The Complementary Roles of Human and Social Capital

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Introduction

This paper discusses the relationship between human and social capital, first raised by James Coleman (1988). The paper begins with a brief account of three different forms of capital: human, social and cultural. It considers why at the conceptual level social capital is relevant to policy formation. It provides a sample of approaches to the analysis of social capital, a framework for considering its relationship to human capital and the complementarities and tensions within this relationship. It concludes with some policy implications. The tone throughout is heuristic rather than definitive; that is to say, it encourages questions and reflection rather than providing answers. In my view it is this heuristic quality which is the primary, and very powerful, advantage of the concept of social capital.

The paper derives from a number of potential paradoxes:

a. Individual choice has rarely been so dominant, as household consumption levels rise, product customisation spreads, and public services become more consumer-oriented in their ethos. The growth of human capital is part of this, as individuals develop the skills and knowledge needed to participate in a modern economy. Yet at the margins of this dominance is a recognition that individual autonomy loses its effectiveness if it is divorced from social relationships, and is threatened by lack of social cohesion.

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b. There is a strong policy consensus, at regional, national and international levels, on the importance of lifelong learning. But following in the wake of this is an emerging awareness of the problems of focussing unduly on narrow interpretations of human capital, and on investment on the supply side.

c. Demands for accountability and evaluation are stronger than ever in the public sphere, and measurement methodologies in some senses technically more sophisticated. Yet the drive towards more and more precise measurement may be self-defeating if the methodologies do not take account of the dynamic uncertainties of the policy fields to which they are applied.

These paradoxes make a discussion of the potential contribution of social capital to policy-making timely. Social capital requires attention to be paid to *the relationships which shape the realisation of human capital's potential*, for the individual and collectively. These include relationships between different groups as well as within groups, so that *distributional* issues are necessarily part of the picture. But these need to be addressed within a dynamic context which captures the *interactions* between policies and institutions, and the *differing time scales* inherent in the concepts under consideration. Moreover, one effect of the success – however contested – of social capital as a concept in attracting interest in a wide range of disciplines and policy sectors has been to reintroduce *normative* issues explicitly into the debate. It shares this with the notion of sustainable development.

There is no assumption here that social capital is the magic key to successful economic or social policy. Indeed, it is as well to acknowledge that exploring the notion of social capital runs a number of risks. It is a relatively new concept, which has not yet had time to bed down. It is proving to be extremely versatile, applicable at many levels and in all kinds of policy fields – so versatile, indeed, that it may appear at times to lose coherence. It is also vulnerable to simplistic application (see e.g. Portes 1998). But the use of social capital opens up avenues of thought, conceptualization and empirical work which allow the paradoxes listed above, and many other significant policy areas, to be fruitfully addressed.

Three capitals

The list of different types of capital is growing fast: to natural, physical and financial capitals are added organisational, intellectual, environmental and many others. Many of these overlap or duplicate each other. Some are used pragmatically, others purely metaphorically. This is not only a matter of academic theorising, but of practical business, as competitiveness depends on the effective mobilisation of assets, including intangibles. There is room for a full-scale mapping exercise of the spectrum of capitals; here, however, we concentrate on just three: human, cultural and social capital.

First, some definitions. Human capital is defined, fairly tightly, by the OECD (1998, p. 9) as "the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity." Duration of schooling and levels of qualification are the standard measures. The origins of human capital as a concept can be reasonably clearly traced to the work of Theodore Schultz and Gary Becker in the 1960s. It is by now highly familiar, widely used in policy thinking as well as in theoretical and empirical analysis. Although by far its most common application is to education and training, we should not forget that Becker has extended this to many other areas, such as marriage and family relations.

Cultural capital is a more academic notion, closely identified with Pierre Bourdieu (1986). It refers to the credentials and cultural assets embodied in individuals and their families. Cultural capital has been used in two contrasting directions. It is used to explain the reproduction of social hierarchy, as elite families endow their children with the cultural capital which enables them to succeed in maintaining their elite position. But it is also used to explain how some manage to use education to move from non-elite positions into elite positions.

The definition of social capital is itself problematic. It owes its prominence mainly to the work of Robert Putnam in political science (1993, 1996), James Coleman in educational sociology (1988), and Francis Fukuyama in economic history and sociology (1996), as well as to the active patronage of the World Bank (Narayan and Pritchett 1997). Its origins go back well beyond these contemporary scholars, however; clear lines of descent have been traced back to classic authors such as Adam Smith and Montesquieu (Sturgess 1997, Woolcock 1998, Schuller et al. 2000). For the majority of writers, it is defined in terms of *networks*, *norms* and *trust*, and the way these allow agents and institutions to be *more effective in achieving common objectives*. The most common measures of social capital look at participation in various forms of civic engagement, such as membership of voluntary associations, churches or political parties, or at levels of expressed trust in other people. More economistic interpretations give greater emphasis to the institutions and rules governing economic transactions, at micro and macro levels. Social capital has been deployed to explain a wide range of social phenomena, including general economic performance, levels of crime and disorder, immigrant employment and health trends. Despite some ambiguity, social capital is generally understood as a matter of relationships, as a property of groups rather than the property of individuals.

One simple way of summarising the three capitals is as follows. Human capital focuses on the economic behaviour of individuals, especially on the way their accumulation of knowledge and skills enables them to increase their productivity and their earnings – and in so doing, to increase the productivity and wealth of the societies they live in. The underlying implication of a human capital perspective is that investment in knowledge and skills brings economic returns, individually and therefore collectively.

Cultural capital focuses on the way power structures are reproduced. It offers no necessary judgement on the effects of this reproduction; its function as a theory is an explanatory one. It is notable that Bourdieu makes little if any reference to human capital; and although he was one of the first theorists to use the term social capital, his discussion of it is quite sketchy (see Bourdieu 1986, Baron et al. forthcoming). Cultural capital will not be discussed further in this paper.

Social capital focuses on networks: the relationships within and between them, and the norms which govern these relationships. Although this does not necessarily entail a specific value position on the part of those who use it as an analytic device, it has strong normative connotations, implying that trusting relationships are good for social cohesion and for economic success (Leadbeater 1999). However, strong ties can also be dysfunctional, excluding information and reducing the capacity for innovation (Granovetter 1973). There can be negative normative associations as well as positive ones – so that some networks embody the 'dark side' of social capital, to the detriment of the wider society and even of its own members.

This focus on relationships underpins the relevance of social capital to the issue of social cohesion. The more positive normative approaches stress the social benefits, sometimes in a simplistic communitarian fashion. Social capital is both a consequence of and a producer of social cohesion, though not necessarily in the static sense that this might appear to imply. Putnam (2000) in particular argues that at the level of community, enterprise or nation, the quality of life - even of the better off - will be higher if membership of the community brings with it active participation. This should encourage us to build social capital directly. And where there is a dark side, this should alert us to the way networks can act against social cohesion. Analytically, therefore, social capital has a close relationship to the debate on social cohesion.

Some recent authoritative contributions to the debate have contested the validity of 'social capital' because of its metaphorical character. Kenneth Arrow (2000, p. 4) argues that "the term 'capital' implies three aspects: a) extension in time, b) deliberate sacrifice in the present for human benefit, and c) alienability", and that social capital fails especially on the second dimension (he also points out that human capital fails on the third). Similarly, Robert Solow opines that the use of social capital is 'an attempt to gain conviction from a bad analogy' (2000, p. 6), mainly on the grounds that it does not represent a stock of anything, and could not be measured by an accountant. On the other hand, Partha Dasgupta offers in the same volume a more nuanced position. Social capital, he argues, has its impact on the economy in precisely those areas of transaction in which markets are missing. We cannot build an aggregate measure of it, and it is, therefore, "premature to regard social capital in the same way as we do physical capital and the measurable forms of environmental capital." (2000, p. 398). However, he continues, "this is not a pessimistic conclusion (…) The concept of social capital is useful insofar as it draws our attention to those particular institutions serving economic life that might otherwise go unnoted. (…) Not having an estimate of social capital is not an impediment to such exercises." (ibid.)

Such are the views of three eminent economists. The outcome of this debate within the field of economics is uncertain. Fine and Green (2000) provide a critique of social capital from a very different economic perspective, illustrating how open the conceptual and methodological discussion is. One issue is how far economists are justified in claiming authority to rule on the validity of 'capital' concepts; another is the intrinsic value of the concept of social capital. My view, as stated above, is that whilst we need to retain a sharply critical perspective on its application, attempts to exclude it from the wider stock of analytical concepts are premature.

Policy rationale: why bother with social capital?

Despite or perhaps because of its immaturity, social capital is the subject of a mushrooming number of treatments, applications and interpretations; and of a correspondingly fast-growing number of typologies and categorisations.

a. In an exhaustive theoretical overview, Woolcock (1998, pp. 193-6) sorts the literature into seven substantive fields: social theory and economic development; families and youth behaviour problems; schooling and education; community life; work and organisations; democracy and governance; and general cases of collective action problems.

b. An alternative broad-ranging example is the World Bank paper by Narayan (1999), 'A Dimensional Approach to Measuring Social Capital', which lists the following dimensions: structures vs norms; sources vs outcomes; form vs function; narrow vs broad; costs vs benefits; use, disuse and abuse; endowment vs constructability; and individual vs community and nation.

c. Putnam (2000), one of the most influential proponents of social capital, suggests that there are three key dimensions along which social capital can be measured:

vertical vs horizontal: the extent to which networks involve relationships amongst agents more or less equally located in the relevant hierarchy, as opposed to relationships between agents located at different levels;

strong vs weak ties: strong ties by definition create greater solidarity amongst network members, but these are not always functional – as Granovetter (1973) has shown, weak ties can be more effective because they entail access to a wider and more heterogeneous set of connections;

bridging vs bonding: bridging ties bring together heterogeneous members, whereas bonding ties link more or less homogeneous members.

d. Portes (1998), who is generally more critical of the concept, says that it is important to distinguish between the possessors of social capital, its sources, and the resources involved; his own discussion, however, does not use this category set, but deals instead with 'sources' and 'consequences'. Portes divides the former into consummatory and instrumental, and the latter into social control, family support, and benefits derived from extra-familial networks.

e. Yet another perspective is supplied by Edwards and Foley (1998). They are critical of approaches that focus on social psychological attributes, and which use individual attitudinal or behavioural measures such as recorded levels of trust or personal membership of civic associations. They argue instead for approaches that concentrate on social structures and relations, and which therefore place questions of power and inequality at the centre of the analysis.

These are just five examples. There is no point in going further into what would in effect be a review of reviews. The point here is to emphasise both the scope of the concept and its apparently almost limitless versatility.

Dealing with social capital entails a number of risks. There is still no agreed definition; its measurement is problematic; and it is highly context-dependent, which causes particular difficulties when it comes to attempting to aggregate it across levels. Nevertheless there are at least four key reasons why we should explore the potential utility of social capital as a policy concept:

1. It helps to counterbalance reliance on policy concepts and instruments which are too narrow to deal effectively with *the complexities and interrelatedness of the modern world*. The history of policy-making is littered with examples of over-emphasis on single policy instruments. Technological innovation and human capital are both very powerful in their own terms, and essential features of prosperity, but they cannot be taken out of their contexts of social relationships. Social capital demands a wider focus. In this sense it is a complement to, or even underpins, other instruments of policy analysis, rather than an alternative to them; it deals with the social infrastructure which enables other policies to be effective.
2. The focus on relationships allows the issue of *social cohesion* to be addressed.

Merely increasing the stock of human capital in any given society will not ensure social or economic progress. It may even impede it by further isolating some groups, who do not have access to it, and whose position is relatively further weakened by the fact that most others are gaining skills and qualifications. Their isolation in turn may have a long-term negative impact on the benefit of human capital growth even to the skilled and qualified. Social capital brings such dynamics into the picture.

3. It helps to insert a *longer-term perspective* into policy-making. Social capital is not something that can be instantly or even rapidly created. Its accumulation, and its erosion, is a process that almost always requires several years at least. It therefore acts as an important counterweight to the tendency to look for quick-fix solutions.

4. Social capital reintroduces a *moral dimension* into policy thinking. The economy is not simply a machine to be engineered, tuned and repaired at a technical level without reference to its social context. The quality of relationships in any given social unit will determine its sustainability.

A number of issues remain. First, for all its deep roots, social capital is a very new arrival on the scene. Globalisation means that new ideas can sweep round the world almost instantly. On the one hand, this means that the speed with which a new concept can be taken up is enormously enhanced; on the other hand, it has less time to develop organically. This opens it to risks of deformity, of inappropriate application. Secondly, social capital challenges two models or sequences which underlie the conventional linear model: investment followed by return, and analysis-action-solution. Thirdly, despite globalisation, the cultural and economic contexts within which social capital exists and grows will always be very diverse. Since it is itself predominantly a characteristic of contexts, we can expect its visible character to vary correspondingly. In short, the search for an invariant and universal entity is futile. We take these issues in turn.

a. *Immaturity.* Social capital is still very much in its infancy as a policy concept, even if its intellectual lineage may be a long one. It has taken human capital over a quarter of a century to gain the purchase it currently has on policy thinking. Yet even here there are still major weaknesses, both in the availability of data and in the extent to which the data sought can be used to explain variations in economic performance or social well-being. The OECD's recent publication (1998) on Human Capital Investment explores these issues very capably. Moreover, the main source of power for the human capital model is the fact that it allows expenditure on learning to be classified as an investment. Yet it is very clear that the rhetoric on this is rarely matched by practice, where such expenditure is generally still reckoned as a cost. Exploration of how accounting systems, at national or corporate levels, can be adapted to give technical application to the investment metaphors, is still very much in its infancy. This has important implications for thinking about the policy relevance of social capital.

The fact that it is so youthful does not necessarily mean that we have to wait for a long time for it to mature – some great wines are ready to drink quite quickly. But it does require debate on how the concept might be most fruitfully developed. There may be an important tension here, between a natural wish to proceed immediately to applying measures of social capital to the analysis of economic and social development, and a different strategy which acknowledges that more time is needed to explore the best ways of operationalising the concept.

b. *Non-linearity.* The investment metaphor is a powerful one, because it implies that an asset is being put to profitable use. But it is based on an essentially linear model: investment is followed by return. One of the most difficult challenges posed by the idea of social capital may be that it does not fit the linear model, at least at some levels. It is hard enough to trace the lines of causality between human capital and socio-economic performance. At this stage, it is unlikely that policy-makers will be able to identify returns to social capital in any direct fashion, so the investment-return model is only partially applicable. Secondly, social capital deals with complex and diffuse areas. Values and relationships are not easily measurable, nor are changes in them easily benchmarked and monitored. The breadth of its focus is a disadvantage from the point of view of the convenience of policy analysis. But in a 'risk society' we need to develop new approaches to the management of information, and social capital requires us to think in more flexible and multi-dimensional ways. The challenge is to match these with suitable standards of rigour and appropriate empirical evidence.

c. *Non-uniformity*. It is already clear that no single operational notion of social capital exists. Here there is some significant difference between human and social capital. The measures used in relation to human capital can be – or at least have been – applied to different levels and contexts with relatively little variance. In other words, it is possible to measure skill or qualification levels of national populations, or of workforces within particular enterprises or sectors, or of populations outside the workforce. It is, therefore, possible to aggregate these up, so that measures of the sub-units of the population can be added together without much confusion.

The case of social capital looks very different. Social capital at a local or community level may take very different forms from social capital when applied at a more macro level. Moreover, the social context will shape strongly the character of social capital, so that it will have different meanings in different cultural settings. This may appear to open social capital to the criticism that it is not a coherent concept, since it takes so many different forms. But there are two responses to this. First, the fact that a concept is context-dependent does not make it meaningless. Secondly, it may well be that by pushing us to confront the problem of consistency and aggregation, social capital raises valid similar questions in relation to human capital: how far are our measures of human capital universal, aggregable and context-independent?

Relationships between human and social capital: a framework

One important issue is the relationships between the different forms of capital: how far are they fungible/convertible one into another, and how does growth in one impact on the others? This is a crucial issue in the debate on sustainable economic development: how can current well-being be achieved or enhanced without prejudice to the well-being of future generations, raising questions about the relationship between stocks of natural capital and other forms of capital.

Table 1 provides a framework for considering the relationships between human and social capital.

TABLE 1

	Human Capital	**Social Capital**
Focus	Individual agent	Relationships
Measures	Duration of schooling Qualifications	Attitudes/values Membership/participation Trust levels
Outcomes	Direct: income, productivity Indirect: health, civic activity	Social cohesion Economic achievement More social capital
Model	Linear	Interactive/circular

Focus. The key distinction between human and social capital is that the former focuses on individual agents, and the latter on relationships between them and the networks they form. In an economic context, the inclusion of social capital draws attention to the obvious, but often underregarded fact, that individuals and their human capital are not discrete entities that exist separately from the rest of the organisation, or from other social units. The acquisition, deployment and effectiveness of skills depend crucially on the values and behaviour patterns of the contexts within which these skills are expected to operate. Focussing on relationships rather than agents is a gestalt switch. On the other hand, it is not an alternative, but a complement, at least in a partial sense.

Input/measure. Human capital is measured primarily by levels of qualification achieved. The inadequacy of this is often acknowledged (see e.g. Behrman 1997), but the availability of large data sets allowing easy measurement ensures that it continues to dominate. Social capital is far more diffuse. It is measured broadly, and often simplistically, in terms of attitudes or values, or by levels of active participation in civic life or in other networks. The relevance of this to economic growth can be seen in a number of ways. It gives greater prominence, for example, to informal modes of learning, and the skills acquired through learning-by-doing. Network membership provides access to important information and ideas, often in a relatively unstructured way. The overlap between different spheres of activity comes into the equation. One example is the interaction between learning related to economic production and that which goes on in the domestic sphere. Another is the question of how far organisations actively encourage their staff to play a part in the life of the surrounding community – in the course of which they may well acquire skills which impact significantly on their economic performance.

Outcomes. The output of human capital is generally measured in terms of enhanced income or productivity. Social capital can be linked directly to economic performance at very different levels – at the level of nation states (e.g. Fukuyama 1996), at the regional level (e.g. Maskell et al. 1998) or between and within communities or organisations (see Grootaert 1998). It also has wider outcomes – including the generation of further social capital. Some of these – for example the maintenance of social cohesion – in turn contribute indirectly to enhanced economic performance. Looked at from a social capital perspective, the direct impact of training may be as much in the strengthening of networks and information flows as in the acquisition of individual competencies or improving productivity.

Models. Human capital suggests a direct linear model: investment is made, in time or money, and economic returns follow. This has considerable appeal, both for its methodological manageability, and in terms of political acceptability. That is, it enables analysts to deploy existing tools to estimate the returns to investment, and politicians to justify expenditure on human capital formation. Social capital has a much less linear approach, and its returns are less easily definable. On the one hand, this incurs the charge of circularity, and it makes it harder to specify what kinds of return might be expected, and by when. On the other hand, as I argue below, such complexity is arguably a closer approximation to the real world.

The relationship explored

This framework generates a wide range of interesting and salient questions to do with the interaction between human and social capital. These include questions to do with trade-offs or even conflicts between the two, as well as complementarities, for example:

- To what extent do high levels of social capital encourage high levels of human capital, or substitute for them?
- Do low levels of social capital inhibit the accumulation of human capital?
- Conversely, do high levels of human capital encourage or undermine social capital?

a. The impact of aspirations and values

Field and Spence (2000) show that in Northern Ireland the values of tight-knit communities can serve to inhibit the learning aspirations of adults, binding them into a low-skill local economy and reinforcing the divide between those who achieve high qualifications in the initial educational phase and those who do not. On the other hand, where there is low trust and poor communication between employers and the local labour force, an exclusive policy focus on increasing skills and qualifications will do little to reverse spirals of decline or attack social exclusion. Employers need to value and reward human capital in ways which communicate this to society as a whole, and not only to the most readily employable. In other words, a social-capital-based analysis of local or regional conditions may reveal the weakness of supply-focussed policies and point to the need for wider, more integrated and multi-levelled policy action (Maskell et al. 1998).

b. Skills and competences

Communication and teamwork skills are two of the most universally acknowledged competences for a modern economy (see e.g. Levy and Murnane 1999). These can be interpreted at a basic practical level, where productive efficiency requires good communication between workgroup members. But the same message applies at other levels, where a professional community depends for its health on trust and openness of information-sharing, whether this is explicit or remains tacit. Both traditional and emerging sectors of the economy provide examples of this – from diamond traders to biotechnology. It is worth remembering that whilst new technologies are often associated with rises in productivity, the nature of the relationship remains unclear; it is certainly not the case that technological change can be assumed to fit smoothly with rising levels of skills. Human capital can certainly be understood to encompass social as well as technical skills; but social capital brings to the fore the social networks and values through which skill portfolios generally are built, deployed and rewarded.

c. Employment relationships

> "Paradoxically, just as one would think that firms would be building closer relationships with their key knowledge workers to keep them committed to the firm, they are smashing that implicit contract also (…) Firms invest less in on-the-job skill acquisition for these knowledge workers, even when they want them to stay around, since they know that fewer of them will stay around." (Thurow 1999, p. 143)

Thurow points to changing employment relationships, notably the putative decline of lifetime employment, and how these affect investment in human capital. But what is the answer to this? It is in all probability futile to appeal to employers to support more secure employment contracts. The answer is twofold. First, a clear role for peer-promoted values, so that professional bodies, or regional chambers of commerce, or other agencies, support the development of human capital through normative pressure. Secondly, more transparency and honesty rather than loyalty as the basis for employment relationships, so that there is a clear understanding between employer and employee on the investments being made (see McRae 2000).

d. *Units of analysis: family and demographic dimensions*

Intra and intergenerational relations are less likely to be neglected in a social capital framework than in a policy framework which focuses only on the skills and qualifications of a population at a given point in time. This issue can be exemplified by reference to the patterns of working time, at individual and household levels. Using training programmes to bring more lone parents into the workforce or create more dual-earner households may reduce unemployment, increase output and raise gross household earnings in the short term. But the divide between work-rich/time-poor households and those with low or no employment incomes is sharpening; and the impact on family ties, and especially on children's social upbringing, may outweigh these immediate gains, both for the families concerned and for the wider society. Putnam (2000), for one, identifies the growth in dual earner households as a factor in the decline of social capital, though he rejects the implication of a return to traditional patterns of employment. This illustrates the tensions between different policy objectives. A social capital analysis is more likely to capture such tensions.

However, it is not only a matter of trade-offs between human and social capital. In the context of an ageing population, more thought needs to be given to how the skills and knowhow of older people can be sustained and indeed developed. This may be through policies designed to enable them to remain longer in the active labour force, for example in part-time employment where they combine conventional paid employment with pension payments to make up a decent income. But it can also be through enabling them to deploy their skills in voluntary work. Older people have a major role to play in maintaining levels of civic engagement (see e.g. Laslett 1989), in ways which exhibit a positive-sum complementarity between human and social capital.

In short, direct substitutability between different forms of capital is only one of the policy dimensions which require consideration. The interactions between different capitals generate a myriad of different policy issues, with implications for how such interactions are to be measured. The complexity is increased when we try to reconcile micro and macro level considerations, once we discard the assumption that a macro picture can be built up simply by aggregating micro level information.

The argument can be extended to the links between sustainable economic growth and social capital. Sustainability resembles social capital in being multi-faceted, and in the way in which it can be brought into play in a number of different policy contexts. It is also a classic case of a ‘contestable concept’ with significant debates occurring over its substantive meaning and ideological significance. One key aspect is the broadening of sustainable growth to include social and economic as well as environmental factors. It also resembles social capital in the way that relationships and interdependence are central to it, and the challenges it, therefore, presents for a broader and more dynamic approach to policy-making.

One final point needs to be made, concerning the relationship between competition and collaboration. Sustainable development is closely associated with the notion of global interdependence, as human capital is with economic competitiveness. Social capital can appear as a rather cosy attempt to defuse the tensions of competition, but in its more sophisticated forms it addresses the interaction between economic openness and social change on the one hand, and the maintenance of trust and stability on the other (Leadbeater 1999). Both sustainable development and social capital address the dynamics of growth and change, seeking to place these in temporal context which unites the long- and the short-term.

Measuring social capital: some general propositions

Social capital may be a prime illustration of the *importance/measurability* dilemma: the important may not be measurable but this does not stop the measurable from becoming important. However, this is a paradox of despair. In almost any sphere the question is not the binary one of whether or not something is measurable, but to what extent (as well as under what conditions and at what cost). In other words, we should concentrate on the extent to which parts of the jigsaw can be filled in without sacrificing the overall picture, or succession of pictures.

Related to this is the issue of *appropriate technomethodology* (Schuller 2000). Already there are signs of statistical techniques being applied in ways which are poorly matched to the quality and the robustness of the data. This is particularly true where the data consists of comparative attitudinal surveys, for example on declared levels of trust, using highly ambiguous terminology. Quantitative analyses which relate these, and through them levels of social capital, to general measures of economic performance, need very severe health warnings. More positively, the debate over which methodologies are appropriate is potentially a very challenging and fruitful one.

There are some curious possibilities relating to the *impact of measurement*. In the natural sciences, the impact of the observer on the observed is taken for granted. Social capital may be an extreme example of this in the social field. For where trust becomes the focus of attention, this may cause it to wither as much as to flourish; some relationships, norms and networks are strongest when they are not exposed to constant examination. On the other hand, it has been well argued that if we are moving towards risk societies, and proactively managing risk rather than passively coping with it, so we should be moving from the passive valuing of trust to its active maintenance.

The *problems of aggregation* may set social capital in a class of its own for measurement purposes. Grootaert (1998) lists as one of the desirable properties of indicators, being subject to aggregation – from household to community to nation. Can this be meaningfully done for social capital, or are we faced with a qualitative shift in the meaning of the term at different levels? If the latter, this may imply such centrifugality that meaningful measurement is ruled out. On the other hand, it may result in a useful challenge to the unrealistic separation of levels, and especially the simplistic binary division between micro and macro.

Finally, there is a major issue surrounding the need to capture the *dynamics* of social capital. This has at least two dimensions. The first is a conventional measurement issue, of complementing cross-sectional analysis with longitudinal so that changes over time can be analysed. The second is more qualitative. The accumulation of social capital is not something which can be evaluated in simple linear terms: the more the better. Networks may become denser (with higher social capital), and in doing so undergo qualitative change with negative consequences, where they lose openness and so become dysfunctional. High levels of social capital may be accompanied by stasis. Capturing the *trajectories* of social capital is a major task.

On all of these issues, however, we should remember that the complexities and difficulties do not apply to social capital alone. Although it is well established as a central policy concept, the notion of human capital could very well be scrutinised under just these headings. For example, whilst measures of human capital appear to allow simple aggregation, for example from the levels of qualification in different sub-communities to the population as a whole, this can lead to flawed and simplistic assumptions about the relationship between the total stock of human capital and economic performance (OECD 1998).

Some policy implications

The discussion above has been schematic and condensed. It points implicitly to a large range of substantive policy areas and methodological issues. Here in conclusion are just five areas which illustrate the breadth of the agenda.

1. Worktime patterns

The polarisation of employment is one of the great threats to social cohesion. The contrast between work-rich and work-poor households has developed alarmingly over the last two decades. One of the seminal findings of Coleman's work (Coleman 1988) was the way in which families with high human capital and high net earnings may nevertheless be low in social capital because there is little time for social interaction within the family and between the family and other social institutions. This is also a major conclusion of Putnam's recent work (2000). These findings place the issue of the distribution of working time at the heart of the policy agenda.

2. Linking technology to social development

New information and communication technologies have created enormous opportunities for access to knowledge, and for new ways of working and learning. A huge range of networks becomes possible. At the same time they pose threats to the ways in which knowledge is accumulated and shared. As with worktime, there are strong trends towards polarisation; at every level, there are groups at risk of social exclusion. There is a whole series of questions to be asked about how ICT can be geared to enhancing social cohesion, for example in its use within educational systems, or in the way it may be used to enhance community capacities at local level.

3. *Informal learning*

Human capital is not built within formal educational institutions and frameworks alone, or even predominantly. Even more obviously, social capital depends on people being able to participate actively in the relevant spheres of social life. Occupational skills are learnt on the job, implicitly as well as consciously. Values as well as competences are only truly learnt when they are applied. There is no necessary logic to the sequence "first learn then do". This simple observation has enormous implications for policy, nationally and at corporate and community levels. In particular, it raises major questions about the extension of the initial phase of education, where young people spend on average more and more time in formal education. We have to ask not only whether this is the most effective distribution of educational opportunity, but what the impact is on their subsequent capacity and motivation to learn. The relationships between formal learning and wider learning through participation in economic and social life, at all different stages throughout the life cycle, need serious re-examination.

4. Time-scales: evaluation and intergenerational solidarity

One of the major challenges posed by the sustainable growth agenda is that of the time horizons implied in it. Stasis is not an option. On the other hand, the sheer unpredictability generated by the pace of change destabilises conventional policy frameworks. One of the most important aspects of this is the way in which relationships between generations are conceived of and managed. In both environmental and welfare spheres, the costs and benefits of one generation's activities impinge heavily on those of its successors (and to a more limited extent its predecessors). Even making such issues explicit runs risks, for example of increased intergenerational conflict over public expenditure, but the risks are unavoidable. If social cohesion is to be maintained and improved, we need more sophisticated and flexible instruments for assessing and evaluating the implications of our actions, and these instruments will have to accommodate widely differing time-scales.

5. *Joining up policy*

Improved coordination is one of OECD's favourite policy recommendations. Sometimes this begs the question of who is to do the coordinating, with an implication of top-down, and perhaps unrealistically mechanistic approaches to policy implementation. A social capital perspective opens up wider alternatives. Its focus on horizontal as well as vertical relationships, and on the sharing of information and values, suggests a different form of coordination, developed through the ongoing interaction between stakeholders. It allows for friction, even conflict, but proposes, in overt normative fashion, that there should be high levels of mutual understanding in order for these to be resolved. This, probably, is why it can be characterised as a blend of socialism and liberalism.

References

Arrow, Kenneth J. (2000) "Observations on Social Capital" in eds. Partha Dasgupta and Ismail Serageldin *Social Capital: A Multifaceted Perspective* (Washington, D.C.: World Bank): 3-5.

Ashton, D., and A. Felstead (1998) *Organisational Characteristics and Skill Formation in Britain: Is There a Link?* Working Paper No. 22 (Leicester: University of Leicester, Centre for Labour Market Studies).

Baron, S., J. Field, and T. Schuller, eds. *Social Capital: Critical Perspectives* (Oxford: Oxford University Press, forthcoming).

Behrman, J. (1997) "Conceptual and Measurement Issues" in eds. Jere Behrman and Nevzer Stacey *The Social Benefits of Education* (Ann Arbor: University of Michigan Press): 17-67.

Boisot, M. (1998) *Knowledge Assets: Securing Competitive Advantage in the Information Economy* (Oxford: Oxford University Press).

Bourdieu, P. (1986) "The Forms of Capital" in ed. J. G. Richardson *Handbook of Theory and Research for the Sociology of Education* (Westport: Greenwood Press): 241-258.

Coleman, J. (1988) "Social Capital in the Creation of Human Capital" *American Journal of Sociology* 94 Supplement: S95-S120.

Dasgupta, Partha "Economic Progress and the Idea of Social Capital" in eds. Partha Dasgupta and Ismail Serageldin *Social Capital: A Multifaceted Perspective* (Washington, D.C.: World Bank): 325-424.

Edwards, R., and M. Foley (1998) "Civil Society and Social Capital Beyond Putnam" *American Behavioral Scientist* 42(1): 124-139.

Field, J., and L. Spence (2000) "Informal Learning and Social Capital" in ed. Frank Coffield *The Importance of Informal Learning* (Bristol: Polity Press): 22-32.

Fine, B., and F. Green (2000) "Economics, Social Capital and the Colonisation of the Social Sciences" in ed. Baron et al. S*ocial Capital: Critical Perspectives* (Oxford: Oxford University Press, forthcoming).

Fukuyama, F. (1996) *Trust: The Social Virtues and the Creation of Prosperity* (Harmondsworth: Penguin Books).

Granovetter, M. (1973) "The Strength of Weak Ties" *American Journal of Sociology* 78(6): 1360-1380.

Grootaert, C. (1998) *Social Capital: The Missing Link?* Working Paper No. 3. (Washington, D.C.: World Bank Social Capital Initiative).

Laslett, P. (1989) *A Fresh Map of Life: The Emergence of the Third Age* (London: Weidenfeld & Nicholson).

Leadbeater, C. (1999) *Living on Thin Air: The New Economy* (Harmondsworth: Penguin Books).

Levy, F., and R. Murnane (1999) "Are There Key Competencies Critical to Economic Success? The Economics Perspective" OECD Paper (Paris: Organization for Economic Cooperation and Development).

Maskell, P., H. Eskelinen, I. Hannibalsson, A. Malmberg, and E. Vatne (1998) *Competitiveness, Localised Learning and Regional Development: Specialization and Prosperity in Small Business Economies* (London: Routledge).

McRae, H. (2000) "Disloyalty Pays off for Companies and Workers" *The Independent* 12 January.

Narayan, D. (1999) *A Dimensional Approach to Measuring Social Capital* (Washington, D.C.: World Bank).

Narayan, D., and L. Pritchett (1997) *Cents and Sociability: Household Income and Social Capital in Rural Tanzania* (Washington, DC: World Bank).

OECD (1998) *Human Capital Investment: An International Comparison* (Paris: Organization for Economic Cooperation and Development, Centre for Educational Research and Innovation).

Portes, A. (1998) "Social Capital: Its Origins and Applications in Modern Sociology" *Annual Review of Sociology* 24: 1-24.

Putnam, R., with R. Leonardi, and R. Nanetti (1993) *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton: Princeton University Press).

Putnam, R. (1996) "The Strange Disappearance of Civic America" *American Prospect* 24(winter): 34-48.

Putnam, R. (2000) *Bowling Alone: The Collapse and Revival of American Community* (New York: Simon & Schuster).

Schuller, T. (2000) "Social and Human Capital: The Search for Appropriate Technomethodology" *Policy Studies* 21(1): 25-35.

Schuller, T., S. Baron, and J. Field (2000) "Social Capital: A Review and Critique" in eds. Baron et al. *Social Capital: Critical Perspectives* (Oxford: Oxford University Press, forthcoming).

Solow, Robert (2000) "Notes on Social Capital and Economic Performance" in eds. Partha Dasgupta and Ismail Serageldin *Social Capital: A Multifaceted Perspective* (Washington, D.C.: World Bank): 6-10.

Sturgess, G. (1997) "Taking Social Capital Seriously" in eds. A. Norton, M. Latham, G. Sturgess and M. Stewart-Weekes *Social Capital: The Individual, Civil Society and the State* (St. Leonards, NSW: Centre for Independent Studies).

Thurow, Lester (1999) *Building Wealth: The New Rules for Individuals, Companies and Nations in a Knowledge-Based Economy* (New York: HarperBusiness).

Woolcock, M. (1998) "Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework" *Theory & Society* 27(2): 151-208.