Education and Social Cohesion: Re-Centring the Debate
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Abstract: Social Capital theory has tended to treat social cohesion as a mere aggregation of individual and community level characteristics, ignoring the long tradition of theory on social solidarity and social cohesion at the societal level. However, the key indicators of social capital – associational membership and social trust – do not co-vary cross nationally and societies rich in community level social capital are not always cohesive societies. Social capital and societal cohesion are not necessarily the same thing and education may have different effects on each. This article seeks to put the analysis of education and societal cohesion back in the centre of the picture. We do this firstly through a critical review of some of the existing literature on education and social capital which points to the limitations of individual level analysis of what are fundamentally societal issues. Secondly, we outline some alternative models for understanding how education impacts on social cohesion in different societies, drawing on an analysis of some of the aggregated cross-national data on skills, income distribution and various indicators of social cohesion. The argument suggests some causal mechanisms for the social impacts of education that are quite different from those which normally underpin arguments about human and social capital.

Education is a powerful generator of social capital. According to recent research on the USA, Italy and the UK (eg Emler and Frazer, 1999; Hall, 1999; Nie et al, 1996; Putman, 1995; 2000), more educated individuals tend to join more voluntary associations, show greater interest in politics and take part in more political activities. They are also more likely to express trust in others (social trust) and in institutions (institutional trust), and are more inclined to 'civic cooperation' - or at least to profess that they do not condone 'uncivil' behaviour. Education is clearly not the only factor that predisposes people towards joining, engaging and trusting, but it is a powerful predictor, at the individual level, even when controlling for other variables such as wealth, income, age and gender. To Robert Putnam, current doyen of social capital theorists, 'Human and social capital are clearly related, for education has a very powerful effect on trust and associational membership, as well as many other forms of social and political participation.' (Putnam, 1995, p. 667).

Precisely how education contributes towards civic engagement and social capital, and under what conditions, is not yet well understood. We know rather little about the mechanisms through which learning influences different kinds of individual social behaviour, the contexts

within which such effects occur, and how and why they change over time in different countries. Social capital theorists who have specifically addressed questions about learning, notably James Coleman, have mostly treated education as an outcome of social capital rather than as a cause. Those, like Putnam, who do take it as an independent variable have not generally gone beyond describing statistical associations between levels of education and social capital outcomes. Outside of the social capital debate, there have been some social psychologists and political scientists (eg Emler and Frazer; 1999; Nie et al, 1996), who have sought to provide causal explanations as to how these effects occur. However, their analyses remain largely at the level of the individual.

What none of this work has begun to do is to provide the theoretical and empirical links between education and social cohesion at the macro societal level. In fact, arguably, none of the traditions above have a conceptual apparatus designed to address this question. Writings on education and civic participation see education as providing individual resources of skills and knowledge which can facilitate certain individual social behaviours, but they tend to address societal effects through individual aggregation rather than analysis of societal institutions and cultures. Extrapolating from individual effects to societal effects may require more than simply grossing-up of individuals outcomes, since individuals effects may be relative or 'positional' as Nie suggests with his theory of education effects on political engagement through competition for limited network-central positions in society (Nie, 1996). [1]Social capital theory, despite using the language of individual resources and the deliberate analogy with human capital, claims to treat the 'norms, networks and trust' that constitute its central concern as properties of social relations as well as individual attributes (Coleman, 1988). But the theory was first extensively developed by Coleman to apply to local communities, and has arguably been subsequently most successfully applied at the level, rather than at the level of whole societies (Woolcock, 2000).

The assumption common amongst social capital theorists that countries with communities rich in social capital will also usually be more cohesive as societies is largely unexplored in the literature and highly debatable, since in reality this all depends on the norms and values of particular constituent communities and whether the different communities are at war or at

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peace with one another other. Some countries cited in the research as having rich deposits of community social capital, such as contemporary Northern Ireland (Schuller, Baron and Field, 2000) and the 1950s America (Putnam, 2000), would hardly be considered models of social cohesion on any of the traditional measures of the latter.

Clearly, it does not automatically follow that because education raises levels of community participation amongst individuals, it will also increase societal cohesion. Nor does it follow that the mechanisms through which learning generates community participation and social capital are the same as those by which it may help to promote societal cohesion. Yet these are rapidly becoming key assumptions of policy makers in America and the UK, who see lifelong learning as promoting social cohesion through the benefits which increased individual resources and competences bring to community renewal and social inclusion.

Social capital theory has made rapid inroads into Anglo-American social science and policy making, largely displacing – or simply conflating – earlier, more 'European' discourses of social cohesion and social solidarity. However, for all its advances in the understanding community networks, and despite the success of the theory in bringing the 'social' back into dominant neo-liberal discourses of politics and economics (Schuller, Baron and Field, 2000), there may also be dangers in forgetting the insights of some of the earlier traditions which treated cohesion as an explicitly societal phenomena. Social Capital and social cohesion are not necessarily the same thing.

In this article we seek to put the analysis of education and societal social cohesion back in the centre of the picture. We do this firstly through a critical review of some of the existing literature on education and social capital which points to the limitations of individual level analysis of what are fundamentally societal issues. Secondly, we outline some alternative models for understanding how education impacts on social cohesion in different societies, drawing on an analysis of some of the aggregated cross-national data on skills, income distribution and various indicators of social cohesion. The argument suggests some causal mechanisms for the social impacts of education which are quite different from those which normally underpin arguments about human and social capital.

The Historical Origins of the Debate about Education and Social Cohesion

How education impacts - at the societal level - on social cohesion and social solidarity is hardly a new question. Historically, it has been a primary concern not only of various social movements and state policies, both of the Left and the Right, but also of mainstream social theory, from Emile Durkheim down to Robert Merton and Talcott Parsons. Given the historical amnesia of much contemporary social science, these antecedents are worth briefly recalling.

As a theoretical and political concept, social cohesion has clearly taken diverse forms, from the authoritarian and nationalistic to the liberal, communitarian and social democratic versions that have tended to prevail in western states during the past half century. The role of education in promoting social cohesion has also been construed in a multitude ways by different historical groups, political ideologies, and state regimes. Crudely put, in nineteenth-century western Europe dominant social/political groups, whether of liberal or conservative orientations, tended to see education as a force for social order, whilst subordinate classes - and more particularly radical labour movements and revolutionary groups - tended to celebrate its potential for collective improvement through forging class consciousness and political solidarity (Simon, 1981). In the twentieth century education has been mobilized in equally diverse ways in support of class or ethnic solidarism, nationalism, and democratic citizenship in its various forms.

When mass public education first appeared in northern Europe and America during the era of state-building in late eighteenth and early nineteenth century, it was seen primarily, at least by the dominant social groups, as a means of building integrated national polities with cohesive national identities. The national education system first emerged precisely as an instrument of state formation, providing an effective means for training state functionaries, promoting loyalty and social order amongst the masses, disseminating dominant national ideologies and languages, and accustomizing populations to the new regulative regimes of the nascent modern bureaucracies (Boli, 1989; Green, 1990, 1997; Kaestle, 1983; Weber,1979). Later, say from the mid-nineteenth century, education become important for providing the skills and knowledge needed for the ‘second’, science-based, industrial revolution (Hobsbawm, 1967) and the civic attitudes deemed essential for maintaining stability as franchises and democratic rights were extended. As social historians, Ramirez and Boli, write

(1987), ‘European states became engaged in authorizing, funding and managing mass schooling as part of an endeavour to construct a unified national polity’.

Contemporary advocates of mass education, from the ‘old world’ of aristocratic Europe to the ‘new world’ of America, almost invariably justified the massive and unprecedented exercise of state intervention as a necessary and critical part of nation-building. Noah Webster, Federalist educational campaigner and author of numerous popular dictionaries and spelling books in the American Early Republic, argued that education was a necessity for developing the American ‘national character’ which, in a land of immigrants and new institutions, was ‘not yet formed’; Andrew Lunt, a vocal Democrat supporter of public education in the later Jacksonian period, proclaimed that education was the 'very bulwark of the republic' and the 'pillars' on which American democracy was supported (Kaestle, 1983). Northern continental Europe was equally, though often initially less democratically, concerned with education as nation-building. Baron Dubin, writing in Prussia in 1826, claimed that: ‘Practically all modern nations are now awake to the fact that education is the most potent means of development of the essentials of nationality.’ (quoted in Fuller and Robinson, 1992, p.52)

From a later and more democratic vantage point, and less specifically concerned with issues of national identity, Emile Durkheim provided the first systematic theorization of the historical role and social function of mass education precisely in terms of social integration: ‘Society,’ he wrote, ‘can only exist if there exists among its members a sufficient degree of homogeneity. Education perpetuates and reinforces this homogeneity by fixing in the child, from the beginning, the essential similarities that collective life demands.’ (Durkheim, 1977)

Durkheim wrote as a liberal socialist republican in late nineteenth century France (Lukes, 1973), but his theories left a complex legacy informing both Left and Right notions of education and social order. Social democratic traditions in continental Europe continued through next century to stress the importance of schooling for social solidarity and democratic citizenship, most notably in the Nordic countries (Boucher, 1982). Various strands in twentieth-century Conservative thought, and particularly the tradition of ‘romantic’ Conservatism which Raymond Williams traced from Burke and Coleridge down through Ruskin, T.H. Green and Michael Oakshot (Williams, 1958), have also emphasised the importance of education to social cohesion, in this case with the emphasis on maintaining the ‘organic community’ with its stable social hierarchies and more narrowly conceived notions

of national values. The educational campaigner and philosopher of aesthetics, Roger Scruton, most notably adopted this position in his diatribes against multicultural education at the time of the 1988 Education Reform Act in the UK (Hillgate Group, 1987). At least one major strand in twentieth-century western sociology - tradition of Parsonian functionalism - continued to focus on education and the transmission of the normative values.

In the post second world war period, newly independent states, particularly those in East Asia, continued to regard education as an important vehicle of nation building (Inkeles and Sirowy, 1983; Green, 1999; Gopinathan, 1994; Hill and Fee, 1995). However, generally-speaking, in the advanced western states, this aspect of schooling became gradually less emphasised. This was partly, at first, because of the sharpened post-war awareness of the dangers of nationalist appropriations of education, and then later because of the difficulty of finding adequate ways of conceptualizing national identity in the more culturally pluralist societies of the global age (Castells, 1997; Hildebrand and Sting, 1995). At the same time, education became increasingly associated with the goals economic development. Skills formation came rapidly to overshadow citizen formation as the primary goal of public education in most developed states (Green, 1997). The rise of human capital theory in the 1960s provided academic justification for the more economically instrumentalist views of education which were had already gained prominence amongst western policy-makers, particularly in English-speaking countries. Even as the discourse of lifelong learning became ubiquitous in the 1990s, its main rationale remained, at least in the more neo-liberal states, the goal of economic competitiveness (Coffield, 2000).

The tide now appears to be turning, to a degree at least. The European Commission, with its model of 'social Europe' and a *raison d'etre* of integration, has always maintained a concern with social solidarity and the ways in which this may be promoted by education. The recent Lifelong Learning Memorandum (EC, 2001) arguably pushes this further into centre stage. Various countries have been reviewing their citizenship education policies (Australia, France, the UK, and - more or less continually in the East Asian states) (Osler and Starkey, 2000). The New Labour Government in the UK has also shown an increasing preoccupation with problems of social exclusion and concomitantly with the social - or wider, non-economic - benefits of learning (Bynner, 2001; Green and Preston, 2001). These policy shifts can no doubt be traced to growing concerns, throughout the advanced economies, about the socially fragmentary effects of globalization, and the symptoms of community breakdown and social

disorder that seem to accompany rising consumerism and individualization (Beck, 2000; Green, 1997).

Education and social integration has thus re-emerged on the policy agenda. However, this time in new clothes. The dominant policy discourse, at least in the Anglo-Saxon countries, is no longer about social cohesion and social solidarity, and the impacts of education on these, but rather on community renewal and impact of education on 'social inclusion' via the labour market. The dominant theoretical discourse has changed as well. Theories of social integration have been superseded in current theory by the burgeoning new discourse of social capital. In both cases - in terms of policy and theory - there has been a significant shift from the macro societal perspective on social cohesion (whether of the Left or Right) to the more micro - individual or and community level - analysis. The role of education in shaping 'social' outcomes is re-established, but the social is now conceived in a different - more individualized - way.

The Rise of Social Capital Theory

Social capital theory is heir to a long American tradition of liberal, democratic localist thinking which dates back at least to de Tocqueville's 1836 essay on *Democracy in America* (de Tocqueville, 1956; Foley and Edwards, 1998; Showronek; 1982; Skocpol, 1996). This remarkable text, for all its deafening silences on class and racial divisions, provided an extraordinarily perceptive commentary on social customs and civic society in the New World, celebrating the vibrant associational life of the Jacksonian North as a democratic alternative the étatism of contemporary continental Europe. It left behind a potent legacy of anti-state civic ideology in American political culture that is now being re-appropriated, ironically - and significantly - at precisely the point when many fear that associational life there is in serious decline. Its return has been by a circuitous route.

The notion of social capital was first extensively elaborated in Pierre Bourdieu's theoretical work (Bourdieu and Passeron, 1970; Bourdieu, 1980), as one of a cluster of concepts, including human capital and cultural capital, which sought to disentangle the various resources and processes which underpin the acquisition and transmission of power and status in modern capitalist societies. Bourdieu's subtle formulations, though at times conceptually blurred and fuzzy, were carefully contextualised both socially and historically. However, they

have been all but forgotten in recent developments of the field within Anglo-Saxon economic and sociological thought, where the dominant approach has been the more decontextualized universalism of methodological individualism. Two strands have been most prevalent in the rise of the social capital research industry.

The first is the tradition inaugurated by James Coleman in his influential 1988 essay (Coleman, 1988) 'Social Capital in the Creation of Human Capital' which sought to illustrate how customary and apparently non-rational social behaviours could be understood as attempts to overcome economic externalities and market failures. Drawing on his previous work on social exchange theory, and working alongside Gary Becker at the University of Chicago (while the latter was simultaneously applying human capital logic to new areas of non-market behaviour), Coleman sought to extend rational choice theory further into the social domain by analysing the role that trust and social reciprocity played in resolving problems of collective action. Coleman was careful to limit his analysis to specific, bounded, local communities rather than to whole societies, arguing that social capital was primarily a 'public good' and a relational property of people in particular communities, rather than a portable or 'fungible' individual asset (Brown and Lauder, 2000).

Following Coleman, economists took up the idea and applied it to a growing range of social contexts and issues, from the micro to the macro levels (albeit in the latter case still using an essentially individual level approach). In one account at least (Fine, 2001; Fine and Green, 2000), this development can be seen as part of the evolution of the economics profession as it seeks to overcome the acknowledged limitations of its own traditional paradigm based on rational agents, utility maximization and equilibriating markets, largely divorced from their historical, cultural and institutional contexts. The latest wave of new neo-classical economics, and particularly the 'information-theoretical' approach associated with Joe Stiglitz's former work at the World Bank, attempts to overcome some of these limitations by understanding non-market conforming behaviours in terms of rational responses to information asymmetries and deficits. A number of economists and sociologists at the World Bank have subsequently begun to use the notion of social capital in analyses of anything from housing markets to crime, health and growth rates. Their work is disseminated to the outside academic community via a popular website (which is dedicated to social capital debate.

Social capital has thus come to be seen by these economists (and the sociologists working

with them) as an immensely flexible conceptual tool which can be used explain a wide array of social phenomena - previously ignored or assumed away by economists - in a way which can be made consistent with market economic logic. In the process, and by virtue of a single concept, whole tracts of the social geography have been re-appropriated for economics without reference to any of the theoretical maps developed by generations of sociologists. Michael Woolcock, who manages the social capital website at the World Bank, notes the positive and negative sides of this: 'several critics,' he writes, 'not without justification, have voiced their concern that collapsing an entire discipline [sociology] into a single variable [social capital]...is a travesty, but there are others that are pleased that mainstream sociological ideas are finally being given their due at the highest levels' (Fine, 2001, p.167).

The second strand of recent social capital theory is primarily associated with the work of the political scientist, Robert Putnam, who moved from his early work on civic association and local Government in Italy (Putnam, 1993) - where social capital appears as an essentially post-hoc theory in the coda to the book - to a full scale study of the trends in social capital in the USA (Putnam, 2000). Putnam's work has been immensely influential, partly because of his exhaustive compilation of data on various social capital measures and partly because his liberal communitarian message about the power of civic association is highly palatable to market oriented governments and commentators seeking politically acceptable solutions to global problems of social fragmentation. His analysis and policy message are both, however, based on a paradox.

In *Making Democracy Work* (1993), he argued that the superior performance of local government in the northern regions of Italy was due to the higher reserves of social capital accumulated there over thousands of years. These were seen, following Coleman, as essentially the bi-product of other historical developments and cultural movements. In *Bowling Alone: The Collapse and Revival of American Community* (2000), his recent study of social capital in the USA, he seeks to show both that social capital suffered a precipitous decline in a mere thirty years after the late 1960s, and that it is ripe for renewal.

The contention that social capital accumulates historically at snail's pace but can be dissipated very rapidly is somewhat curious from an historical point of view, and would certainly have surprised Putnam's mentor, de Tocqueville, whose greatest work, *The Ancien Regime and the French Revolution* (1955), was devoted to showing how even revolution

failed to expunge the legacies of the Ancien Regime in France, in fact building on centralised statism that was its hallmark. As historians frequently remind us, whilst institutions can be suddenly and radically transformed, at least on the surface, cultures change very slowly. Equally contradictory is Putnam's optimism about the possibilities of a socially willed reprise of social capital in America, given the earlier adherence to Coleman's notion of social capital accumulating almost involuntarily as a bi-product of other processes. The antinomies of Putnam's title and theme about collapse and revival appear both naïve and politically expedient in the final essay on the possibilities of communitarian revival. Cassandra and Pangloss both, Putnam can apparently appeal to a wide policy audience, but he has found more critics amongst his academic readers.

Putnam's Paradoxes

Putnam defines social capital as the 'features of social life - networks, norms and trust - that enable participants to act together more effectively to pursue shared objectives' (Putnam, 1995). These objectives are not always laudable, and Putnam has increasingly acknowledged the 'dark side' of social capital (Schuller, Baron and Field, 2000), but for the most part he still treats the concept normatively as a positive basis for enlightened community and active democracy. In the positive civil society scenario, a number of characteristic attitudes and behaviours, including association, volunteering, donation, political engagement, trust and tolerance, are seen to work together in a virtuous spiral to produce desirable collective outcomes. 'Other things being equal,' Putnam writes (2000, p. 137) 'people who trust their fellow citizens volunteer more often, contribute more readily to charity, participate more often in politics and community organizations, serve more readily in juries, give blood more frequently, comply more fully with their tax obligations, are more tolerant of minority views, and display many other forms of civic virtue.' How these behaviours are connected is not always clear, and Putnam acknowledges that causality for individuals can run in different directions, but his claim is that the evidence (which he doesn't cite) weighs on the side of joining forming the basis for trust, rather than the reverse. For Putnam, as for de Tocqueville, what counts most is the vibrancy of associational life - 'the social networks' from which arise 'the norms of reciprocity and trustworthiness' (Putnam, 2000).

Education has a powerful effect on social capital, being the strongest predictor of individual associational membership, trust and political participation (Putnam, 2000, p.667). According

to Putnam, the US data show that the last two years of college attendance make twice as much difference to trust and group membership as the first two years of high school, irrespective of gender, race and generation. Highly educated people, says Putnam, 'are much more likely to be joiners and trusters, partly because they are better off economically, but mostly because of the skills, resources, and inclinations that were imparted to them at home and in school' (Putnam, 2000, p.667).

Despite rising levels of education, however, social capital in America is in decline, according to Putnam's analysis in *Bowling Alone*. On all his measures of membership, trust, political engagement and voting, there has been a steady erosion since the late 1960s which applies across genders, ethnic and social groups and educational levels. These declines, according to Putnam, cannot be explained by urbanization, mobility, time pressures or the changing roles of women. They are primarily generational effects reflecting the passing of the socially engaged New Deal generation and its replacement by generations of so-called 'boomers' and 'Xers' who have more privatised lifestyles and spend more time watching TV. America, the quintessential land of association has, in the course of two generations, become disassociated.

At the level of the individual, Putnam's analysis of social capital has much to commend it. He has compiled a huge mass of data based on a wide array of indicators which shows, fairly conclusively, at least for contemporary America, that there is a relation between individuals trusting, joining and becoming politically engaged, and that education relates to all of these, either directly or indirectly. He has also charted the trends over a substantial period, showing that the behaviour of the American public is indeed changing in significant ways. Several critics have contested his analysis of declining levels of association, but if you accept his (largely fixed) choice of indicators, the evidence is clear and comprehensive. However, for all this, and despite his claims to be providing an account social change in America, he has said very little about American society as such, how it hangs together or fails to hang together, and how education impacts on social cohesion at this societal level. A number of obvious problems stand out and illustrate the weakness of Putnam's approach in providing explanations at the societal level using tools more appropriate for the analysis of individual and community behaviour.

Firstly, if association is the key to social capital - and by extension social cohesion - as Putnam maintains, why is it that the USA, which ranks highest on levels of membership

amongst a wide range of countries in repeated World Values Surveys (Inglehart, 1990), is so palpably lacking in social cohesion on any of the more conventional measures like crime and inter-ethnic conflict? Second, why, if education is such a strong determinant of individual joining and trusting, is social capital declining so fast in America when education levels are still rising, and most with the younger generations who are precisely the most educated? Thirdly, if the decline is due to factors other than education, which on Putnam's account it must be, how do these impinge at societal and individual levels? Putnam finds it difficult to answer these kinds of questions with conviction because his argument, which is pitched at the level of individual behaviour, lacks the cultural, institutional and political dimensions that are critical to understanding societal change.

Putnam argues that associational membership is the key to social capital and social cohesion. But what evidence do we have for this? We know that in contemporary America individuals who join more also tend to trust more and to be more politically engaged than those who do not. We also know that in various other contemporary societies the correlation holds at the individual level (Brehm and Rahm, 1997; Hall, 1999; Stolle and Rochen, 1998). However, if you extend the analysis to a larger set of countries, as Newton and Norris (2000) have done using pooled data 17 countries in the World Values Survey, the association at the individual level becomes extremely weak, and no correlation at all can be found at the societal level (see also Knack and Keefe, 1997; Norris, 2001). America has exceptionally high level of membership relative to other countries but exceptionally low levels of voting and only moderate levels of trust (Inglehart, 1990).

Putnam's contention, which is at the heart of social capital theory, that these various characteristics 'form a coherent syndrome' (2000; p.137) may apply at the level of the individual in some countries but the proposition does not hold for all. As Stolle and Rochen (1999) show in relation to Sweden, Germany and the USA, context, including the role of the state, may have an important bearing on how these characteristics interact. Consequently, there may also be no relation at all between joining and trusting at the societal level. It may be the case that individuals who join more also trust and engage more politically in some contexts, but there may be independent factors that determine the levels of each of these separately at the societal level which are far more powerful than the associations at the individual level. This may mean that some countries have both high levels of trust and moderate levels of joining relative to other countries, as seems to be the case for instance in

some Nordic states, whilst others, like the USA, have relatively high levels of joining and lower levels of trust (Inglehart, 1990). If these core social capital characteristics do not co-vary across countries it suggests that they have little meaning as a single factor at the societal level.

The primacy accorded to association in Putnam's account of social capital is contentious in other ways. His main concern is how much people associate and join, and his analysis of this is largely quantitative. However, quantitative approaches may well miss the key issue for social cohesion. What do people join for and how does it enhance social integration? Putnam acknowledges that there are different kinds of association and that those that encourage 'bridging' between groups and associations and with individual outsiders are more important to social capital than those which merely encourage in-group bonding. This is an important point. As Mark Granovetter has shown (1978), weak but extensive ties may have more beneficial social effects than the strong ties of dense but relatively closed networks. Societies with excessively close and closed family ties, may tend towards the 'amoral familism' described by Banfield (1970) which may be neither trusting nor innovative in societal terms. Equally, as Mancur Olson famously argued (1971) for some of the victorious allied powers after WW2 by contrast with their defeated but reconstructed rivals, states with long established and powerful interest groups – and thus high levels of association - may become prone to sclerosis and slow growth.

The importance of these qualitative distinctions in forms of association are acknowledged by Putnam in principle. However, in his own analysis he is unable to distinguish effectively between organizations which involve bridging and those which involve bonding, so that his conclusions regarding overall trends in association are based on gross aggregates more than any qualitative analysis of the way people associate. This proves to be a fatal weakness in his account and renders his analysis superficial as a commentary on social cohesion.

In terms of institutional and societal behaviour, there is no necessary relationship between associational membership and social trust. It depends entirely on the types of organizations involved and their objectives. Active and long-term membership of some types of organization may incubate trust through reiterated social interactions as predicted in game theory (Fukuyama, 1999; Granovetter, 1973; Axelrod, 1986); this may be a generalized trust if the organizations are relatively 'encompassing' and heterogeneous, and if they are pursuing

collective public goals which go beyond the narrow interests of small groups of people. Under certain historical circumstances major political parties or coalitions of parties might fit this description, constructing what one tradition describes as national popular ideologies or hegemonic social relations (Gramsci, 1971). Trade unions may also at times play this role, especially where they are large general or industrial unions representing disparate occupations at different levels, as opposed to craft unions and professional associations representing narrower interests. Likeswise, major Churches and religions, where they are broadly ecumenical (members of evangelist churches in the USA trust less than the average, whereas members of the broad mainstream Churches trust more - see Putman, 2000).

On the other hand, membership of exclusivist organizations with self-interested goals may encourage trust amongst their members but positively erode trust in society at large (Newton, 1999). Extremist or racist organizations, for instance, may well produce high levels of internal bonding but be guaranteed, at the same time, to generate distrust from their members to people outside and towards their members from people outside. Timothy McVeigh and his co-conspirators in the Oklahoma bombing were all members of bowling clubs, which provides a salutary and somewhat ironic commentary on Putnam's thesis (Fine, 2001).

The crux of the matter in terms of social cohesion is whether associations foster in their members trust in the generality of people rather than simply in other members, and whether this increment to the pool of public trust is not counterbalanced by any diminution in trust amongst those outside generated by the existence of the same organization. Putnam's analysis is simply unable to evaluate this, which weakens his argument about the overall trends in American society. His case is that the gross levels of membership in the US are declining and that this must be bad for trust and ultimately for democracy. Others have argued just as plausibly that levels of association are actually quite stable in the USA, but that people are joining different types of organization whose membership levels Putnam does not measure, and which may be less conducive to social cohesion (Fukuyama, 2000). On Putnam's own evidence (and that of Warde et al for the UK: 2001), the types of membership that are declining fastest are precisely those involving the large, encompassing, multi-interest associations, such as the party and union. Membership growth tends to be in single-function or single-issue organizations, like sports clubs and self-help and environmental groups, or within lobby-type organizations, which, by definition, are serving narrow interests. What matters for social cohesion is the type and aims of association rather than the quantity.

In a recent study of social cohesion and fragmentation in modern societies (Fukuyama, 2000) Francis Fukuyama considers the changing nature of associational life and the apparent paradox, in America, of the coexistence of relatively high levels of association and growing levels of distrust and social fragmentation. The answer, he says, 'has to do with moral miniaturization: while people continue to participate in group life, the groups themselves are less authoritative and produce a smaller radius of trust. As a whole, then, there are fewer common values shared by societies and more competition amongst groups.' (p. 49) Whether or not one shares Fukuyama's socially conservative analysis of the causes of societal fragmentation, he has certainly pointed to a dilemma at the heart of social capital theory and one which underlines the importance of societal explanations of social cohesion.

Putnam's analysis remains ultimately at the level of the quantifying individual behaviour. From his perspective he is unable to provide meaningful measures of cohesion in society at large, let alone to provide meaningful explanations of changes over time. Where there should be analysis of cultural and ideological shifts, of changes in economic and social structures, and of new institutional arrangements, there are simply extrapolations made from individual associations. True to his liberal, individualist tradition, he overlooks the importance of role of the state and institutions in providing the structural basis for social cohesion (Skocpol, 1996), remaining largely silent on the effects on social relations of two decades neo-liberal government, with rising consumerism and individualism and the gradual dismantling of the welfare apparatus. Despite his own empirical demonstrations of the clear cross-regional correlations between social capital and income equality, he fails to explore the connections in America between declining social capital and rising inequality and social conflict. In Putnam's hands, social capital provides a distinctly romantic view of society devoid of power, politics and conflict (Edward and Foley, 1998; Skocpol, 1996).

What both strands of social capital thinking have in common, and the reason why they can relate so readily to mainstream paradigms in neo-classical economics, is that, despite ostensibly dealing with questions of collective action and community, they are equally wedded to a liberal, individualist view of society. Social capital economists ultimately still adhere to a methodological individualism that seeks to explain all social phenomena in terms of individual preferences, rational calculation and utility functions, assuming universal - and hence a-social and a-historical - principles of utilitarian human behaviour. As Fine and Green

note (2000), history only enters into mainstream economics as 'path dependence', 'random shocks' and 'unexplained initial conditions,' while society is absorbed as exogenous givens limiting but not constituting elected individual preferences. Putnam and his followers, whilst making passing reference to culture and institutions, also fundamentally locate and operationalize their analyses at the level of individual behaviour, despite acknowledging the relational nature of social capital. Neither is able to address the broader questions of social cohesion and the effects of education on it.

A Societal Approach to Social Cohesion

An alternative approach to social cohesion is to view it from a societal perspective. This assumes that cohesion in society at large involves not only bonding and trust within particular groups and communities but also between them; and that this entails some common sense of citizenship and values. Inevitably, therefore, it is concerned with questions of power and resource distribution, conflict and conflict resolution and the state forms, institutions, ideologies and cultures that shape these in any given country. Although regional differences within countries will be important, many of factors that most determine societal cohesion in a given country will be structural and national in nature and will require analysis at the societal level. These are often best analysed through comparative qualitative methods (Ragin, 1981) which give purchase on the effects of different national level factors. Where quantitative approaches are used, they will generally involve cross-national comparisons that use countries as the units of analysis because many of the national contextual or 'ecological' factors will be invisible to individual level.

Econometricians are often sceptical of cross-national statistical analysis. The limitations of datasets often mean that there are too few units of analysis (countries) to run reliable statistical regressions (Ragin, 1981). Also, cross-national correlations will sometimes produce results which conflict with the results of individual level statistical analysis and which will be dismissed as 'ecological fallacies' (Wilkinson, 1996). To methodological individualism, phenomena which can't be explained statistically as the result of the accumulation of individual actions do not exist. However, this simply ignores the fact that many societal phenomena are indefinable and hence unmeasurable at that level - as is notably the case with income inequality. Alternatively, they remain unobserved because they exist as constants. What this means, essentially, is that these contextual factors cannot be used statistically to

explain variations between individuals and therefore cannot be entered into the models. However, this should not necessarily imply that they are not major determinants of individual behaviour, nor that they are not highly significant in providing the contexts in which other variables, which can be observed, work. Statistical analysis may be satisfied when it can use individual level variables to understand ten per cent of the variance in individual behaviour in a given national population. However, much larger variations in behaviour between individuals in populations across different countries may remain quite inexplicable.

A cross-national societal approach to social cohesion is likely to differ from an individual-level human capital or rational choice perspective in other important ways. It will start from the assumption that all relations are context bound, that is to say specific to historical times and places and the structures and environments that pertain to them (Foley and Edwards, 1998). In terms of the social effects of education this would imply an a priori scepticism towards any propositions about universal relationships based on time and place specific data, such as the often cited association, for instance, between education and tolerance. From a comparative and historical point of view such ideas are very easily refuted. It would also imply taking institutional and cultural factors seriously. Modern economics, at least in the form of the new institutional economics, has begun to take institutional structures into account as, of course, classical political economy always did before the marginalist movement narrowed economists' concerns. However, cultural factors are still massively underestimated in modern economics and rational choice sociology, appearing, if at all, only as individual preference, which, of course, is precisely what culture is not. Lifestyle and culture are not synonymous.

Comparative, cross-national analysis, on the other hand, is almost bound to attend to the importance of cultures since there is overwhelming evidence that countries do in fact differ substantially, regularly and enduringly on a whole variety of cultural measures, not least to our concerns, in terms of aggregate levels of trust, association, political engagement and tolerance. As Ronald Inglehart tersely concludes from his exhaustive study of data for 25 countries in the World Values Survey (1990) 'The peoples of different societies are characterized by enduring differences in basic attitudes, values and skills: In other words they have different cultures.' (1990, p.3) These cultures are not monolithic and nor are they immutable. However, in given times and places they act as important determinants of social and political behaviour which cannot be left out of account.

To provide an obvious example: more educated people in most contemporary western societies tend to be more tolerant, other things being equal, than less educated people, as countless research studies have shown (see Nie et al, 1996). However, this does not mean more educated societies, past or present, are always more tolerant, nor, even, that educated people are more tolerant in all societies. Nazism arose in Weimar Germany, one of the most highly educated countries on earth at the time. This may mean that education did not have any positive effects on tolerance in Germany then. German Protestants, after all, were on average more educated than Catholics but they were also more likely to vote for the National Socialists, who received support from all social classes. Alternatively, it may simply mean that any positive education effects were overshadowed by other factors. The analysis of data on education and social attitudes across a range of countries in the World Values Survey shows only very weak correlations between average national levels of education and social capital, suggesting that the associations demonstrated at the individual level in various countries are outweighed in cross-country comparisons by other national factors, as we show below.

Education and Social Cohesion: A Cross-National Societal Perspective

In what follows we use a comparative, cross-national approach to develop and perform preliminary tests on an alternative model for the effects of education on social cohesion at the societal level. This serves primarily illustrative and exploratory purposes at this stage. We do not progress to the point of providing any institutional and cultural explanations for the posited relations, but the hypotheses are based on the forgoing theoretical analysis and are constructed in such a way that they are amenable to this kind of qualitative causal explanation.

We start by identifying a set of variables that co-vary at the national level and which analysis of the literature suggests may form a valid combined indicator of national level social cohesion. We then propose and test a model for the effects of education on social cohesion at the national level, using aggregated data for a sample of countries from various existing cross-sectional datasets.[2] In order to explore most fully our hypothesis we use two data sets.

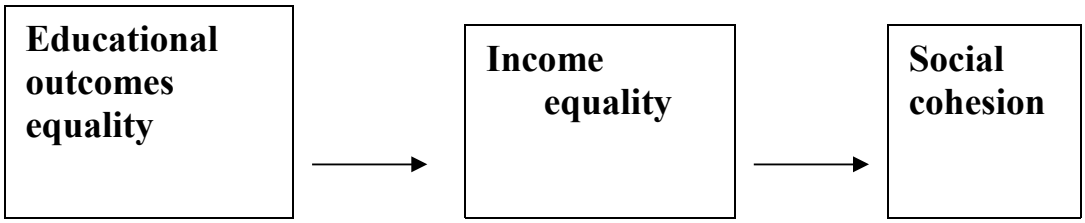
[2]National values for distributions of educational outcomes are calculated from the International Adult Literacy Survey data since these provide direct measures of skills which are deemed better indicators of education that the years of schooling measures commonly used by human capital theorists. Social attitude measures for a

The 'main' dataset is a cross sectional set of 15 economically advanced democracies for which we have data on social cohesion aggregates, skills and income distributions. Except where indicated otherwise in the text, our analysis refers to this dataset. However, in order to explore further the robustness of hypothesis related to social cohesion measures we use additionally an expanded dataset of 38 developed and developing countries that could be categorised as "market economies". The data on these countries is rather more limited – we have information on two social cohesion measures (trust and civic participation) and on income distribution. In the final section we discuss the efficacy of this model and its relation to other models.

Our model hypothesises that education affects national levels of cohesion not only through socialization but also through the indirect effects that the distribution of educational outcomes has through income distribution. Put simply, countries with education systems producing more equal outcomes in terms of skills and qualifications are likely to have more equal distribution of income and this in turn promotes social cohesion. The model is theoretically plausible because there is already considerable evidence (Nickell and Layard, 1998; OEACD/Statistics Canada, 2000) for a range of developed countries that skills distribution and income distribution correlate highly at the national level, and that cross-nationally income distribution is powerful predictor of social outcomes such as crime (McMahon, 1999) and health (Wilkinson, 1996).

Figure One

sample of countries are taken from the World Values Surveys of 1990 and 1995 and from national crime statistics (from Interpol). Gini coefficients for income inequality in different countries come from World Bank Statistics. Appendix 1 explains how our figures were derived for the main and expanded datasets.



Measuring Social Cohesion

Our analysis starts from proposition that social cohesion can only be measured at the societal level with indicators which are appropriate to that level and with sets of indicators which do actually co-vary and cluster at the national level. Social capital theory uses measures of association, trust, civic co-operation and political engagement to represent social capital at the individual/community level. However, as the discussion above suggested, these do not form a coherent syndrome at the national level. Some countries with comparatively high levels of association have moderate to low levels of trust (USA) and others with lower levels of association (Denmark and other Nordics) have high levels of trust (see Inglehart, 1990). Furthermore, on the basis of analysis of trends, there are some countries (USA) where trust and association appear to be declining in tandem (if you follow Putnam at least) and others where they are moving in different directions (ie UK - see Hall, 1999). Analysis by Knack and Keefer (1997) of data on 29 market countries in the World Values Survey (WVS) showed that there was no correlation between aggregate levels of trust and association across countries after controlling for education and income. Other studies have confirmed this (Norris, 2001; Newton and Norris, 2000).

Our own analysis of a slightly different sample of fifteen developed countries in the WVS (without controls) confirms that there is no correlation across countries between three of the social capital measures. These measures, the countries used and data sources are described in appendix 1. We use measures for general trust and trust in democracy (GENTR and DEMTR), for civic co-operation in terms of attitudes to cheating on taxes and public transport (TAXCH and TRANCH), a civic participation measure (GROUP), a tolerance indicator (TOLER) and measures of violent crime and a perception of risk of assult in the

local community safety (CRIME and RISK). Note that these crime and community safety variables are coded so that a reduction in crime or risk would be thought to be socially beneficial.

As Figure 2 (below) shows[3] there is no significant relationship[4] between general trust (GENTR), associational memberships (GROUP) and opposition to cheating on public transport fares (TRANSCHE) at an aggregate level. Figure 3 shows in the form of a scatterplot the lack of clear relationship between group memberships (GROUP) and general trust (GENTR) at the national level – elements which are often taken to be centrally "coherent syndromes" of social capital. This lack of a relationship between civic participation and general trust was also found in our expanded dataset of 38 market economies. As shown in figure 4, a scatterplot indicates little correlation between general trust and civic participation as confirmed by statistical tests ($r=-.069$, $p=.628$).

However, as figure 2 shows, there are significant correlations between general trust (GENTR) and trust in government (DEMTR)[5] in the main dataset ($r=.563$, $p=.029$). There are also a strongly significant relationships between general trust and a feeling of local safety (RISK) ($r=-.724$, $p=.005$) ($p<0.001$) and between norms of civic co-operation such as never cheating on taxes (TAXCH) and never cheating on public transport (TRANCH) ($r=.592$, $p=.020$) ($p<0.001$). These do not significantly correlate in our analysis with trust and membership, but in Knack and Keefer's (1997) analysis of the same data, which uses an aggregated factor based on answers to a larger number of questions about honesty and civic co-operation, there is a correlation between trust and civic co-operation values. Civic co-operation might therefore be included as a co-variant of trust, although we have not done so in this analysis.

Figure 2 also reveals a significant negative correlation between tolerance (TOLER) and never cheating on public transport (TRANCH) which might indicate that there is a perverse relationship between these liberal attitudes at a national level ($r=-.526$, $p=.044$). Those countries with a higher proportion of the population trusting people in general are also significantly more likely to have a high proportion of the population who are prepared to

[3] Estimates were computed using the SPSS computer package

[4] The test for significance is $p<0.05$ for a two-tailed test

[5] This conflicts with Knack and Keefer's (1997) findings from WVS that aggregate national levels of civic cooperation co-vary with social trust scores.

cheat with their public transport fares. Interestingly, we also find a positive and significant relationship between civic participation (GROUP) and only one measure of civic co-operation, namely a belief that it is never right to cheat on taxes (TAXCH) ($r=.592$, $p=.020$).

Figure Two : Pearson correlation coefficients and levels of significance for social cohesion aggregates

		GENTR	GROUP	DEMTR	TAXCH	TRANCH	CRIME	TOLER	RISK
GENTR	Pearson Correlation	1							
	Sig. (2-tailed)	.							
	N	15							
GROUP	Pearson Correlation	.003	1						
	Sig. (2-tailed)	.990	.						
	N	15	15						
DEMTR	Pearson Correlation	**.563***	-.226	1					
	Sig. (2-tailed)	**.029**	.417	.					
	N	**15**	15	15					
TAXCH	Pearson Correlation	.077	**.592***	-.312	1				
	Sig. (2-tailed)	.786	**.020**	.257	.				
	N	15	**15**	15	15				
TRANCH	Pearson Correlation	.195	.071	.223	**.554***	1			
	Sig. (2-tailed)	.486	.801	.425	**.032**	.			
	N	15	15	15	**15**	15			
CRIME	Pearson Correlation	-.146	.407	-.177	.430	-.087	1		
	Sig. (2-tailed)	.603	.132	.528	.110	.757	.		
	N	15	15	15	15	15	15		
TOLER	Pearson Correlation	.095	.351	-.262	.121	**-.526***	.250	1	
	Sig. (2-tailed)	.737	.200	.345	.667	**.044**	.370	.	
	N	15	15	15	15	**15**	15	15	
RISK	Pearson Correlation	**-.724****	.013	-.372	.026	.075	.012	-.266	1
	Sig. (2-tailed)	**.005**	.965	.210	.932	.808	.970	.380	.
	N	**13**	13	13	13	13	13	13	13

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Figure Three : A "coherent syndrome"? Civic participation and general trust at the national level in the main dataset

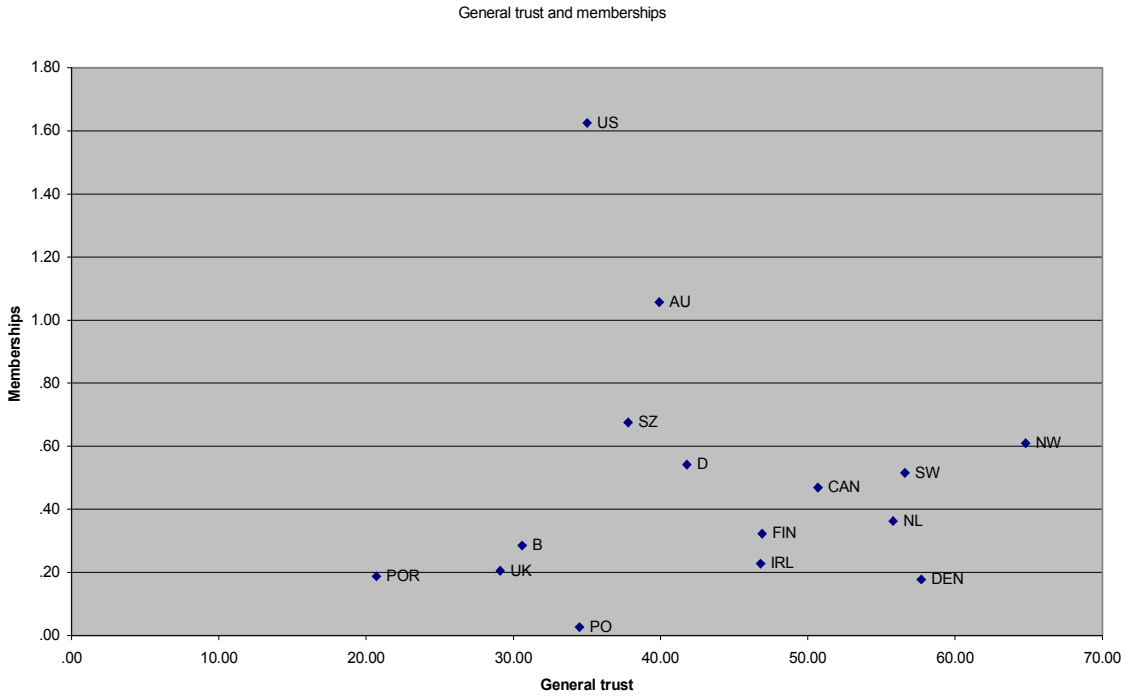
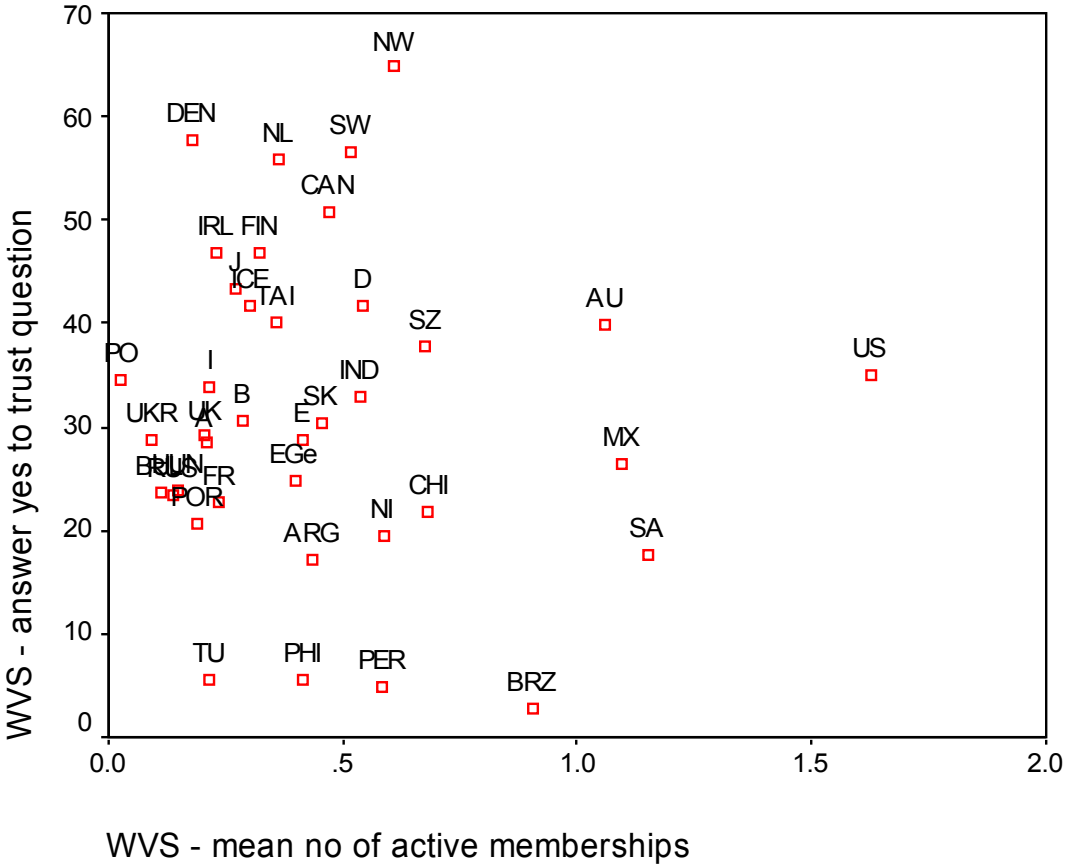


Figure Four : Civic participation and trust in an expanded dataset



Taking trust (general and institutional), civic co-operation and crime as indicators of national level social cohesion arguably makes good sense. Crime is a traditional negative indicator that would be readily recognized as valid by policy-makes and people in general in many cultures. One could hardly imagine it being said high levels of violent crime were a marker of social cohesion at the societal level, although it might be argued that they are compatible with certain kinds of group solidarity. In our analysis, we find that individuals at least consider that they are less at risk of crime in more trusting communities, although this does not necessarily correlate with observed crime rates (although there is some debate in the literature as to whether recorded or perceived crime is a better indicator of actual crime rates : Van Kesteren, Mayhew and Nieuwbeerta, 2000). Civic co-operation is also intuitively connected to social cohesion, at least in principle. People may sometimes massage their tax returns, break speed limits and jump the lights at crossings, but they will generally admit that these are not socially responsible things to do, and lament their increasing prevalence. Social and institutional trust seem to go together since trusting in institutions involves trusting in people

(although there may be societies where ordinary people trust each other but not officials in institutions). Social trust has also proved to be a reasonably robust measure in various studies and, according to Norris (2001), is the main driver of the often cited links between social capital and growth and democratic stability.

Repeated WVS surveys show substantial and durable differences between countries on average levels of trust (Inglehart, 1990). The WVS 'Trust' question ('Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people') has been criticized on the grounds that it is impossible to know whether those answering it are expressing their trust in close friends and family or the wider society of individuals. However, a number of factors suggest that it is general trust that is being measured. As Knack and Keefer (19997) show, trust values across countries in the WVS correlate closely with the results of the Readers' Digest 'dropped wallet' test for a range of countries. They also correspond closely with the stable results of repeated Euobaromter surveys asking individuals whether people from other specified countries are trustworthy (Ingelhart, 1990).[6] Furthermore the very low proportion of those expressing trust in some countries in WVS (ten per cent in Brazil) also suggests that the question is not measuring narrow radius trust.

It is quite possible that cross-country variations in positive responses to the trust question are measuring simultaneously differences in both trusting and trustworthiness, but this hardly matters since trust is understood as a component of social cohesion precisely as a relational, dynamic and institutionally dependent phenomena. Trust breeds trust; distrust, distrust. Trustworthy people are likely to generate trust among others with whom they are in contact, and untrustworthy people the opposite. Societies where honesty and reliability are underpinned by social norms and institutional codes are more likely to be trusting societies because people are more likely to experience reasons to be trusting. Trust is thus measured as an individual attribute but its aggregated value points to societal features. As Alan Fox puts it: trust and distrust 'are embedded in the rules, roles, and relations which men impose on, or seek to get accepted, by others' (Fox, 1974, p.67).

[6] Eurobarometer surveys in 1976 and 1986 asked respondents in 9 European countries how far they trusted people in other named countries. The rank ordering on country's perceived trustworthiness was the same in both years with the Swiss, the Danes and the Dutch being most trusted and the Irish, Italians and Russians being least trusted. America, Britain and France lay in the middle (Inglehart, 1990, p. 399)

Correlation between Education and Social Cohesion Measures

In order to test the correlations across countries between education and our measures of social cohesion we need some valid national measures of education. Years of schooling measures used in WVS, our main dataset, are rejected, because length of schooling is a poor indicator of quality of learning and skills acquired. We therefore use the data on literacy in the International Adult Literacy survey (IALS). This survey has been criticised by some (Blum, Goldstein, and Guðrein-Pace, 2001) for cultural bias, but it at least has the merit of attempting to provide direct measures of skill, rather than proxies such as schooling years or qualifications. One may assume that the skills that it is measuring are related to both the quantity and quality of the education received.

As figure 5 (below) shows there are no significant correlations ($P<0.05$) across countries in the main dataset between aggregates for education levels (PROUS – the mean level of upper-secondary attainment in literacy) and measures for social cohesion (GROUP; DEMTR; GENTR; TAXCH; TRANCH; CRIME; RISK) (athough there is a positive correlation between this variable and tolerance (TOLER), which we have not included here as a social cohesion measure). This should be no surprise given what we have said already about the likelihood that national cultural and institutional factors greatly outweigh gross education effects on social cohesion. We therefore look next at the impact of educational inequality on social cohesion, on the basis that comparative historical and theoretical literature suggests that social cohesion is highly sensitive to distributional effects.

Figure Five : Pearson correlation coefficients and levels of significance for mean level of upper secondary attainment and social cohesion aggregates

Correlations

		GENTR	GROUP	DEMTR	TAXCH	TRANCH	CRIME	TOLER	RISK
PROUS	Pearson Correlation	.354	-.120	.244	-.376	-.487	-.055	.491	-.505
	Sig. (2-tailed)	.196	.670	.381	.167	.066	.845	.063	.078
	N	15	15	15	15	15	15	15	13

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Educational Inequality and Social Cohesion

We have used results from all cycles of the International Adult Literacy Survey (IALS) in order to ascertain the distribution of educational outcomes, in terms of literacy skills, across a number of countries also included in the World Values Survey (WVS). Using a similar methodology to Nickell and Layard (1998, p.67) we calculated a test score ratio based on the differences between the average literacy levels of those who attended the minimal compulsory education for that country and those who continued their education after the upper secondary level. Following the method used by the OECD (2000) when assessing the social consequences of inequalities in literacy, we used the prose measure of literacy rather than the quantitative measure of literacy employed by Nickell and Layard (1998, p.67). There may be questions about the suitability of these measures, or a combined measure as a proxy for skill distribution in the labour market, and this is an issue for further debate.

TABLE 3 : MEAN PROFICIENCY SCORES AND TEST-SCORE RATIO FOR COUNTRIES IN SAMPLE

COUNTRY	PROLESUS	PROUS	PROTERT	P3
Australia	250.60	280.00	310.40	1.24
Belgium	242.50	281.00	312.30	1.29
Britain	247.90	281.90	309.50	1.25
Canada	233.40	283.80	314.80	1.35
Denmark	252.80	278.10	298.50	1.18
Finland	261.60	295.90	316.90	1.21
Ireland	238.80	288.20	308.30	1.29
Netherlands	257.50	297.00	312.10	1.21
Norway	254.50	284.40	315.10	1.24
Poland	210.50	252.70	277.30	1.32
Portugal	206.60	291.50	304.80	1.48
Sweden	275.40	302.30	329.10	1.19
Switzerland	228.10	274.10	298.30	1.31
USA	207.10	270.70	308.40	1.49
Germany	265.60	283.80	310.10	1.17

Table 3 shows the mean prose scores for those whose educational level is less than upper secondary (PROLEUS), for those who have attained upper secondary education (PROUS) and for those who have attained some tertiary education (PROTERT). The test score ratio (P3) is the ratio of the score of those attaining tertiary education (PROTERT) to those attaining lower than upper secondary education (PROLEUS). Hence it is the ratio between

the level of attainment of those who have experienced post-compulsory education and those who have attained the lowest level of secondary education.

The results show that measures of inequality in skills outcomes are rather higher in English-speaking countries such as the UK, the USA and Canada than in some northern continental and Nordic countries such as Germany and Sweden. The relative positions of countries here confirm some of the findings on skills spreads by Brown, Mickelright and Waldmann (2000), based on analysis of IEA data for test scores at 14, and Green and Sakamoto (1999) based on adult distributions of qualifications.

If we then correlate national measures of skills distribution against national measures of social cohesion (Figure 6) we find that there is a significant ($p<0.05$) correlation ($r=-.592$, $p=.020$) between educational inequality (P3) and one commonly used measure of social capital, the general level of trust (GENTRUST). Hence, the higher the level of educational inequality, the lower the level of general trust.

Figure Six : Pearson correlation coefficients and levels of significance for distribution of educational attainments and social cohesion aggregates

		GENTR	GROUP	DEMTR	TAXCH	TRANCH	CRIME	TOLER	RISK
P3	Pearson Correlation	**-.592***	.333	-.283	.265	.171	.398	-.060	.404
	Sig. (2-tailed)	**.020**	.225	.307	.340	.543	.142	.831	.171
	N	**15**	15	15	15	15	15	15	13

* Correlation is significant at the 0.05 level (2-tailed)

However, membership (GROUP), Putnam's key measure of social capital, does not correlate positively with educational equality. In fact in this case the effect of the education variable, which is below the .5 per cent significance level, appears if anything to be reversed, so that number of memberships, for instance, show a positive correlation with educational inequality ($r=.333$, although not significant at the 5% level). This finding, though interesting in itself, need not trouble our thesis since association is not taken to be a measure of national level social cohesion.

Education and income inequality

If educational equality correlates with social cohesion, at least in terms of general trust, across countries, how does this association work? Our model hypothesised that education impacts on social cohesion both directly through socialization effects and indirectly through effects of skills distributions on income distributions. We are unable to test for the socialization effects since we have no measures for 'effective' socialization outcomes. In any case average levels of education in our correlation not does show any association with social cohesion outcomes. We can, however, test the effects of educational distributions on income distributions and we do this using a method adapted from Nickell and Layard (1988).

In measuring the degree to which skill differentials correspond to income inequality, Nickell and Layard (1998) employ earnings ratios, the ratio of incomes between individuals of differing educational levels. In this paper, we employ gini coefficients which are a more general measure of earnings inequality for the whole population. Gini coefficients employed are provided in table 4 (below).

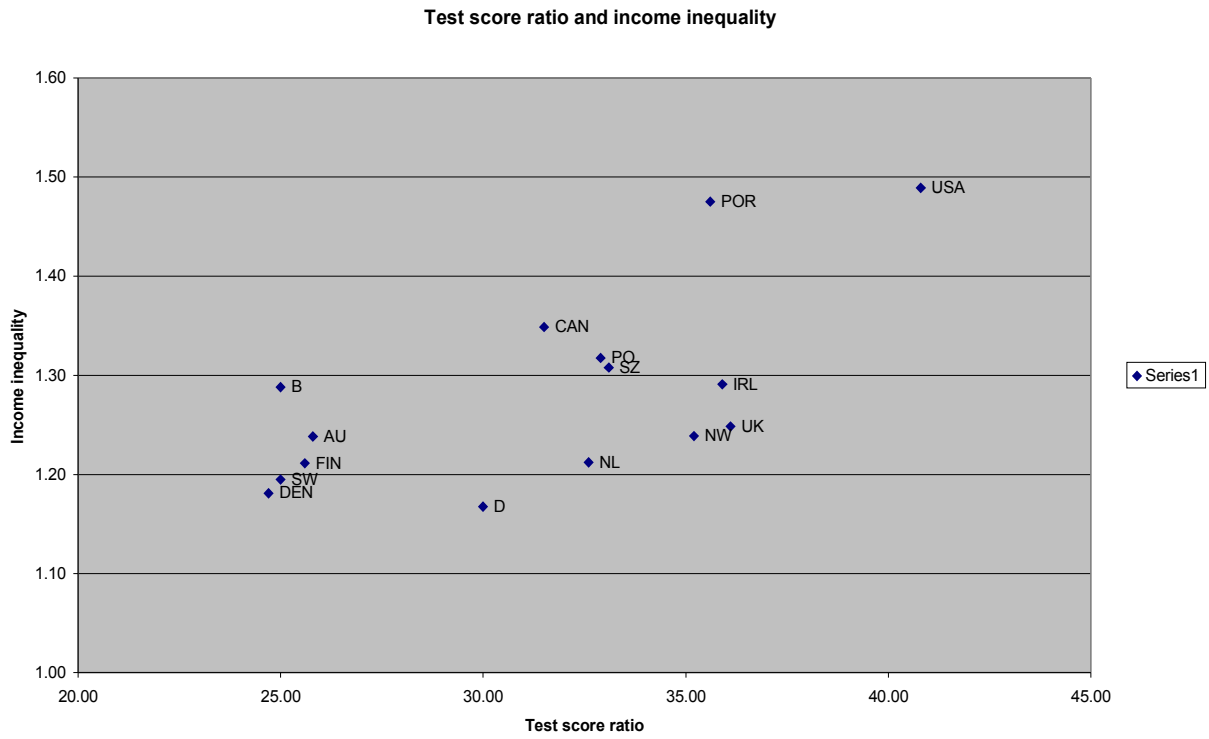
Table Four : GINI COEFFICIENTS (MID 1990S)

COUNTRY	GINI
Australia	35.20
Belgium	25.00
Britain	36.10
Canada	31.50
Denmark	24.70
Finland	25.60
Ireland	35.90
Netherlands	32.60
Norway	25.80
Poland	32.90
Portugal	35.60
Sweden	25.00
Switzerland	33.10
USA	40.80
Germany	30.00

Source : World Bank (2001)

Figure 7 shows the relationship between educational inequality, measured by the test score ratio P3 and each of the fifteen countries in our sample. As can be seen, there is an association between distributions of literacy skills and income inequality in these 15 economies. Economies with a high degree of skill disparity, also have high degrees of income inequality and vice-versa. As shown in figure 7, there is a clear relationship between the test score ratio (P3) and the gini coefficient. This relationship is statistically significant ($p<0.01$) with a positive and large correlation coefficient ($r=.650$, $p=.009$).

Figure Seven: Educational Inequality and Income inequality



Income inequality and social cohesion

The next stage in the model requires that we test whether there is an association between income inequality and social cohesion. Putnam (1993, 2000, p. 360-1) found that income inequality and aggregate social capital correlated across regions in both Italy and the USA, although he made little analytical use of this empirical finding, consigning its mention to a footnote in *Making emocracy Work.* We seek here to find whether this applies at the national level and with which measures of social capital. In order to do this we employed the 1990 and 1995 sweeps of the World Values Survey to calculate measures of general trust and association. Following Knack and Keefer (1997) our measure of trust was based on the percentage of individuals in each country who answered 'yes' to the question whether people in general can be trusted. The association measure employed was the average number of memberships of various associations for each country. These associations included church, religious, art, music and educational organizations, unions, political parties, environmental organizations, charitable organizations and other voluntary organizations.

Figure 8 provides the results of the analysis of correlations between income inequality and our social cohesion aggregates. For the fifteen countries in the main dataset we failed to find a significant relationship between income inequality and associational membership. However, a significant positive relationship between income inequality and violent crime (CRIME) (r=.640, p=.010) and the perceived risk (RISK) of assult in the community (r=.636, p=.020) was identified in addition to a significant negative relationship between income inequality and general trust (r=-.547, p=.035). Scatterplots show descriptively the relationship between income inequality, crime (figure 9) and general trust (figure 10).

Figure Eight : Pearson correlation coefficients and levels of significance for distribution of income and social cohesion aggregates

Correlations

		GENTR	GROUP	DEMTR	TAXCH	TRANCH	CRIME	RISK	TOLER
GINI	Pearson Correlation	**-.547***	.414	-.305	.403	-.009	**.640***	.636*	.240
	Sig. (2-tailed)	**.035**	.125	.269	.136	.975	**.010**	.020	.389

	N	15	15	15	15	15	15	13	15

* Correlation is significant at the 0.05 level (2-tailed).

Figure Nine : Income inequality and general trust

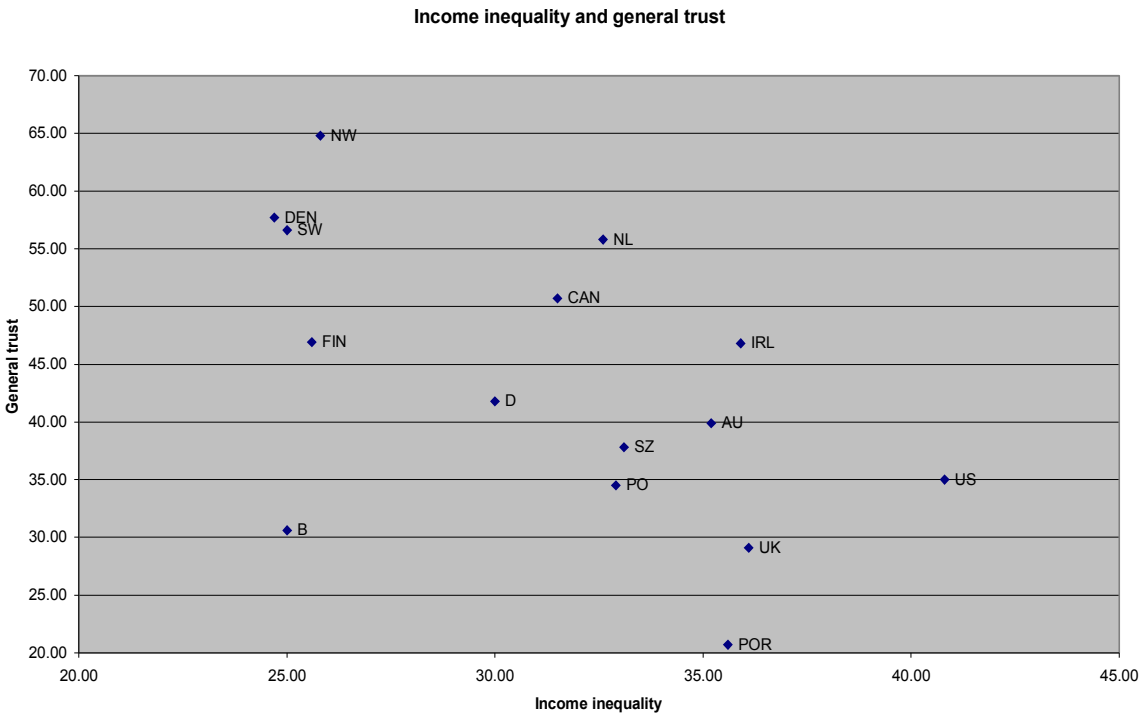
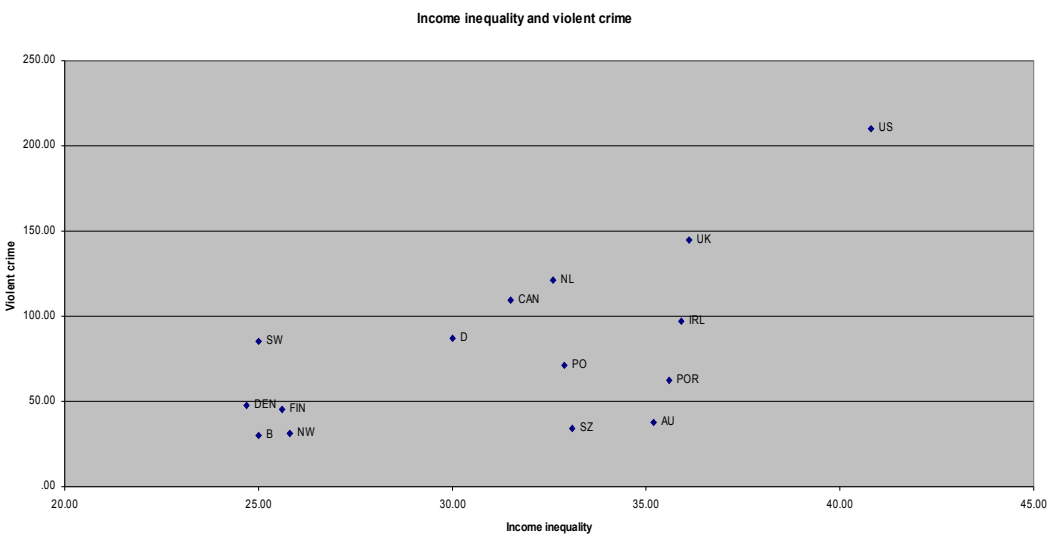


Figure Ten : Income inequality and crime



In order to explore further the relationship between income inequality and associational membership, we expanded our range of countries to include the 'market economies' used by Knack and Keefer. We find a weak but significantly positive relationship between income inequality and association, with average group memberships highest in those countries that have the highest degree of income inequalities. As figure 11 shows, this relationship may be unduly influenced by a number of outlying countries, particularly MDCs and LDCs with high levels of income inequality and high levels of civic participation. However, even if we remove these countries (Mexico, Brazil, Chile and Nigeria) from our sample, and also the USA which is another outlier, a weak positive, but significant, relationship between income inequality and social capital remains ($r=.514$, $p=0.02$). What we may be seeing here is the effect of associational activity undertaken to offset social grievances. This seemingly paradoxical relationship may cause us to question the supposed autonomy of civil society from economic relationships (Marx and Engels 1976 : 62-65) or at least the vested economic interests of social groupings (Olson, 1971) which is conspicuously absent from social capital theorizing.

Using the expanded dataset, we also find that the negative relationship between income inequality and general trust is maintained – that is countries with more unequal distributions of income are also those in which there is less agreement that people in general can be trusted from the WVS ($r=-.655$, $p=<0.001$). The relationship between income inequality and general trust is shown in figure 12.

The findings here on the effects of income inequality on national levels of trust confirms other findings by Knack and Keefer (1997) that income equality (with, in their case, value consensus as proxied by measures of ethnic homogeneity) provides the best statistical explanation of cross-national patterns of variation. The findings on the effects of income inequality on violent crime also parallel the findings of criminologists on violent crime across countries (Braithwaite and Braithwaite, 1980; McMahon, 1999; Messner, 1982; Wilkinson, 1996). Braithwaite and Braithwaite (1980) showed a statistically significant correlation

between greater inequality of earnings and higher homicide rates. Messner (1982) found that the extent of income inequality accounted for 35 per cent of the differences in homicide rates among the 39 countries for which he had data. Taken together these results suggest that income inequality is an important factor in social cohesion. Our results here on the positive relation between inequality and association (of any type) also add support to our argument that association works in a different way from other social capital measures at the national level and should not be considered as a measure of social cohesion.

Figure Eleven : Income inequality and civic participation ("social capital") in an expanded dataset

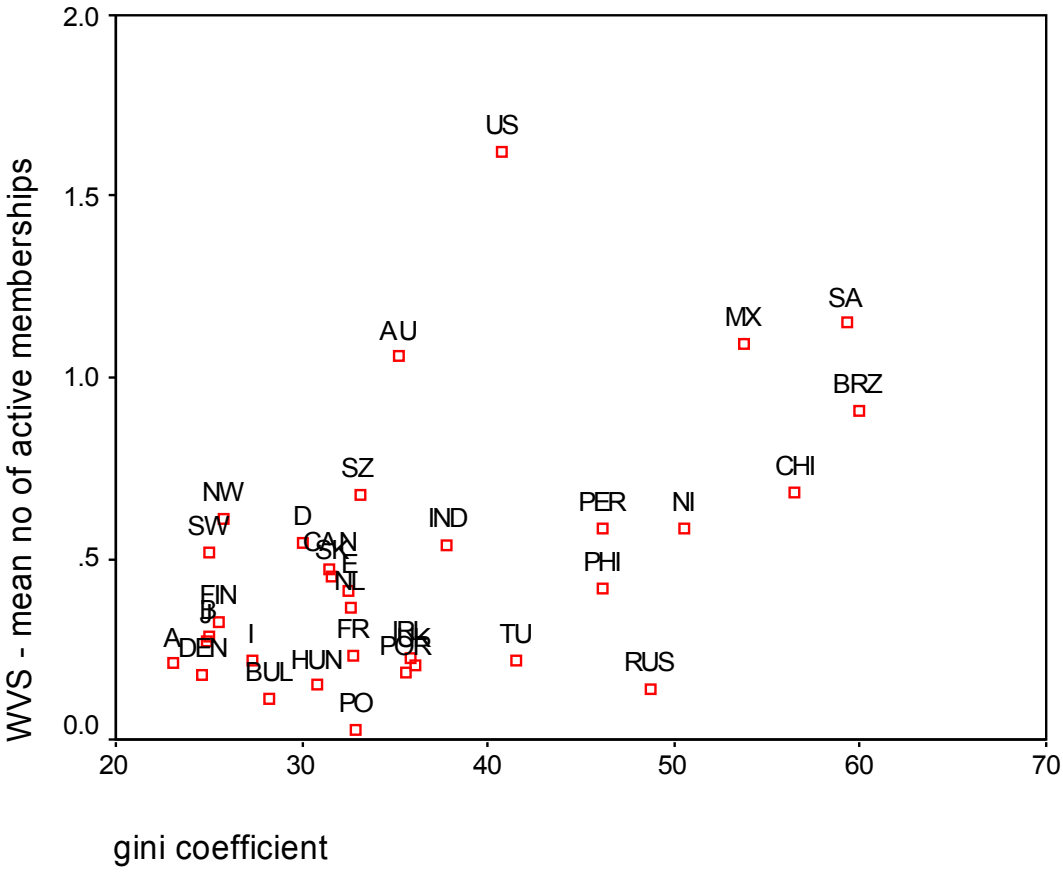
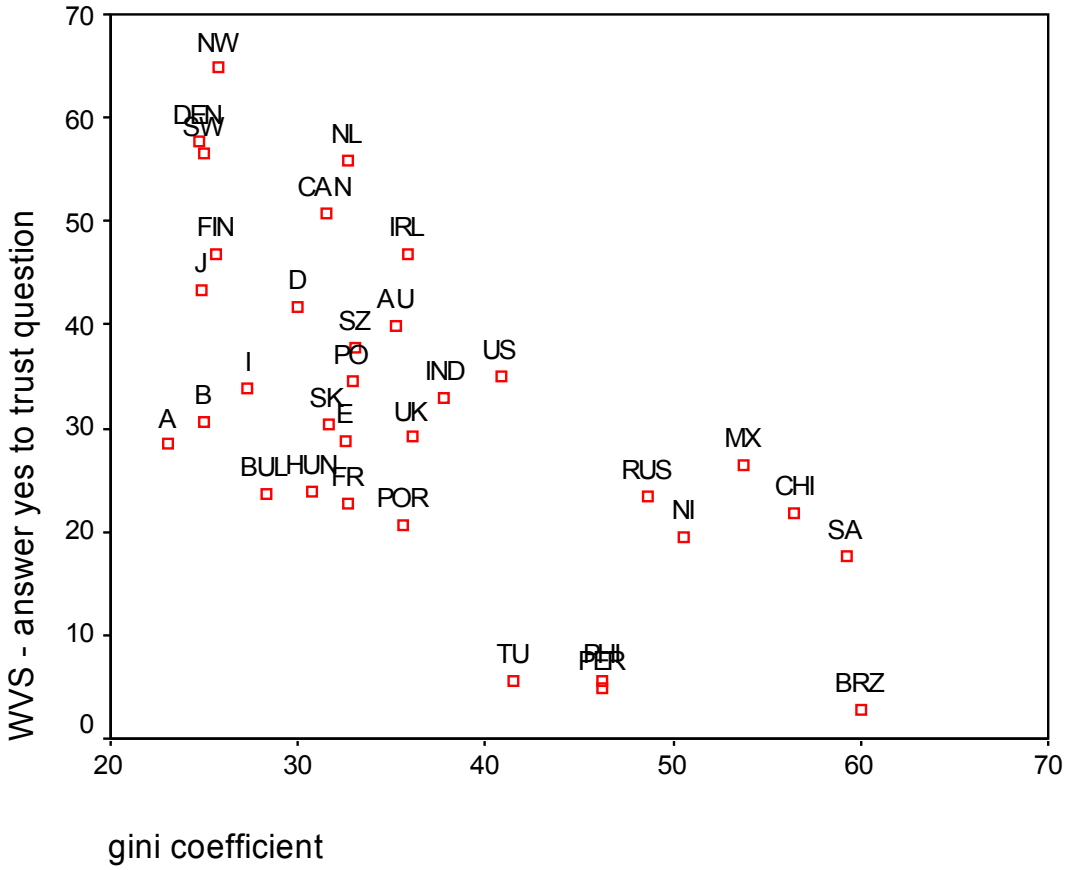


Figure Twelve : Income inequality and general trust in an expanded dataset



Educational inequality, income inequality and social cohesion

We can now look at both stages of the model together. If one regards income inequality as a mediator between educational inequality and social cohesion measures then the explanatory power of some of the causal pathways may be improved. Figure 13 below posits a model whereby the effects of educational inequality are transmitted through income inequality and thereby to measures of social cohesion. In this model, GNP per capita is used as a control, hence the correlation coefficients presented are "partial" correlation coefficients. The measure of GDP per capita used was taken from the Purchasing Power Parity Index employed by the World Bank (1996, pp. 188-189). After introducing controls, the partial correlation coefficients between income inequality and general trust (GENTRUST) (r=-.526, p=.037) remain significant. As before, we find that inequality decreases general trust but increases violent crime (CRIME) (r=.660, r=.010) and increases perceptions of risk of crime (RISK) (r=.628, p=.029). We also find that controlling for GNP per capita means that the association between income inequality and civic participation becomes significant (r=.595,

p=.025). Hence, even in our reduced sample, it is possible to locate a positive relationship between income inequality and civic participation.

Figure Thirteen : Pearson correlation coefficients and levels of significance for distribution of income and social cohesion aggregates with controls for GNP / capita

Correlations

		GENTR	GROUP	DEMTR	TAXCH	TRANCH	CRIME	TOLER	RISK
GINI	Pearson Correlation	**-.562***	**.595***	-.032	.430	-.004	**.660***	.270	**.628***
	Sig. (2-tailed)	**.037**	**.025**	.293	.125	.989	**.010**	.350	**.029**
	N	**15**	**15**	15	15	15	**15**	15	**15**

* Correlation is significant at the 0.05 level (2-tailed).

Some Conclusions

The analysis above leads to a number of tentative conclusions regarding the effects of education on social cohesion at the national level.

First, the measurement of social cohesion at the national level requires different combinations of indicators from those normally used in social capital analysis. While association, trust, tolerance, civic cooperation and political engagement may form a coherent cluster of variables at the individual level in certain countries, they do not co-vary sufficiently at the national level to be considered measures of a single underlying phenomena. In particular, associational membership would seem to work quite differently from other variables at the national level and appears to be a poor correlate of national social cohesion. We would suggest, as indicated earlier, that this is because associational membership involves so many different types of social relations that have quite different effects in terms of social integration. Used purely quantitatively, membership has very little meaning in terms of cohesion at community or national levels. Whatever the salience of de Tocqueville's original (qualitative) argument about the importance of the vibrant of community association for a strong civil society, quantitative approaches to this, which are unable to distinguish between narrow and self-interested association and more encompassing and consensus-building forms

of association, are of little use in looking at modes of social integration in the modern world.

Second, there would appear to be a set of variables which do co-vary at the national level and which may form the basis for measurement of social cohesion. These include social and institutional trust from the original social capital measures, and also perception of crime crime, which is a more conventional measure of social cohesion. Civic cooperation may also be associated although our own analysis here has not sought to confirm Knack and Keefer's findings on this point. We would suggest that other conventional measures of societal cohesion and conflict – such as tolerance, national pride, rates of industrial conflict and incidents of inter-ethnic violence – need further testing and theoretical discussion before being included as positive or negative measures of social cohesion.

Third, there appears to be no significant correlation at the national level between aggregate levels of education and social cohesion, using our measures. This confirms our earlier argument that education effects may well be greatly outweighed by more powerful institutional and cultural factors at the national level. However, this does not mean that the role of education is insignificant. Education may have an important effect through way in which it socialises young people, which is invisible in our crude measures of educational outcomes. As we show here, it would certainly appear to have a significant indirect effect through its impact on equality.

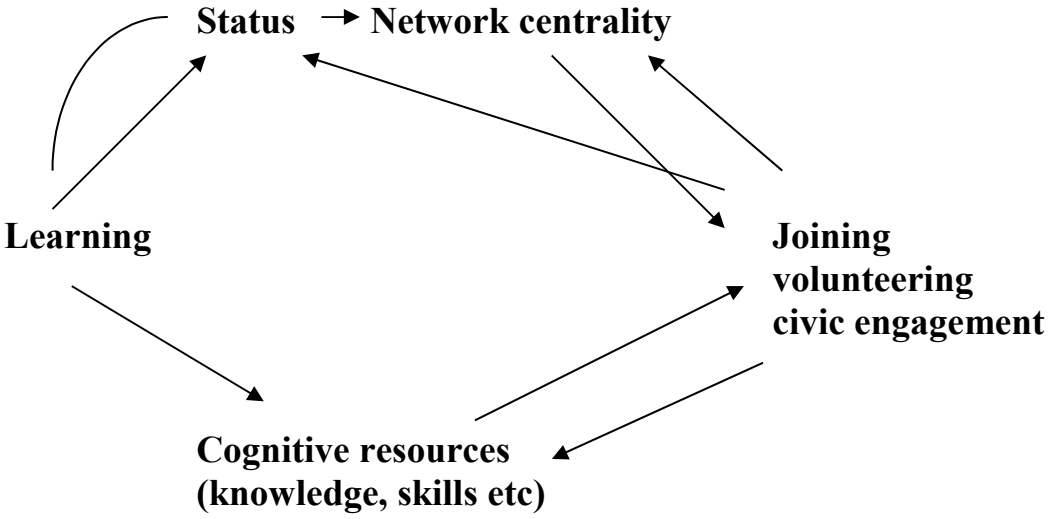
Fourth, inequality of educational outcomes is closely connected to income inequality which has a powerful effect on many of the measures of social cohesion, although we cannot be clear yet about which way all the causal arrows run.

It is quite probable that income equality impacts on educational equality through equalizing access to education. It is also likely that social cohesion and solidaristic cultures and political ideologies promote both income equality and educational equality through equalising aspirations and supporting certain types of policy interventions. Minimum wages and other forms of labour market regulation that make wage agreements binding and inclusive for entire sectors may well, for instance, enhance income equality (Blau and Kahn, 1996; Nickell and Layard, 1988). Measures to equalise resources for and admissions to schools may make educational outcomes more equal, as may shared aspirations about the value of schooling, as has been argued in the case of the – at least until recently - highly egalitarian Japanese education system (Green, 1999). These relationships remain to be investigated analytically, but our analysis here of correlations at least suggests that there is an issue to be explored.

Existing models of education effects on social capital and civic participation (Bynner and

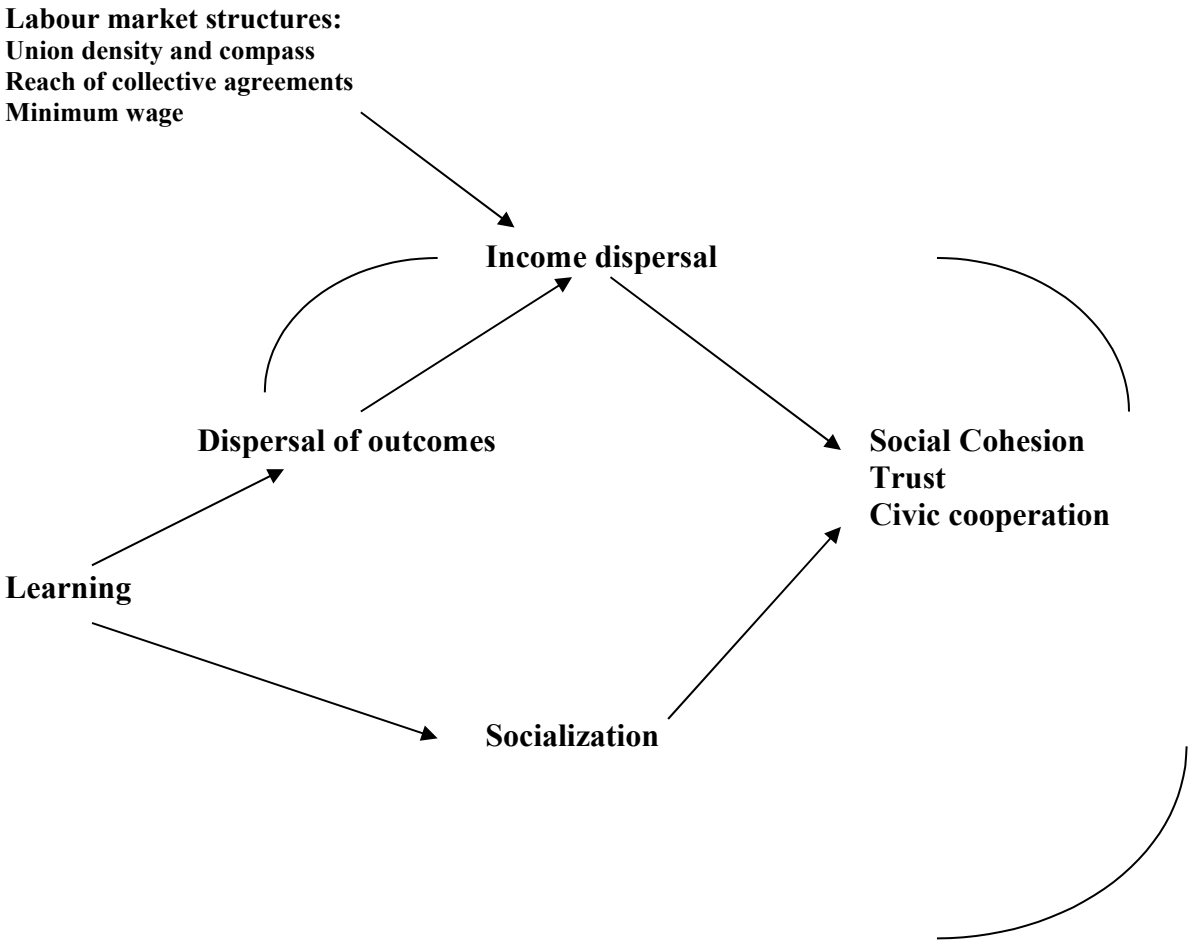
Ashford, 1994; Nie et al, 1996; Emler and Frazer, 1999; Preston and Green forthcoming) suggest that education impacts on association and political engagement directly by conferring useful cognitive resources and indirectly by giving access to jobs which confer network centrality (as shown in figure 14). Our model here in no way contradicts this but rather seeks to explain educational impacts on a different kind of outcome - ie social cohesion. In this model skills and qualifications are still important, but it is mainly the way they are distributed which affects social cohesion. In addition to this we posit, but do not explore, the possibility that different forms of school socialisation may have differential impacts on social cohesion at the national level. The full hypothesised model is shown below in figure 15 below.

Figure fourteen : Learning effects on social capital (joining, volunteering and engagement)



Adapted from R. Nie

Figure fifteen : Learning effects on social cohesion



The model sketched above clearly requires a great deal more testing and causal explanation than can be attempted here. However, we do suggest that this would be a worthwhile endeavour. If proved valid, this model of educational effects on social cohesion would have significant policy implications.

Current Citizenship education policies in England (and some other English-speaking countries) focus strongly on the development of social competences (Kerr, 1999; Osler and Starkey, 2000). This may well be beneficial for association and political engagement, but may have rather less impact on trust, civic cooperation and social cohesion generally. To address these issues through education more attention would have to be placed on the development of shared or cooperative values and on the attenuation inequalities in educational outcomes.

APPENDIX 1 : DERIVATION OF COUNTRY LEVEL INDICATORS

As no one data set could satisfy the types of international comparisons required, a combined data set was constructed using data from the World Values Survey (WVS), International Adult Learning Survey (IALS), World Bank, Interpol statistics and the International Crime Victim Survey (ICVS). All data used was from the years 1990-2000. A copy of the dataset and correlation matrices used in the analysis can be obtained from the authors. Fifteen countries were included in the core data set being Australia, Belgium, Britain, Canada, Denmark, Finland, Ireland, Netherlands, Norway, Poland, Portugal, Sweden, Switzerland, USA and Germany.

Social cohesion measures were obtained from the most recent country sweep available of the WVS. In most cases, data used was from the 1995-1997 sweep, although when data for these years was not available, data from the 1990 sweep was substituted.

General Trust (GENTR) was measured by the percentage of individuals sampled in each country who agreed that most people could be trusted when asked:-

"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" (WVS question V27)

Associational memberships (GROUP) was measured by the mean number of associational memberships for sampled individuals in each country, not including memberships of sporting associations (WVS questions V28 and V30-V36)

Trust in government (DEMTR) was measured by the percentage of individuals sampled in each country who agreed or strongly agreed that they had confidence in their parliament (WVS question V144).

Civic co-operation measures cheating on public transport fares (TRANSC) and cheating on taxes (TAXCH) were measured by the percentage of individuals in each country who stated that such actions were never justifiable (WVS questions V193 and V194).

The measure of educational inequality (P3) was obtained from IALS secondary data by dividing the mean prose score of those individuals who had completed tertiary education by the mean prose score of those who had completed upper secondary education only. To compute these scores, we utilized the most recent sweep of IALS data (IALS, 2000).

Measures of income inequality (GINI) and GNP per capita (GNPCAPIT) were taken from the most recently available World Bank Statistics (World Bank, 2001, pg.282-283).

The measure of crime (CRIME) was obtained from Interpol statistics for 1996 (International Criminal Police Organisation, 1996). The measure of crime used being the sum of homicides, robberies and violent thefts per. 10,000 inhabitants.

The measure of tolerance (TOLER) was obtained from question V57 of the WVS and measures the percentage of respondents in each country who would not mind having an immigrant as a neighbour.

The measure of perceived risk of crime (RISK) was obtained from the mid-1990s, or most recent possible, sweep of the ICVS (International Crime Victims Survey) and measures the mean score for each country from respondents feelings of safety when walking alone after dark in the area (very safe=1, very unsafe=4). Figures were not available for Germany and Norway and so these countries were not included in analysis involving this variable.

Table Five : Social capital / cohesion aggregates for fifteen countries (main dataset)

COUNTRY	ABBREVIA	GENTR	GROUP	DEMTR	TAXCH	TRANCH	CRIME	TOLER	RISK
Norway	NW	64.80	.61	69.50	47.50	70.20	31.26	81.75	N/A
Denmark	DEN	57.70	.18	42.00	57.30	74.50	47.69	88.95	1.67
Sweden	SW	56.60	.52	44.60	49.30	47.00	85.38	95.34	1.68
Netherlands	NL	55.80	.36	51.60	42.90	55.80	121.46	88.64	1.83
Canada	CAN	50.70	.47	37.90	59.20	61.90	109.21	94.30	1.78
Finland	FIN	46.90	.32	32.40	57.40	62.60	45.42	85.44	1.77
Ireland	IRL	46.80	.23	50.30	48.80	57.50	96.88	93.78	1.99
Germany	D	41.80	.54	29.40	40.10	38.60	86.92	95.60	N/A
Australia	AU	39.90	1.06	30.60	62.10	62.80	37.38	95.42	2.25
Switzerland	SZ	37.80	.68	43.90	53.70	59.30	34.40	89.99	1.87
USA	US	35.00	1.63	30.30	73.60	66.50	209.85	90.31	1.95
Poland	PO	34.50	.03	34.50	55.20	68.10	71.04	75.89	2.29
Belgium	B	30.60	.28	42.80	33.90	57.70	29.84	82.28	1.89
Britain	UK	29.10	.20	46.10	53.90	59.40	144.83	88.30	2.10
Portugal	POR	20.70	.19	33.50	39.90	53.40	62.57	90.53	2.18

In addition to our main dataset, we also made use of an expanded dataset of 38 countries broadly corresponding to Knack and Keefers (1997) set of market economies. Data was pooled from WVS sweeps of 1990 and 1995 to arrive at figures for general trust (GENTRUST) and civic participation (GROUPS) using the methods described above. Corresponding measures of income inequality (GINI) were obtained from World Bank statistics, but note that for five countries (Argentina, East Germany, Iceland, Taiwan, Ukraine) reliable gini coefficients were not available. Data for countries in the expanded dataset is provided in table 6.

Table Five : Social capital / cohesion aggregates for thirty-eight countries (expanded dataset)

COUNTRY	ABBREVIATION	GENTRUST	GROUPS	GINI
Argentina	ARG	17.10	.43	N/A
Australia	AU	39.90	1.06	35.20
Austria	A	28.40	.21	23.10
Belgium	B	30.60	.28	25.00
Brazil	BRZ	2.80	.91	60.00
Britain	UK	29.10	.20	36.10
Bulgaria	BUL	23.70	.11	28.30
Canada	CAN	50.70	.47	31.50
Chile	CHI	21.90	.68	56.50
Denmark	DEN	57.70	.18	24.70
East Germany	EGe	24.90	.40	N/A
Finland	FIN	46.90	.32	25.60
France	FR	22.80	.23	32.70
Hungary	HUN	23.80	.15	30.80
Iceland	ICE	41.70	.30	N/A
India	IND	33.00	.53	37.80
Ireland	IRL	46.80	.23	35.90
Italy	I	33.80	.22	27.30
Japan	J	43.40	.27	24.90
Mexico	MX	26.40	1.10	53.70
Netherlands	NL	55.80	.36	32.60
Norway	NW	64.80	.61	25.80
Peru	PER	4.90	.58	46.20
Phillipines	PHI	5.50	.42	46.20
Poland	PO	34.50	.03	32.90
Portugal	POR	20.70	.19	35.60
Russia	RUS	23.40	.14	48.70
South Africa	SA	17.60	1.15	59.30
South Korea	SK	30.30	.45	31.60
Spain	E	28.70	.41	32.50
Sweden	SW	56.60	.52	25.00
Switzerland	SZ	37.80	.68	33.10
Taiwan	TAI	40.20	.36	N/A
Ukraine	UKR	28.80	.09	N/A
USA	US	35.00	1.63	40.80
West Germany	D	41.80	.54	30.00
Nigeria	NI	19.47	.59	50.60
Turkey	TU	5.49	.22	41.50

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