

Journal of Critical Realism

School economics and the aims of education: critique and possibilities

--Manuscript Draft--

Manuscript Number:	REA127R1
Full Title:	School economics and the aims of education: critique and possibilities
Article Type:	Article
Keywords:	economics, education, absence, secondary schools, Ofqual
Corresponding Author:	Jacek Brant University College London UNITED KINGDOM
Corresponding Author Secondary Information:	
Corresponding Author's Institution:	University College London
Corresponding Author's Secondary Institution:	
First Author:	Jacek Brant
First Author Secondary Information:	
Order of Authors:	Jacek Brant Farid Panjwani
Order of Authors Secondary Information:	
Abstract:	Education is increasingly coming under the shadow of economics. In this paper we will engage in ideology critique by applying a critical realist analysis to conventional economic models and the teaching of students. Through a historical and philosophical interrogation, we argue that the current curriculum suffers from a diminutive understanding of human being. We argue that economics education has for a long time now worked with a highly abstracted and decontextualized idea of human being which has forced other dimensions of human concerns to an absence. We examine the current English Advanced level economic curriculum and the revised curriculum which will be taught from September 2015. Using an understanding of the dynamic of structure and agency and that economics operates in open systems, we argue for retrodution as an appropriate methodology.
Additional Information:	
Question	Response
Is this a themed issue paper? If so, please could you indicate which themed issue your paper is intended for in the text box below.	No
Author Comments:	Revised for the special journal edition.
Suggested Reviewers:	Hans Despan Understanding of economics and critical realism
Funding Information:	

School economics and the aims of education: critique and possibilities

Jacek Brant and Farid Panjwani

University College London Institute of Education

Abstract

Education is increasingly coming under the shadow of economics. In this paper we will engage in ideology critique by applying a critical realist analysis to conventional economic models and the teaching of students. Through a historical and philosophical interrogation, we argue that the current curriculum suffers from a diminutive understanding of human being. We argue that economics education has for a long time now worked with a highly abstracted and decontextualized idea of human being which has forced other dimensions of human concerns to an absence. We examine the current English Advanced level economic curriculum and the revised curriculum which will be taught from September 2015. Using an understanding of the dynamic of structure and agency and that economics operates in open systems, we argue for retroduction as an appropriate methodology.

Keywords: economics, education, absence, secondary schools, Ofqual

Introduction

Writing in 1942 the Austrian-born economist Joseph Schumpeter posed the provocative question: “can capitalism survive?” He answered, “No. I do not think it can”.¹ However, in contrast to Marx² who believed that capitalism would eventually collapse because in its excesses it carried the seeds of its own destruction,³ Schumpeter believed that capitalism would be destroyed by its own successes.⁴ We have mentioned these two thinkers not to arbitrate between them, but to highlight the fact neither of them have any significant reference in the economics taught in English secondary schools.⁵ This fact, in turn shows the dominance of economics education by a particular understanding of economics - a market economy dominated by neo-classical models.⁶ We argue that not including alternative conceptualisations of the workings of the economy impedes young people’s ability to adequately understand the world in which they live and their capacity to contemplate alternatives. In this way, characteristics of neo-classical economics, combined with a political neo-liberal agenda, undermine liberal educational goals.

Concerns about capitalism’s health are no longer confined to academic publications. The conference on inclusive capitalism⁷ held in London in May 2014 speculated on the survival of capitalism in the context of recent financial crises. Comments from Mark Carney, Governor of the Bank of England and Christine Lagarde, Managing Director, International Monetary Fund were particularly interesting as they raised concerns about realities of contemporary capitalism that are beyond the remit of the school economics curriculum (but not necessarily of enlightened teachers). Carney warns that there is a growing sense that the basic social contract at the heart of capitalism is breaking down amid rising inequality and he states that capitalism is at risk of destroying itself unless bankers realise they have an obligation to create a fairer society. He explains that market radicalism and light-touch regulation have eroded fair capitalism, while scandals such as the rigging of Libor markets have undermined trust in the financial system.⁸ He states that “all ideologies are prone to extremes. Capitalism loses its sense of moderation when the belief in the power of the market enters the realm of faith. In the decades prior to the crisis such radicalism came to dominate economic ideas and became a pattern of social behaviour”.⁹ Lagarde¹⁰ informs us that the world’s richest 85 people control the same wealth as the poorest half of the global population of 3.5 billion people and worried that rising inequality may be a barrier to growth which could undermine democracy and human rights. She states that if we want capitalism to do its job – enabling as many people as possible to participate and benefit from the economy – then it needs to be more inclusive and that means addressing extreme income disparity.

¹ Schumpeter, 1943: p53.

² Marx 1867.

³ Marx argued that the accumulation of capital in the hands of a few, mostly focused on the accumulation of profits, would lead to major conflicts, and periodical crises which would get more serious and more dangerous and that the system would eventually collapse. In *Das Kapital*, Marx predicted that workers would be goaded into revolution.

⁴ Schumpeter predicted a gradual transformation of capitalism into socialism. One tendency would be for individual entrepreneurship to be replaced by mechanistic teamwork of specialised employees within large corporations.

⁵ 2015 specifications have references to the history of economic thought which includes Adam Smith and Karl Marx. Schumpeter is not mentioned in the new curriculum.

⁶ Brant 2011. In this, schools reflect the trends in undergraduate economics. Some schools in fact use year one undergraduate texts to teach at higher levels.

⁷ On 27 May 2014 global business leaders gathered at the Mansion House and Guildhall in London to attend a conference on inclusive capitalism. See: Inclusivecapitalism.org/.

⁸ Carney 2014.

⁹ Carney 2014 p3.

¹⁰ Lagarde 2014.

What might this have to do with school economics or schooling more generally? It appears that in English Secondary schools, neo-classical economics is the only economics taught to students. In this paper, we critique this orthodoxy and present alternative conceptualisations which we argue are better fit for purpose. School economics reflects the dominant paradigm – a neo-liberal understanding of the (world) economy that is dominated by mathematically modelling based on neo-classical static equilibrium assumptions.¹¹ The pervasive neo-liberal agenda leads to a situation where a certain type of economics, neo-classical economics is purported to be the only respectable economics and therefore considered orthodox. The belief of many economists (and economics teachers) that the discipline is a value-free, positive subject leads to an acceptance of the status quo, and a type of hegemony where theories are accepted as facts and often taught that way.¹² It is ironic that it is by challenging outdated theory, we may achieve more rewarding teaching & learning environments where students' understanding is deepened (and their attainment in examinations improved as a consequence).¹³ There is a further point, economics is pervasive and has influenced education policy, as discussed later in the paper. Thus the flaws of one subject may have profound consequences on the education system as a whole.

In the next section we argue that as far as education about economics is concerned, economics should be conceptualised in a broader and richer way than simply as a neo-classical approach. We will critique the philosophical assumptions underpinning the neo-classical methods and offer alternative conceptions. This will be followed by an exploration of the dominance of economics in educational thinking, demonstrating how this has subverted the liberal aims of education. This will be followed an examination of critical realism as an alternative framework for framing economic problems. This will be followed by a section outlining opportunities in school economics following changes to examination specifications. We then move to some recommendations by arguing for the need to bring in the question of the ends of economics to the forefront which, we argue, will require connecting the subject with wider moral philosophy.

Neo-classical economics – the only economics?

Robins¹⁴ defined economics as a science that studies human behaviour as a relationship between ends and scarce means which have alternative uses. This definition, or variations of it, has become a standard starting point for learning economics at school throughout the world.¹⁵ Furthermore, most standard economics text books distinguish positive from normative economics, the latter observed to be dealing with values and value judgments whereas the former is extolled for being value free and scientific. It is the positive economics that dominates at the school level. So both on the definition of the subject and its methodology, there is a claim of science and scientific method.

Despite the subject's roots in moral philosophy (as discussed later in the paper), economics became increasingly divorced from moral concerns in the twentieth century as it aspired to a science underpinned by mathematical modelling of the world. This trend was part of a more general movement that led to the emergence of what we now call social sciences, whereby different traditions of studying society were seeking to be like the natural sciences.¹⁶ The adaptation of quantitative methods allows economists to make testable propositions and then to make generalizable claims and the adoption of such methodological approaches gives economics apparent scientific respectability.

¹¹ Brant 2011.

¹² Brant 2011.

¹³ Brant 2011.

¹⁴ Robins 1935.

¹⁵ Brant 2011

¹⁶ Alvey 1999.

Friedman¹⁷ asserts that economics is a pure and objective science and that it is in principle independent of any particular ethical position or normative judgements. He states that the task of economics “is to provide a system of generalizations that can be used to make correct predictions about the consequences of any change in circumstance. Its performance is to be judged by the precision, scope, and conformity with the experience of the predictions it yields. In short, economics is, or can be, an objective science, in precisely the same sense as any of the physical sciences”.¹⁸ Friedman asserts that the only criterion of pertinence is if a theory works and that “realism of the assumptions is not important”.¹⁹ He offers the example of a minimum wage as a case in point, stating that arguing for such a minimum wage is a value call (to protect employees who do not have strong wage-bargaining possibilities). He then states that a minimum wage *would* increase unemployment and claims this to be an objective statement. Blaug,²⁰ like Friedman, describes science as the ‘received view’. He states that science is about observing the world around us and from observational data formulating universal laws that explain and predict our world. Furthermore Blaug asserts that offering understanding without prediction ‘short-changes’ the reader. Friedman and Blaug assert that economics should emulate the natural sciences and should adopt the methods of the natural sciences as far as practically possible. Their argument is that economics should be a positive subject and it should be objective in its methodology.

As we see it, the fundamental error made by Friedman is to equate the workings of economy in a social and human setting with that of a physical system where causation allows a natural scientist to make predictive claims based on a theory. The human social context cannot be conceptualised along the same lines, mainly because of the agential nature of human action which makes it highly unpredictable and open-ended. For example, in terms of the labour market that Friedman discusses, we argue that the notion of *ceteris paribus* is itself flawed because changing one variable realises a whole new set of force which make the changes unpredictable. So, although according to Friedman a rise in minimum wage will lead to more unemployment (due to increase supply costs), a counter acting force is the stimulus in demand due to increase in disposable income of workers; the actual outcome will be a result of complex interactions of a wide range of variables, including human agency. Friedman’s model is flawed because it works without taking account of these human complexities. In this unpredictable context, moral judgements are inevitable and hence economics cannot be fully divorced from it. In essence we are arguing that the objects of social science are not just much more complicated than those of natural science but also qualitatively different.

In addition to the conceptual problem noted above, other shortcomings of the orthodox position have been shown. For example, Lawson²¹ suggests that contemporary academic economics is not in a healthy state and doubts the capacity of many of its strands to explain real world events or to facilitate policy evaluation. He further states that contemporary economics is marked by a neglect of ontology and an uncritical application of formulistic methods and systems to conditions for which they are obviously unsuited. Lawson notes the shortcomings of the deductive-nomological model and argues that it is time to “abandon the whole misleading positivistic perspective and its results”.²² Aldred²³ states that economics is not what it appears to be and is an odd kind of science, if a science at all and that many of those who call themselves economists peddle a narrow or simplistic view of economics to serve vested interests and political ends. Piketty²⁴ asserts that an over-reliance on simple

¹⁷ Friedman 1953.

¹⁸ Friedman 1953 p4.

¹⁹ Friedman 1953 p16.

²⁰ Blaug 1992.

²¹ Lawson 1997.

²² Lawson 1997 p154.

²³ Aldred 2009.

²⁴ Piketty 2014.

mathematic models and unrepresentative agents in economics has led to a neglect of important issues such as the distribution of wealth.

It is clear that all is not right with modern-day orthodox economics. It is our argument that mainstream economists should let go of their reverence for positivistic methodology and seek alternative conceptual frameworks, ones that *are* good at understanding and addressing real problems. Our argument is that we need a new conceptualisation for economics; to see the subject as providing an explanatory function to help us understand the world in which we live (and perhaps to suggest ways of improving it) rather than as a predictive science predicated by flawed assumptions. We argue that economics should adopt a critical realist methodology and this is explored in a later section.

Purpose of schools and the dominance of neo-classical economics

A useful way to start exploring what should be the content of economics education in schools is to ask about the purpose of schooling. Reiss and White²⁵ suggest that we have to ask ourselves, what we want to achieve, rather than get bogged down with minutiae and argue about specific content. This appears to be particularly important for the subject under consideration, economics, as economic considerations have also come to dominate state policy about education overall.²⁶ In fact, we aver that business ontology now underpins much of state policy.

It is widely accepted that our education system is underpinned by a liberal philosophy of education.²⁷ Much of the debate about religion and education as well as faith schools, for example, is underpinned by liberal aims of education. Though liberalism as a philosophy has many forms, with different understandings of the meaning of liberty, role of the state and the function of market,²⁸ it can be argued that the presumption in favour of liberty is the core idea underpinning all of these different forms. Gaus²⁹ calls this the “Fundamental Liberal Principle” and Cranston notes, “By definition a liberal is a man who believes in liberty”.³⁰ Liberalism takes freedom to be the natural state of humans and hence political authority, law and even compulsory schooling needs justification.³¹

A child enters into a world which is already full of meanings and practices shaped by histories and anticipations about the future. All types of education seek to help children make sense of this world and find their place in it. A distinctive liberal approach to education not only does that but also aims to help the child grow up to find his or her own path; thus to receive the world not merely passively but through an act of understanding and confidence to act upon it. Thus, a key feature of liberal education is the goal to help children make up their minds; in other words, to be autonomous. As Callan notes, “the idea that schooling should help students become autonomous adults is one that continuous to command widespread interest and adherence among contemporary philosophers of education”.³²

Going back to Rousseau and Kant, the idea of autonomy, in the character or dispositional sense of the term, has been important in modern conception of liberal education and as an aim of schooling. By dispositional autonomy we mean, the inclination to determine one’s own actions. To possess this trait is to have a preference on relying on one’s own judgment, to be independent-minded, free-spirited,

²⁵ Reiss and White 2013.

²⁶ Apple 2004.

²⁷ Reiss and White 2013.

²⁸ Fawcett 2014.

²⁹ Gaus 1996 p166.

³⁰ Cranston 1967 p459.

³¹ Though there is a debate about compulsory schooling, in this paper we will take the position that there is justification for it, as long as the education thus provided in schools is itself a liberal education, Chamberlin, 1989.

³² Callan 1988, p4.

disposed to do things one's own way.³³ Sometimes the stress on autonomy is interpreted as an education seeking to develop a person formed outside of all social influences. This is clearly not the case. Culture, socialization and listening to expertise are an essential part of being autonomous. The claim rather is that the individual is then able to process the information and fashion his or her own path – and therefore be the author of one's life. John Stuart Mill, one of the architects of liberalism makes this point lucidly:

it would be absurd to pretend that people ought to live as if nothing whatever had been known in the world before they came into it; as if experience has as yet done nothing towards showing that one mode of existence, or of conduct, is preferable to another. Nobody denies that people should be so taught and trained in youth as to know and benefit by the ascertained results of human experience. But it is the privilege and proper condition of human being, arrived at the maturity of his faculties, to use and interpret experience in his own way. It is for him to find out what part of recorded experience is properly applicable to his own circumstances and character.³⁴

Having noted the centrality of autonomy as an educational aim, we now arrive at the pedagogical issue of developing children's autonomy. Clearly this is a complex issue and varies according to students' profile, levels and particular subjects. Yet, it seems that one pedagogical tool widely shared is the diversity of exposure to alternatives; be it competing historical explanations of events, diverse interpretations of texts, variety of positions on existential and religious questions or vying hypotheses in science. As Bailey argues, opening students to points of views, traditions, literature, explanations and interpretations other than those that they are likely to get in the growing up processes at homes and in communities is to help them transcend the present and the particular.

The possibility of autonomy increases as the opportunity for observing and imagining alternatives increases, since to be autonomous in decision-making a person must be able to imagine alternative courses of action and choose between them. This is an extremely important consideration for those who educate and train teachers. A teacher rigidly trained in a narrow conception of what it is to teach will find great difficulty in making autonomous decisions and adjustments in a rapidly changing social and technological environment.³⁵

In the earlier part of this paper we argued that the school economics has come to be dominated by a particular conception of economics, neo-classical economics. Alternative conceptualisations as well as a critique of the dominant paradigm are rarely part of students' education about economics. Having now considered both the liberal aim of developing autonomy and a particular principle to achieve it, we argue that the current dominance of a single perspective of economics is a barrier to the development of autonomy in children, at least as far as their ability to think autonomously in matters of finance and economics are concerned. The danger is that the dominant paradigm assumes the status of being 'natural' rather than being seen as socially constructed. Indeed the language of economics (e.g. the invisible hand, equilibrium) reinforces this misconception. In line with autonomy as an educational aim, we propose that it is important that students are exposed to the variety of alternatives to the issue of economic organisation, thus developing their autonomy and economic imagination. As we have discussed above, the dominant understanding of economics is based on conceptions that do not adequately take account of real life; economics has become more about modelling than understanding. We thus require a new pedagogical framework to help students make sense of the economic issues around.

³³ Hand 2006.

³⁴ Mill 1974 [1859] pp121-122.

³⁵ Bailey 1984 p181.

A related issue is that the concern with the teaching of economics is made particularly important as economic considerations increasingly dominating the state policy on education. Much has been written about the resulting impact on education.³⁶ In this trend, called marketization or commodification of education, the practice of education is being reconceptualised and re-imagined as a business. Students are seen not as minds, spirit and character to be nurtured but as consumers of education. Schools and universities are supposed to market their programmes to these consumers and their parents whose satisfaction is the benchmark of quality teaching. Knowledge thus comes to be seen as a commodity like any other commodity which must be bought and sold in a market primarily for private consumption. The problem with the current trend of marketization is that its underlying vision of education has not been arrived through philosophical discussion but imposed through the dominance of an economic paradigm of a particular kind which reduces human beings to consumers and producers of economically measurable goods and services. The purported logic is this; the market is the best way to distribute goods and services; education is a good; therefore the market is the best way to distribute it. But, here is the flaw in this thinking. Markets have been shown to be efficient ways of producing and distributing certain types of goods and services, i.e. those with private benefits only; education is not entirely or even mostly a private good; therefore the market can at best be a partially useful means for its distribution. Education is also a public good and to that extent non-market mechanisms are required for its proper distribution.

From the perspective of this paper, the neo-liberal domination of state education policy further restricts the scope of teaching economics. The liberal state which otherwise should be committed to liberal goals of education now serves the interest of a particular economic paradigm. The naturalisation of the neo-classical model thus happens not only through the particular subject of economics but also the overall drift educational policy. This has implications for citizenship issues as well. Through the dominance of an economic model as the purpose of education, education's key role of nurturing critical citizenship is being forsaken. Rather than being capable of evaluating state policies and thereby making informed democratic decisions, the students will be indoctrinated into a state philosophy of a neoliberalism way of organising society. The task of revamping economics as a subject is thus of critical importance as this can give students the tools to evaluate not only particular economic policies but also the overall drift of the state.

In the next two sections we argue that the concepts and theories of critical realism are a very good candidate for this task and to take advantage of the opportunities offered by the new content requirement to be implemented from September 2015.

Critical realism as a conceptual framework for economics

Roy Bhaskar first articulated critical realism in the 1970s and then developed it over the following four decades. It is a philosophy which is first and foremost concerned with ontology, the study of being. There are three phases of critical realism: basic, dialectic and meta-reality.³⁷ Critical realism is a term derived from two connected philosophical ideas: transcendental realism and critical naturalism and the two together form most of what Bhaskar now refers to as basic critical realism.

Transcendental Realism is a philosophy of science; the underpinning argument, and the basic level of critical realism, is that the world is real and independent of observers, but not necessarily directly accessible and therefore needs to be understood through the structures and mechanisms at play.³⁸ As understood by Bhaskar, Transcendental Realism claims that intelligibility of scientific practice makes it necessary to assume that objects of scientific investigation exist independent of humans; they are structures and mechanisms rather than patterns of events; and they operate in open and closed systems alike.

³⁶ Apple 2004; Brown & Carasso 2013; Ball 2012; Harris, 2007.

³⁷ Bhaskar 2010.

³⁸ Bhaskar 1978.

Critical naturalism is a theory of social science and for Bhaskar,³⁹ the key question is to what extent society can be studied in the same way as nature. The naturalistic tradition based on the Humean notion of law is positivistic with a belief that there is an essential unity of method between natural and social sciences. In contrast, hermeneutics offers a radical distinction in method between the natural and social sciences. Bhaskar argues that both are united in the error of accepting essentially a positive account of natural science. In contrast, he offers a qualified anti-positivistic naturalism. The third part of basic critical realism is the theory of explanatory critique, which attempts to show how values can be deduced from facts; again contrary to positivistic assumptions.⁴⁰

Dialectic critical realism argues that absence as well as presence, negativity as well as possibility and change as much as stasis, are all real functions of the world.⁴¹ This challenged a view which Bhaskar describes as ‘ontological monovalence’, by which he means the critique of a ‘flat’, actualist account of events in the world’.⁴²

The philosophy of meta-reality is a philosophy of hope. It is a critique of the reality of oppression experienced by many and argues that underneath this ‘demi-reality’ there is a meta-reality of trust and solidarity. It argues that recognising this deeper level and acting in accordance with it can lead to a universal world of human flourishing.⁴³ Our arguments in this paper draw on all three phases of critical realism.

Positivism arose as one of the outcomes of the Enlightenment whereby science was seen to have the exclusive source of knowledge and thus only way of solving problems of the universe.⁴⁴ Bhaskar⁴⁵ notes that Humean theory, which forms the lynchpin of the positivist system, presupposes an ontology of closed systems and atomistic events and it presumes a conception of people as passive sensors of given facts. Contrastingly, hermeneutic approaches assumes that human action is meaningful and so to explain the social world one must understand it and make sense of it. However, in contrast to both these traditions, critical realism offers an understanding of the world that has an ontology of human action and the structures and mechanisms that enable or constrain it; and a relativist epistemology in which human understanding is seen as hermeneutical. Hence, for Bhaskar⁴⁶ science should be seen as a social process for scientists, doing their science, are causal agents who purposefully experiment and interact with the world. In particular in the social sciences, he argues for an ontology of structures where tendencies should be sought out which explain the social world. Lawson⁴⁷ continues Bhaskar’s arguments by stating that most of the constant event conjunctions that are held to be significant in science only occur under the restricted conditions of experimental control. In other words, they are not spontaneous in nature but a product of human intervention. Science shows a reliance on human intervention with scientists instrumental in the process. It is thus a characteristic error of positivism to ignore such interdependency, for scientists doing their science are not passive agents.

There is another aspect, however, where scientists do not follow a Humean application of positivism, in their understanding of transfactuality i.e. the applicability of science theories and their result to open systems. Price⁴⁸ explains that the laws of nature exist independently of the systems in which they occur and that reality is layered, with higher order layers emergent from lower order ones. She gives

³⁹ Bhaskar 1979.

⁴⁰ Bhaskar 1979.

⁴¹ Bhaskar 2008.

⁴² Bhaskar 2008.

⁴³ Bhaskar 2011.

⁴⁴ Scott and Usher 1996.

⁴⁵ Bhaskar 2011.

⁴⁶ Bhaskar 1979.

⁴⁷ Lawson 1997.

⁴⁸ Price 2014.

an illuminating example of scientists' understanding of 'moon rocks' as a case in point. She notes that because scientists had knowledge of the natural transfactual laws governing the formation of rocks, derived from their study of Earth's rocks, they were already equipped with knowledge about moon rocks before any such rocks had been made available for study and they were confident that there would be no sedimentary rock on the moon, since sedimentation is a process that requires the movement of materials such as water and wind, and neither of these is present on the moon due to its lack of an atmosphere. Furthermore, scientists are today confident to make highly generalised statements about moon rocks, their composition and the causes of their particular characteristics, despite having only seen rocks from three sites on the moon and despite having not actually witnessing the events that caused the rocks and these scientists do not feel the need to support their knowledge with statistically significant correlations. Price offers a witty account of what moon rock research might look like if scientists actually followed a positivistic methodology:

According to research, based on samples collected from 1000 moons picked randomly from solar systems in the universe, there is a correlation between volcanic activity and the existence of basaltic rock ($P < 0.01$). Based on this correlation, scientists claim that there is good reason to assume that the basaltic rock on our moon was caused by volcanic activity.⁴⁹

On the contrary, argues Price, scientists can confidently assume that the basaltic rock was caused by volcanic activity because of the transfactual knowledge that only molten magma cooling quickly at the surface could possibly account for the chemical and structural composition that defines basaltic rock.

Bhaskar challenges the positivist ontology of causal laws and empirically found patterns of events and suggests that scientists search for the mechanisms of the production of the phenomena of nature. Bhaskar⁵⁰ states that the world is composed not only of events and states of affair together with our experiences and impressions, but also of underlying structures, powers, mechanisms and tendencies that exist and these govern and facilitate actual events. Structures possess certain powers: potentials, capacities or abilities to act in a certain way and mechanisms are the way structured things work. Finally, tendencies are potentials and forces actually at work. Bhaskar distinguishes three domains of reality: Empirical (experience and impression), Actual (actual events and states of affair in addition to the empirical) and Real (structures, powers, mechanisms and tendencies in addition to the empirical and actual).

As noted earlier, orthodox economics is caught in a philosophical time-warp but that there are alternative methodologies to positivism which are of particular value to economics and education. Critical realism accepts the hermeneutical starting point; a need for empathy and an understanding of social life and people's subjectivity. But critical realists argue that there is more to the social world, for there are material realities to contend with too. Bhaskar⁵¹ suggest that just as in the natural sciences, a retroductive approach can be followed by seeking plausible mechanisms that would account for the phenomenon in question. These mechanisms can then be used to explain the concrete phenomena observed. So for a critical realist, to explain economic (or educational) phenomena it is necessary to determine a hypothesis of mechanism. We now apply critical realism to a specific example in economics. Working backwards, people experience phenomena we call 'prices' and these 'prices' are generated by processes that we do not directly experience but which we can model or imagine through our reasoning. We may, for example, refer to these processes as 'supply' or 'demand' but we do not directly experience a 'demand curve', a 'supply curve' or indeed an

⁴⁹ Price 2014 p388.

⁵⁰ Bhaskar 1979.

⁵¹ Bhaskar 1979.

‘equilibrium’. The actual reality that gives rise to these processes lies a step further removed from our experience, essentially unreachable, but that does not mean that we are not influenced by its nature.⁵² To illustrate this, we now borrow an example from physics: magnetic forces may not be seen or experienced directly, but can be evidenced by moving a magnet under a piece of paper sprinkled with iron filings. For the social sciences, Bhaskar⁵³ advocates following a ‘DREIC’ model of enquiry. When trying to understand a phenomenon the first step is description (as in hermeneutics) followed by retrodution, the process of generating explanatory hypotheses. The next stage is to eliminate unlikely hypotheses and by doing so identify the ones that seem to best explain the phenomenon. The final process is an iterative one where corrections are made and the phenomenon is examined again to see if the explanatory mechanism has been identified. The critical realist DREIC approach applied to economics offers the subject a powerful explanatory function in contrast to the dubious claims of accurate predictions. We argue that economics should be seen as an explanatory social science that attempts to address highly complex financial and social issues that face the world in which we live.

In the next section, we explore the opportunities offered by the new content scheme to be implemented from September 2015.

Critical realism and opportunities in school economics

Recent changes to the A-level economics curriculum in England that we discuss below will give teachers scope to approach the subject in a fresh and more relevant way. A subsequent paper, ‘what’s wrong with secondary school economics and how teachers can make it right’⁵⁴ will address these issues.

It is current government policy to reform curriculum and assessment in England. A level economics will be assessed through linear examinations taken at the end of the normal two-year course (first teaching of the new specifications from September 2015). We have compared the new content requirements published by the Department of education (DfE) in April 2014 with existing OfQual (Office of Qualifications and Examinations Regulation) requirements and there are relatively few changes and on first reading it appears to be ‘more of the same’ and hence a missed opportunity to address the issues raised by heterodox economists and by us elsewhere in this paper. Nevertheless, there are changes and we feel they are a significant improvement on current requirements. The DfE aims and objectives are as follows:⁵⁵

1. develop an interest in and enthusiasm for the study of the subject
2. appreciate the contribution of economics to the understanding of the wider economic and social environment
3. develop an understanding of a range of concepts and an ability to use these concepts in a variety of different contexts
4. use an enquiring, critical and thoughtful approach to the study of economics and an ability to think as an economist
5. understand that economic behaviour can be studied from a range of perspectives
6. develop analytical and quantitative skills, together with qualities and attitudes which will equip them for the challenges, opportunities and responsibilities of adult and working life

These requirements do not appear to be controversial, indeed they offer the ‘feel’ of a subject that is relevant and analytical. The significant addition is in point 5 “understand that economic behaviour can be studied from a range of perspectives”. While the syllabus is still broadly neo-classical in its

⁵² Davies and Brant 2006.

⁵³ Bhaskar 1979.

⁵⁴ Brant, submitted for publication and awaiting peer-review

⁵⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302106/A_level_economics_subject_content.pdf
Accessed 090714

approach, there is clear scope for examining alternative conceptualisations and to critique established models. The DfE document continues with a requirement of the Knowledge, understanding and skills states that specifications in economics must:⁵⁶

1. provide a coherent combination of micro-economic and macro-economic content, drawing on local, national and global contexts
2. foster the appreciation of economic concepts and theories in a range of contexts and develop a critical consideration of their value and limitations in explaining real-world phenomena

We see both these requirements as highly significant. There is now a requirement to contextualise economics in the real world in local, national and international contexts and furthermore for students to understand the limitations of neo-classical models and concepts. The DfE document further states that specifications must require students to:⁵⁷

1. develop an understanding of economic concepts and theories through a critical consideration of current economic issues, problems and institutions that affect everyday life
2. develop analytical and quantitative skills in selecting, interpreting and using appropriate data from a range of sources, including those indicated in the Annex
3. explain, analyse and evaluate the strengths and weaknesses of the market economy and the role of government within it
4. develop a critical approach to economic models of enquiry, recognising the limitations of economic models

While retaining a neo-classical underpinning, the specifications now allow teachers to ‘test’ models and to ground economics in the real world rather than in abstracted a priori models. Again, it is beyond the scope of this paper to explore issues of pedagogy, but we welcome the new opportunities for teachers to explore economic thinking beyond the recognised orthodoxy. In terms of specified content, all the normal neo-classical content is present such as the margin, opportunity cost, wage determination, inflation and the circular flow of income, but there is an added requirement of criticality. So for example in the study of supply and demand, students are required to “be aware of the assumptions of the model of supply and demand; explain the way it works using a range of techniques; and use the model to describe, predict and analyse economic behaviour”. Teachers should now teach neo-classical models critically and have the scope to explore alternative conceptualisations.⁵⁸

We have studied the draft proposals from the largest three awarding bodies (Edexcel, OCR and AQA). Broadly, their stated aims and objectives reflect the DfE requirements and consequently we will not repeat them here. Drawing from the Edexcel draft specification, we note a number of interesting inclusions:⁵⁹

Economics as a social science: a) Thinking like an economist: the process of developing models in economics, including the need to make assumptions b) The use of the ceteris paribus assumption in building models c) The inability in economics to make scientific experiments

Positive and normative economic statements: a) Distinction between positive and normative economic statements b) The role of value judgements in influencing economic decision making and policy

Free market economies, mixed economy and command economy: a) The distinction between free market, mixed and command economies: reference to Adam Smith, Friedrich Hayek and Karl Marx b) The advantages and disadvantages of a free market economy and a command economy c) The role of the state in a mixed economy

⁵⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302106/A_level_economics_subject_content.pdf
Accessed 090714

⁵⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302106/A_level_economics_subject_content.pdf
Accessed 090714

⁵⁸ Brant, submitted for publication and awaiting peer-review

⁵⁹ Pearson Edexcel Level 3 Advanced GCE in Economics A (9ECO) Specification, First certification 2017

Rational decision making: a) The underlying assumptions of rational economic decision making: b) consumers aim to maximise utility c) firms aim to maximise profits

We are heartened by these inclusions; the Edexcel specification will allow teachers to teach economics in a more critical and more balanced way. Nevertheless the sample examination questions⁶⁰ are still traditional with a neo-classical underpinning. So while teachers will still have to cover a neo-classical syllabus, at least they can do so honestly and critically. A strength of the new specifications and sample examinations questions is that they appear to reclaim reality from abstract models with questions in all three awarding bodies contextualised with relevant examples.⁶¹ Teaching for these courses will be from September 2015 with first examination of the AS level in June 2016 and the full A-level in June 2017.

One of the strengths of critical realism is its dynamic understanding of the relationship between structure and agency. Agency presupposes social structure and social structure keeps going because of agency.⁶² What is missing in orthodox economics is a view of economics as a social science incorporating both social structures and human agency. For any change to society to become embedded, Bhaskar argues that it must be affective on a number of levels. Bhaskar explains that every social event occurs simultaneously on four planes: material transactions with nature; social interactions between people; social structure that cannot be reduced to agency and fourthly a psychological element. So while orthodox economics typically just looks at individuals from an egocentric point of view, abstracts from social relations and assumes the ubiquity of the market, what is absent is any notion of a compassionate human being who operates on a level of values and who cares about other human beings, human justice and the environment. While the market is an effective mechanism for coordinating complex economic activities across numerous economic agents, it is no more than that, it is a mechanism, a machine. “And like all machines, it needs careful regulation and steering”.⁶³ Transactions are based on trust and on regulation so Adam Smith’s ‘invisible hand’ would not exist without a visible handshake or contract.

Among two important assumptions underlying modern economics are: First, that human beings have revolved around atomistic egocentricity (positivism offers a diminutive model of the human being). Secondly, the world can be described in terms of abstract universality (the positivist philosophy of science has assumed a reductionist ontology and by implication an unchanging world). Critiquing, or understanding the limitations of these two assumptions give rise to a critical realist critique of form and of content of economics. To understand economics, both ontology (there is a world of independent phenomena) and epistemology (knowledge is a social process) are needed. Orthodox economics as it stands is individualistic and lacks a social context and it is characterised by an over-use of theoretical models that are based on unrealistic and/or dubious assumptions. Because of its reductionist nature, orthodox economics has no opening to other social sciences; what is missing is economics as a social science incorporating both social structures and human agency. Due to its positivistic assumptions and over-use of modelling, economics sees the world in terms of closed systems. Consequentially there is an overuse of the term *ceteris paribus* but of course in the real world variables do not remain the same. We agree with Lawson⁶⁴ that it is essential to see economics as part of an open system for the real world is complex, with a multiplicity of mechanisms, structures and agencies at play. We recommend that teachers incorporate historical, social and political contexts to facilitate meaningful understanding of complex economic topics.

⁶⁰ Pearson Edexcel 2014b.

⁶¹ AQA 2014a, 2014b, Pearson Edexcel, 2014a, 2014b, OCR, 2014a, 2014b.

⁶² Bhaskar 1986.

⁶³ Chang 2011 p253.

⁶⁴ Lawson 1997

Reclaiming economics as moral philosophy

Adam Smith famously wrote: “it is not from the benevolence of the butcher, the brewer or the baker, that we expect our dinner, but from their regard to their own interest”.⁶⁵ What did Smith mean by ‘own interest’? It is easy to conclude that concern with one’s own interest could mean being selfish. However, this is not what this means: Smith shares the backdrop of the Enlightenment thought where it meant enlightened self-interest. Let us take a modern example where we indeed behave with enlightened self-interest – road traffic. Each driver on the road is ultimately concerned with arriving at his or her designation in a reasonable amount of time and through the optimally shortest route. Yet, if drivers only drove with their own self-interest in mind (for example, driving through red lights), we would not see the generally smooth traffic that we do. Good driving involves concern for other road users and pedestrians as well as taking account of road conditions. On occasions it would mean letting others go first where one could have forced one’s way through. It is in the context of such enlightened self-interest that Smith talked about self-regulating markets and the famous invisible hand. Yet, as we noted, it is easy to translate Smith’s words as promoting self-interest in the narrower sense. Wang et al⁶⁶ explain that the language of economics makes it especially difficult to differentiate between self-interest and greed.⁶⁷

University economics as taught around the world reflects the orthodoxy and school economics offers a simpler version of university economics⁶⁸, where we see precisely the use of self-interest in the narrower sense. Thus, although completely unintentional, an increased exposure to economic theory may give students convenient frameworks to license greed. Research by Marwell and Ames⁶⁹ of American graduates supports this hypothesis but their study findings are complex. They noted that comparing non-economics graduates with economics graduates was difficult: “more than one-third of the economists either refused to answer the question regarding what is fair, or gave very complex, uncodable responses. It seems that the meaning of ‘fairness’ in this context was somewhat alien for this group”.⁷⁰ Wang et al’s⁷¹ research of Australian graduates found that studying economics leads to more self-interested and potentially greedy action (compared to students in an education class). There appear to be a number of mechanisms working together. First, the neo-classical assumption of self-interest maximisation appears to be pervasive and seen to be ‘natural’ with other human motivations being overlooked. Secondly, game theory’s emphasis of a clinical analytical approach to interpersonal behaviour with an implication that intelligent people will analyse their behaviours rationally and only focus on their own outcomes. Thirdly, the relationship between economics education and the belief that others also pursue self-interest creates a false consensus. It is our argument that the manifestation of self-interest as greed conflicts with basic moral values and is in tension with the aims of a liberal education.

One of the absences noted in this paper is the lack of historicity with regard to economic thought; that is the absence of a historically informed understanding of economic theories. This is not confined to the curriculum but is true of predominant economic thought more generally. Of the few occasions when the history of economic thought is considered, it is rare to find those that go back earlier than Adam Smith.⁷² As a result, it is common to find Adam Smith, and usually a particular reading of him,

⁶⁵ Smith 1994 [1776] p15.

⁶⁶ Wang et al 2011.

⁶⁷ a) Bernie Madoff’s long-running Ponzi scheme conned investors of over \$60 billion; b) the American sub-prime mortgage crisis where there was a financial incentive for lenders to loan to customers who did not have the ability to pay them back; c) the LIBOR rigging scandal of 2012 etc.

⁶⁸ Brant 2011.

⁶⁹ Marwell and Ames 1981.

⁷⁰ Marwell and Ames 1981 p309.

⁷¹ Wang et al 2011

⁷² Roll 1992.

regarded as the founder of economics. Though this belief is not without some basis, reflections on economic issues go back at least to the time of ancient Greeks, particularly to Aristotle. We find engagement with economics in religious traditions as well.⁷³ During all this history, and until the early nineteenth century, economics was seen part of moral philosophy. This nesting of economics with moral philosophy was true for Adam Smith as well. And why economics was considered part of moral philosophy? The answer to this question is revealing and pertinent for our times. Moral philosophy was part of applied philosophy, where the chief aim of reflection was to find the best means to achieve a goal. Economics was seen as part of moral philosophy because it was seen as a means to achieve ultimate ends which were set by speculative philosophy or religion. For Aristotle, the ultimate aim was *eudemonia* or flourishing, a concept wider than happiness or pleasure. In religious traditions the aim was salvation in the next world by leading a life of devotion in this world. For all these, and other, ends, economic activity was seen as necessary means.

As Sen⁷⁴ argues, for Adam Smith too, economics was a branch of moral philosophy. Several years prior to writing his famous *Wealth of Nations*, Smith had written *A Theory of Moral Sentiments*. And while the impact of the former (i.e. *Wealth...*) is widely accepted, the pertinence of ideas in the later is “quite often comprehensively missed in discussions today”.⁷⁵ Indeed, Sen goes on to observe that Smith has been reduced to “a one-idea man propagating only the excellence and self-sufficiency of the market”.⁷⁶ In fact, Smith saw capitalism as an ethical project whose success required political commitment to justice and freedom, not merely an understanding of economic logistics. He shared the Enlightenment ideal which provided him with the ends to which economics was means. It should be no surprise than that Smith ‘identified why the markets may need restraint, correction, and supplementation through other institutions for preventing instability, inequity, and poverty’.⁷⁷ In this book *The theory of Moral Sentiments* he noted the importance of limitations of profit motive and stressed the necessity of motives other the pursuit of one’s own gain. We speculate that Smith would have probably shared Rousseau’s articulation of the problem to which economic thought was to be applied:

to find a form of association which will defend and protect with the whole common force the person and goods of each associate, and in which each, while uniting himself with all, may still obey himself alone, and remain as free as before.⁷⁸

Given this goal, it was no surprise that Smith cared particularly that the poor benefited from the prosperity created by markets.

No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, clothe and lodge the whole body of the people, should have such a share of the produce of their own labour as to be themselves tolerably well fed, clothed and lodged.⁷⁹

Further,

To hurt in any degree the interest of any one order of citizens, for no other purpose but to promote that of some other, is evidently contrary to that justice and equality of treatment which the sovereign owes to all the different orders of his subjects.⁸⁰

⁷³ Islahi 2004; Oslington 2014.

⁷⁴ Sen 2010.

⁷⁵ Sen 2010 p50-51.

⁷⁶ Sen 2010 p52.

⁷⁷ Sen 2010 p53.

⁷⁸ Rousseau 1950 [1762].

⁷⁹ Smith 1776.

⁸⁰ Smith 1776.

In Smith and in history of economic thought generally we see that a vision of what a human being is and what are his or her purpose is central to economic thought. He and many others did not see economics as an end, neither in itself nor of anything else, but a means to achieve other purposes of life arrived through philosophical, religious or ethical reflections.

Conclusion

In the 19th century, we saw a new understanding of economics emerging, whereby economics reflected the technical issues of the time, rather than being a theorisation of the morality of the market, exchange and distribution. This was very much in line with the emergence of the idea of social sciences more generally seeking to emulate the successes of natural science by adopting its methods and presuppositions. Perhaps more than any other social science, it was economics that attempted to emulate natural science by purporting to be a value-free/objective discipline. Overtime the approach gained many adherents and became the main understanding of what economics is about. As a result, one no longer asks: maximization of profit for what purpose? Efficiency of market to what end? Growth of wealth to achieve what goal? From the perspective of our argument in this paper, the key issue is the consequences of the absence of historicity of economic thought. It is not just that students are not likely to have an enlightened understanding of the present economic thought but more importantly they would fail to ask the question about the purpose and ends of economics. There is thus an important task ahead of bringing back the reflection on the moral purpose of economics for our times.

Following a governmental review of the secondary education curriculum there will be changes to both content and assessment of economics coming into force in September 2015. It is our recommendation that economics should be taught as a social science with an emphasis on its explanatory function. We aver that methodology should not be neglected and see a critical realist framework as a possibility for ushering a new paradigm in economics and economics education.

Bibliography

- Aldred, J (2009) *The Sceptical Economist* London: Earthscan.
- Alvey, J. (1999) A short history of economics as a moral science. *Journal of Markets & Morality* Vol 2, no. 1 53-73
- Apple, M. (2004) *Ideology and Curriculum*. New York: Routledge-Falmer.
- AQA (2014) A level economics specification.
- AQA (2014b) A level economics specimen materials.
- Bailey, C, (1984) *Beyond the Present and the Particular: A Theory of Liberal education*. London: Routledge.
- Ball, S (2012) *Global education inc.: new policy networks and the neo-liberal imaginary*. London: Routledge.
- Bhaskar, R (1978) *A Realist theory of Science* London: Verso.
- Bhaskar, R (1979) *The Possibility of Naturalism* Brighton: Harvester Press.
- Bhaskar, R (1986) *Scientific Realism and Human Emancipation* London: Routledge.
- Bhaskar, R (2008) *Dialectic* London: Routledge.
- Bhaskar, R (2010) *The formation of Critical Realism* London: Routledge.
- Bhaskar, R (2011) *Reclaiming Reality* London: Routledge.
- Blaug, M (1992) *The Methodology of Economics* Cambridge: Press Syndicate.
- Brant, J (2011) *The Case for Values in Economics Education*. *Citizenship, Social and Economics Education* Vol 10:2 & 3 117-128.
- Brant, J (under review) what's wrong with secondary school economics and how teachers can make it right.
- Brown, R. & Carasso, H. (2013) *Everything for Sale?: the marketization of UK higher education*. New York: Routledge.
- Callan, E. (1988) *Autonomy and Schooling*. McGill-Queen's University Press.
- Carney, M (2014): bankofengland.co.uk/publications/Documents/speeches/2014/speech731.pdf Accessed 22/06/14.
- Chamberlin, R (1989). *Free Children and Democratic Schools: A Philosophical study of Liberty and Education*. Lewes: The Falmer Press.
- Chang, H (2011) *23 Things they didn't tell you about Capitalism* Penguin: London.
- Cranston, M (1967). 'Liberalism' in *The Encyclopedia of Philosophy*, Paul Edwards (ed.), New York: Macmillan and the Free Press.
- Davies, P and Brant, J (2006) *Teaching School Subjects 11-19: Business, Economics and Enterprise* London: Routledge.
- DfE (2014)
www.gov.uk/government/uploads/system/uploads/attachment_data/file/302106/A_level_economic_s_subject_content.pdf Accessed 09/07/14.
- Fawcett, E (2014) *Liberalism: the Life of an idea*. Princeton University Press.
- Friedman, M (1953) *Essays in Positive Economics* Chicago: University of Chicago Press.
- Gaus, G F (1996). *Justificatory Liberalism: An Essay on Epistemology and Political Theory*, New York: Oxford University Press.
- Hand, M (2006) 'Against Autonomy as an Educational Aim' *Oxford Review of Education*, 32:4, 535-550.
- Harris, S (2007) *The governance of education: how neo-liberalism is transforming policy and practice*. London: Continuum.
- Islahi, A (2004) *Contribution of Muslim scholars to Economic Thought and Analysis*. Jeddah: King Abdul Aziz University.
- Lagarde, C (2014): imf.org/external/np/speeches/2014/052714.htm Accessed 05/06/14.
- Lawson, A (1997) *Economics and Reality* London: Routledge.
- Marwell, G and Ames, R (1981) *Economists free ride, does anyone else?* *Journal of Public Economics* 15: 295-310.
- Marx, K (1867) *Das Kapital* Vol 1 (iPad, e-book version).
- Mill, J. S. (1974[1859]) *On Liberty*. London: Penguin.
- OCR (2014) A level economics specification.

- OCR (2014b) A level economics specimen materials.
- Ofqual <http://www.ofqual.gov.uk/help-and-support/94-articles/341-changes-to-a-levels-in-summer-2010> Accessed 4/6/11.
- Oslington, P. (2104) Oxford Handbook of Christianity and Economics. Oxford: OUP.
- Pearson Edexcel (2014a) Level 3 Advanced GCE in Economics A (9EC0) Sample Assessment Materials.
- Pearson Edexcel (2014b) Level 3 Advanced GCE in Economics A (9EC0) Specification, First certification 2017.
- Piketty, T (2014) Capital in the Twenty-first Century Cambridge Massachusetts: Harvard University Press.
- Robbins, L (1935) An essay on the nature and significance of economic science London: Macmillan.
- Roll, E (1992) A History of Economic Thought. London: Faber and Faber.
- Price, L (2014) Hume's Two Causalities and Social Policy: Moon Rocks, Transfactuality, and the UK's Policy on School Absenteeism. *Journal of Critical Realism* Vol. 13 No. 4, August, 2014, 383–396.
- Reiss, M & White, J (2013) An aims-based curriculum: The significance of human flourishing in schools. London: Institute of Education Press.
- Rousseau (1950 01762]) *The social contract, and Discourses*. New York: Dutton.
- Schumpeter, J (1943) *Capitalism, Socialism and Democracy*. London: Routledge.
- Scott, D & Usher, R (1996) *Understanding Educational Research*, London: Routledge.
- Sen, A (2010) Adam Smith and the Contemporary World. *Erasmus Journal for Philosophy and Economics*, Volume 3, Issue 1, Spring 2010, 50-67.
- Smith, A (1994 [1776]) *An enquiry into the nature and causes of the wealth of nations*. Edinburgh: Thomas Nelson.
- Wang, L, Malhotra, D, & Murnighan, J K (2011), Economics Education and Greed. *Academy of Management Learning & Education*, 10(4), 643-660.

Journal of Critical Realism ('the Journal')

ASSIGNMENT OF COPYRIGHT

In order for W.S Maney & Son Ltd, trading as Maney Publishing ('the Publisher'), to ensure the widest possible dissemination and protection of articles published in the Journal, we request authors to assign worldwide copyright in print, digital and other media in their article, including abstracts, to W. S. Maney & Son Ltd. This enables the Publisher to ensure maximum international copyright protection against infringement, and to disseminate your article, and the Journal, to the widest possible worldwide readership. Should the article be rejected from the Journal for any reason, all rights assigned within this document revert back to the author(s) of the article.

Please read the explanatory notes of this agreement on the following page.

1. In consideration of the undertaking set out in paragraph 2, the author(s) as beneficial owner(s) hereby assign(s) to W. S. Maney & Son Ltd all rights, title and interest in the copyright throughout the world in the article named below (**which shall be taken to include any or all supplementary material associated with the article***) for the full legal term of copyright.

Article title: *School economics and the aims of education: critique and possibilities*

Name(s) of Author(s): *Jacob Brent and Farid Panjwani*

Manuscript no./ref. (if known) *REA127*

If this paper is sponsored for Open Access by your grant funders, please follow the MORE OpenChoice route by signing and returning this copyright assignment to the address below, and find details of the policy and how to make payment at www.maneyonline.com/openaccess.

So that there should be no doubt, it is understood and agreed that this assignment includes the right to publish or adapt (subject to paragraphs 3 and 4) the material in the article for use in conjunction with computer systems, including networks. The article may be published in printed, CD-ROM, microfiche, on-line, or other machine-readable form, or in any other format or medium (electronic or otherwise) approved by W. S. Maney & Son Ltd; and subject to data mining.

2. Maney Publishing, as the Journal's publisher, hereby undertakes to prepare for publication and publish in the Journal, the Article named in paragraph 1.
3. The editor of the Journal, and the Publisher, are empowered to make such editorial changes as may be necessary to make the Article suitable for publication. Every effort will be made to consult the Author(s) if substantive changes are required.
4. The author(s) hereby assert(s) their moral rights under the terms of the Copyright Designs and Patents Act 1988 to be identified as the Author(s) of the Article.
5. The author(s) warrant(s) that the article is the author(s)' original work, has not been published before, either in part or whole, and is not currently under consideration for publication elsewhere. The author(s) also warrant(s) that (a) the article contains no libellous or unlawful statements, (b) it in no way infringes the rights of others (including the holders of copyright in material used within the article), (c) that permission has been obtained to reproduce any material or illustrations for which they do not hold copyright, and that (d) the author(s), as the owners of the copyright, is (are) entitled to make the assignment set out in this agreement. The author(s) hereby indemnifies/indemnify the Publisher against any claims for breach of the warranties given above.

6. In cases where the article is a translation of a previously published article, the author(s) warrant(s) that full permission has been obtained to carry out and publish the translation of the article from its original language, and that it in no way infringes the rights of others (including the holders of copyright in material used within the original Article).
7. The author(s) warrant(s) that the article contains no plagiarised material and agree(s) that the article may be checked for plagiarism and other ethical questions (including checks using automated software packages). The Publisher reserves the right to withdraw or retract any article for which, in its reasonable opinion, valid concerns exist over the originality of the article, or its compliance with the Journal's ethical policy. Maney's plagiarism and ethical policy may be read in full at www.maneyonline.com/page/authors/publishingethics-general.

*If the author(s) cannot assign copyright for any or all the supplementary material, the clause in parentheses should be struck out and a licence to publish provided for this material. If copyright is held by a third party, permission to reproduce this material must be obtained from the copyright holder as laid out in paragraph 5 of this form and submitted to the publisher.

Copyright Assignment

I confirm that all the co-authors, named above in 1, know that the article has been submitted to the Journal.

I hereby sign this Assignment of Copyright with the full knowledge and agreement of all authors.

Signed:



Date:

19/2/15

Printed name:

JACEK BRANT.

Please note: it is essential for publication that Maney Publishing receive this signed Assignment of Copyright form. Without it, we will be unable to proceed to publication.

*Please complete all specified fields and return this signed form to the **Production Editor** of the Journal.*

Production Editor, REA, for Maney Publishing
 rea@maneypublishing.com; fax: +44 (0) 20 7451 7307
 1 Carlton House Terrace, London SW1Y 5AF, UK

School economics and the aims of education: critique and possibilities

Jacek Brant and Farid Panjwani

UCL Institute of Education

Notes on contributor

Jacek Brant is Senior Lecturer in Education in the Department of Curriculum, Pedagogy and Assessment at UCL Institute of Education. He has a background of teaching in the economics & business education field since 1986, with previous experience in manufacturing industry. Jacek is former Chair of the Economics, Business and Enterprise Association (EBEA), a fellow of The Higher Education Academy and a member of the British Education Research Association.

Correspondence to: Dr Jacek Brant, UCL Institute of Education, 20 Bedford Way, London, WC1H 0AL, UK. Email: j.brant@ioe.ac.uk