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What's Wrong With Secondary School Economics and How Teachers Can Make it Right - Methodological Critique and Pedagogical Possibilitiesⁱ

In the wake of current world financial crisis serious efforts are being made to rethink the dominant economic assumptions. There is a growing movement in universities to make economics more relevant and to embrace an understanding of diverse models. Additionally, philosophical schools such as critical realism have provided new tools for thinking about economics. However, not much attention has been paid to relate these developments to school economics and this paper aims to respond to this need. It is about economics as a discipline, school economics and issues pertaining to the teaching and learning of school economics. Mainstream economists focus predominately on static neo-classical models that are poor predictors of the future and do not even adequately explain current states of affairs. I argue that conceptualised differently, economics can be seen as a social science, concerned with understanding the often conflicting values, interests, and capacities of large numbers of individuals operating within the constraints of limited resources. In line with this orientation, I recommend that economics teachers start engaging in exploring the purpose of economics and adopt an interactive pedagogy that seeks to explain the world in which we live.

Im Zuge der jüngsten weltweiten Finanzkrise wurden ernsthafte Bemühungen unternommen, die Annahmen der herrschenden Ökonomik neu zu überdenken. In den Universitäten gibt es eine wachsende Bewegung, die die Bedeutung der Wirtschaftswissenschaft stärken will, auch durch ein Verständnis unterschiedlicher Modelle. Zusätzlich bieten philosophischen Denkrichtungen wie der Kritische Realismus neue Werkzeuge über Ökonomik nachzudenken. Die schulische Wirtschaftslehre hat dieser Entwicklung noch wenig Aufmerksamkeit gewidmet, wozu dieser Artikel beitragen möchte. Er behandelt Ökonomik als Wissenschaft, als Schulfach und als Gegenstand des Lehrens und Lernens im Unterricht. Mainstream Ökonomen konzentrieren sich vorrangig auf statische neoklassische Modelle, die die Zukunft nur schwach vorhersagen können und noch nicht einmal angemessen die derzeitige Situation erklären können. Der Verfasser begründet, dass die Wirtschaftswissenschaft als eine Sozialwissenschaft verstanden werden kann, die sich auch gegensätzliche Grundwerte, Interessen und Kapazitäten einer Vielzahl von Individuen widmet, die mit der Begrenzung beschränkter Ressourcen umgehen müssen. Im Einklang mit dieser Orientierung wird empfohlen, dass Wirtschaftslehrkräfte mit der Erkundung des Zwecks der Wirtschaft im Rahmen einer interaktiven Pädagogik starten sollten und danach zu trachten, die Welt, in der wir leben, zu erklären.

Suite à la crise financière mondiale, des efforts sérieux ont été entrepris pour repenser les hypothèses économiques dominantes. Il y a un mouvement croissant au sein des universités pour rendre la discipline économique plus pertinente et apte à rendre compte des modèles variés existants. De plus, les écoles philosophiques, comme par exemple le réalisme critique, ont offert des nouveaux outils pour penser l'économie. Cependant, peu de ces développements se sont préoccupés de relier leurs avancées à l'enseignement de l'économie dans les écoles, un besoin auquel ce papier propose de répondre. Ce papier traite de l'économie comme discipline, de l'économie à l'école et des questions qu'elle pose en termes d'enseignement et d'apprentissage. Les économistes des courants principaux s'intéressent de manière prédominante aux modèles néoclassiques qui s'avèrent très limités en termes de prédictions du futur ou même d'explications du présent. J'argumente dans ce papier pour une conceptualisation différente de l'économie en tant que sciences sociales qui s'attacherait à la compréhension des valeurs, intérêts et capacités (souvent en conflits) d'un grand nombre d'individus opérant sous la contrainte de ressources limitées. Conformément à cette orientation, je recommande les enseignants de l'économie commencent à s'engager à explorer le but de l'économie et adoptent une pédagogie interactive qui s'attache à expliquer le monde dans lequel nous vivons.

Keywords:

economics, methodology, pedagogy, curriculum, critical realism, financial crisis, moral philosophy

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1 Introduction

This paper explores the nature of the discipline of economics, the teaching of economics in secondary schools and the opportunities that economics teachers have in England following curriculum reforms that took effect in September 2015 (first assessments in 2016 and 2017). A decade ago, economics education was in crisis. In England, for example, economics as a school subject suffered a serious decline in the 1990s and into the 2000s. In the early 1990s there were some 30,000 entries a year at advanced levelⁱⁱ but by 2004 the economics A-level examination was only sat by 17,762 candidates (www.jcq.org.uk). This rapid decline resulted in the almost complete abandonment of economics teacher

preparation and a dearth of exciting economics texts for the Secondary school student. This decline was not just an English phenomenon but was observed globally, with fewer students taking up the subject worldwide (Abelson, 1996; Pisanie, 1997; Hahn & Jang, 2010; Round & Shanahan, 2010; Watts & Walstad, 2010 and Yamaoka et al, 2010). This apparently universal decline in the study of economics suggests a common explanation and a number of hypotheses have been proposed to explain it. One is that the subject is inherently difficult and overly conceptual and that this has led to a substitution effect towards related subjects such as business studies (Hurd et al, 1998). Another is that “this is a reflection of dissatisfaction with the subject, brought about by the feeling that economics is largely irrelevant to the values and development of the young people at whom it is aimed” (Lines, 2000 page 249).

The global financial crisis of 2008 and subsequent crisis of the Euro-zone have contributed to a resurgence of economics as a discipline and many writers have written about the opportunity this presents for the teaching of economics at Secondary school level; for example Mittelstädt et al (2013, p. 11) describe this as an “ideal teaching moment” and Lofstrom & van den Berg (2013, p53) a “golden opportunity”. In England, 27,576 students sat the A-level examination in June 2015 (compared to 17,762 eleven years before) and 46,245 sat the advanced subsidiary (AS) level compared to 21,076 in 2004 (www.jcq.org.uk). It is evident that the number of pupils studying economics is approaching its peak of twenty years ago and the high numbers taking the AS examination suggest that A-level entries still have potential for further growth. It is not good enough, however, to rely on financial crises to achieve good student numbers; the fundamental reasons for the subject’s decline in the 1990s and 2000s should be addressed and the mistakes of the past should not be repeated. This paper attempts to make a contribution to this end.

2 Economics and economics teaching at school

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 exists in which theories are accepted as facts and often taught that way. From my professional experience I have observed that both teachers and students fail to challenge this orthodoxy and as a consequence, students’ learning is often passive with a tendency for teachers to be overly didactic. On the other hand, by challenging out-dated theory and critiquing unrealistic economic models, teachers can create dynamic learning environments where students’ understanding of the economy can be developed. Far from jeopardising performance in traditional examinations such as the English Advanced-level General Certificate of Education (GCE), such deeper understanding is likely to have positive benefits on examination grades.

There is a further problem with school economics: there is evidence that studying the subject may make students more selfish – an outcome which goes against

the grain of the values of liberal western education. Research by Marwell & Ames (1981) 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” (p. 309). Wang et al’s (2011) research of Australian graduates found that studying economics leads to more self-interested and potentially greedy action (compared to students in an education class). As explained in Brant and Panjwani (2015), 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 over-looked. Secondly, game theory adopts 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. If studying economics at school makes young people more selfish and greedy then perhaps economics should not be on the school curriculum? Yet I assert that economics *should* be taught in schools, but not necessarily as it presently is. The changes in examination specifications in England (teaching from 2015) give teachers scope to approach the subject in a more critical and relevant way.

As evidenced by the global financial crisis of 2008 which manifested itself and developed in various ways (e.g. the ‘Sovereign debt crisis’, ‘bank crisis’ and ‘Euro crisis’), all is not well with economics as a discipline. As commented in the English Guardian newspaper, economists are struggling to explain contradictory economic signals in what is an artificially low interest rate environment:

The message from the Bank of England was clear. As clear as mud, that is. The economy is a mystery to the best brains of Threadneedle Street, scratching their heads at figures showing unemployment and earnings growth are both heading south at a rapid pace. This really shouldn't be happening as far as the Bank is concerned, which is why its quarterly inflation report was riddled with uncertainty. The Bank's monetary policy committee is at odds about how much spare capacity remains after the Great Recession. Policy-makers are unsure what is happening to the housing market. Some of them think wage growth is about to pick up; some of them don't.

<http://www.theguardian.com/business/economics-blog/2014/aug/13/pay-puzzle-bank-of-england-inflation-report-mark-carney> Accessed 14/8/14

This paper has three key arguments. One 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). A second argument is one of content: economics should be conceptualised as a social science which must be contextualised historically and politically. The third argument is one of pedagogy: by exploring reality first and then using economic theory as an explanatory tool, lessons will prove more interesting and more relevant to students with the result that more of them may wish to study economics and continue that study beyond school leaving age.

3 What's wrong with economics?

There is a long history of economic thought that is different in nature to contemporary orthodox economics. As early as the thirteenth century, Thomas Aquinas (1274) wrote about just price in relations to financial transactions, the Catholic Church taking a view that consumers should be protected against unscrupulous traders. Similar ideas were prevalent throughout Europe in the middle ages and economics was de facto a branch of moral philosophy. As Thompson (1991) discusses, eighteenth century Britain saw the moral economy of the poor and modern popular discourse include the widely accepted concept of a "fair price" (p. 336). For Adam Smith too, economics was a branch of moral philosophy (Smith, 1759). Smith saw capitalism as an ethical project (Brant and Panjwani, 2015) whose success required political commitment to justice and freedom, not merely an understanding of economic logistics. He stressed the necessity of motives other than the pursuit of one's own gain and he cared particularly that the poor benefited from the prosperity created by markets (ibid). I note how neo-classical economists extol *The Wealth of Nations* (Smith, 1776), reducing Smith to "a one-idea man propagating only the excellence and self-sufficiency of the market" (Sen, p. 52) while ignoring his earlier written *A Theory of Moral Sentiments* (Smith, 1759). 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 purposes is central to economic thought. He and many others did not see economics as an end in itself, but a means to achieve other purposes of life arrived through philosophical, religious or ethical reflections.

Yet despite these roots in moral philosophy, economics took a mathematical turn in the twentieth century and one can see the reliance on mathematical modelling as evidence of mainstream economists aspiring to the certainties of the sciences. The methodology of mathematics allows economists to make testable propositions and then to make generalizable claims and the adoption of such methodological approaches gives economics apparent scientific respectability. In this paper, I critique this approach and present alternative conceptualisations which I argue are more fit-for-purpose. Robbins (1935) 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 (Brant, 2011). 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. So both in the definition of the subject and its methodology, there is a claim of science and scientific method.

I now explore the methodology of neoclassical economics further. Friedman (1953) 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" (p. 4). Friedman asserts that the only important criterion for judging a theory is if it works and that "realism of the assumptions is not important" (p. 16). Friedman offers the example of a minimum wage as a case in point, stating that arguing for such a minimum wage is a value call (i.e. to protect employees who do not have strong wage-bargaining possibilities to ensure a minimum socially acceptable wage). Friedman then states that a minimum wage would increase unemployment and claims this to be an objective statement. Now this is an assertion that I challenge for the objectivity of this statement rests on accepting a neo-classical model of the economy as fact and I do not – it is a theory based on closed model underpinned by unrealistic assumptions. In contrast, a Keynesian analysis may conclude that under certain conditions, a minimum wage may stimulate aggregate demand which may actually lower unemployment (this analysis is based on a different model underpinned by different assumptions). My point is not to arbitrate between Keynes and Friedman but to challenge Friedman's epistemological claim of objectivity.

I now probe deeper into the positivistic assumptions of neoclassical economics and its naturalistic aspirations. Blaug (1992), 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's and Blaug's assertions are that economics should emulate the natural sciences and adopt the methods of the natural sciences as far as practically possible. Their fundamental argument is that economics should be a positive subject and it should be objective in its methodology. The primary ontological and epistemological assumption of positivism, as espoused by Friedman and Blaug, is that the world is objective in the sense that it is independent of its knowers and by using scientific method it is possible to discover universal laws. However, there are fundamental differences between



social and natural sciences. Whereas natural scientists can isolate variables, economists must rely on uncontrolled experiences and here the problem lies with the number of variables in consideration. Furthermore, in social sciences the deterministic relationships assumed in the natural sciences are not possible because of human free will. So the objects of social science are not just much more complicated than those of natural science but also qualitatively different. For social sciences such as economics, this makes objectivity almost impossible in practice.

And what is the problem of maintaining a neo-classical position for economics? A number of heterodox economists have offered arguments against the orthodoxy of neo-classical economics. Donaldson (1984) argues that the discipline is becoming irrelevant and furthermore that economists are not good at dealing with real problems. Houseman & McPherson (1996) suggest that economics should subscribe to a descriptive methodology, McCloskey (1983) argues that economics is a historical rather than predictive science while Thomas (1992) criticises the abstract nature, complexity of modeling, lack of application and the positivist methodology of economics. Lawson (1997) also suggests that contemporary academic economics is not in a healthy state and he 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. Aldred (2009) 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.

It is not often that a book on the 'dismal science' becomes a 'bestseller', but that has been the case with Piketty's *Capital in the Twenty-first Century*. Piketty (2014) explains that an over-reliance on simple mathematical models and unrepresentative agents in economics has led to a neglect of important issues such as the distribution of wealth. While Piketty does not challenge the orthodoxy of economics in terms of methodology, his understanding and analysis of data present a direct challenge to the neo-liberal economic consensus. Piketty studied data of twenty countries, examining historic trends of wealth and income. He observes that there is nothing natural in the distribution of wealth and income and he notes the inherent weakness of orthodox economics because of its refusal to see the world in its social and political context. Piketty notes that in an economy where the rate of return on capital outstrips the rate of growth, inherited wealth will always grow faster than earned wealth and that eventually wealth will concentrate to levels that are incompatible with democracy, in other words, capitalism creates levels of inequity that are politically unsustainable. Piketty sees the 2008 world financial meltdown as no accident, simply the system working normally. He notes that if growth is

high and returns on capital can be suppressed, there can be a more equal capitalism and he states that the redistribution of wealth (as well as income) may be necessary for capitalism to survive. There are of course different forms of capitalism, American capitalism being very different say from a Scandinavian version. It is beyond the scope of this paper to speculate on the demise of capitalism per se, but I note comments from Mark Carney, Governor of the Bank of England and Christine Lagarde, Managing Director, International Monetary Fund at a recent conference on inclusive capitalismⁱⁱⁱ. 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 states that capitalism is at risk of destroying itself unless bankers realise they had 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 (Carney, 2014). 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." (p. 3). Lagarde (2014) 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 worries 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. Lagarde's and Carney's thoughts are in harmony with Adam Smith's sentiments that "no society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable" (1776, p. 230) and the need for economics to have a moral and social dimension.

Of course neo-classical economics is not the only economics taught in schools in England. Keynesian ideas are engaged with during the study of the macro economy and there is now a requirement by some of the awarding bodies to cover the ideas of Adam Smith, Friedrich Hayek and Karl Marx. Nevertheless, the specifications are still dominated by neo-classical thinking with an implicit assumption that economics is a positive science. In the next section I offer a methodological critique of neo-classical economics from a critical realist perspective and I go on to argue that critical realism as a philosophy offers a better ontological, epistemological and methodological underpinning than does positivism.

4 Critical realism as a conceptual framework for economics

Critical realism is a philosophy created in the 1970s by Roy Bhaskar and developed over the following four decades; the term is derived from two connected philosophical ideas, transcendental realism and critical naturalism. Transcendental Realism is a philosophy of



science; its underpinning argument is that the world is real, but not necessarily directly accessible and therefore needs to be understood through the structures and mechanisms at play (Bhaskar, 1978). Critical naturalism is a theory of social science and for Bhaskar (1979), its 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 based on 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's argument is that the error that unites these opposing traditions is the acceptance of an essentially positivist account of natural science; he argues for a qualified anti-positivistic naturalism (ibid).

Positivism arose out of the Enlightenment where science was seen to have the answers to the problems of the universe and it was believed that truth could be discovered through observation and experimentation (Scott and Usher, 1996). Bhaskar (2011) 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. In contrast, critical realism offers an understanding of the world that is real but which may be differently experienced and interpreted by different observers.

For positivists such as Milton Friedman and Mark Blaug, the world is objective in the sense that it is independent of its knowers and thus by using scientific method it is possible to discover universal laws. Positivists believe that it is possible to have intersubjective validation where different observers exposed to the same data come to the same conclusions. This may be possible in a science such as physics, but it is not possible for social sciences as they operate in open systems with many variables that are subject to change (Bhaskar, 2008). There are alternative methodologies to positivism which are of particular value to economics. 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.

Bhaskar (1979) suggests 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 phenomena it is necessary to determine a hypothesis of mechanism. I 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 '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 (Davies and Brant, 2006). To illustrate this, I 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 (ibid). For the social sciences, Bhaskar (1979) advocates following a 'DREIC' model of enquiry. When trying to understand a phenomenon the first step is Description (as in hermeneutics) followed by Retroduction, 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. My argument is 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.

5 Economics and changes to the school economics curriculum

Orthodox economics, in its current manifestation, is individualistic and lacks a social context; the neo-classical 'rational economic man' is purported to behave selfishly and in pursuit of self-interest. Indeed, Adam Smith famously wrote in favour of the pursuit of selfish behaviour: "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" (Smith, 1994 [1776] p15). Wang et al (2011) explain that the language of economics makes it especially difficult to differentiate between self-interest and greed. Neo-classical economics see people as 'rational self-maximisers' with an assumption of self-interest embodied in the desire to 'maximise gains'. The notion of 'rational economic man' implies pursuit of unlimited and un-relented consumption. While individual greed benefits one person at the expense of others; systemic greed can damage an entire system and there are many examples we could draw upon to illustrate this^{iv}. University economics as taught around the world reflects this orthodoxy and school economics offers a simplified version of university economics (Brant, 2011).

It is current UK government policy to reform curriculum and assessment in England. From the summer of 2017, 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 started in September 2015). I 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 in this paper. Nevertheless, there are changes and I see a significant improvement on current requirements. For the sake of brevity, I will not compare and contrast existing and new specifications, rather I will signal significant changes.

The DfE aims and objectives are as follows:

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

Source: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302106/A_level_economics_subject_content.pdf Accessed 09/07/14

These specifications require economics to be relevant and analytical. The significant addition from the earlier specifications 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 approach, there is clear scope for engaging with alternative conceptualisations and with critiquing established models. The DfE document continues with a requirement of the Knowledge, understanding and skills that specifications in economics must:

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
(Ibid)

Both these requirements are 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:

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
(Ibid)

While retaining a neo-classical underpinning, the new specifications now allow teachers to ‘test’ models and to ground economics in the real world rather than in abstracted a priori models. In terms of specified content, the normal orthodox economics 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” (ibid). Teachers are now required to teach economic models (more) critically and they have the scope to explore alternative conceptualisations. For the sake of clarity and illustration, I now offer an example of how teachers may approach the teaching of ‘price’ (see box 1).

The English education system is characterised by a regulatory body, the Office of Qualifications and Examinations Regulation (OfQual), setting broad requirements and competing awarding bodies offering detailed specifications and sample assessment questions; individual schools then decide which awarding bodies to choose for each subject and teachers follow that specification. I have studied the proposals from the largest three awarding bodies (Edexcel^v, OCR^{vi} and AQA^{vii}). Their stated aims and objectives reflect the DfE/OfQual requirements stated above and consequently I will not repeat them here. Drawing from the Edexcel draft specification, I note a number of interesting inclusions:

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

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

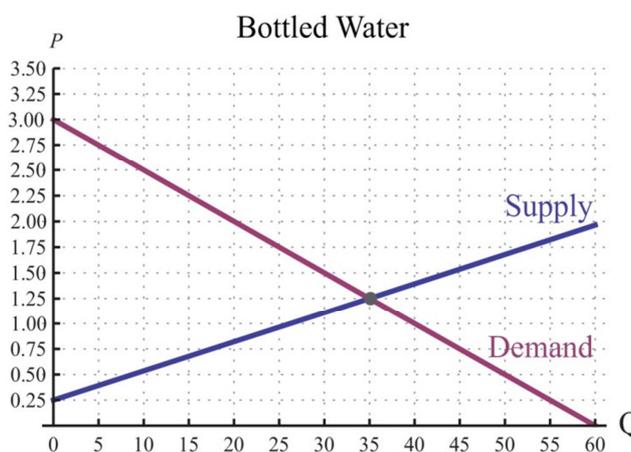
Source; Pearson Edexcel Level 3 Advanced GCE in Economics A (9ECO) Specification, First certification 2017

The Edexcel specification will allow teachers to teach economics in a more critical and more balanced way.

Nevertheless the sample examination questions (Pearson Edexcel, 2014b) are still traditional with a strong 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 (AQA 2014a, 2014b, Pearson Edexcel, 2014a, 2014b, OCR, 2014a, 2014b). Teaching for these courses started in September 2015 with first examination of the AS level in June 2016 and the full A-level in June 2017.

Box 1: teaching about price

In 'traditional' secondary school economics lessons, teaching is often theory-led. As described earlier in this paper, theories are often accepted as facts and taught that way and learning is often passive due to a (false) acceptance that knowledge is a static collection of facts to impart on learners. Typically, teachers will explain theory, present a diagrammatical conceptualisation on the whiteboard and students will copy (or be given as handout). Examples from the real world often follow, 'validating' or exemplifying the theory. So in the teaching of 'price', students may learn about 'supply' and about 'demand' and a graphical representation may look something as follows:



The diagram implies an equilibrium price of €1.25 with 35 units being bought and sold. Teachers rarely label in more detail (than my construction above) and it is often left for the student to assume additional information. Are we to assume 35 bottles are exchanged? How large are the bottles? Perhaps they are half-litre ones? How often does this exchange happen? Perhaps it is daily? Where does the exchange take place? Perhaps it takes place in a convenience store? Such a graph implies a degree of certainty and it would not be unreasonable for a learner to assume that a supply curve 'exists' and that likewise a demand curve is 'real'. It would also be fair to assume that the learner may consider €1.25 as the 'correct' price for a (half-litre) bottle of water, especially after a teacher asserting that the price is €1.25. I suggest that such a teaching approach is deficient in that it presents certainty where certainty does not exist and that it is likely to lead to misunderstandings and misconceptions in the learners that may be hard to correct.

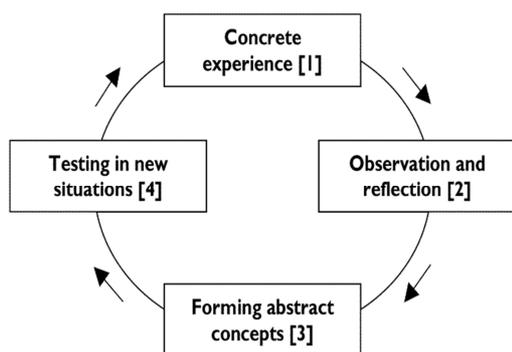
I advocate what I call a 'back-to-front' approach (in contrast to usual economics teaching methodology). Students could be given a scenario where a half-litre bottle of branded water has a price of €1 in a supermarket, €1.25 in a convenience store, €2 in a restaurant and €5 in an exclusive club. Students, working in groups (of say 4), could then discuss explanations for the price differences. Working in groups allows students to articulate their reasoning aloud and it allows the teacher to address misconceptions in a sensitive way. A formal whole-class plenary session may consolidate learning and explore the various mechanisms at work that influence price, price differentials of the same product and possible forces at work that may influence a changes in prices. A supply and demand diagram may follow for the model is a powerful and useful one (and one that must be taught for it is a specified requirement), but it will be predicated on reality and taught as an explanatory device rather than a real entity.

6 An opportunity for teachers to reflect on their teaching of economics

The new economics curriculum in England is an opportunity for teachers to reflect on the way students learn economics and the way economics might be taught. It is my recommendation that students are taught to

see that economics doesn't exist in isolation from society, but is embedded in the social system and relates to many spheres. Decisions made by individuals, firms and governments will affect other individual, society and the environment. One approach might be to take a historical view in trying to understand why the world

looks as it does. For example, 250 years ago there was not much difference in living standards between England, Germany, and India and yet today there are enormous differences. A starting point might be to examine empirical data (a la Piketty) and trying to make sense of that data. Starting with real world evidence should keep economics fresh and relevant. One powerful way of learning economics is through experience and I recommend that economics teachers consider Kolb's (1984) learning cycle as a useful tool. Kolb suggests that learning is a cyclical process that begins from students' experiences and these concrete experiences are the basis for observations and reflections which in turn are assimilated and distilled into abstract concepts.



Source: Davies and Brant, 2006 p. 148

If what students learn in school is to have any impact on their thinking outside school then students must be taught to reappraise their existing knowledge and understanding in the light of what is presented in class. For example, students may have experience of a payment system (piece rates, hourly rates, overtime, bonus payments) through part-time work. Through this experience they will have some awareness of how a payment system operates, some awareness of motivation at work and some awareness of the organisation which employed them. Through reflection on their experience, students can bring each of these aspects of their experience into their current consciousness. A natural way in which students may reflect on payment systems is by comparing their experience with others (Davies and Brant, 2006). This type of approach also has clear implications for teachers in schools who are working with groups of students in classrooms. In these circumstances the teacher could ask: "What experiences do the students have that are relevant to the topic I am about to teach?" The example of payment systems illustrates how this question may be answered. However, 14-19 year-old students' experience of business and commerce is necessarily limited (ibid). Using real data, real-life case studies and scenarios that frame an economics problem, will go some way in addressing relevance.

Another point of reflection for Secondary school economics teachers is on the need to make explicit methodological assumptions as a central part of a more pluralist teaching of economics. This can be achieved by

starting the course with an overview of the history of economic thought and later to reflect on conceptualisations as they arise during the year. Dow (2009) argues that this would address the concerns that "only one general approach is currently emphasised in economics teaching and that instead students should be exposed to a range of approaches" (P41).

I end this section by recommending that teachers reflect on how they teach the use of economic models. Due to the ubiquity of supply and demand (S+D) diagrams in micro-economics, I will use this as an example. Most standard texts explain 'the law of demand' and the 'law of supply' and the resulting formation of price and consequently many students will accept these 'laws' uncritically, influenced by the 'certainty' in which they are presented. The implication of the texts is that it is reasonable to assume that shifts in demand or shifts in supply will lead to changes in price, but in the real world this is dependent on the nature of markets and often prices are surprisingly 'sticky'. I offer four examples that test the model. (1) Demand factors. If one takes the example of ice-cream, it is reasonable to expect the price to rise on hot sunny days as demand increases and yet in ice-cream parlours, cafes and supermarkets, prices normally remain constant (and similarly, adverse weather does not lead to price reductions). Take motor-cars as another example, over a number of years, prices of a manufacturers' models remain remarkably stable, even though there may be long term fluctuations in demand. (2) Supply factors. If wages fall in a particular industry, S+D theory leads us to expect employees to contract the supply of labour (as the price of labour has fallen). Yet employees who have mortgages or have rents to pay on their apartments may need to work more in order to meet their financial obligations. Taking the example of Cross-rail^{vii} in London, the £2.3b expansion of public rail transport across London, S+D theory leads us to expect a price reduction due to an increase in supply, yet there a plans to raise the price of public transport in line with inflation so it is likely that more journeys will take place at a higher price. I am not suggesting that the models are intrinsically wrong, rather that they are inappropriately used in many texts and by many teachers. What the models can represent are the unseen forces and mechanisms at work. In the case of S+D analysis, there are forces of both supply and demand at work and they may influence prices and business decisions. The S+D model can be used as a powerful explanatory device and this is how I suggest it should be used. I assert that models should not be taught as if they are real in themselves.

7 Discussion

In the nineteenth century, a new understanding of economics emerged, whereby economics reflected the technical issues of the time, rather than being a theorisation of the morality of the market, exchange and distribution. Over time the approach gained many adherents and became the main understanding of what economics is about. As a result, one no longer asks: maxi-

mization of profit for what purpose? Efficiency of market to what end? Growth of wealth to achieve what goal? (Brant and Panjwani, 2015). So while orthodox economics typically just looks at individuals acting solely for self-interest, 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 (ibid).

The discourse of modernity is riveted by two fundamental assumptions. 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). 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; in particular, it allows no place for social structures and human agency. Due to its positivistic assumptions and over-use of modelling, economics sees the world in terms of closed systems. Consequently there is an overuse of the term *ceteris paribus* but of course in the real world variables do not remain the same. It is my argument that it is essential to see economics as part of an open system as the real world is complex, with a multiplicity of mechanisms, structures and agencies at play. Moreover, for any meaningful understanding, it is important to take social and political context into account.

The economics teacher is faced with the content of specifications as a given and the nature of examination questions also as a given. But the way that economics can be taught is open to the teacher. Following Kolb's learning cycle, my recommendation is for economics teachers to start with what is known and to move from the 'concrete to the abstract'. Economic models should be used to explain rather than to suggest they exist in any meaningful way as entities themselves. Teaching in an interactive way to seek meaning and explanation is sound economics teaching. But more than that, teaching with values and the interests of the students at heart will maintain relevance and purpose in economics education.

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Endotes:

ⁱ I dedicate this paper to Roy Bhaskar (1944-2014), Philosopher and dear friend.

ⁱⁱ AS and A2 examinations are typically taken by 17 and 18 year olds in England

ⁱⁱⁱ On 27 May 2014 global business leaders gathered at the Mansion House and Guildhall in London to attend a conference on inclusive capitalism. See: <http://www.inc-cap.com/>

^{iv} 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.

^v Edexcel, is a multinational education and examination body. Edexcel is the UK's largest awarding body that sets examinations and awards qualifications (including GCSEs and A-levels).

^{vi} Oxford, Cambridge and RSA Examinations is an awarding body that sets examinations and awards qualifications (including GCSEs and A-levels).

^{vii} AQA (formally known as Assessment and Qualifications Alliance) is an awarding body that sets examinations and awards qualifications (including GCSEs and A-levels).

^{viii} <http://www.crossrail.co.uk/>