally, while race appears as an important determinant of trust, we find instead that religious beliefs and *ethnic* fragmentation of communities do not significantly affect trust. This may be an indication that the American melting pot works at least up to a point, in terms of homogenizing attitudes of different cultures, even though mistrust across racial lines is still quite high.

1 Introduction

When people trust each other transaction costs in economic activities are reduced, large organizations function better, governments are more efficient, financial development is faster: more trust may spur economic success.[1] While a lively recent economic literature has tried to measure the effect of trust on economic outcomes, who exactly trusts others more and why is largely unclear. The goal of this paper is to shed some light on this matter.

Both individual and social characteristics are likely to influence interpersonal trust. We investigate this using the information provided by the General Social Survey (GSS) for the United States which in 1974-94 asked respondents if they think that "most people can be trusted". As we discuss below one has to be cautious in over interpreting findings based upon a survey question that may be understood differently by various respondents, as pointed out by Glaeser et al (2000).

Nevertheless, we find robust results which seem reasonable and internally consistent. 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 (blacks 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). Recent experimental results by Barr (1999) and Glaeser et al (2000) point exactly in that direction. Alesina and La Ferrara (2000) show that in heterogeneous communities participation in groups that require direct contact among members is low; in particular, in racially heterogeneous communities the individuals who do not participate are those with the strongest views against racial mixing. In the present paper we find that individuals who dislike inter-racial contacts also trust others less, the more heterogeneous their community is. One should note that trust and participation in social activities are positively correlated, even though the results on participation and trust are

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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).

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. Also, Helliwell and Putnam (1999) find that while an increase in average education increases trust, it does not increase participation in the same way.

The effect of social interactions on trust are likely to imply complementaries 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.

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

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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.

2 Who trusts?

2.1 Hypotheses

The theory of what determines 'trust' is sketchy at best. Here we highlight a few possible channels. We can distinguish between two types of variables correlated with trust: individual characteristics, such as age, gender, race; and characteristics of the community in which the individual lives.

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 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 or she 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, people may trust more individuals who are more 'similar' to them, 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] 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.[4] 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.[5] 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 should be trust.

Fifth, legal institutions may affect trust. In a community where criminal behavior is effectively persecuted, individuals will trust more because they will feel

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[3]See Banfield (1967).

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

[5]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.

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 an individual'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 trusts others: will he or she 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 complementaries 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?[6]

In summary, we shall 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 its racial and income heterogeneity. In our empirical analysis we find that the last three elements matter much more than the first two.

2.2 Why do we care?

As economists, we are interested in trust because the latter is a major component of "social capital", which is defined by Putnam (1998) as "features of social life, networks, norms, trust that enable participants to act together more effectively to pursue shared objectives." We can think of "social capital" as being growth enhancing through two channels: first, more social capital and trust lead to better functioning public institutions; second, trust and social capital may help where there are market imperfections and thus facilitate economic transactions, especially in financial markets.

Putnam (1993) shows that the large disparities of income and quality of government among Italian regions (especially in a North-South comparison) are due to historical developments which lead to different degrees of reciprocal trust in different communities. In turn, this had an effect on the quality of public policy and on the functioning of markets.[7] In some parts of Italy a sense of "community" lead

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[6]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.

[7]Putnam (1999) argues that a recent decline of social capital in the US is related to a host of

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individuals to be "cooperative" with others and build well functioning institutions; in other parts of that country the lack of community building lead to the opposite outcome. Gambetta (1990) argues that the Sicilian Mafia has emerged to provide "protection" and enforce contracts in a society where lack of trust made it difficult to engage in mutually profitable activities between two parties. Helliwell and Putnam (1995) report statistical evidence on Italian regions and show that measures of social capital (membership in community groups, newspaper readership, etc.) were positively associated with growth rates between 1950 and 1990. However, their measure of social capital is broader than our "trust" variable.

Does "trust" per se lead to economic success? Fukuyama (1995) argues that different levels of reciprocal trust influenced the degree of economic success of a few industrial democracies. Solow (1995), however, criticizes this work for its lack of any kind of measurement of trust. Keefer and Knack (1997) use the answer to a "trust" question from the World Value Survey and relate the percentage of individuals who "trust" others in the different countries to their rate of growth, finding a strong positive correlation. The question on trust from this survey is virtually identical to the one from the GSS which we use in the present paper. Data limitations make it difficult to explore in detail which are the precise links between trust and growth, but these authors emphasize both channels mentioned above: quality of government and confidence in financial markets which facilitates investment. Knack and Zak (1993) confirm these results by showing that this measure of trust influences growth even after controlling for measures of quality of government. Using a much smaller set of countries, Helliwell (1990) reports similar results, using the same "trust" variable.

These results are particularly interesting if one keeps in mind that Easterly and Levine (1997) find that racial fragmentation hinders growth in a cross section of countries and Rappaport (1999) reports analogous findings on a cross section of US counties. The results of the present paper suggests a link between that measure of trust and racial/ethnic fragmentation, thus "merging", in a sense, the two sets of results described above.

As for the effct of trust in financial markets, Guiso, Sapienza and Zingales (2000) use measures of social capital which are only vaguely related to our measure of trust: they use participation in elections and blood donations. These authors find that where "social capital" is low, individuals tend to hold a much larger proportion of their wealth in cash, rather than using financial instruments, such as stocks. In the context of developing countries, La Ferrara (1998) finds that families involved in reciprocal relationships where the scope for trust is high have easier access to informal loans and can thus cope better with credit markets imperfections.

In summary, a small by growing literature stresses that measures of "trust"

undesirable social outcomes.

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strictly defined or broader measures of "social capital" are associated with effective public policies and more successful economic outcomes. If this is the case, understanding what social characteristics lead to more reciprocal trust seems useful and important.

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". The key variable we want to explain, *Trust*, is therefore a dummy taking the value 1 if the respondent is trusting, and 0 otherwise. 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, 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 herself if she answers affirmatively to the question about trusting others, even though in her actual behavior she 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

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[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.

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 respondents saying that they do not trust.

A more subtle issue is raised by Glaeser et al (2000), who performed the following experiment. First they asked the GSS question to a group of subjects. Then, three weeks later, they made the subjects play "games" or express willingness to pay in circumstances where the payoffs depended on how much one trusted others and on the individual's own actions. The results suggested that those who answered that "yes" they trusted others in the GSS type question did *not* act, in the game, as if they did. On the other hand, these individuals acted in ways that would have deserved other people's trust, i.e., they did not "cheat," etc. In other words, those who answered that they trusted others, acted in the games in a "trustworthy" manner. These results suggest that the way a respondent interprets a reasonably open ended question, like the GSS question on trust, may sometimes be a bit fuzzy.[9] In particular, these experimental results –performed on a very specific social group (Harvard undergraduates)– may indicate some confusion in the respondents' mind about the idea of trusting others and the idea of being worth of the trust of others.

We will continue to interpret the answer to the GSS question in the way which seems more consistent with a literal interpretation of the wording of that question, namely, if the respondent believes that others can be trusted. Our results are presented in such a way that a reader convinced that the GSS question prompts respondents to answer something different from what they are asked, can do so. As we show below, however, the strong correlation between the answer to the question and certain individual characteristics, like race or gender, suggests that our preferred (and literal) interpretation is more convincing.

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., health problems), while others may be endogenous to trust (e.g., divorce).[10] 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

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[9]Note, however, that in these experiments a behavior denoting low trust may not be always perfectly distinguished from behavior denoting high risk aversion.

[10]Incidentally, if traumas affect "trust" (as we show they do) this also suggests that a literal intepetation of the trust question is warranted.

MSA/PMSA of the respondent for about two thirds of the total number of respondents in the GSS.[11] To measure income inequality we use the Gini coefficient for the MSA/PMSA computed using family income from the 1970, 1980 and 1990 Census. We obtained the remaining years by interpolation and extrapolation.

Our racial fragmentation index is, by now, standard in the literature. It represents the probability that two randomly drawn individuals in an MSA/PMSA belong to different races. The index is therefore increasing in heterogeneity and it is computed as follows:[12]

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

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 from 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 into 35 categories or countries of origin. We aggregate them into 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).[13]

We use our index of racial fragmentation and of ethnic fragmentation 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 long periods of time, much more so than measures of income inequality. Second, the 1970 and 1980 Censuses report broader racial and ancestry breakdowns than the 1990 one: in order to have comparable indices, we should have sacrificed the precision and informativeness of our categories.

The Appendix reports summary statistics for all the variables used in the present paper.

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[11]MSA stands for "metropolitan sampling area," and PMSA for "primary metropolitan sampling area." They are standard Census definitions which roughly correspond to metropolitan areas.

[12]This expression can be easily derived from rearranging the expression for the probability that two random draws from the population lead to extracting two individuals of different race.

[13]More details regarding the construction of this index can be found in Alesina and La Ferrara (2000). Our results are not sensitive to reasonable changes in the aggregation rules for nations of origin.

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 and South East.[14] 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 income inequality. Amongst the five states with the lowest average trust we find Mississippi, Alabama, Arkansas, and North Carolina, all states with a racially and ethnically fragmented population and with a very unequal distribution of income.

[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.[15] 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 the scientific community, 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

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[14]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 (1999)).

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

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*, *Racial fragmentation*, and *Ethnic fragmentation*, 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 these links.

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, plus year and state dummies. Column 1 reports our 'minimal' specification. First, the age variables indicate that trust in others increases with age, though at a declining rate. Two particularly interesting coefficients are those on *Female* and *Black*: they are both negative and highly significant, especially the one on the latter. The size of the coefficient on *Black* is very large in absolute value: a black person is 24 per cent less likely to trust others that a non black. This evidence is consistent with the view that groups (blacks and, to some extent, women) that historically have been discriminated against trust less.[16] 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 'anti-social' behavior. Women participate less in social activities, but because of a time constraint: in

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[16]This result on blacks is consistent with Demaris and Yang (1994), Smith (1983) and Helliwell (1996b).

fact, the data show that women vote more than men, and voting is an act of participation that does not require a significant amount of time.[17]

Income and education are positively correlated with trust; a successful professional experience is likely to make individuals more prone to trusting others. We have thoroughly investigated for non linear effects on income, but we did not find anything of interest to report.[18] 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, display a declining trend in trust, consistent with Putnam's (1995, 1999) argument that 'social capital' in the US is decreasing over time.

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 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. The variable *Trauma,* which is a dummy equal to 1 if the individual has suffered a major negative experience in the past year, has a negative coefficient. *Trauma* includes occurrences which are clearly exogenous (e.g., diseases) and some that may be partially endogenous (e.g., 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 financial misfortune was the variable with the strongest association with low trust. We also verified the effect of the occurrence of a traumatic experience in the previous 5 years, rather than one year, and found that this variable was not correlated with trust. Perhaps traumas are forgotten relatively quickly. Also, 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.[19]

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[17]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. Helliwell and Putnam (1999) find (like us) that, according to GSS data, men trust more, but using other surveys this result disappears.

[18]Results are available.

[19]All these results are available upon request.

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 social interaction with others, especially those of a different religion.[20] Our results on the US suggest that the American 'melting pot' works, or, to put it more generally, it suggests that trust is more correlated with social interactions than with philosophical or religious attitudes. To put it differently, it may be the case 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.

We have also checked for the possibility of a 'mood' effect estimating our regressions separately for the individuals who declared that "they were happy those days" and those who declared the opposite, but we found no significant difference in the coefficients, except for those on traumatic experiences and divorce, which became less significant due to the high correlation with the individual's 'happiness'.[21]

4.2 Heterogeneity and trust

In Table 3 we focus on the characteristics of the MSA/PMSA where the respondent lives, by adding to the regression in column 2 of Table 2 a set of variables capturing various features of the communities. We do not report all the coefficients on the individual characteristics since they remain very stable. As always, regressions in table 3 also include year and state dummies. Column 1 reports the estimated coefficients on the size of the place where the respondent lives, 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.

[Insert table 3 here]

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

[21]The GSS variable used as a proxy for 'mood' is HAPPY (from the GSS cumulative file 1972-94). The original question is phrased as follows: "Taken all together, how would you say things are these days: would you say that you are very happy, pretty happy, or not too happy?". We have experimented with different splits of the sample, in particular "Very happy" against the other categories, and "Very" or "Pretty happy" against the rest. Results on this point are available.

First, note that both the size of the place and crime are not statistically significant. These two variables are positively correlated, but even if we drop size of place from the regression, crime remains insignificant.[22] Second, when we introduce our three measures of heterogeneity one at a time we find that *Gini* and *Racial fragmentation* are significant, while *Ethnic fragmentation* 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 the latter remains highly significant while *Gini* looses significance. This suggests that *Racial fragmentation* is more strongly associated with trust than *Gini*. The magnitude of the coefficient on *Racial fragmentation* is substantial. Moving form the most homogeneous MSA where *Racial fragmentation* assumes the value of 0.06 to the most heterogeneous where it is 0.61, the likelihood of trusting others would fall by 12 percentage points, i.e. about 30 per cent of the mean. Starting from the sample mean, an increase by one standard deviation in *Racial fragmentation* decreases the probability of trusting others by 3 percentage points, i.e. almost 10 per cent of the mean value. This 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. In summary, table 3 has shown that racial and income heterogeneity are significantly associated with trust, and, amongst the two, racial fragmentation of a community has the strongest relationship. In other words, people are more likely to trust others in an unequal city than in a racially fragmented one.

We have tested for the robustness of these coefficients by eliminating influential observations through the DFbeta method.[23] Our results got actually stronger: while maintaining statistical significance, the marginal impact of a one standard deviation in *Racial fragmentation* became a decrease in the probability of trust of

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[22]This result may have to do with poor data quality on crime. In fact, our crime variable is the number of "serious crimes" included in the FBI Crime Index, for which the FBI relies on the *voluntary* contribution of crime statistics by law enforcement agencies. Not all agencies contribute data for every month of the year. Furthermore, the FBI data is at the county level, while the geographic identifiers for our respondents are at the MSA/PMSA level, so the conversion is likely to introduce some noise. For the cases in which the MSA/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. Finally, the FBI data is available yearly for the period 1977-93. We have obtained the remaining years by interpolation and extrapolation.

[23]Roughly speaking, this method consists estimating the regression leaving out one observation at the time, and then dropping those data points that lead to "relatively large" standardized residuals (specifically, one drops those observations for which $abs(DFbeta) > 2/\sqrt{\#obs}$. For further details on this, the reader is referred to Besley et al. (1980).

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.[24]

There could also be potential concerns for measurement error or endogeneity of the variable *Gini.* In fact, communities with higher levels of trust may offer better opportunities for the advancement of relatively poor people, for example because trust facilitates risk sharing and informal credit transactions. This is probably not a major issue of concern, but we briefly investigate it anyway. We have estimated our model with instrumental variables (IV), using three instruments for *Gini* and experimenting with various combinations of the three: the number of municipal 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.[25] Finally, where a large fraction of the labor force is employed in manufacturing, we expect the level of inequality to be lower. As it is often the case, these instruments are far from perfect; still, it can be useful to check whether our results are robust to instrumentation.

[Insert table 4 here]

Table 4 displays the coefficients on *Gini* from the IV model (top panel), and those on the instruments in the first stage regression (bottom panel).[26] 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). It is also consistent with the attenuation bias that we would get in the presence of measurement

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[24]Results are available from the authors.

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

[26]In the first stage, *Gini* is regressed on the MSA/PMSA level averages of the individual controls, on the community controls listed in in column 1 of table 3, and on the instruments discussed above (as well as on year and state dummies). The predicted value of *Gini* is then substituted in the linear probability model for *Trust*, correcting the standard errors.

14

error on inequality. In any case, standard tests do not seem to indicate the need for instrumentation.[27]

4.3 Mobility and trust

One of the possible factors influencing trust discussed in section 2 was geographical mobility. On the one hand, an individual who has not been living 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.[28] On the other hand, living in a community in which everyone is 'transitory', in the sense of not permanently residing in the area, 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 association with 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

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[27]In all cases, the Hausman test fails to reject the hypothesis of measurement error and weak exogeneity of *Gini*. Furthermore, in all cases the Sargan test suggests that our instruments are valid at the 10 percent level of confidence or less.

[28]See Barr (1999) for experimental investigations on the relationship between familiarity and trust.

before 1990. As we can see, this variable has a strong positive association with 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.[29] This suggests that amongst the two types of variables, mobility and fragmentation, the latter set seems more robust 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 ones 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.[30]

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.[31]

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 trust is lower because interracial contacts (and contacts across income brackets) are more frequent. We shall refer to this interpretation as the "aversion to heterogeneity" explanation. A second interpretation has to do with complementaries 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

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[29] 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.

[30] Rappaport (1999) used data at the county level and not at the MSA/PMSA level, so this comparison of results should be taken with caution.

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

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 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 *Racial fragmentation*) retained a negative coefficient, significant at the 1 percent level.[32] 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 individuals to trust relatively less than white ones 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. The result of this test are displayed in Table 6.

[Insert table 6 here]

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[32]Results are available.

17

As we can see from column 2, we find exactly the opposite of what the local interaction hypothesis would predict, namely racial heterogeneity is insignificant in the regressions in which the sample is restricted to black respondents only. 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 7 here]

In table 7 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 which includes all the usual individual and community 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 *Racial fragmentation* 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 *Racial fragmentation* (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.[33] 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

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

GSS asks several questions about individual attitudes towards inter-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.[34] We have used responses to eleven questions concerning racial relations. These are all the usable questions in the GSS concerning racial relations.[35]

[Insert table 8 here]

The nature of the questions is self explanatory: question [1] refers to interracial marriages; questions [2] and [3] refer to social interactions in leisure time. Question [2] is particularly interesting because inquires about actual behavior, rather than opinions and attitudes. A few of the other questions have to do with schools and others have to do with the right to segregation.

The regressions estimated in table 8 are simple probits on trust (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 *Racial fragmentation* 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 nine cases out of eleven. In addition, column 3 shows that the difference between the coefficients is statistically significant at standard confidence level in eight out of these nine cases.

We find this test particularly compelling, because it captures differences in the impact of heterogeneity on trust among individuals *within the same MSA/PMSA*, hence the results cannot depend on omitted city-specific characteristics. Overall,

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[34]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.

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

19

we believe this table shows overwhelming support for the view that the variable *Racial fragmentation* 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. The experimental results by Glaeser et al (2000) are also consistent with our finding: they report, in fact, that in their experiments subjects acted in ways that showed less trust toward members of a different race.

6   Conclusions

Trust seems to be related to 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 in large partly due to the fact that individuals trust those more similar to themselves.

Based upon all these results, can one conclude that if one person is (exogenously) moved from a less to a more homogeneous community he or she will trust others more? This is, of course, a very difficult question, but our results are not inconsistent with an affirmative answer. It goes without saying that this is not a policy prescription since the pros and cons of policies to promote more or less homogeneity for communities are very complex, delicate and, in this area, short run benefits may come at the price of long run costs.[36] That is, the benefits of more homogeneous communities in terms of increased social harmony may come at the cost of making, in the long run, the "melting pot" fail, possibly countervailing any short run increase in trust.

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Table 1: Descriptive statistics

	Means	Correlations with Trust
	[1]	[2]
Trust	.40	1
Confidence in banks & financial institutions	.27	.06*
Confidence in major companies	.25	.14*
Confidence in organized religion	.30	.04*
Confidence in education	.32	.01
Confidence in executive branch of federal government	.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 scientific community	.40	.15*
Confidence in congress	.14	.02
Confidence in military	.35	-.03*
Gini	.41	-.10*
Racial fragmentation	.36	-.10*
Ethnic fragmentation	.67	-.03*

Notes: * denotes significance at the 1 percent level.

Table 2: Individual determinants of trust

Dependent variable = 1 if trust others

	[1] $\widehat{\beta}$	$\widehat{\sigma}_\beta$	[2] $\widehat{\beta}$	$\widehat{\sigma}_\beta$	[3] $\widehat{\beta}$	$\widehat{\sigma}_\beta$	[4] $\widehat{\beta}$	$\widehat{\sigma}_\beta$
Age	.007**	.002	.009**	(.002)	.009**	(.002)	.011**	(.002)
Age^2 [a]	-.034*	(.020)	-.052**	(.019)	-.052**	(.019)	-.074**	(.018)
Married	-.006	(.013)	-.025	(.016)	-.026	(.017)	.002	(.015)
Female	-.028**	(.013)	-.028**	(.013)	-.028**	(.013)	-.033**	(.013)
Black	-.241**	(.016)	-.240**	(.016)	-.245**	(.017)	-.260**	(.016)
Educ<12 yrs	-.128**	(.017)	-.127**	(.017)	-.127**	(.017)	-.147**	(.016)
Educ>16 yrs	.182**	(.013)	.179**	(.013)	.180**	(.013)	.195**	(.013)
Children	.017	(.013)	.023*	(.013)	.023*	(.013)	.027**	(.013)
ln(real income)	.058**	(.008)	.056**	(.008)	.056**	(.008)		
Fulltime	.001	(.018)	-.000	(.018)	.000	(.018)	.022	(.017)
Partime	.061**	(.025)	.059**	(.025)	.059**	(.025)	.064**	(.025)
Divorced/Separated			-.045**	(.021)	-.046**	(.021)	-.052**	(.021)
Trauma in past yr			-.024**	(.012)	-.024**	(.012)	-.032**	(.012)
Protestant					.017	(.028)	.019	(.028)
Catholic					-.007	(.029)	-.004	(.030)
Jewish					-.015	(.045)	-.005	(.046)
Other religion					-.007	(.044)	-.013	(.044)
STATES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. obs.	7326		7326		7326		7326	
Pseudo Rsq	.10		.10		.10		.10	
Observed Prob	.42		.42		.42		.42	
Predicted Prob	.40		.40		.40		.40	

Notes:

[*] denotes significance at the 10 percent level, [**] at the 5 percent level.

$\widehat{\beta}$'s are marginal probit coefficients calculated at the means; $\widehat{\sigma}_\beta$'s are standard errors corrected for heteroskedasticity and clustering of the residuals at the MSA level.

(a) Coefficients and standard errors are multiplied by 1000.

Source: GSS cumulative file, 1972-94.

Table 3: Heterogeneity and trust

Dependent variable = 1 if trust others

	[1]	[2]	[3]	[4]	[5]
Size of place[a]	-.003	-.002	-.001	-.003	-.001
	(.004)	(.004)	(.004)	(.004)	(.004)
Median household income[b]	7.293**	6.273**	8.105**	7.137**	8.170**
	(2.632)	(2.637)	(2.370)	(2.598)	(2.720)
Median household income ^2	-.345**	-.298**	-.383**	-.337**	-.387**
	(.126)	(.126)	(.114)	(.125)	(.130)
Crime[c]	-.105	-.077	-.053	-.112	-.023
	(.464)	(.445)	(.441)	(.460)	(.440)
Gini[d]		-.960**			-.347
		(.307)			(.443)
Racial fragmentation[e]			-.220**		-.238**
			(.047)		(.089)
Ethnic fragmentation[f]				-.089	.209
				(.139)	(.159)
INDIV CONTROLS[g]	Yes	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes
No. obs.	7209	7209	7209	7209	7209
Pseudo Rsq	.11	.11	.11	.11	.11
Observed Prob	.42	.42	.42	.42	.42
Predicted Prob	.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) Logarithm of the size of place where respondent lives (thousands of people). Source: Census 1990.

(b) Logarithm of median household income in MSA/PMSA where respondent lives. Source: Census 1990.

(c) Number of serious crimes per person in the MSA/PMSA where respondent lives. Source: FBI.

(d) Gini coefficient on family income in MSA/PMSA where respondent lives. Source: Census 1970, 1980, 1990.

(e) Racial fragmentation index in MSA/PMSA where respondent lives, defined in expression (1). The five categories used for the shares are: i) white; ii) black; iii) American Indian, Eskimo, Aleutian; iv) Asian, Pacific Islander; v) other. Source: Census 1990.

(f) Ethnic fragmentation index in MSA/PMSA where respondent lives, defined in expression (1). The aggregation of the original ancestry data into broader categories is discussed in Alesina and La Ferrara (2000). Source: Census 1990.

(g) Individual controls: all those listed in col. 2 of Table 2.

Table 4: Instrumenting Gini

Panel A: IV estimates		Dependent variable = 1 if trust others				
		Instrument set:				
		NGOV62	NGOV62 REVIG62	NGOV62 MANSHR	REVIG62 MANSHR	NGOV62 REVIG62 MANSHR
	OLS					
	[1]	[2]	[3]	[4]	[5]	[6]
Gini[a]	-.889**	-2.379**	-2.187**	-2.494**	-2.030*	-2.334**
	(.268)	(1.043)	(.991)	(1.040)	(1.052)	(.984)
No. obs.	7077	7077	7077	7077	7077	7077
Adjusted R sq.	.13	.12	.12	.12	.12	.12
Hausman (p-value)		.17	.20	.14	.26	.153
Sargan (p-value)			.06	.10	.09	.04

Panel B: First Stage		Dependent variable: Gini				
		[7]	[8]	[9]	[10]	[11]
NGOV62[b]		.071**	.073**	.066**		.065**
		(.020)	(.020)	(.021)		(.021)
REVIG62[c]			.207**		.227**	.222**
			(.081)		(.082)	(.082)
MANSHR[d]				-.021	-.058**	-.032
				(.027)	(.026)	(.027)
No. obs.		569	569	569	569	569
Adjusted R sq.		.62	.62	.62	.62	.62
CONTROLS[e]	Yes	Yes	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes	Yes

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.

28

(a) Gini coefficient on family income in MSA/PMSA where respondent lives. Source: Census 1970, 1980, 1990.

(b) Number of municipal and township governments in 1962 in the MSA/PMSA where respondent lives. Coefficients and standard errors multiplied by 1000. Source: Cutler, Glaeser and Vigdor (1999).

(c) % of fiscal revenue from intergovernmental transfers in 1962 in the MSA/PMSA where respondent lives. Source: Cutler, Glaeser and Vigdor (1999).

(d) Share of the labor force employed in manufacturing in 1990 in the MSA/PMSA where respondent lives. Source: Cutler, Glaeser and Vigdor (1999).

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

Table 5: Mobility and trust

Dependent variable = 1 if trust others

	[1]	[2]	[3]	[4]	[5]
Same state at age 16[a]	-.024				
	(.032)				
Age*same state at 16	.001				
	(.001)				
Same city at age 16[b]		-.008			
		(.032)			
Age*same city at 16		.000			
		(.001)			
% born in state[c]			.162**		
			(.082)		
% residents same county[d]				.129	
				(.140)	
% residents same house[e]					.465**
					(.192)
CONTROLS[f]	Yes	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes	Yes
No. obs.	7285	7285	7334	7334	7334
Pseudo Rsq	.10	.10	.11	.11	.11
Observed Prob	.42	.42	.42	.42	.42
Predicted Prob	.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) Dummy = 1 if respondent has been living in the same state since the age of 16. Source: GSS cumulative file 1972-94.

(b) Dummy = 1 if respondent has been living in the same city since the age of 16. Source: GSS cumulative file 1972-94.

(c) Fraction of the population in the MSA/PMSA who was born in the same state where they currently live. Source: Census 1990.

(d) Fraction of the population in the MSA/PMSA who in 1985 was living in the same county as in 1990. Source: Census 1990.

(e) Fraction of the population in the MSA/PMSA who in 1985 was living in the same house as in 1990. Source: Census 1990.

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

Table 6: Heterogeneity and trust, black sample only

Dependent variable = 1 if trust others

	[1]	[2]	[3]	[4]
Gini[a]	.424			.273
	(.728)			(.959)
Racial fragmentation[b]		.057		.125
		(.170)		(.248)
Ethnic fragmentation[c]			-.243	-.397
			(.296)	(.345)
CONTROLS[d]	Yes	Yes	Yes	Yes
STATES	Yes	Yes	Yes	Yes
YEARS	Yes	Yes	Yes	Yes
No. obs.	1178	1178	1178	1178
Pseudo Rsq	.12	.12	.12	.12
Observed Prob	.16	.16	.16	.16
Predicted Prob	.13	.13	.13	.13

Notes:

Sample includes black respondents only. * 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) Gini coefficient on family income in MSA/PMSA where respondent lives. Source: Census 1970, 1980, 1990.

(b) Racial fragmentation index in MSA/PMSA where respondent lives, defined in expression (1). The five categories used for the shares are: i) white; ii) black; iii) American Indian, Eskimo, Aleutian; iv) Asian, Pacific Islander; v) other. Source: Census 1990.

(c) Ethnic fragmentation index in MSA/PMSA where respondent lives, defined in expression (1). The aggregation of the original ancestry data into broader categories is discussed in Alesina and La Ferrara (2000). Source: Census 1990.

(d) Controls: all those listed in col. 2 of Table 2 and col. 1 of Table 3.

Table 7: Confidence in institutions

Dependent variable = 1 if respondent has confidence in:	Marginal Probit coeff.[a] on		
	Gini [1]	*Racial fragm.* [2]	*Black* [3]
Banks & financial institutions	.479	.150**	-.007
	(.311)	(.061)	(.021)
Major companies	.126	.062	-.140**
	(.280)	(.053)	(.016)
Organized labor	.080	.028	.044**
	(.176)	(.028)	(.011)
Executive branch of federal gov.	.136	.077	-.071**
	(.275)	(.051)	(.014)
Congress	.377*	.066	-.029**
	(.217)	(.050)	(.013)
Supreme court	-.000	-.120	-.076**
	(.564)	(.090)	(.020)
Military	-.084	.037	-.045**
	(.287)	(.062)	(.021)
Organized religion	-.271	-.030	.017
	(.248)	(.054)	(.018)
Education	.210	.029	.100**
	(.333)	(.078)	(.021)
Scientific community	.147	.002	-.140**
	(.401)	(.081)	(.019)
Medicine	.074	-.012	-.020
	(.273)	(.061)	(.018)
Press	.335	-.039	-.035**
	(.315)	(.050)	(.013)
Television	.231	.020	.003
	(.234)	(.051)	(.011)
CONTROLS[b]	Yes		
STATES	Yes		
YEARS	Yes		

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) 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.
(b) Controls include the individuals controls listed in col. 2 of Table 2 and the community variables listed in col. 1 of Table 3.

Table 8: Trust and aversion to racial mixing

Dependent variable =1 if trust others	Probit coeff. on Racial fragm. for those who answer		Test $\beta_1 = \beta_0$ (p-value)	Fraction of Yes
	Yes	No		
[1] Would favor a law against mixed marriages[a]	-.662** (.099)	-.280** (.080)	.00	.18
[2] No opposite race home for dinner in last few years[b]	-.340** (.083)	-.210** (.082)	.00	.63
[3] Strongly object opposite race home for dinner[c]	-.570** (.207)	-.074 (.149)	.00	.07
[4] Whites have right to segregated neighbourhood[d]	-.634** (.107)	-.235** (.081)	.00	.07
[5] Think that blacks should not push[e]	-.393** (.147)	.071 (.150)	.00	.32
[6] Oppose your children going to school with half opposite race[f]	-.352** (.077)	-.126* (.074)	.00	.18
[7] Oppose busing[g]	-.155** (.063)	-.129 (.082)	.57	.75
[8] Oppose black president[h]	-.490** (.131)	-.136** (.071)	.00	.13
[9] No change racist rules in club[i]	-.237** (.092)	-.072 (.089)	.00	.28
[10] Racist has right to teach[j]	-.246** (.088)	-.322** (.076)	.08	.43
[11] Allow racist books in library[k]	-.218** (.080)	-.434** (.094)	.00	.67
CONTROLS[l]	Yes			
STATES	Yes			
YEARS	Yes			

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) Dummy = 1 if respondent thinks that "there should be laws against marriages between blacks and whites". Source: GSS.

(b) Dummy = 1 if "during the last few years, no one in the respondent's family has brought

a friend of the opposite race home for dinner". Source: GSS.

(c) Dummy = 1 if respondent "would strongly object if a family member wanted to bring a friend of the opposite race home to dinner". Source: GSS.

(d) Dummy = 1 if respondent strongly agrees that "white people have a right to keep blacks out of their neighborhoods if they want to, and blacks should respect that right". Source: GSS.

(e) Dummy = 1 if respondent strongly agrees that "blacks shouldn't push themselves where they're not wanted". Sample includes non-blacks only. Source: GSS.

(f) Dummy = 1 if respondent "would have any objection to sending his/her children to a school where half of the children are of the opposite race". Source: GSS.

(g) Dummy = 1 if respondent "in general opposes the busing of black and white school children from one school district to another". Source: GSS.

(h) Dummy = 1 if respondent says that "if his/her party nominated a black for President, he/she would not vote for him if he were qualified for the job". Sample includes non-blacks only. Source: GSS.

(i) Dummy = 1 if respondent says that "if he/she and his/her friends belonged to a social club that would not le whites/blacks join, he/she would not try to change the rules so that they could join". Source: GSS.

(j) Dummy = 1 if respondent says that "a person who believes that blacks are genetically inferior should be allowed to teach in a college or university". Source: GSS.

(k) Dummy = 1 if respondent thinks that racist books should be allowed in libraries. Source: GSS.

(l) Controls: all those listed in col. 2 of Table 2 and col. 1 of Table 3.

Appendix

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
Racial fragmentation	.355	.147	9364
Ethnic fragmentation	.670	.073	9364

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