



## **A Bernsteinian & realist synthesis to critique instrumental & constructivist theories of knowledge & learning**

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**A Bernsteinian & realist synthesis to critique  
instrumental & constructivist  
theories of knowledge & learning**

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## **Abstract**

*The aim of this paper is to defend the place of theoretical knowledge in vocational education and training curriculum in Australia by drawing on the theories of Basil Bernstein and critical realism. Competency-based training is the mandated model of curriculum for publicly funded Australian VET qualifications. Such a defence is required by the near-hegemonic dominance of constructivist theories in learning theory on the one hand, and by instrumentalism in curriculum as enforced in VET in Australia on the other. Whilst there are many differences between Bernstein's theories and critical realism, drawing from each provides insights that together can be used to effectively critique the marginalising of theoretical knowledge in VET curriculum. Theoretical knowledge in the curriculum is important for both social and epistemic reasons, and Bernstein's analysis provides insights into the former, while critical realism provides insights into the latter. Both are predicated on acknowledging boundaries between different forms of knowledge, and on providing students with access to the structures of knowledge, the nature of the boundaries between different kinds of knowledge, and the means to traverse them.*

## **Introduction**

Competency-based training (CBT) is the mandated model of curriculum for all publicly funded vocational education and training (VET) programs in Australia. The VET sector in Australia is a tertiary education sector, although lower level VET certificates are increasingly offered as part of the senior school curriculum in all of Australia's eight states and territories. The VET sector offers programs ranging from low level certificates to advanced diplomas, and VET graduate certificates and diplomas, whilst the higher education sector mostly offers programs ranging from degrees to post-graduate coursework and research degrees.<sup>1</sup> Australian government legislation passed in 2005 enforces CBT by making it a condition of VET funding to the State governments. A small number of publicly funded VET providers have tried to escape these restrictions by seeking accreditation for, and offering, programs accredited in higher education, and one state government has allowed its publicly funded VET providers to offer higher education degrees in specialised areas. However, this provision remains marginal, and will only grow through full fee, and not publicly funded, programs. The overwhelming majority of all VET publicly funded provision is, and will continue to be, based on CBT.

This paper critiques the dominant VET paradigm of competency-based-training in Australia on the one hand, and on the other, constructivist alternatives championed by those who, to varying degrees, oppose CBT. I argue that while there are important differences between them, and each occupies different positions within the VET field, that there are important commonalities between them. Both emphasise the contextual, situated and

problem-oriented nature of knowledge creation and learning, with the consequence that a convergence around a new pedagogy is emerging, which draws “on constructivist theory and practice as its main source of understanding” (Cullen et al., 2002: 11) even if the philosophical position underpinning each is different. The commonalities arise because both constructivists and CBT proponents sacrifice the complexity and depth of vocational knowledge in curriculum in favour of ‘authentic’ learning in the work-place.

The paper draws on my continuing PhD work, which is a defence of the role of knowledge in the curriculum, through a synthesis of Bernstein’s theories and critical realism. The paper focuses on Bernstein’s later work on the structures of knowledge (with less emphasis on the pedagogic device). I argue that Bernstein’s analysis is a powerful tool for understanding VET in Australia, but it is not enough on its own. Bernstein presents a compelling case for the social basis of disciplinary knowledge, but this can be strengthened with a critical realist argument concerning the epistemic basis of disciplinary knowledge.

The paper first explains the basis for a synthesis between aspects of Bernstein’s theories and critical realism by identifying their differences and commonalities, before proceeding to an exposition of each. Next, the paper uses Bernstein and critical realism to critique CBT and constructionist approaches to knowledge to argue that VET students must have access to the disciplinary structures of knowledge for social and for epistemic reasons.

### **The basis for a synthesis**

Johnson *et al.*, (1984: 22-28) argue that it is necessary to distinguish between an abstract theoretical strategy and the concrete theoretical projects of theorists and their perspectives in social theory. They identify four broad abstract theoretical strategies that distinguish between an ideational or materialist social reality on the one hand, and on the other, approaches that define the social as the aggregation of its individual components (individualism), in contrast to approaches in which the social consists of real social structures that are irreducible to its individual components (realism). These four broad strategies consist of:

- empiricism, which is materialist and individualist
- subjectivism, which is idealist and individualist
- rationalism, which is idealist and realist
- substantialism, which is materialist and realist (Johnson *et al.* 1984: 23)

While each strategy generates a *strategic bias* generated by their ontological and epistemological premises, each also constitutes a *field of tensions* and not

unmoving positions. Tensions arise in the way each strategy seeks to answer the perennial questions of social theory to do with agency and structure, free will and determinism, and interpretation/meaning versus fact/theory (Johnson *et al.* 1984: 22). Johnson *et al.*, (1984: 23) argue that these tensions cannot be fully resolved by any one strategy, and that concrete theoretical projects emerge from relations of opposition and affinity between broad theoretical frameworks. Concrete theoretical projects are distinguished by their strategic ontological and epistemological emphases, but also by the way they resolve these dilemmas through their “methodological rules, research programmes, substantive analyses, social concerns, etc” (Johnson *et al.* 1984: 25).

This is the framework that I have used to explore the differences and commonalities between Bernstein’s approach, which I categorise as broadly rationalist (and Durkheimian), and critical realism,<sup>2</sup> which I categorise as substantialist, while not necessarily agreeing to the appellation in either case, and also conceding that neither neatly fits into the rationalist or substantialist box. Whilst they differ over their ontological premise, both reject ontological nominalism or atomism and methodological individualism, and both see society as consisting of objective structures that constrain and enable differently positioned agents through the social distribution of access to power, and in this sense both can be characterised as social realism.<sup>3</sup> Both also agree on the *sui generis reality* of knowledge and its independence from those who produced it and the context in which it was produced. They agree that while knowledge is socially and historically constructed it is not reducible to that context, and that it is necessary to go beyond ‘sense’ data to understand the real. In other words, whilst knowledge is marked by the conditions of its production, and in this sense is historically and socially specific, it also has transcendent properties that endow it with its *sui generis reality*, independence and the capacity to transcend specific contexts.

## **Bernstein**

Bernstein’s approach is fundamentally Durkheimian because of his analysis of the nature of knowledge. He shares with Durkheim the view that all societies distinguish between esoteric knowledge on the one hand and mundane knowledge on the other (Bernstein 2000: 29). Esoteric knowledge is theoretical and conceptual knowledge, while mundane knowledge is “*knowledge of the other...knowledge of how it is (the knowledge of the possible)*” (Bernstein 2000: 29), or ‘every day’ commonsense knowledge (Bernstein 2000: 157). The distinction between the two is universal, while the content is culturally and historically specific. It is the fact of this distinction, and the social relations underpinning it that shapes knowledge production, rather than the relationship between knowledge and the object that that knowledge is about.

The distinction between esoteric and mundane knowledge is the means through which society navigates between the concerns of everyday life (the mundane) and a 'transcendental' realm (Bernstein 2000: 29). Esoteric knowledge consists of 'collective representations' of a society that allow it "to 'make connections' between objects and events that are not obviously related", and "to 'project beyond the present' to a future or alternative world" (Young 2003: 102-103). Collective representations also provide the moral 'glue' that hold society together through establishing society's values, norms and mores, and in so doing, connect the individual to the collective (Durkheim 1960: 336).

Religion was the paradigmatic form of theoretical and abstract knowledge that historically gave rise to philosophy and science because of the way in which it negotiated the boundaries between the material and immaterial, but also because religion, philosophy and science share the same concerns: "they are nature, man, society" (Durkheim 1967: 476). Bernstein argues that other specialised forms of knowledge developed (such as English, economics and the social sciences) particularly during the 19<sup>th</sup> century, in response to an increasingly specialised and differentiated "discursive division of labour", linked to the exigencies of governing a growing British empire, economy and society, which in turn required "the management of subjectivities" (Bernstein 2000: 54). Durkheim and Bernstein consequently emphasise the historical continuity between religious and academic, disciplinary knowledge, arguing that they are homologous forms of knowledge.<sup>4</sup> The homologous structuring of knowledge of religion and specialised forms of knowledge (as in the academic disciplines) produces a homologous social division of labour; in each field there are knowledge producers (prophets and academics/researchers), knowledge reproducers (priests and teachers) and knowledge acquirers (laity and students), who stand in similar relations of complementarity and opposition (Bernstein 2000: 36-37).

Bernstein's rationalism (or idealism) is more consistent and coherent than Durkheim's, because Durkheim distinguished between collective knowledge and empirical knowledge, arguing that the latter is individualistic because it is grounded in our sensuous, *individual* experience of the world.<sup>5</sup> Bernstein overcomes Durkheim's dichotomising of 'individualistic', sensuous (empirical) knowledge and collective representations, because he argues that *all* meanings are conceptually mediated: "All meanings are abstract; it is not the *fact* of the abstraction but the *form* that the abstraction takes" (Bernstein 2000: 29).

Beck (2002: 619) also differentiates between Bernstein and Durkheim, arguing that Bernstein's approach is an improvement on Durkheim, because Bernstein is able to consider the *relationship* between the sacred and profane, whereas Durkheim argued that the radical otherness of sacred knowledge from profane knowledge resulted in an unbridgeable separation between the two. Consequently, Bernstein was able to recognise "that a sacred dimension of

identity could co-exist with a profane aspect" (Beck 2002: 619), whereas for Durkheim the fracturing of sacred from profane knowledge led to an inevitable fracturing of individual identity, in which our social selves were always riven from our individual selves (Durkheim 1960: 337).<sup>6</sup> Bernstein's analysis of the relationship between the sacred and profane provides insights into the way in which communities of knowledge producers in specialised fields of knowledge can at one and the same time pursue 'sacred' knowledge *and* self-interest, with the former irreducible to the latter. In other words, an 'inner commitment' to knowledge coexists "with mundane issues of economic existence and power struggles" (Beck and Young 2005: 186).

Bernstein also differs from Durkheim because his emphasis was not (as was Durkheim's) on consensus and social integration, but on the way in which class privilege and domination is structured and enacted. Sadovnik (1995: 19) argues that Bernstein integrated Marxist and Weberian conflict theories into his Durkheimian structuralist foundation.

In distinguishing between esoteric and mundane knowledge, Bernstein argues that the mundane, or 'every day' is tied to specific contexts and events, and that 'everyday' meanings are directly related to, and do not transcend, the particular context in which they are enacted. Bernstein (2000: 30) says that these meanings are "so embedded in the context that they have no reference outside that context." This makes it difficult for mundane meanings to be powerful drivers of change beyond the contexts in which they are enacted, because they are tied so closely to those contexts, and have little meaning outside them.

Bernstein (2000: 30) argues that esoteric knowledge is powerful knowledge because it constitutes the site of the 'unthinkable' and the 'yet-to-be-thought'. Esoteric knowledge has the capacity to challenge the social distribution of power, because it has the potential to transform knowledge and how that knowledge is used. Such knowledge is *indirectly* related to a material base, and this means that there is a potential for a *gap* to arise between that knowledge and its material base, which Bernstein (2000: 30) refers to as the "*potential discursive gap*". Bernstein (2000: 30) argues that this gap can "become (not always) a site for alternative possibilities, for alternative realisations between the material and immaterial" and can "change the relations between the material and immaterial." This is the site of the 'unthinkable', the 'impossible' and the 'not-yet-thought', and this is why esoteric knowledge has power and status, and why access to it is always regulated through a division of labour, and through distributive rules that provide access to some, but not others (Bernstein 2000: 31).

Each form of knowledge is realised within a different social base, social relations and discourse. Each discourse has its own grammar through which it is structured, which acts to structure the further development of knowledge

and social relations (Bernstein 2000: 156). Bernstein distinguishes between horizontal discourse, which incorporates mundane knowledge, and vertical discourse (which he further differentiates), which represents abstract and theoretical knowledge. Through identifying the *generating principle* underpinning each kind of discourse, Bernstein was able to identify the specific mode of cultural reproduction that structures the circulation and reproduction of knowledge, and the structuring of identities associated with each.

Horizontal discourse is “likely to be oral, local, context dependent and specific, tacit, multi-layered, and contradictory across but not within contexts” (Bernstein 2000: 157). Horizontal discourse is *segmented* on the basis of the specific context (for example, the work-place, home, or local sporting club) in which it is realised. Not all segments (or segmental discourses) are of equal importance, and different segments may be more or less related to each other, but each has its own logic, practices and forms of discourse. This gives rise to local strategies that are “segmentally organised, context specific and dependent, for maximising encounters with persons and habitats” (Bernstein 2000: 157). The principle through which knowledge is selected and applied is relevance to the local context, and the local context is usually the site in which learning that knowledge (and how to apply it) takes place. This means that meanings, knowledge and competences acquired in one context (or segment) do not necessarily have meaning or relevance to another (Bernstein 2000: 159).

In contrast, vertical discourse represents theoretical bodies of knowledge organised in disciplinary fields. Vertical discourse is distinguished from horizontal discourse because unlike the latter, the former is not a segmentally organised discourse. Integration of knowledge doesn’t occur through the *context*, but through integration of *meanings*, meanings that are not tied to a specific context (Bernstein 2000: 160).

Vertical discourses take one of two main forms. The first form of vertical discourse “takes the form of a coherent, explicit, and systematically principled structure, [and is] hierarchically organised, as in the sciences...” (Bernstein 2000: 157). The other “takes the form of specialised languages with specialised modes of interrogation and specialised criteria for the production and circulation of texts, as in the social sciences and humanities” (Bernstein 2000: 157). Bernstein makes further distinctions within the second form of vertical discourse, because, as Harris (2006: 104) puts it, “some are more vertical than others.” It is not possible to explore the important distinctions Bernstein makes between these different kinds of vertical discourse, and the consequences that ensue for the way in which knowledge is developed and acquired in each. It is an important discussion, because first, Bernstein wishes to avoid over-homogenising (and romanticising) different knowledge structures, and second, his theoretical distinctions exemplify his argument



that the structures of knowledge are not derived from their relationship with their objects of knowledge, or the methods they use to conduct research.<sup>7</sup>

Bernstein's enduring insight is first, that he demonstrates how the *structures* of knowledge, and not just its *content*, are also a relay for power. His argument is not against the disciplines; rather it is against the lack of democratic *access* to the disciplines because they provide access to the unthinkable and the not-yet-thought (Bernstein 2000: xx). Bernstein focuses on an aspect of knowledge that is not sufficiently acknowledged by all critical realists, which is the way in which the *structures* of knowledge distribute and deny access to socially powerful knowledge.<sup>8</sup> Second, he illustrates the way in which the structures of knowledge have causal and emergent properties that contribute to the further production of knowledge. Bernstein has here introduced a novel argument that could enrich critical realist arguments about knowledge. Critical realists mostly focus on the emergent properties of the *content* of knowledge or the *relationship* between particular concepts within a theory. Margaret Archer (1988; 1995; 2000), a leading critical realist, explores the emergent properties of propositional knowledge *qua* propositional knowledge as distinct from the content of that knowledge, but this leads her to a reductionist analysis of knowledge because it reduces codified knowledge to propositional knowledge that is subject to the 'law of contradiction', strips it of all other properties, and severs it from the broader 'systems of meaning' that provide the context for understanding that knowledge.

However, Bernstein's approach is not enough on its own. The most important limitation in Bernstein's approach that I wish to draw attention to in this paper is that it fails to offer a framework for judging the validity of truth claims of knowledge on their own merits. He provides a (new) framework for exploring the emergent properties of the structures of knowledge and in itself this represents an epistemic gain. However, he does not provide a basis for judging the epistemic claims of theories.

Bernstein (2000: 166-169) quite rightly critiques disciplines such as sociology because they are dominated by relativism in which knowledge is defined through the perspective of the knower, rather than through generating 'languages of description' that are able to empirically define their object of study. That is, relativist disciplines have 'weak grammars' because they cannot construct strong languages of description that can empirically define their object of study, and outline the methods through which the validity of their claims can be judged.<sup>9</sup> In making this criticism Bernstein *implicitly* invokes the notion of an objective reality that is accessed through appropriate methods of theory building and inquiry, and in so doing, provides the basis for critiquing the social practices of the relativist disciplines. Moore (2004: 142) says that Bernstein insists that theory "must submit to an external *ontological* imperative...that allows that which is outside to 'announce

itself'...in such a way that the theory is independently tested against reality and open to systematic modification in light of that testing – a principle of falsification." In this sense, Bernstein's approach is similar to critical realism. However, I think this aspect of Bernstein's approach is under-developed, because he argues that the phenomena being studied is "irrelevant to the question of the status of knowledge" (Bernstein 2000: 166). The object of study recedes in importance, because the structure and grammar of the discourse is more important.

In his analysis of the structures of knowledge Bernstein restricts his critique to the 'weak grammar' of relativist disciplines, and I don't think this is a sufficient criterion to ground the objectivity of knowledge, and nor is it a basis for critiquing those disciplines that comply with his requirements. Entwistle (2005) explains that as well as inducting students into the 'style of reasoning' associated with different disciplines, the teaching of disciplines usually requires students to understand 'threshold concepts', which "represents a transformed way of understanding...or viewing something without which the learner cannot progress" (Entwistle 2005: slide 17). We need grounds for critiquing these threshold concepts, including in those disciplines that meet Bernstein's criteria for strong external languages of description. For example, we need grounds for critiquing human capital theory, which has emerged as a colonising theory from the discipline of economics to stake a claim in many other disciplines (and realms of life). We also need grounds for critiquing positivist approaches to the construction of knowledge. The production of knowledge is *co-determined* (Moore 2004), and we need to explore the epistemic claims disciplines make about their objects of knowledge and their ontological and epistemological premises, as well as the structures of knowledge.

How should we ground the objectivity of knowledge? Andrew Collier, a leading critical realist, argues that the objectivity of knowledge can be understood in *three* ways. Collier (2003: 134) says that "The first and central use of the word 'objectivity' is to refer to what is true independently of any subject judging it to be true." It was an objective truth that the earth revolves around the sun before Copernicus and Galileo proclaimed it so. In other words, something may be objectively true even if *no-one* believes it to be so. The second meaning of objectivity concerns the objectivity of human judgements. Knowledge is objective (but still fallible) if it is *caused* by its object, and "not by some feature of its subject other than that subject's openness to the effects of the object" (Collier 2003: 135).<sup>10</sup> Such knowledge is fallible because beliefs are *about* something; they are not a direct correspondence or translation of the object, and so an objective judgement can be more or less fallible. The third meaning of objectivity concerns objectivity as a human attitude, and this is closest to Bernstein's approach. Collier (2003: 137) says that:

“This is an attitude of trying to make one’s judgements objective in the second sense; trying to make one’s beliefs and values conditional upon what is objectively true and valuable – objective in the first sense...Objectivity as an attitude means openness to refutation by data derived from the real objects with which we are concerned; the alternative is to be shut up in one’s own subjectivity.”

## Critical realism

Critical realism makes claims about the nature of reality in distinguishing between the real world and our knowledge of it, arguing that what exists (including society and social structures) does not depend on what we think about it or know about it. In insisting on the existence of a social world that exists independently of our knowledge of it, critical realists admit that we have insights into the social world because the conception of agents “are not external to the facts described but make up part at least of the reality of those facts” (Outhwaite 1998: 283).

However, our knowledge of those facts does not exhaust all there is to know. While the natural and social world exists independently of our conceptions of them, our knowledge of both is fallible and provisional because our experience of the world is always theory-laden (though not theory *determined*) (Sayer 1992). The fallibility of knowledge supports rather than undermines realism, because, as Sayer (1992: 67) explains: “...it is precisely because the world does not yield to just any kind of expectation that we believe it exists independently of us and is not simply a figment of our imagination.” Sayer (2000: 41-42) says that while realists could agree with relativists that “What counts as truth is intersubjectively agreed upon”, that nonetheless, the matter does not end there because these conventions are not *arbitrary*. Admitting the relativity of knowledge does not lead to the slippery slope of relativism or solipsism, because there are grounds for choosing between theories on the basis that some explanations provide more ‘practically adequate’ accounts of the reality they seek to describe. Theories are judged by the extent to which they accord with what we know, are materially possible as far as we know, and “generate expectations about the world and the results of our actions which are actually realized...” (Sayer 1992: 69). Bhaskar (1998a: x-xi) explains that critical realism is premised on “a clear concept of the continued independent *reality* of being...the *relativity* of our *knowledge* ...and *judgemental rationality*.”

Critical realists argue that the (natural and social) world is complex and stratified. Collier (1998: 263) explains everything is governed by the law of physics; some, but not all things are governed by the laws of biology; and more recently, some but not all things are governed by the law of capitalist economics. These different strata interact to make factory production

possible. Bhaskar (1998b: 37) says that “the world consists of things, not events.” He says that most things are complex, are internally differentiated and “possess an ensemble of tendencies, liabilities and powers” (Bhaskar 1998b: 37). It is a *relational* philosophy because it examines the *interplay* between different objects and strata, arguing “that the world is characterised by emergence, that is situations in which the conjunction of two or more features or aspects gives rise to new phenomena, which have properties which are irreducible to those of their constituents, even though the latter are necessary for their existence” (Sayer 2000: 12). For example, while they are intrinsically related, individuals, groups and society are three different kinds of ‘objects’ with different properties, none of which are reducible to the other. While groups and societies would not exist unless individuals existed and both emerge from social relations between agents, it is not possible to add up all the individuals in society or a group to arrive at either (as with nominalism or methodological individualism). Individuals have capacities that organisations or groups do not have and vice-a-versa. Individuals have capacities for cognition, perception and consciousness, whereas groups can have a flat or hierarchical organisational structure, and a society can have an old or young demographic structure, can be more or less class differentiated and so on (Archer 1995). The process of *emergence* describes what happens when different kinds of objects or strata interact.

Critical realists argue that the stratification of the real and processes of emergence apply to the social world as well as the natural, but in making this statement realists do not therefore think that the methods of the natural sciences can be unproblematically applied to the social sciences. This is because the nature of the object that we are investigating determines what we can know about it, and the processes we use for finding out (that is, the practices we use). This is why it is not possible to have a universal method to account for objects that do not have universal properties. For example, Bhaskar (1998c: 25) says that:

“...it is the nature of objects that determines their cognitive possibilities for us; that, in nature, it is humanity that is contingent and knowledge, so to speak, accidental. Thus it is because sticks and stones are solid that they can be picked up and thrown, not because they can be picked up and thrown that they are solid (though that they can be handled in this sort of way may be a contingently necessary condition for our *knowledge* of their solidity).”

Critical realism argues that it is necessary to identify *three* levels of reality in the social and natural worlds. The three levels are the real, actual and empirical. This is illustrated in Table 1.

**Table 1: The domains of the real, actual & empirical**

	Domain of Real	Domain of Actual	Domain of Empirical
Mechanisms	✓		
Events	✓	✓	
Experiences	✓	✓	✓

Source: Bhaskar (1998b: 41)

The domain of the real consists of *underlying causal mechanisms* (which may or may not be observable).<sup>11</sup> Causal mechanisms interact in open systems, and this means that some cancel each other out, or change the way in which they act. The aim of science therefore is not to identify *laws* but *tendencies* of things to act in particular ways. Causation isn't determined by the number of times things *happen* (which is the main focus of positivist, atomistic science and social science), but through trying to identify the way in which causal mechanisms act in ways that are internally related, or in ways that are contingently related (that is, neither necessary nor impossible). For example, Sayer (1992: 110) says explains that we don't need to explode neutron bombs to know their causal liabilities. Sayer (2000: 11) explains that "Realists therefore seek to identify both necessity and possibility or potential in the world – what things must go together, and what could happen, given the nature of the objects." Mechanisms are *real*, they are not 'theoretical entities' or 'logical constructs' (Collier 1994: 44). They generate the events that happen, and the things we experience. An example of a causal mechanism in the social world is class, while in the natural world an example would be gravity. Applying this analysis to Bernstein, the grammar and structure of knowledge constitute causal mechanisms, which are emergent from, among other things, the method through which knowledge is justified and legitimated in different fields (Moore and Maton 2001).<sup>12</sup>

The interaction of causal mechanisms gives rise to *events*, which Bhaskar (1998b: 41) describes as the domain of the actual, where things actually happen. Events are always co-determined by multiple, *stratified* causal mechanisms, and as such, outcomes cannot be fully predicted in advance (Collier 1998: 263). Some events can be perceived while others cannot. Collier (1994: 44) explains that we don't have to experience a rainstorm to determine that it happened, or that a murder took place even though the murderer was never identified. The tree does indeed make a sound when it falls in the forest, even if there is no-one there to hear it. Whether or not we perceive events is an empirical question, and one that is continually reshaped by science as we discover ways to empirically observe events that previously were only discernable through their effects.

The third domain is the domain of the empirical, which "is comprised only of experiences" (Collier 1994: 45). This means that it must have been generated in the domain of the real and taken place in the domain of the actual. Unless we acknowledge a 'depth' ontology in this way we are left with 'actualist'

accounts of causation which restricts the real to events (“every time A, happens, B happens” (Collier 1994: 7)) or empirical realism which restricts the real to that which we can experience. To argue that investigation should be restricted to the level of actions, or even worse, to empirically observable events, is to collapse the question of what exists into a question of what we can know or experience (Sayer, 2000).

Critical realists argue that knowledge arises from our practice in the world, and not from the structures of knowledge. World before word. As our practice leads to better knowledge of the world, this leads to changes in the classification and structures of knowledge. The division of the disciplines is not wholly arbitrary, because they seek to describe different aspects of a stratified reality. Some disciplines, like physics or chemistry, provide insights into *aspects* of the world, by identifying causal mechanisms in isolation of their operation in open systems. Other disciplines, like all the human sciences, focus on the emergent outcome of many causal mechanisms interacting at different levels (Collier 1997).

The division of the disciplines in the social sciences is a contentious issue among critical realists with some, such as Sayer (2000) arguing that while the natural sciences reflect different aspects of the natural world, it is more difficult to establish discrete and bounded objects of study capable of clear disciplinary definitions in the case of the social, with the result that the disciplinary divisions of the social sciences represent the outcome of turf wars rather than intrinsic distinctions in their objects of study. However, this is not an argument against the social sciences *per se*, because their objects of knowledge still relate to aspects of the world, however imperfectly.<sup>13</sup> All it says is that the relationship between them is more permeable than it is in the natural sciences. Both the natural and social sciences abstract their objects of study from the fields in which they are situated. This is necessary to identify causal mechanisms and their tendencies to act in particular ways. However, interdisciplinary research is necessary to understand concrete particulars, because the real is always a consequence of co-determination of many different mechanisms. Such interdisciplinary work takes place however, through explicitly negotiating disciplinary boundaries rather than their negation.

Critical realists such as Collier emphasise the importance of induction into disciplinary structures of knowledge. Experience is not a clean slate that *of itself* can be treated as self-authenticating and self-explanatory (Collier 1994: 71). He explains that experience is not determined “just by what is there, but what we have already learnt” (Collier 1994: 72). He says that “we learn from others how to learn from nature” (Collier 1994: 72).<sup>14</sup> Induction into the disciplines “*produces* suitable ‘knowing subjects’”, whilst recognising that to be a ‘knowing subject’ “is to acquire a *historically specific* set of ideas, techniques and skills” (Collier 1994: 54), because one cannot be a knowing

subject of *any* sort in the absence of historically specific and socially produced knowledge.

Induction into the disciplinary structures of knowledge is important, even if we wish to overturn elements of these structures because, as Collier (1994: 55) explains “A training in normal science is a necessary condition not only of normal science but of the revolutionary science that overturns it.” He argues that “...we cannot think for ourselves productively until we have had long practice in thinking other people’s thoughts after them....” (Collier 1994: 71).<sup>15</sup>

Collier (1994: 56) explains that an academic discipline is not the same as the objects that it studies. It is also shaped by broader social, political and ideological mechanisms that co-determine the production of knowledge. Our aim should be to explore these different mechanisms to distinguish between that which is intrinsic to knowledge production and critique those practices that reflect ideological bias or political or economic pressures (Collier 1994: 57).

Bhaskar (1998c: 15) says that “Research and teaching are the two most obvious, yet philosophically under-analysed *tasks* of scientists, just as the laboratory and the classroom are the two most obvious *sites* of knowledge.” This is a valid criticism, *particularly* of critical realism. Bernstein’s analysis helps us to overcome these problems. His analysis of the structures of knowledge potentially enriches a critical realist analysis of the nature of knowledge and its causal and emergent properties, as well as providing a greater understanding of the social relations that produce and are produced by different kinds of knowledge structures.<sup>16</sup> In other words, his analysis of the structures of knowledge *qua* knowledge helps to reveal emergent properties of knowledge, and illuminates the *relations* between the structures of knowledge and social relations.<sup>17</sup>

Access to disciplinary knowledge is important for epistemic reasons because it provides students with access to the ‘collective representations’ about the *causal mechanisms* that the discipline studies, mechanisms that are not always accessible through direct experience. The disciplines provide students with access to the *relational* connections within a field of study and between fields, and students need access to the disciplinary “style of reasoning” (Muller 2000: 88) to move beyond a focus on isolated examples of *content*. Specific content is the *product* of disciplinary knowledge, and not the generative mechanism that allows students to produce that content. If the world is characterised by ontological depth, stratification, emergence and co-determination students need to understand these processes, and not have their understanding restricted to the level of *events* or *experiences*. These are the epistemic reasons why access to the disciplines is important. Moreover, epistemic access to ‘collective representations’ mediates *social* access to the ‘unthinkable’. This is the nature of the synthesis between a Bernsteinian and critical realist analysis.

## Critique of CBT & constructivism

Even though there are philosophical differences between the proselytisers of competency based training models of curriculum on the one hand, and 'constructivist' learning theorists on the other, there is considerable common ground between them. Cullen *et al* (2002: 11) say that "the most important feature of the 'new pedagogy' is the altered configuration of the whole educational research enterprise." The emphasis on codified, theoretical knowledge in the curriculum is giving way to the contextualised, contingent and immediately applicable. Both emphasise the contextual, situated and problem-oriented nature of knowledge creation and learning, even if they do so for different reasons. The commonalities arise because both sacrifice the complexity and depth of vocational knowledge in curriculum in favour of 'authentic' learning in the work-place. Both posit a 'flattened' ontology in which 'the real' exists at the level of events and experiences, and both reduce knowledge to *experience* although they do so in different ways (Moore 2004: 160). Both omit from their analysis the generative mechanisms in the domain of the real. The next section critiques CBT theory, while the one following critiques constructivist theory.

### CBT

All publicly funded course delivery in the VET system in Australia *must* be based on training packages where they exist, and industry-endorsed competency standards where they do not. Training packages have three components:

- sets of industry competencies that refer to the skills and knowledge needed for competent performance in the work-place;
- assessment guidelines; and,
- the qualifications that can be issued from each training package.

The Australian guidelines for developing VET qualifications stipulate that while underpinning knowledge is important, that 'underpinning knowledge' in units of competency "should be in context" and "should only be included if it refers to knowledge actually applied at work" (DEST 2005: 109).

Bernstein's insights allow us to see that CBT fundamentally transforms the nature of knowledge by *delocating* it from the vertical discourse in which it is classified and *relocating*<sup>18</sup> into a horizontal and segmented knowledge structure (if not necessarily a horizontal *discourse*).<sup>19</sup> This changes the nature of knowledge, and the processes through which it is acquired. Rather than *integration of meanings* we have *integration within a context*. Consequently, students are provided with access to specific *content*, and not the *systems* of meaning in disciplinary knowledge. However, the content of a discipline is



the *product* of the discipline (and each discipline has lots of 'products'); it is not the generative principles used within the discipline to create new knowledge and nor does a focus on content provide the criteria needed to *select* the knowledge needed in new contexts. Content is disaggregated so that it consists of isolated 'bits' of knowledge. A focus on specific content for a specific context means that the meaning of that content is exhausted by the context. Unless students have access to the generative principles, they are not able to transcend the particular context. Knowledge is not under their control. This simultaneously denies them *epistemic* access to the structures of knowledge relevant in their field and *social* access to the 'unthinkable'.

Critical realism extends these Bernsteinian insights, because a focus on the specific content of disciplines denies students access to the 'collective representations' that provide access into the stratified and emergent nature of the real. This 'absence' arises from the broader ontology and epistemology of CBT, which is a form of empirical realism (based on atomism in ontology and epistemology). By focussing on the knowledge and skills that people need to 'do' their job, and by insisting that assessment be *directly aligned* with these outcomes (in the work-place or in a simulated work-place), CBT collapses the domain of the real (of generative mechanisms) and the domain of the actual (where events take place) into the domain of the empirical (that which is observable). It does so, because CBT assumes that outcomes can be achieved by directly teaching to the outcomes, and in doing so ignores the complexity that is needed to create *capacity*, and this goes beyond the level of experience in the contextual and situated. Teaching and learning must engage the real and the actual and not just the empirical, because this is the only way to generate a varying and contextually sensitive performance in a variety of contexts. In contrast, CBT breaks skills down into discrete components, which can be packaged as competencies, then added up, moved about, and reconfigured to make different qualifications, through common core competencies (and now generic skills). That is, the total equals the sum of the parts, and different sums (comprising many of the same elements) make different totals. This is the method that *aggregates*, and is less concerned with understanding the *relationship* between elements, and how these elements are transformed in the context of such a relationship.

### ***Constructivists***

Unlike the empirical realism of CBT, constructivists focus on the level of actions rather than restricting themselves to the empirical. They are generally not guilty of atomism in the same way as is empirical realism.<sup>20</sup> In focussing on the construction of meaning that is situated and intersubjective, strong constructivists reduce all that is important to the intersubjective, and this tends to exclude the importance of (and reality of) theoretical knowledge. To insist on the externality and reality of knowledge, is to be guilty, according to

relativists, of reification (the crime of regarding something abstract as a material entity). The emphasis instead is placed on *process* and tacit knowledge and skill, and the way in which the social construction of both authorises a performance in one instance as skilled, and in another as unskilled (and does not address the question of whether or not the performance *really is skilled*). The focus becomes the way in which meaning is constructed, and truth defined intersubjectively in ways that exclude and include.

The problem with this analysis is that it only accounts for *part* of the context it seeks to describe, because it focuses on a discourse that is internal to itself, and devoid of external referents. It focuses on the community of producers and how they *understand* what they are doing, and not on their actual practice – or *what* they are doing. *Both* aspects need to be analysed if the nature of practice is to be understood. Strong constructivists emphasise the immediate and the moment and the interplay between agents, and not on the underlying mechanisms, which (as Bernsteinians and critical realists agree) include discourse and power relations, but which go beyond both. Relativists must discount the way in which social and cultural structures provide the ‘degrees of freedom’ within which agents act, which facilitates or impedes their purposeful action, because to admit that social and cultural structures exist independently of processes of instantiation by agents is to be once again guilty of the sin of reification. Consequently relativists deny that agents confront a (social, cultural and material) *prestructured* environment that set parameters for the course of action they may choose. This is because they insist “that the elementary structures of society are nothing but (relatively enduring) sets of interpretations” which consequently do not have a material dimension, or a relatively autonomous existence independent of individuals in society (Archer 1988: 198).

The consequences for students are similar as with CBT. Students are denied access to an understanding of the boundaries of knowledge, and therefore the means to recognise and negotiate those boundaries. They are denied epistemic and social access to the unthinkable. They are not inducted into disciplinary structures of knowledge and thereby not provided with access to the ideational tools they need. Not all knowledge that we need to use emerges from practice (Young 2001), and we need the means to move beyond the contextual to access systems of knowledge and their generative principles.

## **Conclusion**

Muller (2000: 76) argues that while life is ‘boundary-transcending’ that none-the-less “boundaries are the condition both for the constitution of sense and for the transcendence of boundaries.” The transcendence of boundaries can only occur through their explicit negotiation. The boundaries between

different kinds of knowledge arise for social and epistemic reasons. This paper has drawn on critical realism and Bernstein to argue that the boundaries between different kinds of knowledge arise because the world is complex, stratified and emergent, *and* that the structures of knowledge themselves have emergent properties that iteratively shape the further production of knowledge and the social relations associated with its production and distribution. Whilst there are important differences between them, Bernsteinian theory and critical realism share a relational and depth ontology, *beyond* their shared commitment to social realism, even though the social realism of each has a different ontological premise. Each can offer the other insights that strengthen their analysis. Each brings insights that strengthen the other in critiquing CBT on the one hand, and constructivism on the other. Both show how these approaches deny students epistemic and social access to powerful knowledge.

## Endnote

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<sup>1</sup> The Australian Qualifications Framework (AQF) permits the higher education sector to offer diplomas and advanced diplomas, but most universities do not do so. VET and HE diplomas are distinguished by the sector in which they are accredited and the curriculum model used to do so. VET diplomas must be based on CBT.

<sup>2</sup> Johnson *et al.* (1984: 147) also characterise Durkheim as a rationalist, and Bhaskar's critical realism as substantialist (Johnson *et al.* 1984: 213).

<sup>3</sup> See Moore and Muller (2002: 635) who categorise Bernstein's approach as a "form of sociological realism in the Durkheimian mode."

<sup>4</sup> See in particular Bernstein (2000: chapter 5), where he argues that *Christianity* is more fundamentally implicated in the structures of knowledge beyond the homologous structuring of conceptual knowledge in religion and specialised fields of knowledge (as in the academic disciplines). Bernstein argues that Christianity played a fundamental role in:

- structuring the principles that generated the *classification* of disciplinary knowledge (the word);
- providing the principles for understanding the material world (the world);
- structuring the relationship between word and world (Bernstein 2000: 82); and,
- structuring the relationship between knower and knowledge.

<sup>5</sup> Durkheim (1967: 27-31) argues that the distinction between esoteric and mundane knowledge arises because the former is social and the latter is individual. Social knowledge arises from the universal 'categories of understanding' that are expressed in culturally specific forms. The categories of understanding are derived from nature, as they express the relations between things in society and in nature, with society the highest expression of the natural world. The categories of understanding are real and not heuristic categories, because relations between things are real, and this endows the categories with an objective existence and *sui generis* reality. On the other hand, Bernstein (2000: 28-29) argues that the distinction between esoteric and mundane knowledge is derived from language: "it is the very nature of language that makes these two classes of knowledge possible." This is another example of the way in which Bernstein's idealism or rationalism is more consistent than Durkheim's, although I think Durkheim has a stronger argument.

<sup>6</sup> See also Lukes (1985: 286) who says that "In short, Durkheim interpreted the beliefs, and more particularly the religious beliefs, of all cultures (including his own) as in part ways of interpreting, in more or less coded form, this permanent duality of society and individual and the tension between them."

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<sup>7</sup> See Bernstein (2000: 166) where he argues (in drawing on Popper) that the *methods* of the natural and social sciences are the same, while the social sciences share similar concerns with the humanities (“human behaviour, conduct or practice in one form or another”), and a similar linguistic structure to the humanities. This leads him to argue that “differences in phenomena studied [are] irrelevant to the question of the status of knowledge” (Bernstein 2000: 166). In my PhD I argue that this leads Bernstein to a relatively uncritical acceptance of positivist science and social science, an over-homogenised view of the natural sciences that doesn’t take account of the conflicts over paradigms (particularly around positivism), and an account of many of the social sciences and humanities that over-emphasises the incommensurability of languages. See Sayer (1992: 75) for a discussion of these last two points, although Sayer is not talking specifically about Bernstein, but rather the problems that ensue from these approaches.

<sup>8</sup> Though it is by some, see Sayer (1992; 2000) for a discussion of the *dual* relationship that structures the process of knowledge creation, which includes the direct relationship between the agent and the object she is exploring and the social relationships in which she stands, relationships that help to construe the object of study and her orientation towards it. See also López (2001) on the role of metaphor in structuring our understanding of the world, and Carter and Sealey (2004) who argue that language is a ‘cultural emergent property’ which has causal properties of its own.

<sup>9</sup> See Moore and Maton (2001) who argue that Bernstein’s analysis on the structures and grammars of knowledge provides important insights that nonetheless need to be extended through exploring the basis of knowledge claims in different forms of vertical discourse. Bernstein *describes* but had not yet *explained* the generative principles underpinning disciplines in which relativist theories of knowledge were dominant, compared to disciplines that used theories to generate languages of description to empirically define their object of knowledge. Moore and Maton explain the difference between these two approaches as generated by the way in which knowledge claims are legitimated. Relativist approaches generate and legitimate knowledge through social relations, because all reality is socially constructed and therefore differently ‘situated’ actors will have different perspectives (none of which is more ‘true’ than the other), and the aim is to enlarge the range of ‘voices’ that can speak. The issue becomes one of power and discourses of inclusion and exclusion, not the development of shared knowledge about an agreed object of study. In contrast, hierarchical knowledge structures (such as in the sciences) legitimate and generate knowledge through emphasising the *epistemic* relation between knowledge and its object. Knowledge claims must be legitimated through the claims they make about their object of study using the (more or less) agreed methods of investigation in the discipline. Moore and Maton develop the notion of the ‘epistemic device’ to compare and contrast these different methods for judging knowledge claims, and argue that the way in which knowledge is *legitimated* structures the different grammars of relativist and non-relativist disciplines.

<sup>10</sup> See Moore’s (2004: 157) discussion of the distinction between ‘normative’ and ‘naturalised’ epistemologies. The former grounds ‘truth’ with the “*formal conditions* for holding certain beliefs as true (with the *a priori* form of logical justification)” while the second is concerned “with the *social conditions* under which true beliefs came to be produced and accepted as such.” Naturalised epistemologies (such as critical realism) ask about the extent to which different social practices (of science or social science) provide access to their objects of study.

<sup>11</sup> There is debate between critical realists over whether underlying causal mechanisms can be observable. Sayer argues that the extent to which they are visible or not is an empirical question, whereas Bhaskar (1998b: 42) argues that the exercise of generative mechanisms, the events they produce and our perception of them are not normally in phase, except when the “social activity of science...makes them so.” This means that generative mechanisms cannot be observable.

<sup>12</sup> See footnote 9.

<sup>13</sup> ...and therefore meets Collier’s definitions of objectivity – at least in terms of the second and third meanings discussed earlier in this paper.

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<sup>14</sup> Margaret Archer (2004) disagrees with him. She argues that knowledge of the natural world is primarily non-linguistic arising from embodied engagement. This is not an argument between them about scientific training, but about the extent to which our engagement in the natural world and in the 'practical' world is socially mediated. I think Archer's approach leads to an under-socialised individual, and artificial divisions between knowing that, knowing why and knowing *with* – that is, the extent to which we know with (and have embodied) our theories, ideas and concepts.

<sup>15</sup> Polanyi (1983 [1966]) makes this argument also.

<sup>16</sup> As well as Bernstein's insights, we must also incorporate Moore and Maton's (2001) theorising of the epistemic device. See also Maton (2000; 2003; 2005).

<sup>17</sup> Bhaskar (1998c: 11) says that "If the objects of our knowledge exist and act independently of the knowledge of which they are the objects, it is equally the case that such knowledge as actually possess always consists in historically specific social forms." Bernstein provides insights into the latter that could enrich critical realism.

<sup>18</sup> Bernstein (2000: 113) distinguishes between the *production* of knowledge and the *reproduction* of knowledge. He says that *all* knowledge is *delocated* from the site in which it was produced (for example, in research in physics departments) and *relocated* into pedagogic discourse (for example, as part of the physics curriculum in school, VET or higher education), because the whole field of knowledge production cannot be reproduced in entirety in the curriculum. This means that a process of selection and recontextualisation must take place. However, while the field of physics *production* is not the same as the field of physics *reproduction* in the curriculum, they are related by the way in which knowledge is classified within the discipline. My point here is different, because CBT *severs* the relationship between the field of knowledge production and its associated field of knowledge reproduction in curriculum.

<sup>19</sup> Horizontal *discourse* refers to the mundane or everyday knowledge, while a horizontal knowledge *structure* is a form of vertical discourse, but one characterised by serial languages, so that knowledge is segmented by *language* and not (as in horizontal *discourse*) by segment. See Bernstein (2000: 166-169) for a discussion of the differences and similarities between horizontal *discourse* and vertical discourses with horizontal knowledge *structures*. It is clear that VET policy in Australia is moving the form of knowledge privileged in VET closer to horizontal *discourse*.

<sup>20</sup> Except perhaps, when considering the natural world, see Danermark *et al.*, (2001) and Moore {, 2004 #1015}.

## References

- Archer, Margaret (1988) *Culture and Agency: The Place of Culture in Social Theory*, Cambridge: Cambridge University Press.
- Archer, Margaret (1995) *Realist social theory: the morphogenetic approach*, Cambridge: Cambridge University Press.
- Archer, Margaret (2000) *Being Human: the Problem of Agency*, Cambridge: Cambridge University Press.
- Archer, Margaret (2004) Objectivity and the growth of knowledge, Archer, M. and Outhwaite, W., *Defending Objectivity: Essays in Honour of Andrew Collier*, New York, Routledge. New York: Routledge.
- Beck, John (2002) "The Sacred and the Profane in Recent Struggles to Promote Official Pedagogic Identities," *British Journal of Sociology of Education* **23**(2): 617-626.
- Beck, John and Young, Michael (2005) "The assault on the professions and the restructuring of academic and professional identities: a Bernsteinian analysis," *British Journal of Sociology of Education* **26**(2): 183-197.
- Bernstein, Basil (2000) *Pedagogy, Symbolic Control and Identity*, 2nd, Oxford: Rowman & Littlefield Publishers.
- Bhaskar, Roy (1998a) General introduction, Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., *Critical Realism: Essential Readings*, London, Routledge: ix-xxiv. London: Routledge.
- Bhaskar, Roy (1998b) Philosophy and Scientific Realism, Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., *Critical Realism: Essential Readings*, London, Routledge. London: Routledge.
- Bhaskar, Roy (1998c) *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 3rd, London: Routledge.
- Carter, Bob and Sealey, Alison (2004) Researching 'real' language, Carter, B. and New, C., *Making Realism Work. Realist Social Theory and Empirical Research*, London, Routledge. London: Routledge.
- Collier, Andrew (1994) *Critical Realism: An Introduction to Roy Bhaskar's Philosophy*, London: Verso.
- Collier, Andrew (1997) "Unhewn demonstrations," *Radical Philosophy* **81**: 22-26.
- Collier, Andrew (1998) Stratified explanation and Marx's conception of history, Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., *Critical Realism: Essential Readings*, London, Routledge: 258-281. London: Routledge.
- Collier, Andrew (2003) *In Defence of Objectivity and Other Essays*, New York: Routledge.
- Cullen, Joe , Hadjivassiliou, Kari , Hamilton, Emma , Kelleher, John , Sommerlad, Elizabeth and Stern, Elliot (2002) *Review of Current Pedagogic Research and Practice in the Fields of Post-Compulsory Education and Lifelong Learning*, February London: The Tavistock Institute

- Danermark, Berth (2001) *Interdisciplinary research and critical realism - the example of disability research*, June Örebro: Örebro University Swedish Institute for Disability Research SE-701 82 Örebro Sweden
- Department of Education Science and Training (2005) *Training Package Development Handbook*, October Canberra: DEST
- Durkheim, Emile (1960) The dualism of human nature and its social conditions, Wolff, K. H., *Emile Durkheim, 1858-1917: A Collection of Essays, with Translations and a Bibliography*, Columbus, Ohio State University Press. Columbus: Ohio State University Press.
- Durkheim, Emile (1967) *The Elementary Forms of Religious Life*, New York: The Free Press.
- Entwistle, Noel (2005) *Keynote presentation: Teaching and Learning in Diverse University Settings: Findings from the ETL Project*, What a Difference a Pedagogy Makes: Researching Lifelong Learning & Teaching, University of Stirling, Scotland.
- Harris, Judy (2006) Review of the Academic Literature on Workplace Learning, Brennan, J. and Little, B., *Towards a strategy for workplace learning*, London, Centre for Higher Education Research & Information, & KPMG. London: Centre for Higher Education Research & Information, & KPMG.
- Johnson, Terry, Dandeker, Christopher and Ashworth, Clive (1984) *The Structure of Social Theory*, Hampshire: Macmillan.
- López, José (2001) Metaphors of Social Complexity, López, J. and Potter, G., *After Postmodernism: An Introduction to Critical Realism*, London, The Athlone Press. London: The Athlone Press.
- Lukes, Steven (1985) Conclusion, Carrithers, M., Collins, S. and Lukes, S., *The category of the person. Anthropology, philosophy, history*, Cambridge, Cambridge University Press. Cambridge: Cambridge University Press.
- Maton, Karl (2000) "Languages of Legitimation: the structuring significance for intellectual fields of strategic knowledge claims," *British Journal of Sociology of Education* **21**(2): 147-167.
- Maton, Karl (2003) "Pierre Bourdieu and the Epistemic Conditions of Social Scientific Knowledge," *Space & Culture* **6**(1): 52-65.
- Maton, Karl (2005) "The sacred and the profane: The arbitrary legacy of Pierre Bourdieu," *European Journal of Cultural Studies* **8**(1): 121-132.
- Moore, Rob (2004) *Education and Society: Issues and Explanations in the Sociology of Education*, Cambridge: Polity Press.
- Moore, Rob and Maton, Karl (2001) Founding the Sociology of Knowledge: Basil Bernstein, Intellectual Fields and the Epistemic Device, Morais, A., Neves, I., Davies, B. and Daniels, H., *Towards a Sociology of Pedagogy. The Contribution of Basil Bernstein to Research*, New York, Peter Lang. New York: Peter Lang.
- Moore, Rob and Muller, Johan (2002) "The Growth of Knowledge and the Discursive Gap," *British Journal of Sociology of Education* **23**(4): 627-637.
- Muller, Johan (2000) *Reclaiming Knowledge. Social Theory, Curriculum and Education Policy*, London: RoutledgeFalmer.

- Outhwaite, William (1998) *Realism and Social Science*, Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., *Critical Realism: Essential Readings*, London, Routledge. London: Routledge.
- Polanyi, Michael (1983 [1966]) *The tacit dimension*, Gloucester, Mass: Peter Smith.
- Sadovnik, Alan R (1995) *Basil Bernstein's Theory of Pedagogic Practice: A Structuralist Approach*, Sadovnik, A. R., *Knowledge and Pedagogy. The Sociology of Basil Bernstein*, Norwood, New Jersey, Ablex Publishing Corporation. Norwood, New Jersey: Ablex Publishing Corporation.
- Sayer, Andrew (1992) *Method in Social Science: A realist approach*, 2nd, London: Routledge.
- Sayer, Andrew (2000) *Realism and Social Science*, London: Sage.
- Young, Michael (2001) "Contextualising a New Approach to Learning: some comments on Yrjo Engestrom's theory of expansive learning," *Journal of Education and Work* **14**(1): 157-161.
- Young, Michael (2003) "Durkheim, Vygotsky and the Curriculum of the Future," *London Review of Education* **1**(2): 100-117.