

CAPITALS AND CAPABILITIES

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June 2004

Acknowledgements

This paper was arose through a request from the Smith Institute to contribute to an 11 Downing street seminar series on wealth using data from the 1970 British Birth Cohort Study to demonstrate the long term economic, social and personal returns to a broad range of early educational achievements. Planning the seminar stimulated our thinking about the meaning of such terms as wealth, capital and capability in the modern context and we decided to prepare a background paper setting out, by way of clarification, our understanding of the distinctions between them. This is a revised version of the original paper. A note of the empirical results presented at the seminar is available on request. A more developed analysis in the light of the seminar discussion is in preparation for an academic journal. We are grateful to the Smith Institute for the support given over a number of years to the Centre for Longitudinal Studies and the Centre for Research on the Wider Benefits of Learning Centre, based at the Institute of Education, without which the work would not have been done.

Summary

There has been a gradual extension of the economists' term 'capital' to embrace social, cultural and psychological as well as human and financial assets available for investment. This development raises the question of whether the properties that economists attribute to capital meaningfully extend to these wider usages. The development economist Amartya Sen has introduced the different but related notion of 'capability' to describe the potential to achieve desired levels of functioning in the different domains of life. There are clear but insufficiently explored parallels between this notion and those inferred by the different forms of capital.

This paper is part of the ongoing programme of research being conducted by the Centre for Research in the Wider Benefits of Learning, and stimulated by work done for a Smith Institute seminar on 'Wealth' in 11 Downing Street. The paper describes essential elements of the notion of capital in the usage of economists, factors such as: the property of being invested in; measurability; ownership; returns and; fungibility. Capabilities, on the other hand, are conceptualised as inputs to the production of capitals and also the returns to them in the wider sense (i.e. social and personal as well as economic). The final section considers the links between the two notions and addresses the policy implications of the debate. The aim is to stimulate discussion on the validity and usefulness of the term capitals and capabilities for describing these important resources and to ask which term is more useful in the different contexts in which they might each be applied.

1. Introduction

A concept that has gained generality and importance in explaining success under the conditions of what Anthony Giddens' defines as 'late modernity'¹, is that of 'capital'. A whole raft of policies is now devoted to equipping individuals with the capital needed to negotiate successfully the routes through education and the labour market and the domestic and civic domains of adult life. In the case of the Child Trust Fund ('Baby Bond') the government ensures that every individual starts life possessing *financial capital*. But that is only one part of a wider range of *capitals* that the individual needs to possess. Much of this capital accumulation is identified with the acquisition of *capability* – in Amartya Sen's terms², the potential to achieve desired functioning in the different domains of life. Sen argues that variation in these capabilities is the underlying cause of inequality.

A consideration of the modern usage of the term capital and its links to capability is helpful in the appraisal of current policies directed at reducing inequalities and identifying gaps in the policy agenda. Clarification is not merely an academic exercise, but also helps us to frame more clearly the targets to which education policy needs to be directed and how they might be evaluated. The specific contribution of this paper is to clarify the strict logical implications of the capital metaphor, as a basis for adopting a broader and more comprehensive empirical approach to the idea of 'educational returns'. This also raises questions of measurement: what are we trying to measure in judging the components of success and how might we do it better?

The notion of capital has been implicit in the analysis and evaluation of learning, ever since the 18th century when Adam Smith's wrote "Wealth of Nations". The connection between capital and education was made explicit in the emergence of *human capital* in the 1960s as an essential concept in economic and social analysis, promoted mainly by American economists such as Gary Becker and Theodor Schultz. Soon afterwards French sociology, through Pierre Bourdieu, developed the notion of *cultural capital*, with a particular role for education as a means of reproducing, or challenging, social inequalities and power relations. Bourdieu also coined the term *social capital* in his classic work *La Reproduction* to encompass the social relations and networks that could be another basis of labour market advantage, but subsequently made little further use of it³. US sociologist James Coleman, in drawing attention to an ecological or area-based component of achievement, proposed social capital, reflecting community strength (good neighbourliness, trust reciprocity), as a key building block in the development of human capital⁴. The more recent

¹ Giddens, A. (1991) *Modernity and Self-Identity: Self and Society in the late Modern Age*. Cambridge: Polity Press.

² Sen, A. (1992) *Inequality Re-examined*. Cambridge (Mass): Harvard University Press.

³ Bourdieu, P. and Passeron, J-C. (1977) *La Reproduction*, Paris: Les Éditions de Minuit

⁴ Coleman, J. (1988) 'Social Capital in the Creation of Human Capital', *American Journal of Sociology*, 94, Supplement, 95-120.

emergence of the notion of social capital, primarily through the American political scientist Robert Putnam⁵ (is evidence of the further extension of the application of the capital metaphor across the social sciences⁶. It has since been extended further to notions of *identity capital*, *intellectual capital* and others. These extensions of the uses of the term have sparked continuing debate amongst a range of disciplines, about how tightly ‘capital’ is to be defined.

Roughly speaking a continuum can be seen as running from a view of capital as a purely economic term that can strictly be applied to physical and financial resources, to a very loose approach that allows it to be attached to more or less anything which can be thought of as an asset of some kind and/or yields some kind of return or added value. The notion of emotional capital would come close to this end of the spectrum. Human capital comes closer to physical capital in terms of the acceptance of it in mainstream economics and the number of points of logical coherence that it has in common with physical capital. The point at which the line between a literal and a metaphorical application of the term is to be drawn varies enormously; so does the weight that might legitimately then be attached to any analysis involving the term.

Our overall objective therefore is to clarify the terms in which discussion of different “capitals” is based and so to assess ideas about the different types of capital in a common framework. We begin with some general discussion of different meanings of capital, and then set out a number of features of capital and discuss how they might be applied to the different forms of capital that we have identified. Following this examination we further explore the links between the concept of capital and that of capability. This is a valuable extension of the argument because it enables us to bring the different types of capital into a single framework that makes more explicit the connections with policy - particularly policy in relation to education, with which the paper concludes. We acknowledge earlier work of Bebbington in examining these links in the different context of development economics⁷. The Institute of Development Studies ‘Framework for Sustainable Rural Livelihoods’ also encompasses them⁸.

The paper is very much a discussion paper. We are already working on a more refined framework, but judged it best to place these ideas in the public domain now.

⁵ Putnam, R. (1999) *Bowling Alone: the collapse and revival of American community*. New York: Simon and Schuster

⁶ For a full overview of the evolution of the term social capital see - Barron, S., Schuller, T. and Field, J (2000) *Social Capital: Critical Perspectives*, Oxford University Press.

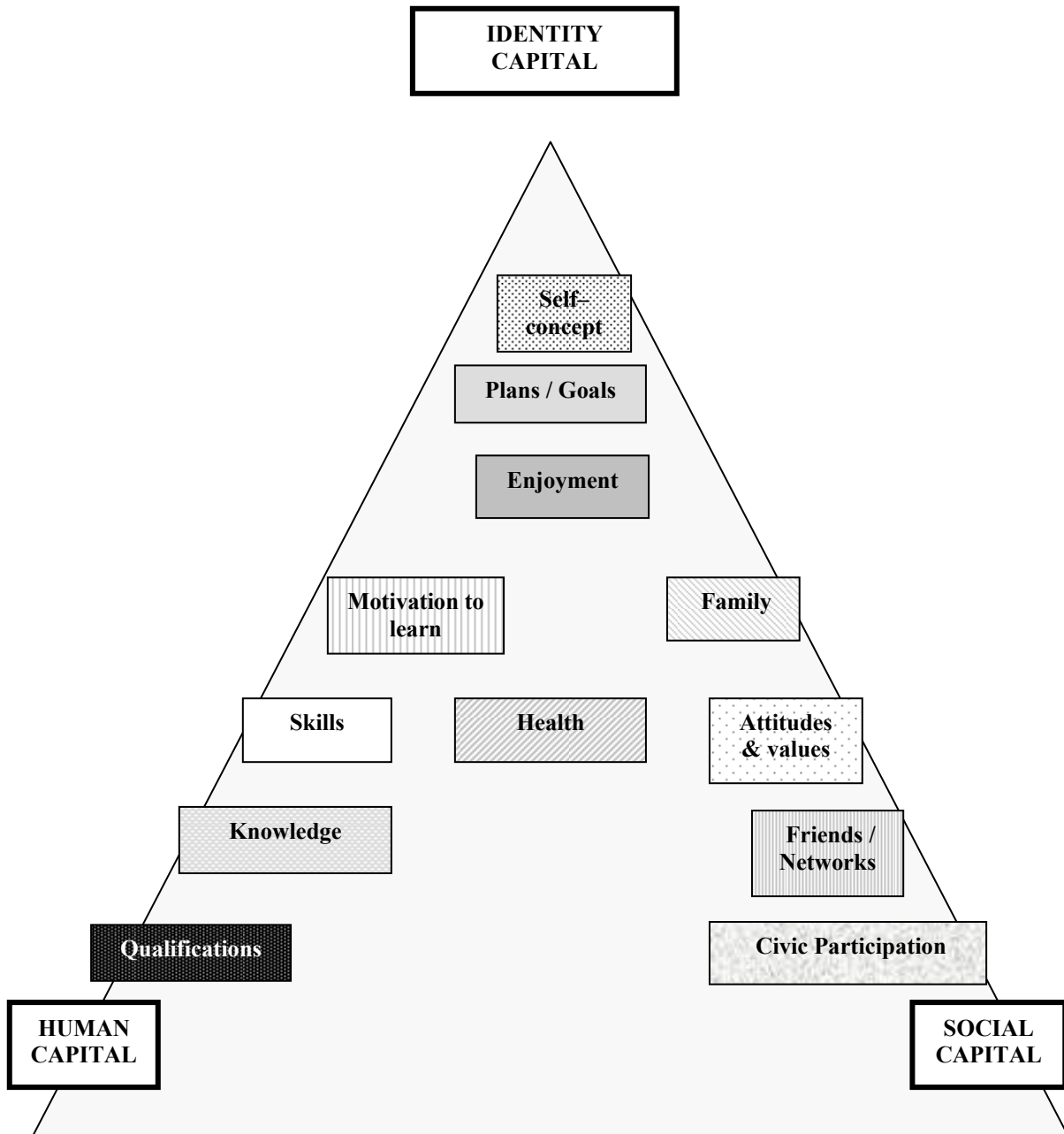
⁷ Bebbington, A. (1999) *Capitals and Capabilities: a Framework for Analysing Peasant Viability, Rural Livelihoods and Poverty.*, *Policy that Works for Sustainable Agriculture and Regenerating Rural Economies* SPTW, London: International Institute for Environment and Development (IIED) Sustainable Agriculture and Rural Livelihoods.

⁸ Scoones, I. (1998) *Sustainable Rural Livelihoods: A framework for Analysis*, IDS Working Paper 72

1.1. Types of capital

In work conducted at the Centre for Research on the Wider Benefits of Learning we have investigated the broad diversity of effects of learning on the lives of learners. These effects range across many aspects of the individual and so require an interdisciplinary approach and a broad view of the individual. To conceptualise this diversity we have developed a model based on a triple capital perspective⁹. We present this as a triangle in Figure 1.

Figure 1: Capitals and capabilities as returns to learning



Our triangle has human capital, social capital and identity capital as its three points.

⁹ Schuller, T. Brassett-Grundy, A., Green, A., Hammond, C. and Preston, J. (2002) *Learning Continuity and Change in Adult Life*, Wider Benefits of Learning Research Report no3, Centre for Research on the Wider Benefits of Learning, Institute of Education; Schuller, T. Preston, J., Hammond,

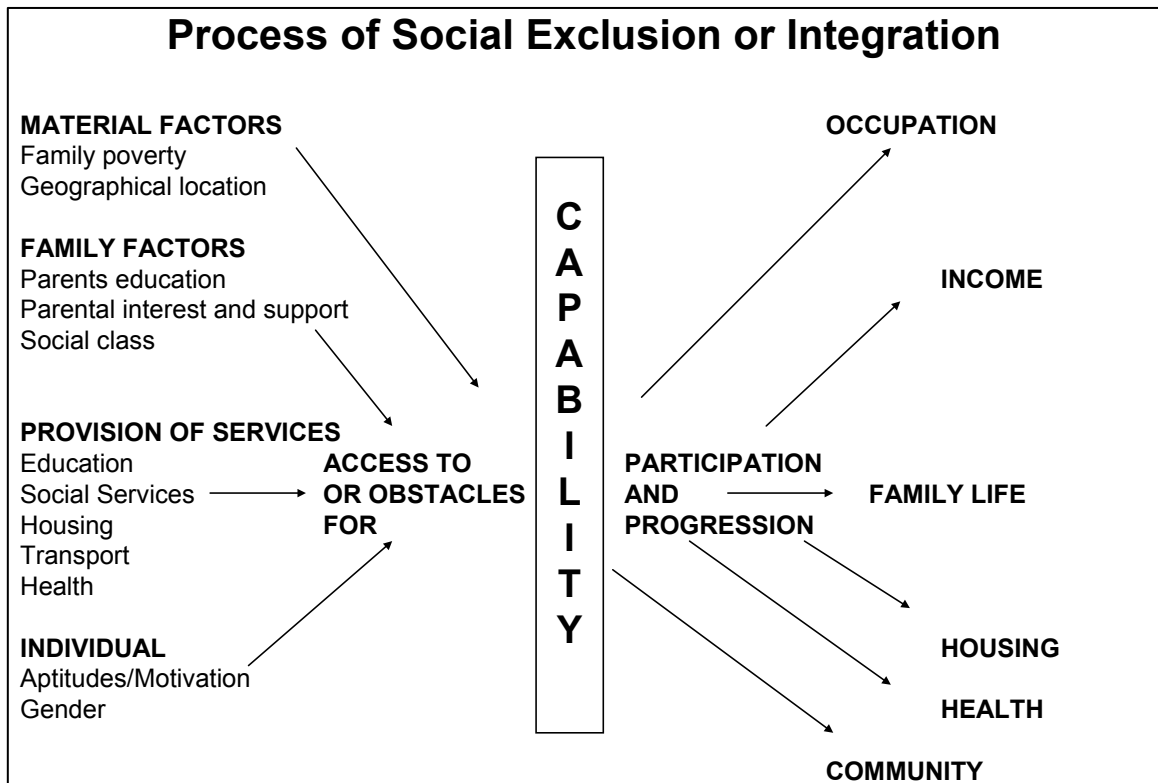
Broadly, human capital refers to knowledge, skills and qualifications; social capital to norms, networks and relationships; and identity capital to self-esteem, self-efficacy and a sense of purpose or direction in life. We locate capabilities within the triangle, as reflecting the direct and indirect learning outcomes through which the different forms of capital are accumulated.

Policy comes into the picture as the means through which society contributes to the formation of capabilities, most obviously through education. In company with other public services, education has to contend with many other influences, which may work with, or work against, capability acquisition and enhancement. Figure 2 depicts these relationships together with the long-term outcomes of capability and capital accumulation that constitute effective functioning in adult life¹⁰. The graphic also reflects the major policy concern with social exclusion. Those with least access to capabilities, and consequently capital accumulation in the broad sense considered here, are also the most likely to experience social exclusion as adults.

C, Brassett-Grundy, A. and Bynner, J. (2004) *The Benefits of Learning: impact of education on health, family life and social capital*. Basingstoke: Macmillan.

¹⁰ Bynner, J. , Joshi, H. and Tsatsas, M. (2000) *Obstacles and Opportunities on the Route to Adulthood: Evidence form Urban and Rural Britain*. London: Smith Institute

Figure 2: Process of social exclusion or integration



In what follows we examine in more detail the usefulness of first capital and then capability in describing particularly what education policy is trying to achieve, how the returns to it need to be viewed and how they can be measured.

1.2. The meaning of “capital”

In everyday language the term capital refers to wealth. We talk about investing capital, for example, implying that capital is an asset that can be owned and allocated, an aspect of wealth. Indeed in everyday usage a capitalist is assumed to be materially wealthy.

Economists do not use the term in quite the same way. For those familiar with the national accounting framework, the term capital refers to the stock of reproducible (mainly tangible) assets that contribute to the production of goods and services. This capital stock is primarily the product of yearly investment flows (although in accounting terms it also includes changes in inventories and net investment abroad).

Whereas the everyday usage acknowledges that capital can be invested - though it might be consumed instead - economists *define* capital as that which is or has been invested. The stock of physical capital is the stock of output-producing assets that results, net of depreciation and technological obsolescence, from the production of plant and machinery (fixed capital formation) and the purchase of supplies for use in production (inventories).

Moreover, in economics investment has a similarly technical and precise meaning. In everyday usage we talk of investing in stocks and shares, say, or more generally in *financial* assets, but that is not the technical economic meaning. Traditionally in economics, the term investment referred to investments in physical capital, i.e. plant, buildings and machinery. However, it has long been recognised that firms, households and governments also commit resources to education and training. The ‘human capital revolution’ in economics made explicit that income invested in education can be considered as an investment in human capital.

McCloskey (1990) describes the revelation of the idea of human capital for Schulz who

“interviewed an old and poor farm couple and was struck by how contented they seemed. Why are you so contented, he asked, though very poor? They answer: You’re wrong Professor. We’re not poor, we’ve used up our farm to educate four children through college, remaking fertile land and well-stocked pens into knowledge of law and latin. We are rich¹¹.”

This is a definition based on the idea that rather than investing assets in physical capital or consuming them, education is an investment in the stock of skills to earn a future return. Hence the metaphor implicit in the term "human capital" relates to investment and to the notion of using resources to build up a stock of additional resources (human capital) that will earn a return.

1.3. Broadening the notion of capital

In the simple traditional capital model, physical capital produces output. Physical capital earns a return in line with its productivity. It is valuable precisely because it earns this return. Neoclassical economics is able to provide some –though far from complete - foundations for a description of this process based on axioms of profit-maximising firms, utility maximising households and price signals resulting from the supply and demand equilibrium under perfect competition. A key aspect of this model is the production function, the theoretical expression of the processes of production by which inputs (capital) are transformed into outputs (goods and services or Gross Domestic Product, GDP).

The broadening of the notion of capital to enable it to be applied to people and aspects of society can be thought of as having two intentions, though these intentions are often not made explicit by different authors. Both supply links to the concept of *capability* that we consider later.

The first effective objective is to broaden the set of inputs that should be considered as important for the production of GDP. The introduction of the notion of human capital achieved the first objective. Gary Becker’s work that won him a Nobel prize in

¹¹ McCloskey, D.N., (1990). *If You’re So Smart: The Narrative of Economic Expertise*. Chicago: University of Chicago Press, p13.

economics showed how the skills of the labour force – a key set of capabilities - are an important aspect of the production function¹². This notion has been further emphasised and refined in many versions of endogenous growth theory¹³. The originator of the modern idea of social capital, Coleman¹⁴, also emphasised the role of social capital in this light, seeing its existence as a prerequisite for the accumulation of human capital.

The second objective may be to broaden the set of outputs that should be considered to be of intrinsic value. Social capital is not only of value because it enhances the production of goods and services but also as an end in itself. It is of value to be a member of a community with high levels of social capital, partly because you are less likely to suffer from crime but also because it feels good. This second objective relates to recent theorisation of the importance of happiness as the key “output” of the economy¹⁵.

2. Features of capital

The two objectives set out in the previous section are associated with different uses of the term capital. In the different contexts (i.e. as input or output) the application of the capital metaphor carries different meanings. We now describe in more detail aspects of the notion of capital, presenting schematic observations about the logical requirements of the application of the term in order to consider the sense in which its application clarifies understanding or obscures it. Observations are presented under the following headings: investment; stocks; ownership; returns; distribution and fungibility.

2.1. Investment

As discussed, above, traditionally, investment was confined in economics to physical capital. Although it is quite common parlance now to talk about investing in human capital, this is a metaphorical way of saying that we are investing in education, skills, competences that we think will derive a return.

The shift enables households and individuals to participate directly in investment in capital, in a different sense to what happens when they hand over their wealth as savings, to firms or to financial intermediaries. It allows people to invest in themselves or their children, as well as organisations to invest in their staff or governments in their population. It also allows them to invest more than just financial wealth but also time, energy and commitment.

¹² Becker, G.S. (1975) *Human Capital* Washington D.C.: National Bureau of Economic Research.

¹³ See, for a review, Barro R. J. and X. Sala-i-Martin, *Economic Growth*, MIT Press, 1998

¹⁴ Coleman, J. (1988) *op cit*.

¹⁵ Layard, R. “*The Case for Happiness*”. Lectures at LSE, Feb 2003, www.cep.lse.ac.uk

2.1.1 The role of government

Crucially, the notion of investment clarifies an important role for public sector intervention. Market failures such as poor information, barriers to investment, or the failure of prices to reflect social rather than private benefits, are all examples of externalities that call for government intervention. Direct investment in human capital on the part of government means building schools, training teachers and so on. Employers, too, aiming for labour market advantage spend on training facilities, paying trainers and paying individuals to devote time to learning. Money is visibly spent on these. They are in that sense a direct investment in human capital formation. But skills and competences are developed in other ways too, for example through the ‘informal’ training by observing colleagues at work. Thus, the development of human capital follows from both *direct* and *indirect* investment. This is an important distinction.

In some circumstances, there may be no conscious intention on the part of individuals to develop human capital, or even consciously as role models to influence their colleagues, but the way they carry out their functions influences the skill acquisition of others. Similarly, Tayloristic technologies, which break down operations into routine and fragmented activity, are to be distinguished from technologies that require skills and supply the means of developing them. These indirect aspects of human capital formation are important in the economic literature that considers them as externalities and where a substantial and growing body of research is attempting to quantify them¹⁶.

The distinction between direct and indirect investment applies to other capitals, though not always straightforwardly. Government can invest in community facilities like libraries or sports centres, but there is no guarantee that people will use them or add to the associational elements of their social capital by doing so. From the policy angle, therefore, it is debatable whether social capital is something in which direct investment can be made, or whether it can only (or best) be developed indirectly. Even more problematic, mutual ‘trust’ is taken to be a key component of social capital, but can trust levels be directly influenced in the same way as more school or university places can be provided?

This is a way of saying that, in economic language, the social capital production function may be more complex and difficult to determine than that for physical or even human capital. Whereas, the indirect effects or spill-over benefits in the formation of human capital may be important there are nonetheless direct interventions that can be made in schools, universities and so on. For social capital, the direct interventions may be a much smaller part of the formation process and indirect investments in community facilities much more important.

¹⁶ Morretti, E. (2002) *Estimating the Social Returns to Higher Education: Evidence from Longitudinal and Cross-sectional data*. NBERm Working Paper W9108; Arrow, K. (1962) ‘The Economic Implications of Learning by Doing’, *Review of Economic Studies*, 29.

How can society (or units within society) develop such elements of social capital as trust obliquely? An example might be the institution of strengthening mediation arrangements, which seek to minimise antagonistic litigation. Public trust in the quality of education is a vital element in its success, and not only a reflection of the extent to which it is successful. In developing policies for ‘sustainability’ after collapse of the local industrial base, for example, democratic forms of consultation and participation are recognised as important to shore up the social capital components¹⁷. Sustainability more generally, e.g. in the field of development economics, sustaining the effects of a new programme, depends on a community’s ability to marshal a range of capital resources including those identified with social capital¹⁸. But ‘investing in social capital’ in this way might often have to be done almost by stealth and not under an explicit label – so it might not fit conventional accounting approaches. Notably the government recognises the value of social capital in the evaluation of social interventions, such as *Neighbourhood Renewal*, but tends to downplay committing resources explicitly to its generation.

2.1.2 Rationality of the investment decision

Investment can be *rational* or *implicit*. Investing in physical capital is in most cases a conscious decision that it is relatively straight-forward to model within the neo-classical economics framework of rational firms maximising profit. This is not so clearly the case for the other mooted forms of capital.

The extent to which investment in human capital should be seen as a rational decision is at the heart of the current debate about university student finance: how far do individuals make calculations about returns, and what criteria do they apply? There is a question about the quality of information available to potential investors and their willingness to bear risk but more substantially there are questions about the components of the return to the investment.

Prior to this is the issue of the disposition to calculate (which incidentally takes us back to well-worn debates about the deferment of gratification). It is exactly the habit (or *habitus*) of the middle class not so much to make these calculations as to act on assumptions about the returns to education based on collective historical experience. This does not undermine the predictive value of models based on axioms of rationality but does raise questions about their accuracy as models of the actual process of decision-making at a psychological level.

The difference can be seen in relation to another key component of social capital, that of networks. At one extreme is the conscious and instrumental use of networks: the

¹⁷ Aldridge, S. (2002) *Social Capital in the UK: Policy Implications*, paper presented to the European commission Conference on Social and Human Capital in the Knowledge Society, Brussels;

Omman, I. and Spangenberg, J.H. (2002) *Assessing Social Sustainability: the Social Dimension of Sustainability in a Socio-economic Scenario*. Sustainable Europe Research Institute, Vienna, Austria;

¹⁸ Bebbington, A. (1999) *op cit.*; Scoones (1998).

cocktail party guest who allocates fractions of time to fellow-guests on the basis of whether they will be a useful member of his or her network. Less exploitative approaches to developing or nurturing contacts can nevertheless reflect implicit assumptions about the value of network membership (rationality). However, as discussed above in relation to the importance of indirect investments, rationality may be a much less successful empirical foundation for analysis of social capital than it has been for questions of physical or human capital. Individuals do make decisions about school or university participation, even if those decisions are not always founded on clear analysis of potential returns. Social capital, however, is less easily modelled as the product of decisions by firms or households.

Identity capital is still so far away from being in common parlance that it is hard to conduct the same kind of examination. It would be fair to say that on the whole few people consciously invest in their own identity¹⁹. Côté and Levine argue that the demands of the (late) modern world mean that they should.²⁰ Thus 'gap years', multiple jobs and multiple occupational roles, largely unknown in the past, increasingly characterise the routes to and through adulthood. Moreover a lot of the activity involved is explicitly centred on developing or bolstering self-confidence and self-esteem and a sense of personal identity, attributes at the core of identity capital. Our fieldwork showed that participation in learning can be very important for this, in ways that the participants themselves recognise. Mostly they do so after the event, so that the 'investment' is only seen as such in retrospect; but it would be possible to think of such investment as being planned beforehand.

2.1.3 Opportunity cost

One important issue is whether or not investment requires something to be *foregone*. In the standard economic sense, an investment requires current consumption, or alternative investment, to be reduced or abandoned. Without an equivalent or greater return to the investment, such a sacrifice is unlikely to be made. Investing in one's own human capital requires one to spend time learning - sometimes painfully - rather than pleurably consuming something else; and in some cases it involves deferring income, or deferring higher levels of income in the short term (usually of course in the expectation that the deficit so incurred will be wiped out by later gains.)

If this criterion is strictly applied as a necessary condition of 'capital' it may seem to discredit the notion of social capital on the grounds that trust, norms and networks can all be developed without anything being foregone - although generally these things require effort in order to be sustained. However, from the Government's perspective if it expends resources on programmes to support the development of social capital it cannot spend those resources on programmes with other objectives. The fact that

¹⁹ On the other hand *Facelift Diaries* (Channel 4, 7/3/03) showed people directly, consciously and explicitly investing in their own appearance in the expectation of returns.

²⁰ Côté, J.E. and Levine, C.G. (2002) *Identity, Formation, Agency and Culture*, London: Lawrence Erlbaum .

social capital can be developed without an opportunity cost does not mean that there is never an opportunity cost. Moreover of course, education is not always painful but is also a form of consumption, so the question to those who accept human capital but not social capital as a legitimate metaphor is whether something can be both consumption and investment simultaneously. An accounting model excludes this simultaneous existence, a problem for Schultz in his early reformulation of the notion of human capital²¹, but this has not prevented the notion of human capital being meaningfully applied to empirical and theoretical research.

2.2. Valuing stocks

Physical capital is tangible. It is also relatively straightforward to value. Depreciation and technological obsolescence raise difficult accounting problems but the currency of evaluation is at least clear and market prices exist to support attempts at valuation. The problem is eased too because the function or purpose of the unit of capital is relatively clear-cut: the more productive the unit of capital the greater its value. In neoclassical economics, the value of physical capital is related directly to its productivity.

In the case of human capital the capital resulting from the investment is harder to assess, let alone value. The usual approach to measurement is to use the levels of qualification achieved, or, even more crudely, the duration of education by years of schooling. These are crude proxies for formed human capital and it is important to remember that human capital is not the same as learning.

2.2.1 Measuring outputs

In core neo-classical economic theory, the return to human capital is the wage, i.e. the value to the firm of the extra productivity brought to the firm by the owner of the human capital. The true measure of the output of human capital is, therefore, productivity not learning. This is very rarely acknowledged. It is a feature not just of the individual but of the individual in a historical, social and fundamentally technological context. (Take a high human capital individual from Stanford and place her in Mozambique and observe the change in productivity.)

The error in measurement of human capital is, therefore, not the difference between measures of schooling such as years in education or qualifications gained and what has actually been learned in terms of knowledge and skills, but between the schooling measures and productivity. This is a knotty problem when one accepts that not all schooling enhances productivity or that many non-educationally generated skills bring economic returns.

In addition, the OECD and most human capital economists recognise the problem of establishing that wage returns follow as a result of the intrinsic value of the human

²¹ Schultz, T.W. (1961) 'Investment in Human Capital', *American Economic Review*, LI, 1-17.

capital and not from its power as a signal of some kind of capacity. The problems of assessment and valuation are therefore substantially more complex for human as opposed to physical capital.

Because a substantial proportion of the return to physical capital is private, the private market return is a good measure of the realised asset. For human capital, more significant externalities come into play and many non-market or non-pecuniary returns are also important. This weakens the extent to which the marginal product can be considered to be the “true” valuation of the investment.

Again, for social and identity capitals, the private return is even less well proxied by the wage and the social return becomes more important. Employer value placed on these forms of capital is recognised to be greater than it was in the past because of the move toward technology-based industry and non-Taylorist methods of production, e.g. ‘flattened’ team-based structures rather than hierarchies. But these are also examples in which the broadening of the notion of capital is equally, if not more, about broadening the output measure than the input.

These problems of measurement and valuation are further exacerbated when one moves from the micro-economic to the macro-economic level. There is plenty of evidence that investing in one’s own human capital can bring economic as well as non-economic (personal and social) returns. The evidence for causal links between the qualification levels of a population and conventional measures of economic success are, however, much more tenuous – though this does not prevent the relationship from underpinning much policy rhetoric and activity²².

Stocks of identity capital might be measurable by surveys of psychological attributes such as self-esteem or other indicators. In relation to social capital, there are cross-national measures of trust levels, and this kind of measure could be replicated, or adapted, at national or local level. But a further point of criticism made by those who would delegitimise social capital as a term is that one cannot identify stocks of it, since it resides primarily in relationships rather than individual attributes

Finally, there is an interesting question about rates of decay in respect of capital. This is important in the light of growing interest in the notion of sustainability in the production sense. Physical plant is written off, though at very varying rates of depreciation. In relation to human capital the notion of a half-life, borrowed from physics, has some currency, with shortening half-lives indicating the rapidity of technological and other change and the need for constant updating. But the techniques for estimating the decay of human capital stocks are rudimentary. The issue is, incidentally, important in the debate on lifelong learning, since proponents of front-loading (i.e. of investing primarily in initial education) argue that the earlier the

²² e.g. Wolf, A. (2002) *Does Education Matter*. London: Penguin Books.

stock of human capital is built up in someone's life the longer the returns to it will flow, and the higher they will therefore be in the aggregate.

The question of decay has impinged strongly on the social capital debate. If social capital declines, that can be seen as social change of a normatively negative kind, rather than depreciation. One criticism of Robert Putnam's account of the decline of social capital in the US²³ is that there is a contradiction between his stress on the long timeframe required to build social capital and the rapid fall, which he apparently shows in the last quarter-century. This complex issue involves analysis of historical, cohort and generational factors, which may pull in different directions.

In the case of identity capital the issue is how to find the means of bolstering, as well as sustaining, the personal attributes (capabilities) increasingly demanded for functioning in modern industry and society that were traditionally identified with the middle class.

2.3. Ownership

For some, ownership implies alienability, or, in the physical case, the right to dispose of what is owned. The owner of physical capital can sell it or give it away if they cannot find a buyer. This is a fundamental feature of capital ownership, though there are many possible forms of constraint, which may operate to restrict this right.

Human capital is obviously different. I may pass on my skills to you, and do so for money. But I do not lose ownership of the skills – even though their value may be in some small measure diminished by my act because of reduced scarcity (hence copyright laws). They are still mine to exercise. It is of course illegal to sell ownership of qualifications, precisely because they are awarded to an individual in respect of knowledge or skills acquired by that particular person.

Social capital is different again. A crude and individualised interpretation of SC measures it in terms of personal contacts – the size of one's address book. Here there is some scope for selling, as one could sell network names as a list of business contacts. Ownership is not lost (although if one did this too often the value of the contact would probably drop). Norms are not owned, but subscribed to. I cannot hand over my social capital to someone else, whether or not money is involved. Nor can I hand over my identity²⁴.

Capital can be collectively, as well as individually, owned through the state or an institution such as a mutual or a pension fund. Is there any sense in which ownership of human or social or identity capital can be construed as being collectively owned? This opens up some interesting avenues of thought. Human capital resides in

²³ Putnam, D. (1999) *op cit*.

individuals, but there are many circumstances when an individual can only exercise those skills if other forms of human capital – embodied in other individuals – are present. Globally, this partly explains why returns to education are low in the developing world; it also explains why investment in human capital has variable pay-offs in terms of productivity, as well as income. So although the ownership remains at the individual level, the realisation of any value to the capital is dependent on others forming a part of the activity. Of course at a general level this is true of most skills, since they require a functioning society with division of labour to be operable; but there are more precise senses in which this could be true, where the skills are so tightly interdependent that none of them make sense without the rest of the package.

Social capital by contrast, (and in certain respects identity capital), could be thought of as primarily a collective asset, if we move away from the ‘address book’ model, i.e. how many people a given individual is in contact with. It inheres in relationships, which requires at least two agents to be involved. Because of this inherent quality social capital is not alienable; those involved cannot even collectively decide to rescind ownership and pass it on to some other set of people. This does not conform to the traditional economic model in which a cooperative or a state can decide to sell off its assets.

2.4. Returns

As discussed above, returns may be private or social. It is not difficult to see how human capital generates both forms of return, though demonstrating it conclusively is still surprisingly difficult. It enables individuals to gain higher-paid jobs, either because they have scarce skills or because they are identified as more desirable employees. At a different level it enables a company, and by extension a nation, to compete successfully on the economic front. It also appears to generate social returns in the form of improved health, which benefits both the individuals concerned and the wider collectively. In this public good sense it maybe resembles the kind of private investment, which infuses an area with economic vigour, one spin-off being a generally improved quality of life for those in the area, irrespective of whether they share directly in the economic activity.

The example of health shows that there are wider benefits, i.e. beyond the economic. Social capital likewise brings benefits to individuals and more broadly; and the benefits are both economic and social. These are the two senses of ‘wide’, which define all of our Wider Benefits of Learning research²⁵.

Identity capital embodies or generates returns to the individual, though it is odd to express it in these terms. Self-confidence and self-efficacy are themselves positive

²⁴ Côté refers to 'identity exchanges', but these mean episodes where individuals interact and each draws on their personal resources to mutual advantage, rather than any literal transfer of identity.

²⁵ Carried out in the Centre for Research in the Wider Benefits of Learning in the Institute of Education, London University, <http://www.learningbenefits.net/>

assets, but also generate further positive returns because of the way they enable people to function effectively. They may also have a broader reach, where someone's strong sense of personal identity and high self-esteem has a positive effect on the identity capitals of those around; the converse can of course also be true, e.g. where a strong ego or group identification undermines, or is a source of conflict with, others. The religious divide in Northern Ireland is one of the more visible examples.

Mention of a strong ego raises the issue of 'excess' of capital. Can one be too self-confident (excess of identity capital)? The idea of an excess of human capital leads to contentious debates about 'over-education', which needs unpacking before we can be sure of the exact nature of the dispute: is it a descriptive term about the state of the labour market than about education, or a more evaluative one about human nature, e.g. 'over-confidence reflecting the absence of other qualities such as empathy and humility' ? This line of argument confirms that we need multi-dimensional, and non-linear, notions of capital accumulation.

2.5. Distribution

Distribution is closely linked to both ownership and returns. The distribution of capital is relevant not just for political reasons, but for reasons associated with its use. The Levellers referred to knowledge as being like manure: if concentrated it stinks, but if spread around it brings benefits to all. The value of capital, physical and human, depends not only on its volume but on its distribution. Piling up human capital at an aggregate level may not bring the expected returns if the distribution is very skewed. Thus it is quite possible to have a country, or a more local unit, which has high human capital in aggregate terms being outperformed economically and/or socially by one which has less education but a more appropriate distribution. Green, Preston and Sabates' work explores in a very interesting way the relationship between distribution of human capital and other social features²⁶.

Distribution as applied to social capital has both similarities and differences. In so far as it is a property of relationships rather than an asset held by individuals one cannot speak of distribution in the same sense. Yet there can be significantly different levels of social capital across groups, with differential returns. A high concentration of social capital in one group can change the value associated with it, from positive to negative, at least potentially, because the benefits it generates for insiders is outweighed by negative externalities. This is why the social capital of a whole community needs 'bridging' as well as 'bonding' components, i.e. relationships outwards as well as inwards to other members of the group. To some extent most if not all networks operate to exclude. But for any given network there is a point at which its exclusiveness may be judged to be socially or even economically damaging. The insularity of Japan's once-lauded banking practices is a case in point at the macro

²⁶ e.g. Green, A. Preston, J. and Sabates, R. (2003) *Education, Equity and Social Cohesion: A Distributional Model*. Institute of Education, Centre for Research into the Wider Benefits of Learning, Research Report No 7.

level. There can be no a priori position on what level of concentration is appropriate, but it would be hard to think of a society as being truly high in social capital, with the putative benefits, if this was heavily concentrated in a few pockets.

Distribution of identity capital is in some respects more nebulous, but nevertheless can be demonstrated in relation to personal attributes that tend to differ across demographic categories such as gender and class. The middle class monopoly of the less tangible aspects of cultural capital and the 'charismatic skills' that accompany them in gaining and advancing in employment can be viewed in this light²⁷.

2.6. Fungibility and interaction between capitals

Finally we deal with how far capitals are convertible one into another. Bourdieu's work suggests how economic capital generates cultural capital which in turn enables those with this capital to continue to secure their place in society²⁸. In his view and the views of others (following Marx) all capitals are ultimately reducible to the economic. Analytically what we need is a sense of the mechanisms by which different forms of capital translate into each other; the extent to which one can substitute for another; and the ways in which they can run against each other or cancel each other out.

Thus financial assets can help the acquisition of human capital, and buy a place in some social networks (though not necessarily buying trust at the same time). More interestingly a high level of identity capital, in the shape of strong self-confidence, can compensate for low human capital if it enables its holder to address tasks in a positive frame of mind, where the technical requirements are not too specific. Conversely, low identity capital can completely disable the mobilisation of human capital: a person with good qualifications may still lack the confidence to exercise them, on the labour market or elsewhere.

One of the most significant lines of policy argument to develop recently is that high levels of human capital may be relatively unfruitful if their holders do not have access to the networks which provide the opportunities for deployment. On the other hand, a high level of social capital can depress human capital, where the norms it embodies discourage educational aspiration.

3. Capabilities

Figure 1 located the three kinds of capital we have been discussing as the points of a triangle. We have only made passing reference to the components of the different

²⁷ Brown, P. (1995) 'Cultural Capital and Social Exclusion: Some Observations on Recent Trends in Education, Employment and the Labour Market', *Work, Employment and Society* 9, 29-51.

²⁸ Bourdieu, P. and Passeron, J-C. (1977) *op cit*.

capitals located within the boundaries of the triangle, reflecting broadly the direct and indirect effects of education and learning. Examination of these learning outcomes draws in Amartya Sen's concept, introduced at the beginning of the paper, 'capability'. Without undertaking the kind of exhaustive examination embarked on for 'capitals', we need to consider in a little more detail what Sen means by capability and how it can help us in linking the broad range of capitals to policy and especially to the education system

In *Inequality Re-examined* Sen distinguishes what he calls 'functionings' from 'capabilities'²⁹. Functionings exhibit performances in the different domains of adult life, which can be considered to have different levels of significance or value. At a fundamental level they include being properly nourished being in good health, avoiding premature mortality or morbidity – broadly satisfying the lower levels of Maslow's hierarchy of needs. At a different level they draw on more general features of life satisfaction and positive experience of relationships with others including taking part in the life of the community. These may be seen as (normative) goals to which most individuals aspire. Other kinds of effective functioning are sought more through collective aspiration and are to a certain extent relativistic in nature. For example, not all families strive for their children to continue to higher education. Not all communities necessarily seek the same level of technological advance.

Basing these ideas in development economics, Sen stresses the need to supply the means through which individuals and communities can achieve their goals in education, health, citizenship and so on. This is where the idea of capabilities becomes particularly salient to our interests here. These are defined as "the various combinations of functioning's (beings and doings) that the person can achieve" (1992, p39). This linkage to functioning has two implications: first if achieved functionings constitute a person's well-being, capabilities constitute the capacity, and hence the *freedom*, to achieve well-being. Secondly, in so far as choice and the ability to choose is self-evidently valuable, then achieving well-being itself depends on capability.

The various kinds of attribute shown in Figure 1 as outcomes of learning, and hence the 'building blocks' of our three capitals, can usefully be interpreted in capability terms. For example, in relation to human capital the knowledge, understandings and skills acquired through education that have utility and value in the labour market constitute its core capability components. In relation to social capital, un-discriminatory attitudes, willingness to participate in community activity, and political engagement to which the citizenship curriculum is directed, constitute core capability elements of social capital. Finally the psychological attributes identified with identity capital may similarly be seen in this light. Self confidence, strong feelings of personal control, self efficacy and positive psychological state - together with the generic kinds of attribute valued in the modern labour markets such as flexibility, creativity,

²⁹ Sen, A. (1992) *op cit.*

leadership and team working – can be viewed as capabilities similarly fostered (or not) through education.

Thus in so far as education generates, alongside the conventional knowledge and skills-based capabilities, the less tangible personal and social capabilities, it supplies a means of achieving the kinds of functioning identified with social and identity capital. In the 1980s the Royal Society of Arts (RSA) conducted a major programme, ‘Education for Capability’, devoted to reforming education and training on these lines. Though the RSA campaign was driven more by the needs of employment, than Sen’s broader societal conception, it did acknowledge that there was much more to the school curriculum than the reproduction of traditional knowledge and skills.

Sen’s capability approach is distinct from other approaches to the conceptualisation of well-being, notably that of Rawls, who concentrates on primary goods, or Dworkin, on resources³⁰. It also differs from an income-based approach. What makes the approach particularly relevant to our concerns is the notion that we should pay attention to *potential which is there to be mobilised*. Our three capitals, and perhaps capital itself as a generic concept, all denote assets which can be potentially mobilised to improve functioning in different domains and ultimately well-being, in an individual and a community sense, as a whole.

Sen’s primary concern with reducing “inequalities in societies” stresses the obstacles to achieving capability which different individuals and groups encounter. It therefore resonates with current policy concerns about *social exclusion*, to which capability may be seen as the solution. As Figure 2 demonstrates, the policy goal of *social inclusion*, takes on board the capability approach in recognising that it is the task of society to find ways of removing obstacles to capability in the education, welfare, and economic systems. All individuals and groups should have not only the opportunity to realise their full potential, but the level of functioning they aspire to achieve. In this scenario clearly education and training are core instruments for generating capability and consequently for capital accumulation in the more general sense that we have discussed above. The emphasis, however, needs to move away from the narrow concept of capability concerned exclusively with labour market functioning to functioning in the wider set of personal and social domains, through which full well-being is ultimately achieved.

The second feature which links capital and capability is the dynamic sense in which *their effective exploitation itself increases them*, in some kind of broadly virtuous circle. Capital has the capacity to support its own reproduction, as machines produce more machines, people learn how to learn, networks flourish and identities are confidently assumed. ‘Growth’ here does not necessarily mean quantitative growth. For example, a flourishing network does not necessarily need to expand numerically.

³⁰ Rawls, J. (1982) ‘Social Unity and Primary Goods’ in Sen, A. and Williams, B. (eds.) *Utilitarianism and Beyond*, Cambridge: Cambridge University Press; Dworkin, R. (1981) ‘What is Equality?’, *Philosophy and Public Affairs*, 10.

Indeed, bringing in more members might weaken it. In this context, growth means deepening the commitment which members have to it or to each other, a reinforcing of the norms that bind it together. In the context of learning and its benefits, we can look on learning which leads to more learning as a reasonable benefit, rather than an infinite regress.

There is a further aspect to this dynamism, which concerns distribution – equality being Sen’s primary concern. Success breeds success, in learning as in economic activity or perhaps more so. Capability refers to potential rather than achieved functionings. Capability can shrink as well as grow. So there is a major issue about the impact of early achievement on subsequent capability, and how this shapes the distribution of achievement over the individual’s life course. Given the strong relationships we have been finding between participation in learning and both health and citizenship, the corollary – of an increasing gap between participants and non-participants in respect of both those two dimensions and probably others – looks highly probable.

Identity capital, human capital and social capital comprise capability-based assets, which exist and which can be mobilised to yield returns. The returns can be to an individual, but are likely to go well beyond him or her. Capital is inert until it is put to use. The extent of the mobilisation varies according to a wide range of factors. Capabilities are ‘combinations of doings and beings’ that a person might achieve, but has not yet. Education, and learning of different forms, is a significant mediating factor in these processes of mobilisation, of converting capability into functioning. The merit of capability is that it makes us go back a pace, to take into account potential as well as actuality.

4. Policy considerations

The discussion above may seem rather abstract, but arguably it has some quite major implications for policy thinking in a wide range of domains.

First, it underscores the need for a *multidimensional approach* in assessing the development of and utilisation of assets. The emergence of human capital transformed thinking about production functions in the second half of the century. We can now see that human capital needs to be augmented by other forms of capital in order for its potential contribution to personal, social and economic well-being to be properly appreciated.

Secondly, the *accumulation and realisation of assets* should be seen in a lifetime context. At an individual level, the idea of baby bonds which give each individual a better start in life by providing some minimal endowment of financial capital, with consequences for the rest of their adult life, has its parallel in a genuinely lifelong approach to learning. Poor early educational achievement, reflecting a depleted base

for human capital has a strongly cumulative effect. Major efforts should be made to redress initial inequalities, but these are bound to be limited in impact if they are only applied to the initial phase of the lifecourse. This is one of the fundamental weaknesses of educational policy, which focuses too narrowly on initial achievement.

Thirdly, *capitals interact with each other*, sometimes positively and sometimes to cancel each other out, or at least to reduce the returns to single-capital modes of investment. Without necessary levels of social capital, in the form of access to relevant networks, skills cannot be mobilised and utilised. Without good levels of identity capital, membership of networks will not pay dividends in the workplace and the community.

Fourthly, *many assets lie under the surface of society*. A capability perspective brings to our attention the way in which the potential for capital accumulation through capability acquisition is frustrated by structurally and sometimes policy-based obstacles to opportunity. This stresses the interdependence of capitals and functionings in the different domains of life. It also makes the case for a truly comprehensive approach to the curriculum that addresses, alongside the economic, the social and personal facets of functioning that ultimately make up the quality of life.

Fifthly, we recognise the need to *demonstrate empirically* the theoretical connections discussed here and our research programme is providing the evidence base for this. At the same time we would argue that narrow accountancy approaches, which force capabilities and capitals into separable and exclusive categories are inadequate as instruments for generating policy-relevant information. We need instead research tools, which can accommodate interaction and holism, especially in the sense of being able to handle both investment and consumption simultaneously. This means adopting a broad perspective and approach to evidence as well as to the meaning of educational returns.