

HUMAN CAPITAL, EDUCATION, AND SUSTAINABILITY

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ABSTRACT

Human capital theory remains a powerful influence in modern economics and within educational discourse. In this paper, the theory and its prevalence across European state education policy is explored and critiqued in a number of ways including its implication in an ethos which aims at maximising returns from resources. As such, the theory and its practical manifestations are inimical to the concerns of sustainability. The paper suggests that while the concept of “natural capital”, in its focus on the need to preserve profitable natural resources for future benefit, does coalesce with sustainability discourse at points, more fruitful potential for the goals of sustainability lies in redirecting the aims of state education, away from a human capital theory orientation, towards a renewal of the social aims inherent in the original democratic ideals of liberal education.

KEY WORDS

Ecology; Economics; Schooling.



SISYPHUS

JOURNAL OF EDUCATION

VOLUME 2, ISSUE 3,

2014, PP. 78-99

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INTRODUCTION

Barely a decade ago it could be argued that education systems were one of the few instances where the nation state could still exert something like distinctive, independent control (Olssen, Codd & O'Neill, 2004), even in the face of globalizing tendencies in the economic, cultural, and political spheres, epitomised by the spread of multinational capitalism, Western cultural dominance, and the increased role of supranational agencies. That claim is more difficult to support today as various normalizing worldwide pressures increase, dominated by neoliberal thinking which, amongst other goals, aims to lock in education systems to the demands of global capitalism (Ball, 2012; Rizvi & Lingard, 2010). Nevertheless, it is still true that national education systems do retain a degree of individuality so that, even within the European Union, for example, there is little appetite for greater homogenization (Lawn & Grek, 2012). As a result, school systems have preserved something of a distinctive national flavour, at least across Europe.

However, the fashion for policy borrowing, travelling policy (Ozga & Lingard, 2007), and policy tourism (Whitty, 2012) within education, and the strengthening international role of global operators such as the OECD (Sellar & Lingard, 2013), for example, have contributed to considerable similarities



emerging between national education systems. The global reach of neoliberal ideas, a widespread belief in the key place of the so-called knowledge economy, and a concern amongst countries to present themselves as attractive as possible to multinational capital and investment, have contributed to this increase in significant structural convergence between these separate education systems. This development has been termed “vernacular globalization” (Lingard, 2000; Winter, 2012) to indicate the ways in which these global trends are translated into local national contexts, or given a local accent.

One of the most striking and prevalent ideological conceptualizations of education in current discourse is drawn from human capital theory, a seam of thought which can be seen to be foundational in the policy discourse evident in a huge number of national education systems (Gillies, 2011a). In this paper, this trend of conceptualising education as a form of capital investment, which repays individuals in improved employment opportunities and financial rewards and nation states in greater economic activity and growth, will be challenged as a significant barrier both to greater awareness of social and environmental sustainability and to greater environmental responsibility. The paper will begin by outlining the key features of human capital theory; it will then explore, through analysis of European state policy texts, the very significant place it is afforded within education systems internationally; then consider the strengths and weaknesses of this theory with specific reference to sustainability issues; and, conclude by sketching an alternative understanding of education (more specifically, schooling) which may offer some better hope for humanity and its environmental responsibilities.

HUMAN CAPITAL THEORY AND EDUCATION AS INVESTMENT

The dominant role of human capital theory in educational discourse, particularly in relation to the orientation of state education systems, does mean that it serves as a powerful globalizing influence. Its neoliberal vision sees it very much aligned with the activities of powerful framing organisations such as the World Bank and the OECD. It is no coincidence that the OECD, whose focus and *raison d’être* is economic development, should have become such an important shaper of state education systems through its publications



and the powerful PISA mechanism (Meyer & Benavot, 2013). As will be seen, the concept of the knowledge economy, and the associated conceptualisation of education as economically instrumental, are both heavily associated with the ideas of human capital theory. Much of what follows has been adapted from Gillies (2011a).

The origins of human capital theory can be traced to the work of a US labour economist, Jacob Mincer, who first used the concept nearly 60 years ago (Mincer, 1958), in a paper exploring income differentials in American society. Its main proponents, however, and those who more fully developed the theory, are two Nobel prize-winners, both associated with the Chicago school of neoliberalism, Theodore Schultz (1902-98) and Gary Becker (b. 1930).

At base, there are two foundational pillars to this theory, the first of which is concerned with theorising that differential income distribution can be best explained by establishing a causal connection between wages and individuals' levels of education (and training). Thus, in the early days of human capital theory, research centred on exploring the extent to which earnings could be linked to educational attainment. Longitudinal studies were undertaken which compared the earnings of high school graduates as opposed to college graduates in the USA (Mincer, 1958, 1974). The data appeared to suggest that, at the very least, there was a correlation between highest level of education experience and higher wages.

Schultz (1960, 1962), noting that college graduates earned more, argued that the costs of a college education could be understood as an investment which would later generate financial rewards in the form of comparatively higher wages. The costs of education included not just those of fees and living expenses but also the opportunity costs of foregoing earned income during college years. Schultz's work is marked by its clarity and accessibility, despite the quantitative basis to it and its mathematical modelling. He summarises human capital theory very succinctly, despite the sexist vocabulary of the age:

I propose to treat education as an investment in man and to treat its consequences as a form of capital. Since education becomes part of the person receiving it, I shall refer to it as human capital (Schultz, 1960, p. 571).

Quantitative research data suggested that time and resources devoted to education and/or training, of various forms, generated a financial return over time so that individuals and their families could be interpreted as engaging



in these as a form of investment which would pay dividends later in the form of higher earnings. This new economic outlook therefore framed education as no longer comprising “consumption” but as investment (Blaug, 1976).

The second key pillar of early human capital theory is related to this finding. Whereas classical economics had tended to view the workforce in purely quantitative terms, human capital theory introduced a qualitative aspect. Education and training were seen as the most important ways in which the quality of the workforce could be enhanced. College graduates did not earn more by chance: it was because of the quality of their work that they earned more. Thus, education and training yielded broader economic returns than individual earning power. There were generic economic benefits for society which accrued from a well-educated and well-trained workforce. Just as individual choices about education and training could be understood in relation to judgements about likely returns on such investment, so at a national level the education system could be justified in the light of likely returns in the form of economic growth.

It was this second aspect of human capital theory that had the greatest political effect, as can be imagined. This simplified form of the theory, with its apparent linear certitude, was extremely attractive to politicians seeking an assured way of creating economic growth. The theory seemed to suggest that by improving the quality and reach of the education system and its outcomes, one could generate economic growth. Schultz (1962) supported this view with the example of the post-war recoveries of Japan and Germany, attributing this to their pre-existing status as well-educated nations with high levels of human capital. Becker (2002a) later argued a similar case in relation to the global recovery from the crash of 1987. Developing human capital was thus presented as an important way in which economies could grow, but also the means by which they could survive, or recover from, significant disruption and instability. Human capital seemed to offer remarkable powers in relation to both economic growth and resilience. Becker (1992) argued that, with the exception of the Warsaw Pact countries, human capital investment in the form of educational opportunities was central to those countries experiencing faster economic growth from the 1960s. In its appropriated form, the theory was thus held to be able to account for economic growth *per se*: “The Human Capital perspective (...) emphasises the direct impact of skill creation on productivity (...) skills are seen as essential determinants of national economic performance” (Olssen, Codd & O’Neill, 2004, p. 147).



Some theoretical criticism of human capital theory and the downturn and economic turmoil of the 1970s combined to cast doubt on its value, however. Schultz himself (1971) sought to clarify that because of the “long gestation period” between educational investment and economic return it was “absurd” to think that sudden crises in relation to inflation or deflation could be tackled by turning on and off the education tap. Gary Becker (1972, 1975, 1992, 1993, 2002a, 2002b), however, had sought to develop human capital theory in a particular neoliberal way. Concentrating primarily on individual decision-making in relation to personal educational investments, Becker fused the theory with rational choice theory and began to explore its explanatory potential in a whole range of social activities previously rarely the locus of economic theorising such as the family and marriage. It was this enhanced focus on the individual, on the power of individual choice, that chimed with the neoliberal politics of the Reagan and Thatcher eras. As Foucault (2008) argues, this represents a fundamental break with previous understandings. The worker moves from being an “object” of economic analysis to being an “active” economic subject (p. 223), and from being a partner in economic exchange to being an entrepreneur, an entrepreneur of the self: the self now being understood as capital, and so the producer and source of earnings — “(...) income cannot be separated from the human individual who is its bearer” (p. 226). Becker’s analysis, therefore, shifted paradigmatically from economics in terms of a relational mechanism between things or processes within a social structure, to “the analysis of the internal rationality, the strategic programming of individuals’ activity” (pp. 222-223).

In recent times, the definition of human capital has widened somewhat so that it is not simply knowledge or skills but also includes “competencies”, “attributes”, and “attitudes” such as “reliability, honesty, self-reliance, and individual responsibility” (Becker, 2002b, p. 6). Education remains centre stage, however, as the key actor in forming such human capital, which itself remains crucial for “economic success” (Gurría, 2007). Thus, we have increased importance on state schools developing “soft” skills in their students so that they become better shaped to be effective economic agents. The educational provision which is relevant to human capital theory, therefore, includes a very strong sense of economic training.



HUMAN CAPITAL THEORY IN EDUCATION SYSTEMS

A review of state education policy across the globe very quickly can identify the significant influence of human capital theory. While national systems will often have long-standing educational aims, enshrined in landmark legislation, more recent policy documents will evidence human capital discourse.

Within Europe, there is very clear evidence of its influence. One of the most prominent features of this is the way in which children and young people are categorised as a national “resource” within policy statements. In this way, they are equated with other resources such as oil and gas reserves, or minerals, all having in common the feature that they are potentially wealth-producing. Thus, children and their education is a form of capital reserve, capable of being further developed for future profit. Thus, for example, we read in Scottish policy documents that “our people are Scotland’s greatest resource. That’s why we are investing in our current and future workforce (...)” (Scottish Government, 2011). This echoes the view of the OECD and its secretary-general: “All societies must invest in their most valuable asset: their people” (Gurría, 2008). Perhaps surprisingly, Norway has also adopted this way of portraying its population, and its young people in particular: “People are society’s most important resource” and one of the government’s most important priorities is “to invest in education and knowledge” (Regjeringen, 2009). In Bavaria, this idea is expressed with some bluntness: “the raw material of a child’s mind is the most valuable natural resource that we possess” (Bayerische Staatsregierung, 2009).

More commonly, children and young people are represented as natural resources which require further investment for their profit-making potential to be fully realised. This is more akin to portraying the child as raw material which requires a manufacturing process, as it were, to become fully valuable. This sort of discourse is evident across the European sphere. In England, for example, and particularly during the early days of New Labour, this sort of approach was explicitly promoted: “We are talking about investing in human capital in the age of knowledge” (DfEE, 1997, p. 3). In Ireland, following the economic problems of 2008, the perceived need to develop young people for future national dividends is manifest: “If Ireland is to achieve its ambitions for recovery and development within an innovation-driven economy, it is essential to create and enhance human capital by expanding participation in higher education” (DES, 2011a, p. 10). The EU as a whole endorses such a view



too, nudging member states towards “(...) increasing investment in human capital through better education and skills” (Commission of the European Communities, 2008, p. 2). In Slovakia, one of the EU’s more recent arrivals, a similar view is expressed: “Slovakia’s capability of effectively utilising and fostering its human potential is a precondition for its economic and social, as well as moral and cultural, success (...)” (Slovak Government, 2010). Norway, too, looks to generate future profit from its young: “enhanced human capital and skills (...) have direct economic effects” (Regjeringen, 2009). In Germany, the Federal Government talks “of the special importance of developing human resources” in relation to economic growth (Federal Ministry of Education and Research, 2009). This view was perhaps most succinctly and starkly expressed by Tony Blair in an early New Labour education document: “education is the best economic policy we have” (DfEE, 1998, p. 1). Similarly, Irish policy discourse is rooted in the same conception: “higher education is central to future economic development in Ireland” (DES, 2011b, p. 3).

This concept of investment is also positioned within the perceived context of an international competitive market. Many national policies see investment in human capital as geared towards gaining an international advantage. EU policy, including the Lisbon Agreement of 2000, is very much about education within its policy space being aimed at the EU gaining a competitive advantage in terms of its main target rivals in the Asian and North American trading blocs. In Austria, this view is strongly projected: “in all of our countries we are developing towards knowledge-based societies. Consequently, investing in human and social capital becomes crucial for the competitiveness of our economies; for all educational systems this poses a major challenge” (Schmied, 2010). Federal policy in Germany links education and economic competition very closely in its vision. The place of learning is clearly positioned also: “the competition for future opportunities for Germany has essentially become an international competition for the quality of education systems” (Federal Ministry of Education and Research, 2009).

Even within the reputedly less hard-nosed Nordic zone, this idea of competition is endorsed. In Finland, for example, we read: “Education is a key factor for competitiveness” (Opetusministeriö, 2009) and “the goal for the government is to make Finland the most competent country in the world (...) a primary aim for the government is to enhance the competitiveness of Finnish knowledge and competence” (Ministry of Education and Culture, 2012, p. 7). In Denmark, this international market is similarly embraced: “The aim is to



create a world-class education system and have everyone participate in lifelong learning. It shall help develop Denmark as a leading knowledge society in a globalised world” (Undervisnings Ministeriet, 2007). In Sweden, recent educational change is defended as increasing competitive prospects: Regeringskansliet (2011, p. 3), for example, argues that “The foundation of the Swedish reform programme has been that education enhances Sweden’s competitiveness and improves individuals’ skills and opportunities in life”.

New Labour in England had long promoted a similar view: “To compete in the global economy (...) we will have to unlock the potential of every young person” (DfEE, 1997, p. 3) and that the overall aim had to be “to outsmart other countries in the development of the nation’s human resources” (Brown, 2001, p. 9). In Northern Ireland, the major school improvement document argues for the country to compete more strongly internationally in terms of education and its outcomes: “(...) we should be benchmarking ourselves rather more ambitiously and in an international context. It is after all from across the globe that our young people will have to face challenges and compete in tomorrow’s economy” (DENI, 2009, p. 8). Wales, too, sees education and its economic relationship in terms of an international market: “We are taking forward a far-sighted, ambitious agenda for education and lifelong learning. We want to rival the best in the world” (DELLS, 2008). Ireland also sees itself in similar terms: “there is a pressing need to adapt and reform the structures and improve the performance of the education system to meet current social and economic needs and to rank with the best performing education systems” (DES, 2011a, p. 8). The Slovak government takes a slightly different line, seeing the competition operating at an individual rather than state level: “The main criterion the Government will follow when changing the compulsory curriculum is the development of an active citizen capable of succeeding in an international labour market (...)” (Slovak Government, 2010).

Overall, therefore, three discrete but interconnected aspects of human capital theory influence can be identified in current education policy discourse. The first is the tendency to objectify children and young people as resources; the second is to see education as an investment aimed at harnessing these resources for greater future profitability; the third is to see these resources as engaged in a global struggle for economic “success”, whether at an individual level or a national level.

PROBLEMATISING EDUCATION AS INVESTMENT

It is important to recognise the significance of construing education as an investment, and especially so when viewed within a context of social and environmental sustainability, not solely economic sustainability. There are numerous implications of such a perspective, some of which have so seeped into normal discourse that they no longer are subject to much public questioning and debate. Nevertheless, it can be argued that this discursive shaping of education is antithetical to the values of sustainability and perpetuates the notions of exploitation and exhaustive profitability which are so problematic in this field.

Seen as an investment, state education provides future dividends in terms of the economic activity, labour power, of the individual. Neoliberal discourse encourages the individual to maximise these returns by becoming an entrepreneurial self, an agile body who seeks out opportunities for financial returns on this educational investment (Gillies, 2011b). The broader aims of schooling are not weighed in such balances, except insofar as they can be of economic benefit. For example, issues of citizenship and socialization are not considered as centrally concerned with how humans interact and live, but immiserated, as merely providing stable, economic conditions favourable to economic activity, and growth: “(...) relationships and shared values in societies can be seen as a form of capital that make it easier for people to work together and achieve economic success” (Keeley, 2007, p. 11).

Similarly, issues around social, gender, and racial disadvantage are not considered in terms of equity, humanity, and social justice but rather in terms of economic wastefulness. If the poor, if women, if particular ethnic groups, perform less well educationally than other social groups, in human capital theory this is economic waste rather than an issue of inequality. Were these groups to achieve at the level of societal norms, then the argument is that they would be more economically productive and so reap better financial rewards at the individual and the state levels. In many ways, it is this reductive view of the human and of education which is at the root of the distaste with which many view human capital theory, a situation acknowledged by Schultz himself, who accepts that some may find it “offensive” to consider humans as mere “capital goods” (1961, p. 2). He recognises that the theory’s formulation also may be considered “repugnant” by others because of the way it sees education in such narrow economic terms, and so he argues that his



economistic view should “in no way detract from, or disparage, the cultural contributions of education” (1960, p. 572). Becker also acknowledges that theory’s failure to include the broader aims of education in its analysis could be viewed as “unfeeling and extremely narrow” (1993, p. 392).

The emphasis on the economic, the view of education as a calculated investment, does have further implications. If this type of cost analysis is applied uniformly across the population, then there are some potentially disturbing implications. It is not clear, for example, how human capital theory can adequately account for special education, the education of children with disabilities, nor indeed for state education within weak economies. In the case of children with special needs, the concept of investment as a suitable model seems singularly inappropriate. Using a simplistic investment-return mechanism as a means of adjudging the “value” of education is clearly ineligible unless one wishes to return to some of the worst times in recent world history. For the severely disabled, for those with significant cognitive impairment, the costs of education are unlikely ever to be recuperated in simple economic terms. Many children with disabilities, with chronic health issues, will be unable to be economically active in the ways one might assume of an average worker. In most instances, special education will be more expensive, more of an “investment” therefore. A theory which looks to account for education on the basis of future financial returns seems egregiously ill-fitted to deal with this aspect of the field. There are alternatives, and much more humane ways, of conceptualising and justifying the financing of special education. In any event, human capital theory, in democratic terms, cannot be presented as the grand, total theory it purports to be. Democratic values sit uneasily with an outlook which perceives humans as entries in a budget system, as numerical data in a simple profit-loss account.

In addition, the way in which human capital theory presents a linear connection between standards in state education and economic growth and status is not borne out by empirical evidence. Without the supportive context of a “successful” economy, it is dubious that high levels of educational achievement are significant economic factors (Blaug, 1987; Pissarides, 2000). An advanced education system rooted within a weak economy is more likely to generate emigration than local economic growth. In that sense, investment in the national state system could be seen, in human capital terms, to be wasted and one response would be to reduce levels of state education, or to channel it towards areas, or children, most likely to offer profits at a national level. An exam-

ple of the mismatch between educational attainment and economic context currently would be Poland which performs highly on PISA ratings but which remains a weak economy such that large numbers of the educated and qualified young emigrate for employment. A similar situation is emerging in Spain and Greece, where the effects of recent financial crises are also having effects on out-migration levels. Even in economies with less striking difficulties, “the underemployment of highly schooled people has been recognized as a social problem” (Livingstone, 1997, p. 9) rather than such a cohort being seen as an agent for growth. The empirical evidence would suggest that having a highly educated population without a complementary advanced economy renders the equations of human capital theory contestable, at least. Indeed, recent experience in China shows that even in a strong, rapidly-expanding economy, if that is driven by low-wage manufacturing jobs for the export market, graduate *underemployment* becomes a major issue: there are insufficient jobs at a white collar level to match a (over) qualified population (Chen, 2014; Huang, 2013).

Another aspect of human capital theory as currently practised in many countries, at least at the tertiary sector, is to focus educational spending on “excellence”. Here there is less controversy about issues of equity and rights, and so many national systems explicitly target investment in those areas most likely to generate financial reward. The onerous and varicose Research Excellence Framework in the UK, for example, serves both as a means of accountability but also as a mechanism by means of which government can identify those institutions deemed to be worthy of further investment. The higher education sector has increasingly been seen as aligned to economic and business policy much more sharply than that of the earlier stages of education. Its status as post-compulsory, as not founded on principles of universal provision, allows for it to become much more closely aligned with a human capital outlook.

SUSTAINABILITY AND THE HUMAN CAPITAL MODEL

It could be viewed as symptomatic of the problematic position of human capital theory that its consideration of the issue of sustainability tends to be restricted to two very nuanced, and typically economic, understandings of the concept. The first of these is the term “sustainable competitive advantage” which is concerned with managing an organization for continued market success; the second use is in relation to what is known as “sustainable human



resource management” (Osranek & Zink, 2014), which is largely concerned with the development of staff and the renewal of staff over time, again to ensure continued corporate market success.

The more common ecological understanding of sustainability is much less evident in human capital literature. As this paper has suggested, the reasons for this are closely linked to the conceptual orientation of the theory and its concern with maximising returns from resources rather than any sense of nurturing and protecting them. Human reproduction has not been a concern for some generations now and, indeed, where it is, it is often rather more in relation to overpopulation, for example in China, than about its scarcity. Thus, human population as a raw resource is not much of a concern, in human capital theory terms, except in terms of its quality. Human capital theory has not had any problem, thus, with its supply of natural resources: people. Therefore, the theory in its manifestation within educational discourse continues to be about the maximum development of such resources, exploiting them to their fullest degree. This becomes a powerful imperative when allied with crisis narratives about underachievement and the differential attainment of minority and disadvantaged groups. The failure to develop people into productive, high-yield citizens — culpable economic waste in human capital theory terms —, becomes fused with the discourse of equality and social justice to present a significant political challenge.

As can be seen, human capital theory is conceptually somewhat distant from, if not wholly misaligned with, ecological discourse. The argument of this paper is that its influence within education currently, allied with this misalignment, contributes to the continuation of a dominant mind-set which sees maximum exploitation of (human) resources the key priority and anything else a symptom of failure or mismanagement. While human capital theory does not advocate a rapacious approach to the planet, it is founded on the values of market return from the exploitation of resources, values which, it could be argued, have been fundamental to the ecological problems facing humanity at this time.

In keeping with the recent “capitalization” of discourse which pervades the social sphere, however, the term “natural capital” has come into common usage (Jansson, Hammer, Folke & Costanza, 1994). This covers environmental resources in relation to their economic use. Just as “human capital” can be viewed as a narrowly reductivist understanding of the person, so “natural capital” could be viewed as a similarly impoverished image of the richness of



the natural world. However, what such a concept has done is to highlight the importance of this “capital” being monitored and not simply wasted. Thus, the literature on the economics of “natural capital” points to the need for this natural capital to be protected to ensure its sustainability as an economic resource (Harte, 1995; Neumayer, 2012; Reynolds, Farley & Huber, 2010). In the same way that issues around social justice become framed in human capital theory terms as economically wasteful — as opposed to an understanding based on democratic principles or those of justice and equality — so issues around sustainability become framed as economically profligate rather than as being understood in ecological terms. The concern thus becomes not so much about protection of the environment, notions of human responsibility, and respect for our common habitat, but rather about how failure to manage natural resources strategically will decrease future opportunities for profit and reward. In natural capital terms, therefore, sustainability comes to be important because future profitability depends on natural resources continuing to provide economic potential. In an odd way, therefore, at least some of the concerns of sustainability converge with those of market capitalism, albeit from very different starting-points. It may be that some progress around ecological welfare can be secured through this odd coupling of instrumental capitalist and intrinsic environmentalist concerns. This, however, will only apply to certain aspects of the environment and not to others where the profit motive has little purchase and so this form of “weak sustainability” (Daly & Cobb, 1989) would mean that nothing would stand between those “uneconomic” parts of the natural world and oblivion.

SUSTAINABILITY AND MODERNITY

The term “sustainability” is now commonly used in all sectors of society and as such, the term does encompass many forms, including human, social, and economic sustainability, each of which is rooted in a notion of “preservation” and, in its stronger form, also justice (Baumgärtner & Quaas, 2010). In recent times, however, the whole issue has been problematized by those who see a manifest paradox in that the modelling for future sustainability is based on the same scientific paradigm which many argue is the source of the very problems of sustainability which humanity now faces (Benessia et al., 2012). Such critics argue that the predictive and controlling mode of thinking which typifies



techno-science is implicated in the problems we must tackle and cannot be relied upon as the solution. Modernity's dedication to science and rationality is seen as part of the problem and a move to a more open, plural approach is championed instead: "dynamic cross-systemic explanations are sought where static and reductionist models once prevailed" (Gallopín, Funtowicz, O'Connor & Ravetz, 2001, p. 219), a move from narrow, analytical approaches to broader, inclusive, integrative streams, from the coldly cognitive to a more holistic, human model (Viches & Gil-Pérez, 2013). This literature presents a fundamental challenge, therefore, both to the promise of modernity but also to the "weak" sustainability agenda. This counter to modernity also challenges the way in which the education system is currently configured and the whole manner in which the young are acculturated, certainly in the developed world. This alternative framework looks more at integrating the world of modernity with indigenous, traditional, and natural epistemologies and at uniting the rational with the relational, emotional, and ethical (Colucci-Gray & Camino, 2011). The argument is that the complexity of the human predicament requires this multi-faceted re-thinking rather than the simple, linear rationality which has brought us to this crisis. Allied to this, therefore, would be the view that human capital theory, with its calculations of investment and return, of profit and maximisation, is also compromised by being rooted in this modernist mind-set of infinite progress and technological advancement. The whole issue of sustainability is similarly compromised, therefore, if what it means is the attempt to preserve and maintain rather than to change and re-think.

ALTERNATIVE EDUCATIONAL MODELS

If the human capital theory approach renders education principally as a means to extract future economic benefit, then it seems clear that this narrowed focus misses much of what has traditionally been valued in education. An alternative outlook can be seen both in relation to the aims of education and to the "subject" of education. However, if the challenge to modernity from the "strong" sustainability discourse sketched in the previous section is also considered, then an even more fundamental reform of schooling seems necessary, one which would reshape learning, curriculum, assessment, and organisation. This is not the focus of this paper but is a matter which will require considerable creative thought.



The aims of education have often been presented as encompassing three main purposes: personal fulfilment; social aims or cultural transmission; and vocational aims through preparation for employment. Biesta (2008) presents these as the differing imperatives of subjectification, socialisation, and qualification. Different cultures at different times have placed the emphasis differently but these strands can be evidenced throughout the history of state education. The first is concerned with the development of the individual in the fullest sense; the second with the development of citizens and social harmony (dating back to Plato); the third with the development of the individual in relation to future employment. Rather than seeing these as discrete and separate, however, it may be more profitable to view these strands as necessarily interlinked in that personal fulfilment involves notions of friendship and community as well as engagement in meaningful employment. In other words, part of what is involved in human flourishing — *eudaimonia* in Aristotelian terms — is both fruitful personal relations and stimulating work. Even such free thinkers as A.S. Neill, who had little sympathy with much of what state education implies, saw happiness as involving meaningful work (1960). The difference, however, is that in human capital theory these purposes are rendered secondary to the prime necessity of generating economic returns. For human capital theory, notions of happiness or fulfilment, if recognised at all, would only be understood in terms of their capacity to increase economic productivity. The Nobel prize winner, James Buchanan (2007) of the same Chicago School as Schultz and Becker, for example, refused to recognise the concept of “public service”, “public good”, or altruism, seeing everything instead as rooted in self-service. Such thinkers, with their narrow conception of the individual as a profit-seeking strategist, would not give much credence whatever to notions of happiness or fulfilment which went beyond mere quantitative calculation.

An alternative model to the human capital theory approach would involve a return to, and stronger emphasis on, social and moral educational purposes. Instead of prioritising the creation of enterprising economic agents, and the risks that this poses to the sustainability imperative, state education would have a stronger sense of social responsibility and global citizenship, and an eye on a more abundant life than that of mere economic growth. It should be stressed that most national education systems already have such purposes set in legislation (Gillies, 2014) and they can be seen in the United Nations Convention on the Rights of the Child, Article 29 of which sets out shared aims for the development of the child, part of which includes the development



of “respect for the natural environment” (UN, 1989). Indeed, this notion of “development” is one which can be seen to be more in keeping with a sustainability perspective than notions of “exploitation” and maximising returns which underlie the human capital approach. An education system which supports the development of the child to fullest potential need not entail the single-minded pursuit of profit. Ideas of development, rooted in the concept of nurture and notions of natural growth, would seem to present much more promising ways of framing education than the investment-and-return model proposed by human capital theory.

A second opportunity to reframe education is in relation to the “subject” of education. Modern educational discourse, influenced by human capital theory and neoliberalism more generally, is focused on the individual. The subject of education, therefore, is a single human. This narrowing, as this paper has argued, contributes towards the development of a discourse which removes society, community, and the social from its worldview. The prime focus on the individual and her or his economic agency serves to minimise notions of social responsibility, ecological concern, and shared accountability. Human capital theory, allied with neoliberalism’s elevation of the individual and its aim of removing regulations and rules which hinder that individual’s freedom, is much less easily aligned with the discourse of sustainability.

An alternative view of the “subject” of education is presented by Fielding (2000a, 2000b, 2007), for example. Drawing from the philosophy of John Macmurray (1961), he argues that the “subject” of education is the “person” and not the “individual”. The distinction is that the person is the human viewed as essentially socially situated whereas the individual is a theoretical abstraction, the human as a single, isolated figure — impossible to find in reality. What Fielding then offers is a notion of education as plural, rather than singular, and of the human as a social being, and so whose personal development involves plurality and living in relation. This reshaping of educational discourse prioritises issues and concerns central to humanity, but which the functionalism of human capital theory depicts as merely peripheral. It can be argued that this educational perspective which is centred on notions of plurality, human society, and so community, offers a much better basis on which education for sustainability can be founded (Slaus & Jacobs, 2011). An education system which gives primacy to personal rather than economic development, to personal relations rather than individual acquisitiveness, seems both more humanly appropriate as well as more globally sympathetic.

There are different ways of positioning state education which offer better prospects for achieving the ends of sustainability rather than the narrow discourse of human capital theory. This paper suggests that a focus on the wider aims of education beyond the economic, and a focus on the person as a social being beyond the individualistic, offer better prospects for the future of humanity and the environment. The means for achieving this already exist: they can be found in national and international legislation but it will require changed political perspectives and shifted values for these to become living reality.

REFERENCES

- BALL, S. (2012). *Global education inc. New policy networks and the neo-liberal imaginary*. London: Routledge.
- BAUMGARTNER, S., & QUAAS, M. (2010). What is sustainability economics? *Ecological Economics*, 69, 445-450.
- BAYERISCHE STAATSREGIERUNG. (2009). The future lies in education [Online]. Retrieved November 14 2013, from <http://www.bayern.de/The-Future-Lies-in-Education-.607.htm>.
- BECKER, G. (1972). Schooling and inequality from generation to generation inequality: Comment. *The Journal of Political Economy*, 80(3), S252-S255.
- BECKER, G. (1975). *Human capital: A theoretical and empirical analysis* (2nd edition). New York: Columbia University Press.
- BECKER, G. (1992). Human capital and the economy. *Proceedings of the American Philosophical Society*, 136(1), 85-92.
- BECKER, G. (1993). Nobel lecture: The economic way of looking at behaviour. *The Journal of Political Economy*, 101(3), 385-409.
- BECKER, G. (2002a). The age of human capital. In E. LAZEAR (Ed.), *Education in the 21st century* (pp. 3-8). Stanford CA: Hoover Institution Press.
- BECKER, G. (2002b). *Human capital* [Online]. Retrieved November 14 2013, from <http://www.um.edu.uy/docs/revistafcee/2002/humancapitalBecker.pdf>.
- BENESSIA, A., FUNTOWICZ, S., BRADSHAW, G., FERRI, F., RÁEZ-LUNA, E., & MEDINA, C. (2012). Hybridizing sustainability: Towards a new praxis for the present human predicament. *Sustainability Science*, 7, 75-89.
- BIESTA, G. (2008). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*, 21(1), 33-46.



- BLAUG, M. (1976). The empirical status of human capital theory: A slightly jaundiced survey. *Journal of Economic Literature*, 14(3), 827-855.
- BLAUG, M. (1987). *The economics of education and the education of an economist*. New York: New York University Press.
- BROWN, P. (2001). Skill formation in the 21st century. In P. BROWN, A. GREEN & H. LAUDER (Eds.), *High skills* (pp. 1-55). Oxford: Oxford University Press.
- BUCHANAN, J. (2007). Interview. In A. Curtis (Producer), *The trap*. London: BBC.
- CHEN, C.W.L. (2014). *The higher education trap: over-qualified and under-employed in China* [Online]. Retrieved from http://works.bepress.com/cgi/viewcontent.cgi?article=1001&context=caroline_chen.
- COLUCCI-GRAY, L., & CAMINO, E. (2011). Environmental crisis and scientific thinking: which science education for sustainability? *Journal of Activist Science and Technology Education*, 3(1), 80-92.
- COMMISSION OF THE EUROPEAN COMMUNITIES. (2008). *An updated strategic framework for European cooperation in education and training COM (2008) 865*. Brussels: the authors.
- DALY, H., & COBB, J. (1989). *For the common good: redirecting the economy towards community, the environment, and a sustainable future*. Boston, MA: Beacon Press.
- DFEE — DEPARTMENT FOR EDUCATION AND EMPLOYMENT. (1997). *Excellence in schools*. London: Her Majesty's Stationery Office.
- DFEE — DEPARTMENT FOR EDUCATION AND EMPLOYMENT. (1998). *The learning age: a renaissance for a new Britain*. London: The Stationery Office.
- DELLS — DEPARTMENT FOR EDUCATION, LIFELONG LEARNING AND SKILLS. (2008). *The learning country: Vision into action*. Cardiff: Welsh Assembly Government.
- DENI — DEPARTMENT OF EDUCATION (Northern Ireland). (2009). *Every school a good school*. Belfast: The authors.
- DES — DEPARTMENT OF EDUCATION AND SKILLS (Eire). (2011a). *Organisation and current issues*. Dublin: The authors.
- DES — DEPARTMENT OF EDUCATION AND SKILLS (Eire). (2011b). *National strategy for higher education to 2030 — Report of the strategy group*. Dublin: The authors.
- FEDERAL MINISTRY OF EDUCATION AND RESEARCH. (2009). *Innovation in education* [Online]. Retrieved November 18 2013, from <http://www.bmbf.de/en/1076.php>.
- FIELDING, M. (2000a). The person-centred school. *FORUM*, 42(2), 51-54.
- FIELDING, M. (2000b). Community, philosophy and education policy: Against effectiveness ideology and immiseration of contemporary schooling. *Journal of Education Policy*, 15(4), 397-415.



- FIELDING, M. (2007). The human cost and intellectual poverty of high performance schooling: Radical philosophy, John MacMurray and the remaking of person-centred education. *Journal of Educational Policy*, 22(4), 383-409.
- FOUCAULT, M. (2008). *The birth of biopolitics: Lectures at the Collège de France 1978-1979*. Basingstoke: Palgrave Macmillan.
- GALLOPÍN, G., FUNTOWICZ, S., O'CONNOR, M., & RAVETZ, J. (2001). Science for the twenty-first century: From social contract to the scientific core. *International Social Science Journal*, 53(168), 219-229.
- GILLIES, D. (2011a). State education as high-yield investment: Human capital theory in European policy discourse. *Journal of Pedagogy*, 2(2), 224-245.
- GILLIES, D. (2011b). Agile bodies: A new imperative in neoliberal governance. *Journal of Education Policy*, 26(2), 207-223.
- GILLIES, D. (2014). The aims of education in European state policy: Blurred vision or pluralist inclusion? Paper presented at the *European Conference on Educational Research*. Oporto, Portugal.
- GURRÍA, Á. (2007). Introduction. In B. KEELEY, *Human capital: how what you know shapes your life* (pp. 3-4). Paris: OECD.
- GURRÍA, Á. (2008). *A brief introduction to what we do*. [Online]. Retrieved October 30 2013, from <http://www.oecd.org/dataoecd/57/7/41481091.pdf>.
- HARTE, M. (1995). Ecology, sustainability, and environment as capital. *Ecological Economics*, 15, 157-164.
- HUANG, Y. (2013). China's educated underemployment. *East Asian Policy*, 5(2), 72-82.
- JANSSON, A., HAMMER, M., FOLKE, C., & COSTANZA, R. (1994). *Investing in natural capital: The ecological economics approach to sustainability* (International Society for Ecological Economics). Washington, DC: Island Press.
- KEELEY, B. (2007). *Human capital: How what you know shapes your life*. Paris: OECD.
- LAWN, M., & GREK, S. (2012). *Europeanizing Education: Governing a new policy space*. Oxford: Symposium.
- LINGARD, B. (2000). It is and it isn't: Vernacular globalization, educational policy and restructuring. In N. BURBULES & C. TORRES (Eds.), *Globalization and education: Critical perspectives* (pp. 79-108). London: Routledge.
- LIVINGSTONE, D. (1997). The limits of human capital theory: Expanding knowledge, informal learning and underemployment. *Policy Options*, July/August, 9-13.
- MACMURRAY, J. (1961). *Persons in relation*. London: Faber.
- MEYER, H-D., & BENAÏOT, A. (2013). *PISA, power and policy: The emergence of global educational governance*. Oxford: Symposium Books.



- MINCER, J. (1958). Investment in human capital and personal income distribution. *The Journal of Political Economy*, 66, 281-302.
- MINCER, J. (1974). *Schooling, experience, and earnings*. New York: National Bureau of Economic Research.
- MINISTRY OF EDUCATION AND CULTURE. (2012). *Education and research 2011-2016: a development plan*. Helsinki: the authors.
- NEILL, A. (1960). *Summerhill*. New York: Hart.
- NEUMAYER, E. (2012). Human development and sustainability. *Journal of Human Development and Capabilities*, 13(4), 561-579.
- OLSEN, M., CODD, J., & O'NEILL, A-M. (2004). *Education policy*. London: Sage.
- OPETUSMINISTERIÖ MINISTRY OF EDUCATION. (2009). Education [Online]. [14-05-2011] Retrieved November 4 2013, from <http://www.minedu.fi/OPM/Koulutus/?lang=en>.
- OSRANEK, R., & ZINK, K. (2014). Corporate human capital and social sustainability of human resources. In I. EHNERT, W. HARRY & K. ZINK (Eds.), *Sustainability and human resource management* (pp. 105-126). London: Springer.
- OZGA, J., & LINGARD, B. (2007). Globalisation, education policy and politics. In J. OZGA & B. LINGARD (Eds.), *The RoutledgeFalmer reader in education policy and politics* (pp. 65-82). Abingdon: Routledge,
- PISSARIDES, C. (2000). *Human capital and growth*. Paris: OECD.
- REGERINGSKANSLIET. (2011). *Sweden's 2011 report on the implementation of the strategic framework for European co-operation in education and training* [Online]. Retrieved November 16 2013, from http://ec.europa.eu/education/lifelong-learning-policy/doc/natreport11/sweden_en.pdf.
- REGJERINGEN. (2009). *Education and research* [Online]. Retrieved November 10 2013 from <http://www.regjeringen.no/en/topics/Education-and-research.html?id=930>.
- REYNOLDS, T., FARLEY, J., & HUBER, C. (2010). Investing in human and natural capital: An alternative paradigm for sustainable development in Awassa, Ethiopia. *Ecological Economics*, 69, 2140-2150.
- RIZVI, F., & LINGARD, B. (2010). *Globalizing education policy*. Abingdon: Routledge.
- SCHMIED, C. (2010). *Investing in human and social capital: New challenges* [Online]. Retrieved October 26 2013, from <http://www.bmukk.gv.at/ministerium/ministerin/reden/oecdopening.xml>.
- SCHULTZ, T. (1960). Capital formation by education. *The Journal of Political Economy*, 68(6), 571-583.

- SCHULTZ, T. (1961). Investment in human capital. *The American Economic Review*, 51(1), 1-17.
- SCHULTZ, T. (1962). Reflections on investment in man. *The Journal of Political Economy*, 70(6), 1-8.
- SCHULTZ, T. (1971). *Education and productivity*. Washington DC: National Commission on Productivity.
- SCOTTISH GOVERNMENT. (2011). *Skills for Scotland* [Online]. Retrieved May 14 2011, from <http://www.scotland.gov.uk/About/Strategic-Objectives/smarter>.
- SELLAR, S., & LINGARD, B. (2013). PISA and the expanding role of the OECD in global educational governance. IN H-D. MEYER & A. BENAVIDES (Eds.), *PISA, power and policy: the emergence of global educational governance* (pp. 85-206). Oxford: Symposium Books, 1.
- SLAUS, I., & JACOBS, G. (2011). Human capital and sustainability. *Sustainability*, 3, 97-154.
- SLOVAK GOVERNMENT. (2010). *Civic responsibility and co-operation*. Bratislava: The authors.
- UNDERVISNINGS MINISTERIET. (2007). *Denmark's strategy for lifelong learning*. Copenhagen: the authors.
- UN — UNITED NATIONS. (1989). *Convention on the Rights of the Child* [Online]. Retrieved February 12 2014, from <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>.
- VICHES, A., & GIL-PÉREZ, D. (2013). Creating a sustainable future: Some philosophical and educational considerations for chemistry teaching. *Science & Education*, 22, 1857-1872.
- WHITTY, G. (2012). Policy tourism and policy borrowing in education: A transatlantic case study. IN G. STEINER-KHAMSI & F. WALDOW (Eds.), *World yearbook of education 2012: policy borrowing and lending in education* (pp. 354-370). Abingdon: Routledge.
- WINTER, C. (2012). School curriculum, globalisation and the constitution of policy problems and solutions. *Journal of Education Policy*, 27(3), 295-314.

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Received: December 8, 2014

Final version received: December 21, 2014

Published online: December 29, 2014

