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Social trust: global pattern or Nordic exceptionalism?

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Social Trust: Global Pattern or Nordic Exceptionalism?

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Abstract

Cross-national comparative analysis of generalised social trust in 60 countries shows that it is associated with, and is an integral part of, a tight syndrome of cultural, social, economic, and political variables. High trust countries are characterized by ethnic homogeneity, Protestant religious traditions, good government, wealth (GDP per capita), and income equality. This particular combination is most marked in the high trust Nordic countries but when this group of outliners is removed from the analysis, the same general pattern is found in the remaining 55 countries, albeit in a weaker form. There are indications that rural societies tend to have comparatively low levels of generalized trust but no evidence that large-scale urban society tends to undermine trust.

The cause and effect relations between trust and its correlates are impossible to specify but the results suggest that the ethnic homogeneity and Protestant traditions have a direct impact on trust, and an indirect one through their consequences for good government, wealth and income equality. The importance of ethnic homogeneity for generalised trust also suggests that the difference between particularised and generalised trust may be one of degree rather than kind.

Generalisiertes Vertrauen in die Mitmenschen ist eng verknüpft mit einem Syndrom kultureller, sozialer, wirtschaftlicher und politischer Kontextmerkmale. Dies zeigt eine komparative Makro-Analyse mit 60 Ländern, basierend auf dem World Value Survey und Makro-Indikatoren. Insbesondere ethnische Homogenität, protestantische religiöse Tradition, hohe Regierungsqualität, Wohlstand und Einkommensgleichheit begünstigen ein hohes generalisiertes Vertrauen der Bevölkerung. Diese Merkmale finden sich in Kombination – und besonders ausgeprägt – in den nordischen Ländern, die auch die höchsten Vertrauenswerte aufweisen. Doch selbst wenn man die nordischen Länder als Ausreißer in der Analyse nicht berücksichtigt, sind für die verbleibenden 55 Länder dieselben Determinanten von Vertrauen wirksam, wenn auch in abgeschwächter Form.

Zwar können die genauen Ursache-Wirkungszusammenhänge zwischen Vertrauen und den genannten Ländermerkmalen nicht spezifiziert werden. Jedoch legen die Ergebnisse nahe, dass ethnische Homogenität und Protestantismus zum einen auf direktem Wege ein Klima des Vertrauens erzeugen, zum anderen auf indirektem Wege, indem sie die Regierungsqualität, die wirtschaftliche Entwicklung und Einkommensverteilung beeinflussen. Die Bedeutung ethnischer Homogenität für Vertrauen wirft auch die Frage auf, ob zwischen partikularisiertem und generalisiertem Vertrauen wirklich – wie oft angenommen – ein fundamentaler Unterschied besteht oder ob dieser nicht eher gradueller Natur ist.

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1 Introduction

Social trust takes three main forms. Particularised trust, sometimes called 'thick' or personal trust is strongest in small, face-to-face communities where people know each other well and interact closely on a daily basis, and where trustworthy behaviour can be reinforced by strong social sanctions made possible by closure around group boundaries (Gambetta 1988, Portes and Landholt 1996, Portes and Sensenbrenner 1993). Instrumental or calculating trust, sometimes referred to as tit-for-tat trust, is based on rational, cost-benefit calculations about self interest (Arrow 1972, Hardin 1993, Ridley 1997). The third type, 'thin' or impersonal or generalised trust, is more common in modern large-scale urban society where social ties are often weaker but more extensive (Granovetter 1973), where society is more differentiated and heterogeneous, where life can be more competitive, and populations more mobile. This form of trust between strangers and aquaintances is more difficult to understand and explain than the thick trust of closed communities, and the calculating trust of rational-choice theory. Why should we trust people we barely know, when sanctions are relatively weak, and when it is comparatively easy to get away with untrustworthy behaviour? Nevertheless, it is generally agreed that generalized social trust is an essential 'synthetic force' in modern society (Simmel 1950), but this only makes its origins and explanations the more puzzling.

There are also three main approaches to the explanation of generalized social trust. A social-psychological school sees it as an integral part of a personality syndrome (Erikson 1950; Rosenberg 1956, 1957; Allport 1961; Cattell 1965; Uslaner 1999, 2002) that is developed in early childhood socialization and tends to change only slowly thereafter. Others also treat it as an individual characteristic but not as the result of childhood socialization. They either see it as an outcome of individual self interest, or as the product of individual circumstances associated with such things as class, income, education, gender, ethnicity, and age (Orren 1997; Brehm and Rahn 1997; Patterson 1999; Newton 1999a; Whiteley 1999). A third school sees trust not as an individual property but as a collective characteristic of social relations (Luhmann 1979; Bourdieu 1983; Coleman 1988, Giddens 1990) that is sustained by cultures, communities, and social institutions.

Trust probably works on all three levels, and in this sense it is a multi-level concept (Weatherford 1992), but this article focuses on the third; it is concerned with the explanation of different levels of trust across the countries of the world. There are both empirical and theoretical reasons for following this research strategy. Empirically, the results of individual level research have not always been particularly strong or impressive. For example, while there is evidence of variation in trust between different social groups, the correlations are usually rather weak and patchy, they vary from one country to another, or one time period to another, and the variance explained by regressions equations is often rather low (see, for example, Patterson 1999; Whiteley 1999; Costa and Kahn 2002: 6; Alesina and La Ferrara 2002: 221; Delhey and Newton 2003).

Theoretically, there are good reasons for interpreting trust not so much as an individual property that people 'have' or 'carry around' with them, but as something based on how people evaluate the society they live in. When individuals response to the standard survey question by saying that they trust others, they are not so much making a statement about themselves as about the trustworthiness of others. In this sense trust is a collective property (Putnam 2000: 138; Newton 2001: 203-4; Van der Meer 2003) that can be explained at collective levels. According to this view, trust can be a top-down phenomenon that is created and sustained by cultures, communities, and institutions that make it both possible and rational for the individuals within them to behave in a trusting and trustworthy manner (Levi 1996; Tarrow 1996; Foley, Edwards 1996; Rothstein 2000; Maloney, Smith, and Stoker 2001: 96). People express trust or distrust to varying degrees because daily experience suggests that others generally behave in a trustworthy or untrustworthy manner.

This raises the difficult problem of the definition and interpretation of trust. Fortunately, for our purposes it is not necessary to go deeply into the complexities of the conceptual debate surrounding the meaning of trust (see, for example, Baier 1986; Misztal 1996; Hardin 1993, 1996; Seligman 1997; Hollis 1998; Warren 1999). It is sufficient to treat generalised social trust as the basic feeling that others will not deliberately do us harm, at worst, or will try to look after our interests, at best. Trust is about the feeling that we are unlikely to be mugged or raped in the streets, cheated in shops, exploited at work, served unjustly by police, courts, and public bureaucrats, deceived by politicians and other elites, or lied to by neighbours and acquaintances. This is close to Hardin's (1998: 12-15) definition of trust as 'encapsulated interest', to Gambetta's (1988: 217) suggestion that it is built upon the belief that others will act beneficially rather than maliciously towards us, and Warren's (1999: 311) that trust involves lack of malice and shared interests. The main question asked here is what sorts of societal circumstances breed trust and distrust?

2 Theories of the origins of social trust

Conflict and cleavages

The more others are like us in terms of social identity and characteristics, and the more they share our interests, the more trustworthy our behaviour towards them is likely to be. If trust is built upon common bonds, then the more homogeneous a society the higher its trust level is likely to be, and the more it is divided by cleavage and social difference, the more conflictual and the less trustful it is likely to be. To the extent that most social cleavages in modern society are formed around class, religion, language, and ethnicity, we expect the more divided they are along these lines, the lower their level of generalised social trust are likely to be. There is support for this proposition in research showing that ethnic homogeneity and income equality are strongly associated with trust (Knack and Keefer 1997; Briggs 1997; Uslaner 2000: 580; Paxton 2002; Alesina and La Ferrara 2002; Costa and Kahn 2002; Helliwell 2003). Our measures of cleavage cover income inequality (as a class measure), and ethnic and religious composition.[1]

Social strain and disruption: Anomia and public safety

Generalised trust is likely to be associated with social stability, integration and peace; distrust is likely to accompany many forms of social disturbance, disruption, and conflict. We have five measures of the latter, ranging from the mild to the severe. The mildest, the lethal accident rate, is included because a society that disregards the safety of others (driving dangerously, a disregard for public health and safety rules, constructing unsafe bridges or buildings) is likely to breed distrust. A safe society is one that takes care of others, which is to say, a society where we can put our own safety in the hands of others with some confidence of low risk.

The suicide rate is a second measure, included on the grounds that anomie and acute personal distress may be associated with distrust. Similarly a high murder (homicide) rate implies anomic behaviour. Most extreme , however, is civil war since armed internal conflict means the breakdown of social institutions and social order to some degree. Not all conflict, however, will be associated with distrust: conflict with an external enemy is more likely to draw society together and increase trust. The proposition tested here, therefore, is that internal

(civil) war is likely to be associated with lower levels of trust within a society, whereas external (foreign) war will tend to improve trust. The more recent the war, the greater its impact on trust is likely to be. Our measures, therefore, take account of internal and external wars, and the time elapsed since their conclusion.

Economic development and modernisation

Wealth is positively related to social trust, but more strongly at the cross-national than at the individual level (Knack and Keefer 1997; Inglehart 1999; Paxton 2002). A casual inspection of the comparative figures (Table 1) shows that some of the wealthiest OECD countries rank at the top, while the poorest are often found at the very bottom. Perhaps the most striking example of trust levels tracking economic development is post-war West Germany where the trust score rose from 9% in 1948 to 45% in 1993 (Cusack 1997). Factors other than the *wirtschaftswunder* help to account for this steady long-term increase, but rising per capita incomes seem to play a part.

A statistical association between wealth and trust tells us nothing about the mechanisms underlying the link. One possibility is that wealthier individuals and countries may be in a more secure position to take the risks that trust involves, while, at the same time, their command of resources make it less necessary to act in an untrustworthy manner (Banfield 1958: 110). Another possible causal link, however, is that wealthier countries educate their populations to a higher level, and that education is associated with liberal and trusting attitudes. Many studies find an association between education and trust at the individual level (e.g. Knack and Keefer 1997: 1279; Putnam 2000; Uslaner 2002. But see also Delhey and Newton 2003). Therefore, we include school enrolment as an important independent variable that is not the same as wealth, but closely related to it.

A third possible link between wealth and trust is that it is not money, as such, that matters, but a wide array of factors that most generally accompany economic development and modernization: wealthy societies are generally urban and largely non-agricultural. Our measures of modernisation are the degree of urbanisation, the size of the agricultural sector, and life expectancy. There is no reasons to regard life expectancy to be directly associated with high levels of trust (although the more trusting may live longer) and it is used here as an indicator of modernisation, which may be associated with generalised trust.

It should also be noted that the relationship between modernisation and social trust may be the exact reverse of our hypothesis. If it is true, as many claim, that modern large-scale society tends to breed alienation, anomie, and competition or aggression between individuals, then it will be associated with distrust rather than trust.[2] Therefore, population size and density are included in the analysis.[3]

Finally, on the topic of economic development, it may not be wealth that matters so much as income equality (Alesina and La Ferrara 2002). Perhaps individualist, free-market, competitive societies with higher Gini indexes tend to have lower levels of trust than collectivist welfare states whose redistribution of income and resources encourages a sense of egalitarian citizenship and shared identities and interests. This leads us back to the hypotheses presented earlier that suggests using income equality as a measure of class cleavage.

Democracy and good government

The more democratic a nation the more trusting its population is likely to be (Knack and Keefer 1997; Inglehart 1999; Newton 2001; Booth and Richard 2001: 55; Paxton 2002). Once again the reason is not clear and it is probably not simple. Democracy may encourage trust between citizens because they are all given the same set of rights and duties, and share an interest in maintaining the social order and democratic stability. Democratic government also protects civil rights and liberties and may, therefore, be a source of institutionalised trust (Weingast 1998: 165; Levi and Stoker 2000: 493).

There is also a paradoxical relationship between trust and democracy in that a distrust of political power leads democracies to set up institutional arrangements that limit, so far as possible, the chances of political leaders betraying their trust. These arrangements include, among others, the division of powers between the three main branches of government, elections, the rule of law, judicial oversight, a free press, open government, and the constant scrutiny of political elites. According to this argument, if we trust political leaders, it is not because they are individually trustworthy (they may or may not be), but because democracies have a variety of constitutional devices that prevent or discourage untrustworthy and corrupt behaviour on the part of political elites. Similarly, a wide range of institutional mechanisms try to maintain the trustworthy and honest behaviour of a wide range of public officials, especially of judges, police, and civil servants.

Support for this top-down view that governments can affect trust is provided by the east European countries under Communist rule, which were characterised by low levels of generalised trust, because of the nature of the regime and social and political climate it created, but particularised trust among small circles of people who knew and dependent upon each other (Sztompka 1996; Rose 1994: 29; Rose and Mischler 1997). On the other side of the coin, research on Sweden's universal welfare state suggests that it encouraged generalized trust between citizens, and between citizens and welfare officials, compared with particularistic welfare systems, which are associated with greater suspicion and distrust (Rothstein and Stolle, 2003). The importance of government is also underlined by Canadian research

showing that the impact of ethnic diversity on social trust seems to depend to some extent on the quality of government and its institutions (Helliwell 2003). In this way, government may act as an intervening variables between trust and the ethnic factors discussed earlier.

Democracy is embedded in a broader array of institutions than specifically governmental ones. In the rational-legal order the power of officials of all kinds is strictly limited, their conduct is rule- bound and impersonal, sanctions are imposed for breaches of trust, the rights of ordinary citizens are protected, and opportunities for corruption are reduced. This may also help to create an institutional framework within which trusting attitudes and behaviour can develop. Public officials are required to treat the public according to universal principles, which, in turn, encourages the development of citizenship based upon equality, common interest and identity, and trust.

The size and importance of the public sector means that it has a pervasive influence on the whole of society, including the private and the market sectors, but the latter also have mechanisms for policing corrupt and untrustworthy behaviour, including methods of enforcing service standards (e.g. professional ethics), the self-regulation of business practices (e.g. advertising standards), and the evaluation of a wide range of occupational groups (e.g. the evaluation of teaching practices in schools and universities). In sum, although they may well be a double-edged weapon that both reinforce trustworthy behaviour and undermine trust at the same time (O'Neil 2002), the institutions of democratic society are intended to create a structure that encourages trustworthy behaviour and punishes corruption and untrustworthiness.

The finding that trust and norms of civic cooperation are stronger in countries with formal institutions that limit the power of political executives, and that effectively protect property and contract rights (Knack and Keefer 1997) are consistent with this hypothesis. So also are the findings that social trust helps to create a taxation system that operates in a fair way (Scholtz and Lubell 1998), and helps government to provide public services more effectively (Putnam 1993).

According to this theory social trust and democratic government may be involved in a complicated virtuous circle that helps to resolve collective action problems. In a bottom-up manner, social trust between citizens enables society to build a set of civil and private institutions that operate in an impartial and fair way, that protect civil rights and liberties, and that encourage effective government performance (Pharr, Putnam, and Dalton 2000: 26-7). At the same time, democratic and effective government, and the fair and impartial operation of social institutions have a top-down effect of helping to create circumstances in which trustworthy behaviour is required and respected. We test aspects of this general theory, using measures of the extent of civil liberties, the quality of government, the provision of public services measured by the size of public expenditure, and the extent of corruption in public life.

Voluntary organisations and civil society

Classical theory holds that social trust is generated by individual involvement in voluntary associations, which act as the free schools of democracy and generate the skills and habits of the heart associated with democratic culture and practice. However, empirical results are inconclusive, or no more than weakly supportive of this claim. Much of the research finds little or no connection among individual members of, or activists in, voluntary organisations and either trust or democratic attitudes and behaviour (Torcal and Montero 1996; van Deth 1996; Dekker and van den Broak 1995; Torcal and Montero 1999: 177; Billiet and Cambre 1999: 255; Newton 1999a, 1999b; Whiteley 1999: 40 –1; Uslaner 2000; Booth and Richard 2001: 50; Delhey and Newton 2003). Other work suggests that particular kinds of associations may promote trust, but that voluntary activity in general does not seem to do so (Stolle and Rochon 1999; Putnam 2000: 22; Paxton 2002, Uslaner 2002).

There is some evidence of an association between voluntary activity and social trust at the cross-national comparative level (Knack and Keefer 1997: 1281-2), but it is not notably strong, and in-depth case studies of Germany and Spain find that a strong voluntary network is neutral towards democracy and may be used or exploited by whatever political groups are in power, democratic or otherwise (Berman 1997; Encarnacion 2001). To test the role of voluntary associations in generating trust we develop four measures of voluntary activity based upon (1) membership of, or (2) activity in one association, and (3) membership of, or (4) activity in three or more associations.

Religion and culture

Trust may be based on moral precepts (Uslaner 2002) and related to some religious beliefs and traditions (Knack and Keefer 1997: 1283; Inglehart 1999: 94), although Alesina and La Ferrara (2002) find that religious beliefs in the USA do not significantly affect trust. A religious interpretation of trust of this kind is different from the religious cleavage model already discussed. The cleavage theory focuses on religious differences and divisions, whatever the particular religions involved, whereas the religious culture model focuses on the content of religious beliefs, insofar as these may encourage or discourage generalized social trust, whether or not there are also religious cleavages involved. In particular, Protestant beliefs are associated with democracy, equality, a relative absence of corruption, and strictures about the constant need to behave in a trustworthy and moral manner. It is not clear what implications other religious beliefs may have for trust, and to explore this matter the

research includes data on the seven religions that dominate in the countries covered by the study.

Problems of cause and effect

Before we discuss details of data and methods we should make one last point of a general theoretical nature concerning the problem of causes and effects. Many have discussed the issue (see, for example, Levi 1996; Rahn, Brehm, and Carlson 1999; Warren 1999; Paxton 2002; Delhey and Newton 2003), but we have avoided the terms causes, effects, or consequences and have deliberately used the words 'association' or 'link' in their place. This is because in almost every case where there is an association between trust and another variable, trust may be either a cause, an effect, or both. For example, we hypothesise that economically equal societies are more trusting because economic differences and cleavages are reduced, so limiting class conflict and encouraging trusting attitudes and behaviour between equal citizens. Or perhaps it is the other way round. Perhaps widespread social trust makes it easier for citizens to redistribute income between themselves (Luttmer 2001, quoted in Alesina and La Ferrara 2002: 209). Similarly, we hypothesise that wealth is associated with trust, perhaps because it helps to reduce the risk that goes with trust. Equally, trust may encourage economic growth, or it may be that both reinforce each other. We will return to this matter at the end of the paper in the light of the empirical results.

3 Data and methods

Details of the independent variables included in the study are covered in Appendix 1. The empirical analysis is based upon data for sixty countries collected from a variety of sources. Our dependent variable, trust, comes from the World Values Surveys, which ask the classic question about social trust in more than 60 nations. It also samples populations in some sub-national regions, but only nation-states are examined here, because it is difficult or impossible to get other sorts of information (for example, income inequality, homicides, and GNP) for sub-national populations.

Two waves of the WVS are used: wave II for 1990, and wave III for 1995-7. Trust scores are available in the WVS III survey for 55 countries; an additional 11 countries are available from the previous WVS II, giving a total of 66 countries. Since the correlation between trust scores for those 32 countries for which figures are available in both years is 0.88 (Pearson's r, $p < .001$), stability over short periods of time is evidently high, justifying the use of the 1990 trust scores as a valid proxy for trust scores in the mid-90s.[4] However, six of the 66 nations for which we have trust data had to be excluded from the analysis because other data was missing, leaving a total of 60 nations for this research.[5]

The data cover a wide range of countries from all regions of the globe, although most are drawn from west Europe (17) and east Europe (20). The Americas and Asia are represented with 12 countries each, Africa with 3, and Oceania with 2 (see Table 1). Our 60 nations are not a sample of any kind, and given a total of 192 states in the world, it is not even a majority of the global total. Nevertheless, 60 countries are enough to provide a reliable basis for statistical analysis and a larger number than previous cross-national studies of social trust; Knack and Keefer (1997) cover 29 countries, and Paxton (2002) deals with 48.

The questionnaire of the WVS asks the standard, and much tried and tested question:

> 'Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?'

In most countries there is a sample of between 1,000 and 2,000 respondents, and in only ten nations were fewer than a thousand interviewed. The World Values surveys have some problems, because urban and high income groups tend to be over-represented in some countries, but these problems do not seriously detract from the randomness of the samples.

The measure of social trust has some deficiencies. First, it is based on only one question about social trust, albeit the classic one, rather than the more valid and reliable three-item Rosenberg scale. Second, respondents saying most people can be trusted are scored 1, and those who say you can't be too careful are scored 0, which is probably a less sensitive measure than wider rating scales of, say, 0-4 or 0-10. However, the disadvantage of the scale is reduced in our work which aggregates individual responses to produce a national average. This produces a more differentiated measure of trust across countries than the simple zero-one score for individuals. The highest national score is 65% and the lowest is 3%.

There may also be some ambiguity about what is meant by 'most people' in the World Values question. Clearly 'most people' includes a far wider range of individuals than family, friends, and immediate neighbours, but how far the circle extends is open to interpretation. It may be that trusting people extend the boundaries wider than low trust people, or that low trust people tend to restrict 'most people' to those they feel they can trust. In this case, their definition of 'most people' may be influenced by their feelings of trust in the first place. This objection, however, is speculative, and there is some good evidence to suggest that the generalized trust question does its work adequately. Uslaner (2000: 575; 2002: 54) finds that it loads heavily on trust in strangers, and concludes that does measure generalized trust. The experiment reported by Yamagishi and Yamagishi (1993) also found a correspondence between trusting attitudes and trusting behaviour (see also the 'experiment' reported by Knack and Keefer 1997: 1257).

A data set was constructed consisting of the aggregate national trust scores, as the dependent variable, and a wide range of independent social, economic and political variables collected according to the hypotheses outlined above. Data sources and further explanations of the indicators used are listed in the Appendix. The data cover:

- *Population characteristics* - total population and population density. A measure of foreign born populations (as a possible social cleavage) was not included because of lack of data.

- *Modernization* - degree of urbanization, industrial development (size of the agricultural sector), life expectancy, and education level (secondary net enrolment rate).

- *Wealth* - GDP per capita in purchasing power parities.

- *Civil and political liberties* - Freedom House scores for civil liberties and political rights, a dummy variable for (former or current) communist rule, government expenditure on health and education, and four indices of the quality of government.

- *Indicators of social disturbance and disruption* - suicide rates, rates of lethal accidents, murder rates, and the level of corruption.

- *Cleavages and conflicts* - ethnic, linguistic and religious fractionalisation, income inequality, and involvement in internal and/or external wars, and their dates.

- *Voluntary Organisations* - membership of, and activity in voluntary associations (one and three or more).

- *Religious Culture* - dominant religions (Roman Catholic, Protestant, mixed Catholic-Protestant, Islam, Hindu, and Buddhism).

Some of these variables are constructed from a complex set of indicators (see Appendix). The resulting list of independent variables is larger and more varied than any used in previous research on social trust. Inglehart (1999) tests the influence of three social variables, Paxton (2002) of six, and Knack and Keefer (1997) of eleven.

The quality of indicators

We are aware that some of the indicators are not the most refined measures of the concepts we have discussed. For example, income inequality, and measures of ethnic, linguistic, and religious diversity indicate a potential for cleavage based conflict, not actual conflict that is manifest in the societies. They indicate the presence of structural social characteristics that could result in conflicts. A case in point is income inequality: there is a wide variation in how much inequality is acceptable across countries, and any given level may not be a problem in some places but a source of conflict in another (Delhey 2001). There again, the measure of civil war is restricted to armed conflict, though the concept includes confrontations that fall short of para-military combat. Similarly, the murder rate is only one of many forms of criminal and deviant behaviour that might be associated with trust levels, and, in any case, crime statistics are notoriously open to criticism, quite apart from the difficulty of comparing them cross-nationally. Even some of the tried and tested indicators (GNP per capita) are not without their problems. We try to minimise this problem by factor analysing sets of variables in order to produce more reliable and valid measures.

Because of the large number of independent variables, the analysis proceeds through two stages. After looking briefly at the distribution of social trust across the globe, the first stage examines a large number of bivariate correlations. In the second step, the strongest or 'winning' variables from the complete list are used in multivariate analyses.

4 Results

Trust across the globe

In only six countries do as many as half the population express trust, these being the high-trust societies of Scandinavia (Norway, Sweden and Denmark), the Netherlands, Canada, and China (Table 1). Evidently high trust societies are a small minority. A further 21 countries fall into the medium trust range, mainly the wealthy, OECD nations of western Europe and the USA, plus three east European countries and India. In this cluster, at least 30% of the population are trusting. The remaining 39 countries (59% of the total and therefore an absolute majority of all our 60 nations) have trust scores of under 30% and may be described as low trust nations. Countries from all world regions are in this cluster, with a concentration in east Europe and South America. All three African nations are in the grouping. Within this last category there is a sub-group of very low trust nations, consisting of 6 countries (Macedonia, Puerto Rico, the Philippines, Turkey, Peru and Brazil) in which fewer than 10% of the population express trust. To put it the other way round, in these countries more than 90% of the population do not trust their fellow citizens. They are closer to 'no-trust' than 'low-trust' societies.

Table 1 shows regional patterns across the globe. The Americas are clearly divided into the North with high or medium trust, and the Middle and South with low, or virtually no trust. West European nations generally have fairly high levels, with a few southern countries (France and Portugal) in the low-trust cluster. Eastern Europe is predominantly a low-trust area, with only three exceptions (surprisingly, the crisis-ridden countries of Serbia and Montenegro, and the politically and economically unstable Ukraine). The Asian countries of our sample are distributed across all clusters, with China, India and the highly industrialized countries Japan, Taiwan and South Korea in the high to medium grouping, and the Central Asian republics formerly belonging to the Soviet Union in the lower one. Finally, the two countries in Oceania (Australia and New Zealand) go with the other wealthy OECD nations in the medium to high category.

Table 1: Social trust scores in different world regions (% of population trusting other people)

Americas		**Western Europe**		**Eastern Europe**		**Asia**		**Africa**		**Oceania**	
More than 50 % trusting (high-trust societies)											
		Norway	65								
		Sweden	60								
		Denmark	58								
Canada	53	Nether-lands	53			China	52				
30 % and more trusting (medium-trust societies)											
		Finland	49							N. Zealand	49
		Ireland	47								
		Iceland	44								
		N. Ireland	44			Japan	42				
		Germany	39			Taiwan	42			Australia	40
USA.	36	Switzer-land	37			India	38				
		Italy	35								
		Belgium	34								
		Austria	32	Monte-negro	32						
		Britain	30	Ukraine	31	S. Korea	30				
		Spain	30	Serbia	30						
10 % and more trusting (low trust societies)											
				Bulgaria	29						
				Czech R.	29						
Mexiko	28			Bosnia	28						
				Albania	27						
Domenica	26			Slovakia	27						
				Latvia	25	Armenia	25				
				Croatia	25						
				Belarus	24						
				Russia	24						
		France	23	Hungary	23			Ghana	23		
		Portugal	22	Estonia	22						
Uruguay	22			Moldova	22	Azerbijan	21				
Chile	21			Lithuania	22	Bangladesh	21				
				Romania	19	Georgia	19	Nigeria	19		
Argentina	18			Poland	18	Pakistan	19				
				Slovenia	16			S. Africa	16		
Venezuela	14										
Colombia	10										
Less than 10 % trusting (no-trust societies)											
Puerto Rico	06			Macedonia	08	Philippines	05				
Peru	05					Turkey	05				
Brazil	03										

Source: World Value Surveys 1990, 1996, own computations.

Bivariate associations

Table 2 presents the bivariate correlations between generalised social trust and a list of independent variables selected on the basis of the theory laid out in the first part of the article. The simple correlations show that of the various cleavage measures, income inequality is most strongly associated with trusting attitudes. Societies with more equal incomes are substantially more trusting. At the same time, ethnic fractionalisation shows a strong (negative) correlation with trust, while linguistic and religious fractionalisation do not. This suggests that it is not cleavages that matter so much as specifically economic and ethnic cleavages.

No matter which of the three measures of external war is used, it does not correlate significantly with trust, so there is no evidence here that an external enemy will draw society together and lift trust levels. A real test of this hypothesis requires longitudinal data rather than cross-sectional data we employ here, but if there were a time effect we would expect the correlation between trust and the last year of the war to be significant, and it is not ($r = -0.173$). Internal wars do matter, however, and all four of our measures are negative and statistically significant. It is noticeable that it makes little difference when the war took place in the 1945-90 period – whether is it a recent conflict or forty years old. This suggests that it may not be internal war, as such that is important, but the circumstances associated with war in the first place. In other words, the internal war measure may be important because it is a good indicator of deep cleavages in society which exist both before and after the war whenever that may have occurred.

The wealth and modernisation measures have a mixed but generally strong association with trust. The figures for GNP per capita are particularly strong, suggesting that wealth and the benefits it brings are conducive to the development of trusting relations. The figure for education is highly significant but still substantially smaller than that for wealth, suggesting perhaps that education is rather less important than money. Moreover, the finding that both wealth and income inequality matter for trust indicates that money matters for trust more than most things.

The degree of urbanisation is not significant, but a large agricultural sector is associated with low levels of generalised trust. Taken together the two figures lend some support for the idea that modern society does not undermine generalized social trust, but that this form of trust is not generally compatible with agricultural society. More speculatively, the findings are consistent with the idea that agricultural societies may have high particular (Portes and Landholt 1996) but low generalized trust, whereas urban-industrial societies have a neutral impact on generalized trust. However, to test this proposition we would have to have measures of particularised and generalised trust and, unfortunately, we have only the latter, so all we can say from our figures is that the larger the agricultural sector the lower the generalised trust. The finding that there is no significant association between trust and either population size or population density, supports the conclusion that modern large scale, urban-industrial society is not associated with widespread generalised distrust.

All the measures of democracy and government effectiveness are strongly and positively associated with high trust, with the single exception of the former/current Communist countries. They show lower levels of trust, as we expected, but the figure is not significant. It is worth noting that the positive association with political freedom is substantially higher when a twenty year period of freedom has accumulated rather than the simply taking account of the current state of affairs. The last four political measures of political stability, law and order, rule of law, and government effectiveness, are all closely associated with high trust, a set of figures consistent with the idea that government structures and performance are linked to trust. The fact that all four correlations are of almost identical strength suggests, however, that they measure the same or very similar things.

The figures show that it is not only government structures that matter, but also government policies and services. There are substantial associations between trust, on the one hand, and public expenditure on health and education on the other. This is consistent with the idea that political systems that spend money on education and health help to generate a sense of citizenship which is associated with trust, while systems that rely more on markets than public services may be more individualistic, more competitive, and less trustful.

Two measures of social strain and disruption – the suicide and accident rates - do not correlate with trust. A third measure – the murder rate - is statistically significant but does not reach the same substantive level as some other variables in the table. Overall, this suggests that suicide, accident, and murder rates are not good predictors of social trust. However, the fourth measure of corruption is one of the highest in Table 2. It is not surprisingly that corruption and distrust are associated since corrupt behaviour is untrustworthy behaviour, but the closeness of the association stands out, and lends strong support to the idea that corruption in public places is of great importance for social trust between citizens. If we add to this the finding the fact that government structures and practices, especially the rule of law, political freedom, and government effectiveness, are all closely linked with social trust we are lead to the conclusion that government forms and practices have a close association with generalized social trust.

Active membership of voluntary associations is not important, whereas the figures for membership of associations are significant, though not as impressive as many others in the table. Overall, this is not strong evidence to support the idea that voluntary associations generate trust, but enough to suggest that the membership variable should be included in the second-stage multivariate analysis.

Finally, the set of figures dealing with religion has only two significant correlations, both related to Protestantism. Countries that are dominantly Protestant or have a significant Protestant minority show higher levels of trust than Catholic countries, which served as a reference. No other religion makes a difference. The initial results concerned with both cleavages and cultures, therefore, indicate that religion is not of much importance, with the single exception of Protestant cultures which show higher levels of trust.

Table 2: Bivariate correlations with generalised social trust

Variable	Correlation with social trust
Cleavages and conflicts	
Cleavages	
Class (income inequality)	-.466**
Ethnic fractionalisation	-.385**
Linguistic fractionalisation	-.134
Religious fractionalisation	.126
Conflicts	
Internal war after 1945, last year of war	-.431**
Internal war after 1945 (dummy)	-.436**
Internal war after 1991 (dummy)	-.423**
Internal war after 1995 (dummy)	-.332**
External war (Last year of war?)	-.173
External war after 1945 (dummy)	-.121
External war after 1995 (dummy)	-.196
Modernization and Wealth	
Urbanization	.210
Agricultural employment	-.361**
Life expectancy	.507**
Education – secondary school net enrolment ratio	.393**
GDP per capita	.660**
Total population	.187
Population density	.034
Good Government (Democracy and Government Effectiveness)	
Freedom House score (Civil and political rights)	.394**
Freedom House score (cumulated 20 years)	.528**
Former/current communist (yes/no)	-.229
Government expenditure on health and education	.471**
Index of political stability and lack of violence	.642**
Index of law and order	.684**
Index of rule of law	.683**
Index of government effectiveness	.641**
Social climate (anomia and public safety)	
Suicide rate	.030
Lethal accidents	-.231
Murders (homicides)	-.381**
Corruption level (CPI)	-.665**
Voluntary organizations	
Voluntary organization membership (yes /no)	.372**
Voluntary organization membership (3 or more)	.345**
Voluntary organization active membership	.186
Voluntary organization active membership (3 or more)	.086
Religion (ref. Group: Roman Catholic)	
Mixed Catholic/Protestant (dummy)	.287*
Protestant (dummy)	.432**
Orthodox (dummy)	-.185
Islamic (dummy)	-.232
Hindu (dummy)	.087
Buddhist (dummy)	.216

Notes: * significant at 0.05; ** significant at 0.01; *** significant at 0. 001.
Numbers of observations: 60 countries.

Multivariate analysis

Bivarariate correlations tell us which variables are not closely associated with trust, leaving a set of 'winning' variables that are employed in the second stage of multivariate analysis. There are two problems in this second stage, however. In the first place, even 60 cases allow us to test the power of only a few independent variables simultaneously. Second, many of the winning variables are strongly correlated with each other (multi-collinearity). For example, rich countries are generally egalitarian ones with democratic governments, and many of them have a Protestant background, low rates of corruption, and no internal wars in their recent history. Many variables are so closely inter-correlated that it is impossible to disentangle their separate influences by means of regression analysis or causal modeling. These methods have to be rejected, therefore, and other means of analysis used.

Limited progress can be made by cross-tabulating variables to get an impression of their relative importance. The correlations show that both wealth and income equality are linked to trust, and by cross-tabulating the two we can see that wealth is more important than equality (Table 3). Countries that are rich and egalitarian show the highest mean score on trust, rich but inegalitarian countries are next, and income inequality makes little difference to poor countries, because it is wealth not its distribution that matters for them. However, the standard error within each group of countries is very large, and on statistical grounds we can only be sure that the trust scores of rich and egalitarian countries are higher than those of poor countries.

Table 3: Cross tabulation of wealth and inequality

	Income level (gdp)	
Income inequality	Rich (above median)	Poor (below median)
Egalitarian (below median)	38 % trusting citizens (N = 22 countries) confidence 95%: +/- 6 points	24 % trusting citizens (N = 10 countries) confidence 95%: +/- 5 points
Inegalitarian (above median)	29 % trusting citizens (N = 7 countries) confidence 95%: +/- 10 points	20 % trusting citizens (N = 19 countries) confidence 95%: +/- 5 points

Numbers of observations: 60 countries

In other words cross-tabulation is of limited value, so we must try another way of overcoming multi-collinearity problems. One method is to group variables which are conceptually very close to each other and to factor analyse them to produce a single score. An advantage of this method is also that the single factor is likely to be a more reliable and valid indicator of a complex concept such as economic development or government quality. On the other hand, care must be taken to group only those variables that are closely related conceptually, so that the meaning of the single factor they deliver is clear. For example, the five indicators of government performance (rule of law, government effectiveness, political stability, freedom, and law and order) are all relate conceptually, and they all fit together statistically. Therefore factor analysis is justified that produces a single overall score that is an indicator of the 'quality of government', or 'good government' (see Appendix 2). Since this composite measure already includes an assessment of corruption (via the subindex 'rule of law'), it covers also this aspect of good government, and hence our stand-alone measure of corruption (the CPI) is not used in the following regressions.[6]

For the same theoretical and empirical reasons we combine the measure of wealth, urbanization, life expectancy, size of the agricultural sector, and education enrolment. These variables are closely associated conceptually with the more general ideas of modernization and economic development and they also deliver a strong single factor, so this also passes the theoretical and statistical test for factor analysis.[7] However, in regression models the economic development factor was not statistically significant after allowing for the effects of Protestantism and ethnic fractionalisation (see Table 4). This puzzled us since wealth and modernization are obviously closely associated, and our bi-variate results show wealth and various indicators of modernization are also closely associated. A closer look at the bi-variate relations shows why. The economic development/modernisation factor contains some variables not strongly associated with trust (urbanisation, agriculture, and secondary school enrolment) which serve to dilute the impact of the modernization factor, and conceal the full power of the single wealth variable. When the latter is used in the regressions (Table 4) it retains the strength of its association with trust. It seems, therefore, that it is wealth that matters, not necessarily the accompanying features of economic development and modernisation.

No other combination of variables fulfill our theoretical and empirical criteria for factor anlaysis. Many of the remaining winning variables are inter-correlated but they fail either the theoretical or statistical tests. For example, the cleavage measures have a theoretical link with the anomia measures of social disturbance and disruption, but the resulting factor fails the test of a KMO value of 0.6 or more. As a result we are left with the problem of multi-collinearity among the remaining independent variables, and, in particular, an overlap between wealth and the good government factor, both of which produce particularly strong bi-variate correlations with trust in the 60 countries.

In response to these problems the rest of the paper follows the strategy of, first, organising our variables according to exogeneity and endogeneity, and second, running a series of regression models to establish which combination of different variables produces the best fit. The first exogenous variable is the Protestant religion. The argument is not that Protestant

Table 4: OLS-Regressions on social trust

Model No.	1	2	3	4	5	6	7	8	9
	Beta (T-value)								
Protestantism+	.57*** (5.94)	.50*** (4.62)	.33** (2.74)	.52*** (5.28)	.59*** (4.82)	.51*** (4.92)	.59*** (4.96)	.50*** (4.39)	.37** (3.31)
Ethnic fractionalisation	-.40*** (-4.14)	-.32** (-2.98)	-.22* (-2.03)	-.31** (-2.99)	-.24* (-2.05)	-.36** (-3.65)	-.40*** (-4.12)	-.37*** (-3.72)	-.26* (-2.56)
Modernisation (factor)		.18 (1.50)							
Quality of government (factor)			.41** (3.14)						
Income inequality				-.25* (-2.35)					
Homicides					-.19 (-1.64)				
Internal war						-.16 (-1.49)			
Voluntary organisation membership							.05 (.378)		
Government social spending								.13 (1.11)	
National wealth									.36** (3.00)
R2 (corrected)	.46	.47	.53	.49	.50	.47	.49	.46	.52

\+ Dominant Protestant country or mixed Protestant-Catholic country.
Significance levels: *** p < .001, ** p < .01, * p < .05.
Numbers of observation: 60 countries.

theology or beliefs necessary pervade countries than are labelled Protestant now, but that the religion has left a clear cultural imprint over the past centuries that has shaped a very wide range of present-day features from economic development and forms of government, to attitudes towards equality and corruption. The Protestant ethic facilitated the emergence of capitalism in the seventeenth century, and Protestant countries are still among the richest, the most democratic, and the least corrupt in the world today. Therefore, religious tradition is treated as an exogenous variable that proceeds other variables historically, without being influenced by them.

Similarly internal (civil) wars are treated as exogeneous because we measure them over a fifty year period. If we accept the argument that civil war, in itself, is not as important as civil war as an indicator of deep cleavages that go back historically, then contemporary wars can be taken as a manifestation of historically important divisions within society. The ethnic composition of countries is another exogeneous variable that changes only slowly over time. Its stability makes it more plausible to assume that it has a long-term effect on social developments, rather than the other way round. We are aware that wealthy countries that guarantee human rights for minority groups may attract immigrants, and therefore good government and wealth affect patterns of migration, but ethnic composition does not change greatly in the short run, even in the modern era of mass population movements, and we feel justified in classifying its as an exogenous variable.

When the three exogenous variables are run in the same OLS regression on trust, Protestantism and ethnic composition turn out to be highly significant, but the power of civil wars declines to insignificance. We therefore exclude it from the next set of OLS regressions (Table 4) that include each endogenous variable in turn. These enable us to identify the endogeneous variables that have an association with trust, and which of the exogeneous variables have a direct effect and an indirect one that works through an endogeneous variable. Model 1, which serves as the basic model, shows that Protestanism and ethnic fractionalisation together explain 46% of the variance in social trust, with religion having the biggest impact.

In the subsequent regression models (2 to 9), each of the mediating variables is added to the basic model in turn. These show:

1. In each regression, religious tradition remains a strong (and usually the strongest) predictor of social trust. However, the considerable drop in the influence of religion in Model 3 indicates that the religious culture also has strong influence on the development of government institutions and practices, with Protestant countries usually having the highest good government scores. It seems, therefore, that Protestantism has a direct association with trust, but also an indirect one that operates through its effect on good government, wealth, and economic equality.

2. Ethnic fractionalisation remains significant in all the models, but it also loses much of its strength when the good government variable is entered. This is probably because ethnically diverse societies have more difficulty in generating and sharing public goods (Alesina, Baqir and Easterly 1999; Goldin and Katz 1999), and in establishing public institutions that work well (La Porta, et al., 1999).

3. After controlling for Protestantism and ethnic diversity, the impact of murder rates, voluntary organisation membership, and government spending on health and education is not significant. Models 3, 4, and 9 show that the statistical power of good government, income inequality, and national wealth retain their significance.

Figure 1a: Explaining cross-national differences in social trust: main influences (all nations including the Nordic countries)

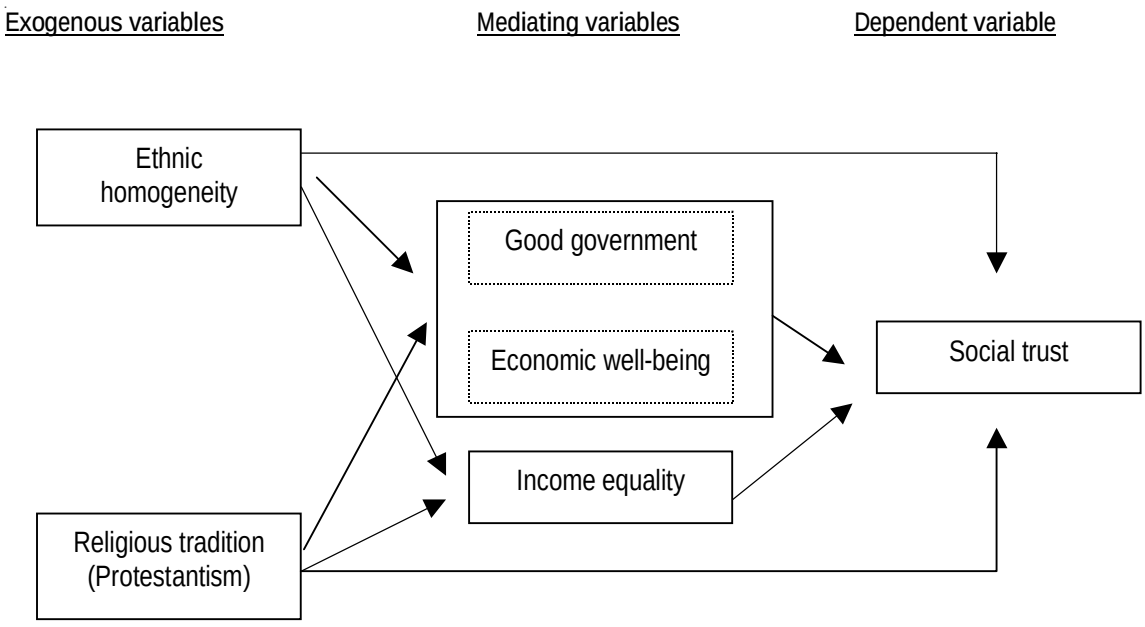
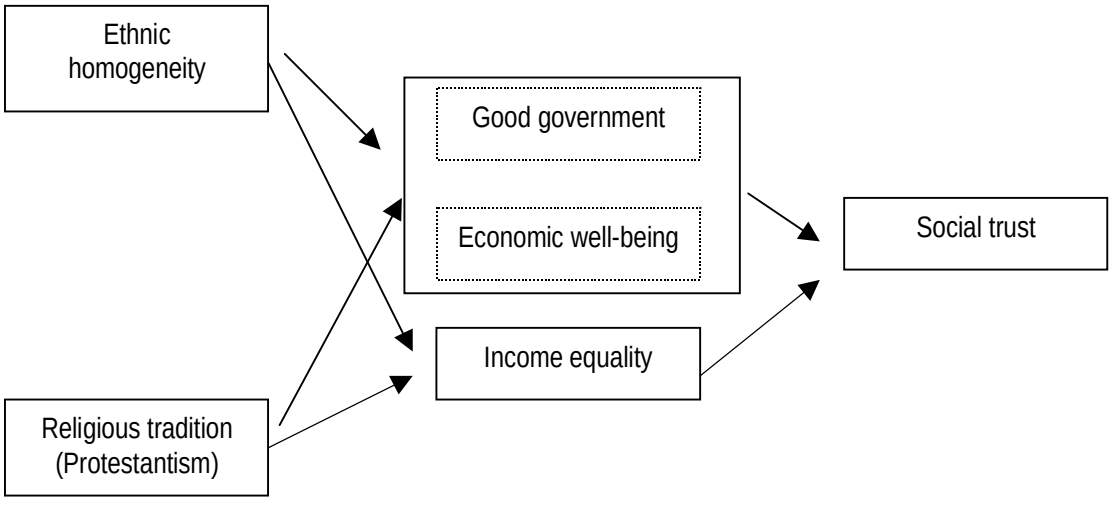


Figure 1b: Explaining cross-national differences in social trust: main influences (excluding the five Nordic countries)



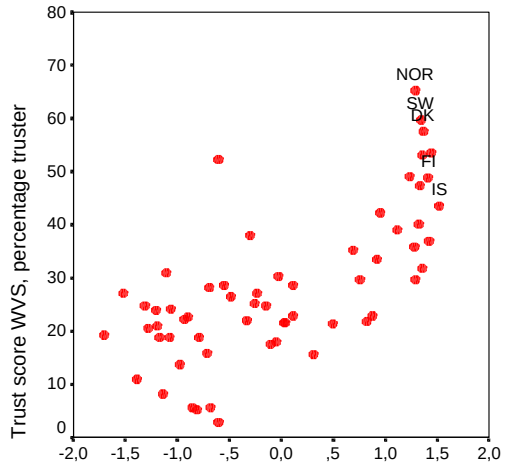
These results suggest that the best model for explaining cross-national differences in social trust (Figure 1a) includes two exogenous variables (Protestant traditions and ethnic composition) and three mediating variables (good government, wealth, and income inequality). Because multi-collinearity is so high, especially between wealth (economic well-being) and good government, one cannot put both variables in the same equation, and therefore cannot say precisely how much influence each has. Nevertheless, it is possible to draw three conclusions. First, both exogenous variables have a direct impact on social trust, of which Protestant culture is the stronger. Second, among the endogenous variables, wealth and good governance are more important than economic equality, but because wealthy countries have good government it is not possible to disentangle their effects. Third, the indirect effects of both Protestantism and ethnic fractionalisation flow mainly through good government and national wealth, less so through economic equality.

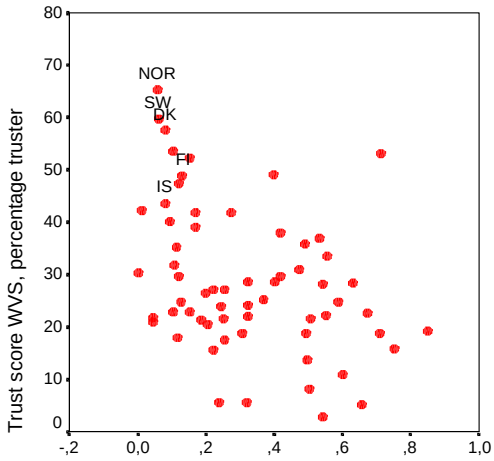
5 Nordic exceptionalism?

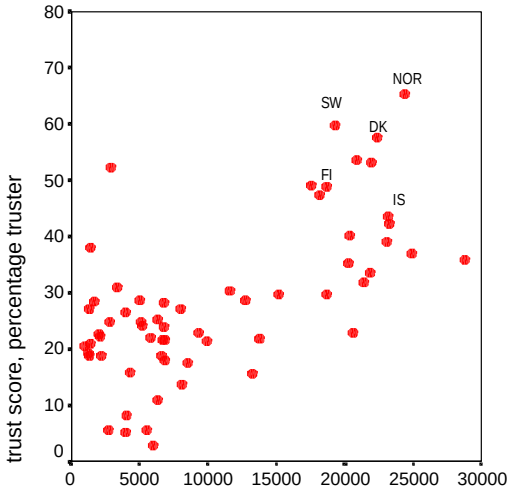
It is clear that the Nordic countries are exceptional cases. Norway, Sweden and Denmark have the highest levels of trust of any of our 60 nations, and Finland and Iceland rank in the top ten, not far behind. All five countries are Protestant, rich, and ethnically homogeneous, and all have high good government scores. Scatterplots (Figure 2) illustrate the problem: the Nordic nations have extreme scores on our most powerful explanatory variables, as well as trust itself. Could it be that the Nordic countries, as outliers on all the important measures, distort the results? Are the results truly global, or merely the result of Nordic exceptionalism? To test this possibility we repeated the regressions, excluding the five Nordic countries (Table 5).

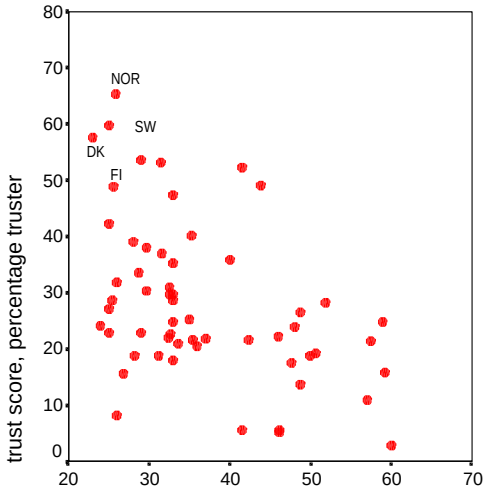
The results show that there is indeed some Nordic exceptionalism at work. Taking out the Nordic countries from the regressions means reducing the explanatory power of the models considerably, a loss of almost 20 percentage points in the basic model (from .46 to .29), and between 14 percentage points and 21 percentage points in the other models (Table 5). Hence, the amount of variance explained depends on whether the Nordic countries are included or not. Nevertheless, taking out the Nordic countries does not eliminate the main conclusions of the analysis. In all models except the third, Protestantism retains a significant association with trust. It seems that ethnic fractionalisation is not so closely associated with trust outside the Nordic societies for it loses its significance in three of the seven regression that include an

Figure 2: Scatterplots of social trust against selected variables









Note: No inequality data available for Iceland

Table 5: OLS-Regressions on social trust (excluding the five Nordic countries)

Model No.	1	2	3	4	5	6	7	8	9
	Beta (T-value)								
Protestantism+	.49*** (4.06)	.40** (3,10)	.21 (1.50)	.45*** (3.79)	.48** (4.82)	.42** (3.30)	.53*** (3.82)	.45** (3.35)	.28* (2.09)
Ethnic fractionalisation	-.36** (-3.02)	-.27* (.2.04)	-.14 (-1.079)	-.27* (-2.21)	-.16 (-1.11)	-.31* (-2.58)	-.38** (-3.01)	.-.35** (-2.83)	-.20 (-1.66)
Modernisation (factor)		.21 (1.57)							
Quality of government (factor)			.48** (3.39)						
Income inequality				-.26* (-2.11)					
Homicides					-.27 (-1.910)				
Internal war						-.20 (-1.56)			
Voluntary organization membership							.02 (.89)		
Government social spending								.09 (.64)	
National wealth									.41** (3.04)
R2 (corrected)	.29	.28	.39	.31	.32	.28	.28	.26	.36

+ Dominant Protestant country or mixed Protestant-Catholic country.
Significance levels: *** p < .001, ** p < .01, * p < .05.
Numbers of observation: 55 countries.

endogenous variable. Since there is very low, or virtually no ethnic diversity in Nordic countries, it is difficult to know whether its contribution to the explanation of trust is global or simply an artifact of its absence from the Nordic countries which happen to have none.

The important point to emerge from a comparison of Table 4 and Table 5 however, is that the same set of five variables are directly or indirectly associated with trust, whether the Nordic countries are included or not: Protestant religious traditions, ethnic fractionalisation, wealth, good government, and income equality. In all cases income equality is the weakest variable,

although it is statistically significant. The consistently robust nature of the findings allows us to conclude that is not only Nordic exceptionalism that drives the results. The same patterns, albeit in a somewhat weaker form, are found across the rest of the globe (Figure 1b).

6 Conclusion

To explain the origins of generalised social trust among sixty countries across the globe, we started with a list of more than thirty independent variables covering a wide variety of social, economic, and political indicators. Some of these are themselves derived from a number of different but closely related measures. At the end of the analysis, however, we are left with a simple but robust model.

Most of the independent variables fall quickly by the wayside, although all were introduced for theoretically plausible reasons in the first place. Perhaps most important and most surprising, none of the four measures of voluntary activity stood up to statistical tests, in spite of the importance attached to them in a large body of writing, from de Tocqueville onwards. Most religious measures turned out to be insignificant, as did our general composite measure of economic development, and most of the measures of social strain and disruption. In the end the internal (civil) war measure also disappears, perhaps because it is less important in itself than as an indicator of deep underlying social cleavages that have an effect whether or not civil war has actually broken out at some time in the past forty five years.

The composite indicator of economic development/modernisation also disappears after controlling for ethnic homogeneity and Protestantism, although the single measure of GDP per capita remains strong. There is the suggestion in the figures that rural societies tend to have rather low levels of generalised trust, but urban scale and density have a neutral effect. This is consistent with the suggestion that rural society may breed particularised but not generalized trust, whereas large scale urban-industrial society has neither a positive nor a negative effect on generalised trust. However, we need measures of both particular and general trust to test this interpretation.

The highest levels of generalised social trust across the globe are closely associated with a tight syndrome of religious/cultural, social, economic, and political characteristics. These may also be seen as a set of ethical/cultural, social, economic, and structural conditions in which trust flourishes. Protestantism, but none of the other religions, forms the religious and ethical foundations, probably because the Protestant ethic has had an historical imprint on a culture of equality and the importance attached to persistently trustworthy behaviour. Ethnic homogeneity is the social basis, presumably because people of the same ethnic background find it easier to trust one another. Per capita GDP and income equality are the economic

conditions. Wealthy and economically egalitarian societies are trusting societies, although wealth seems to matter more than equality, except in the wealthiest countries where both make a contribution. Good government is an essential structural basis of trust. Government, especially corruption free and democratic government, seems to set a structure in which individuals are able to act in a trustworthy manner and not suffer, and in which they can reasonably expect that most others will generally do the same.

Trust is strongest where all these conditions are found in combination, and all these conditions are found most clearly in Nordic countries. Sweden, Norway, Denmark, Finland and Iceland are outliers on almost every important variable in the study. However, removing them from the analysis does not alter the combination of variables associated with trust in the remaining fifty five countries scattered across the globe, although it reduces their statistical power substantially. The ethnic homogeneity of the Nordic countries also complicates matters slightly. Nevertheless, in broad outline the models remain simple, consistent, and relatively robust in terms of statistical significance, with or without the Nordic countries.

The strength of the direct and indirect association of ethnic homogeneity with trust raises a question about exactly how general generalized social trust is. Particular trust is trust in people we know or who are like us. Generalised trust is trust in people we may not know and who may not be like us. The finding that ethnic homogeneity is strongly associated with generalised trust suggests that it may not extend easily to all others in general, as opposed to others who are like us, at least so far as ethnic background is concerned. In other words, generalised trust is strongest where we have something in common with others, especially where we are from the same ethnic background, which is exactly the condition associated with particularised trust. It does not follow that generalised trust does not or cannot exist, only that it is stronger where people have a shared ethnic identity, which makes it different from particular trust in degree rather than kind.

Finally, we return to the problem of cause and effect. We can say little about this, partly because our analysis is cross-sectional, but mainly because it is easy to envisage trust as either a cause or effect or both in most of our statistical models. We can claim that Protestantism is more of an historical cause than effect, and that the same is true of ethnic homogeneity insofar as this predates the trust levels of the 1990s and changes rather slowly. But it is not possible to order good government, GDP, or income equality in the same historical way, and therefore it is not possible to disentangle their cause and effect relations.

In one important sense, however, this does not matter very much. It is evident that generalised social trust is tightly integrated into a single syndrome of ethical/cultural, social, economic, and structural conditions which are either theoretically or empirically linked, and usually both (cf Inglehart 1997, 1999; Welzel, Inglehart and Klingemann 2003). Trust is all of a single piece with these conditions, and it might well be both as pointless as it is impossible to try to disentangle its intimate relations with them, even if we had the most complete time-series data.

Notes

1 We do not argue that all forms of social conflict are necessarily associated with low trust, but that this is likely to be the case in general. According to Simmel and Coser, overlapping and interlocking conflicts and cleavages do not threaten social cohesion, but can work as synthetic forces within societies. The theory is similar to the social capital claim that voluntary organisations that bridge important social differences will help to generalised social trust between social groups.
2 Paxton (2002: 266) finds a strong negative correlation between industrialisation and trust.
3 Knack and Keefer's cross-national study (1997: 1283. See also Delhey and Newton 2003) found no relationship between social trust, on the one hand, and population size, population density, and urbanization, on the other, and Alesina and La Ferrara (2002: 221) found no association between social trust and size of place in the USA. But House and Wolf 1978 and Putnam (2000: 205) find a positive association between small scale communities and trust.
4 On the stability of national trust scores over time see also Knack and Keefer 1997: 1262.
5 The excluded countries are Bosnia, Montenegro, Northern Ireland, Puerto Rico, Serbia, and Taiwan.
6 The factor quality of government consists of (factor loadings in brackets): rule of law index (.98); government effectiveness index (.97); political stability index (.93), cumulated freedom score (.84), law and order index (.82) . The explained variance is 83%, and the KMO value .83.
7 The factor economic development consists of (factor loadings in brackets): employment size agriculture (-.90); life expectancy (.90); GDP in purchasing power standards (.85), urbanisation (.79) and secondary education enrolment ration (.64). The explained variance is 68%, and the KMO value .84.

Appendix: Methods

Religious, linguistic and ethnic fractionalisation

The heterogeneity of the populations was measured by three fractionalisation measures computed by Alesina et al (2002), who have used the Encyclopedia Britannica (2001) as their main data source. Each of the three measures reflects the probability that two randomly selected individuals from a population belong to different (religious, linguistic or ethnic) groups. The higher the score, the more diverse (fractionalized) the population. In perfectly homogenous countries, the probability is 0. Alesina et al (2002: 5) note that in general the definition of religions and languages is much easier than for ethnicities, with the latter involving a combination of racial and linguistic characteristics.

Political freedom

The most-widely used measures are the Freedom House ratings for political rights and civil liberties (see www.freedomhouse.org) which, for the purposes of this work, were combined into a single political freedom score. The higher the score the greater the freedom. Because it may be some time before political freedom can create a climate of trust, a measure for the mean level of freedom over 20 years (1976-1996) was also constructed. For countries newly established during this time period, the scores of the predecessor country were taken for the missing years.

Government expenditure

Government expenditure for health and education as proportion of GDP are combined as a proxy for total government social expenditures. The figures are derived from Human Development Report (2002).

Good government

The Human Development Report (2002) provides a collection of subjective indicators of the quality of government, including:

- An *index political stability and lack of violence* is taken from the World Bank. This is the perceived likelihood of destabilization caused by ethnic tensions, armed conflict, social unrest, terrorist threat, internal conflict, fractionalization of the political spectrum, constitutional changes, and military coups. The World Bank collects information about these indicators from a variety of sources including the Economist Intelligence Unit and Business Environment Risk Intelligence.

- An *index of law and order* is taken from the International Country Risk Guide (ICRG), and measures legal impartiality and popular observance of the law, as judged by in-house expert opinion.

- The *index of the rule of law* is taken from the World Bank. The measure covers the extent of black markets, enforceability of private and government contracts, corruption in banking, crime and theft as obstacles to business, losses from and costs of crime, and the unpredictability of the judiciary. The World Bank collects information from a variety of sources including the Economist Intelligence Unit and the PRS Group.

- The *index of government effectiveness* is taken from the World Bank and measures bureaucratic quality, transaction costs, quality of public health care and government stability. The World Bank aggregates information from a variety of sources including the PRS Group, Freedom House and Business Environment Risk Intelligence.

Corruption

The measure for corruption is the 1996 Corruption Perceptions Index (CPI) from Transparency International (www.transparency.org). The CPI estimates the extent of corruption among officials, as judged by experts from business, academia, and in risks analysis. For our purpose, the scale from 10 (very clean) to 0 (very corrupt) was reversed, so that higher values indicate more corruption. The first Transparency International figures were collated in 1995, but covered only 41 countries, so later CPI figures were taken for the remaining countries. CPI scores do not fluctuate much in the short term, so later data are a good proxy for 1996. The methodology of the CPI is explained in Lambsdorff (2002).

Internal war, external war

Two variables covering armed conflicts in the post-WWII period are constructed from data presented by the 'Arbeitskreis Kriegsursachenforschung' (AKUF). *Internal war* combines 'anti-regime', 'secession and autonomy' and 'other inner-state' wars. *External war* combines 'international war' and 'de-colonization war'. The time-series starts in 1946. For both variables, the number of years since the end of the last war is entered, so that countries with wars ending in 1946 are coded '1', and countries with a war going on in 1996 are coded '51'. Countries with no war experience after WWII are coded '0'. On the basis of this information several dummy variables were constructed. For internal wars, countries with *any* internal war after WWII are coded '1', countries without any internal war '0'. Similarly, dummy variables are constructed for internal wars within the last five years, and internal wars within the last two years (including the survey year 1996). The same procedure was applied to external wars. The definition of war used by the AKUF is that of Kende, which is generally regarded as the international benchmark for armed conflict research (for more information see www.akuf.de).

Income inequality

The Gini Index of income inequality, taken from Human Development Reports, ranges from 0 (absolute equality, everybody has the same income share) to 1 (absolute inequality, one single citizen gets the whole country's income). The higher the Gini-Index, the more unequal is the income distribution. In some cases country data are not available for 1996, so figures for 1989 to 1995 are used instead. Once again, this is an acceptable way of filling in country data because Gini indices usually do not change much over short periods of time.

Lethal accidents

Lethal accidents are measured as deaths per 100.000 inhabitants due to accidents, as recorded on medical registers of causes of death.

Homicides

Rates are measured as murders per 100.000 inhabitants, as recorded on medical registers of causes of death.

Voluntary organisation membership

Information on membership in voluntary associations is provided by the WVS. Respondents were asked for active membership, inactive membership or non-membership of the following associations: churchs, sports club, arts organisations, trade unions, parties, environmental groups, professional organizations, charities, and other associations. Four measures of voluntary activity are derived from this information : proportion of respondents who are (1) active members of any association; (2) active members of three or more associations; (3) members (either active or inactive) of any association; and (4) members (either active or inactive) of three or more associations. Due to obviously invalid figures, Armenia, Ghana, Nigeria and Pakistan had been set to 'missing'.

It should be noted that these measures of organisational activity are aggregated individual scores for countries, not structural or system measures, such as the quality of governance, economic freedom, or the Gini index of economic equality. However, it proved impossible to find good and reliable system measures of the voluntary sector. We are forced to use aggregated individual scores from the WVS as the nearest approximation to proper system level or structural measures.

Dominant religion

Depending on their dominant religious tradition, countries are classified as Protestant, Catholic, mixed Protestant/Catholic, Orthodox, Islam, Buddhist, or Hindu. For the purpose of analysis, dummy variables have been constructed, using the largest group of countries – the Catholic countries – as the reference group.

Table A-1: Description of variables collected for analysis

No.	Variable	Unit	N	Year	Min	Max	Mean	SD
[1]	Social Trust	% trusting	60	1996, 1990	3	65	28	14.2
[2]	Total population	Millions	60	1996	.3	1232	72	198.1
[3]	Population density	Persons per sqkm	60	1996	2	834	117	136.0
[4]	Ethnic fractionalisation	Probability measure, 0-1	60	1983-2001	0	0.85	0.32	0.22
[5]	Linguistic fractionalisation	Probability measure, 0-1	59	1983-2001	0	0.87	0.29	0.25
[6]	Religious fractionalisation	Probability measure, 0-1	60	1983-2001	0	0.86	0.45	0.22
[7]	Foreign born population	% foreign born	43	1990-1995	.1	23	4.5	5.1
[8]	Urbanization	% urban population	60	1996	17	97	65	17.8
[9]	Size of agriculture	% employment in primary sector	58	1996	2	72	19	17.5
[10]	Life expectancy	at birth in years	60	1995	51.4	80.0	72	5.9
[11]	Education	secondary net enrolment ratio		1996				
[12]	National wealth	GDP per capita in PPP	60	1995	1004	28752	10790	8134.4
[13]	Freedom House Score	7 = free, 1 = not free	60	1996	1	7	5.5	1.5
[14]	Freedom House score, cumulated 20 years	7 = free, 1 = not free, averaged	60	1976-1996	1.6	7	4.6	1.9
[15]	Former/actual communist	1 = yes	60	1945-1996	0	1	.35	.5
[16]	Political Corruption (CPI)	10 = highly corrupt, 0 = free	60	1996	.6	9.3	5.0	2.6
[17]	Government expenditure health + education	% of GDP	60	1996	1.5	15	9.2	3.4
[18]	Income inequality	0-100 (absolute inequality)	58	Around 1995	23	60	37	10.4
[19]	Suicide rate	Per 100.000	35	1994-98	.4	80	6.6	12.1
[20]	Lethal accidents	Per 100.000	49	1997	11.5	104.2	43.3	23.0
[21]	homicides	Per 100.000	49	1997	0	130	10.4	20.5
[22]	Internal war	Last year after 1945	60	1945-1996	45	96	63	23.0
[23]	Internal war after 1945	1 = yes (dummy)	60	1945-1996	0	1	.42	.5
[24]	Internal war after 1991	1 = yes (dummy)	60	1991-1996	0	1	.3	.46
[25]	Internal war after 1995	1 = yes (dummy)	60	1995-1996	0	1	.17	.38
[26]	External war	Last year after 1945	60	1945-1996	45	96	53.6	17.1
[27]	External war after 1945	1 = yes (dummy)	60	1945-1996	0	1	.23	.43
[28]	External war after 1995	1 = yes (dummy)	60	1995-1996	0	1	.05	.22
[29]	Voluntary organization membership	% members	55	1996, 1990	11	96	61	21.2
[30]	Voluntary organization membership 3+	% members in 3 or more organisations	55	1996, 1990	0	59	20	25.8
[31]	Voluntary organization active membership	% active members	55	1996, 1990	2	79	34	19.3
[32]	Voluntary organization active membership 3+	% active members in 3 or more organisations	55	1996,1990	0	35	6	7.1
[33]	Political stability/lack of violence	Index, +2.5 (best) to -2.5	60	2000-2001	-1.45	1.61	.42	.83
[34]	Law and order	Index, 6 (best) to 0	58	2000-2001	1	6	4.2	1.46
[35]	Rule of law	Index, +2.5 (best) to -2.5	60	2000-2001	-1.13	1.91	.48	.94
[36]	Government effectiveness	Index, +2.5 (best) to -2.5	60	2000-2001	-1.10	1.93	.42	.94

Sources:

[1]	World Value Survey, waves II + III
[2]; [3]	United Nations: Demographic Yearbook 1996
[4]; [5]; [6]	Alesina et al. 2002
[7]	World Culture Report*
[8]	Human Development Report 1996
[9]	OECD: Labour Force Statistics
[10]; [11]	Human Development Report 1998
[12]	Human Development Reports (various volumes)
[13]; [14]	Freedom House web resources
[15]	Own entries
[16]	Transparency International web resources
[17]	Human Development Reports (various volumes)
[18]	Human Development Report 1996
[19]	Human Development Reports (various volumes)
[20] ; [21]	United Nations: Demographic Yearbook 1998*
[22] – [28]	AKUF web resources
[29] – [32]	World Value Survey, waves II + III
[33] – [36]	Human Development Report 2002
[16]	Transparency International web resources
[17]	Human Development Reports (various volumes)
[18]	Human Development Report 1996
[19]	Human Development Reports (various volumes)
[20] ; [21]	United Nations: Demographic Yearbook 1998*

* Item has been taken from Ruud Veenhoven's *States of Nations*-Database. We are grateful to Ruud Veenhoven for sharing his database with us.

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