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Theory and Research in Education 2007; 5; 173

DOI: 10.1177/1477878507077732

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Truth and truthfulness in the sociology of educational knowledge^I

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ABSTRACT

The aim of this article is to reflect on and explore questions of truth and objectivity in the sociology of educational knowledge. It begins by reviewing the problems raised by the social constructivist approaches to knowledge associated with the 'new sociology of education' of the 1970s. It suggests that they have significant parallels with the pragmatist ideas of James and Dewey that Durkheim analysed so perceptively in his lectures on pragmatism. The article then considers Basil Bernstein's development of Durkheim's ideas. We argue that despite his highly original conceptual advances Bernstein seems to accept, at least implicitly, that the natural sciences remain the only model for objective knowledge. This leads us to a discussion of Ernest Cassirer's idea of symbolic forms as a more adequate basis for the sociology of knowledge. In the conclusion, the article suggests how an approach to knowledge in educational studies that draws on Cassirer's idea of 'symbolic objectivity' can come to terms with the tension between the concept of truth and a commitment to 'being truthful' that was left unresolved, even unaddressed, by the 'new' sociology of education of the 1970s.

KEYWORDS *educational knowledge, objectivity, sociology, truth*

'... endless forms most beautiful and most wonderful'

From the last sentence of the *Origin of Species* by
Charles Darwin

There is only knowledge, period. It is recognizable not by its air of holiness or its emotional appeal but by its capacity to pass the most demanding scrutiny of well-informed people who have no prior investment in confirming it. And a politics of sorts, neither leftist nor rightist, follows from this understanding. If knowledge can be certified only by a process of peer review, we ought to do what we can to foster communities of uncompromised

Theory and Research in Education

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VOL 5(2) 173-201 ISSN 1477-8785 DOI: 10.1177/1477878507077732

experts. That means actively resisting guru-ism, intellectual cliquishness, guilt-assuaging double standards, and, needless to say, disdain for the very concept of objectivity (Crewes, 2006: 5)

I. INTRODUCTION

IN HIS BOOK *Truth and Truthfulness* (Williams, 2002), Bernard Williams identifies the ‘commitment to truthfulness’ as a central tendency in current social thought that can be traced back to the Enlightenment and now stretches from philosophy and the humanities to ‘historical understanding, the social sciences and even to the interpretations of discoveries and research in the natural sciences’ (Williams, 2002: 1). He describes this tendency as ‘an eagerness to see through appearances to the real structures and motives that lie behind them’ (p. 1). However he sees this ‘commitment to truthfulness’ as increasingly paralleled by a no less pervasive ‘scepticism about truth itself’, ‘whether there is such a thing [as truth] ... whether it can be more than relative or subjective or something of that kind’ (p. 1). His argument is that the latter inexorably corrodes the former.

The two tendencies, towards truthfulness and against the idea of truth, are not for Williams, as for many, just a contradiction or tension that as sociologists or philosophers we have to live with. Rather he sees an acceptance of the notion of truth as the condition for a serious commitment to truthfulness. This article takes Williams’s claim as a starting point for re-examining what kind of activities the sociology of knowledge (in educational studies, and more generally) is engaged in, bearing in mind that in most forms it has been an almost paradigmatic case of endorsing a scepticism about the truth.

Williams compares the sociology of knowledge to muck-raking journalism with which it has some similarities. Both seek truthfulness, but more often are little more than forms of debunking. Muck-raking journalism and some strands of the sociology of knowledge have little doubt about what truth is or where it lies – it lies in identifying the corruption of the powerful. This is the basis for the kind of moral self-righteousness and absolute certainty that we find in campaigning journalists such as John Pilger. Some sociologists of education have tried to resolve the tension between truth and truthfulness in similar ways, often by assuming that their identification with the powerless or with a particular disadvantaged group brings them automatically closer to the truth. Such positions are often referred to as ‘standpoint’ theories² even if the grounds for claiming that a standpoint can be the basis for a theory are far from clear. Though superficially attractive, such solutions, Williams argues, serve only to deflect us from facing the really difficult questions about knowledge and truth that we cannot avoid if sociology is to offer more than – as some post-modernists claim – a series of stories (Mendick, 2006).

Williams also points out that the end of the 'science wars' and the 'culture wars' and the gradual collapse of any credibility that post-modernism had as a social theory (Benson and Stangroom, 2006) has not led to a new commitment to exploring the inescapable links between truth and truthfulness. More commonly he suggests, the outcome has been 'an inert cynicism ... [which] runs the risk of sliding ... through professionalisation, to a finally disenchanting careerism' (Williams, 2002: 3).

In this article we focus largely on the sociology of knowledge as it has developed within educational studies. This is partly because this is the context within which we have worked. However, locating the question of knowledge in educational debates raises more fundamental questions for social theory that are not always recognized. As Durkheim and Vygotsky (and more recently Basil Bernstein) recognized, just as every theory of education implies a theory of society, educational theories always imply a theory of knowledge (Young, 2006).

As sociologists of education, we are, as Floud and Halsey (1958) pointed out long ago, creatures of the rise of mass education and the range of attempts to resolve its particular contradictions. As an aspect of modernization, mass education faced and still faces what might be described as the fundamental pedagogic issue – overcoming the discontinuity (sometimes expressed as a conflict) between the formal, codified, theoretical and, at least potentially, universalizing knowledge of the curriculum that students seek to acquire and teachers to transmit, and the informal, local, experiential and everyday knowledge that pupils (or students) bring to school.

When most of the small proportion of each cohort who attended school shared the underlying cultural assumptions of those designing and delivering the formal curriculum, this discontinuity was barely acknowledged. Nor was it seen as a problem, at least by policy makers, in the earlier stages of industrialization when schools prepared the majority for unskilled work, and knowledge acquisition was seen as only important for a minority. However, the clash between the democratizing, universalizing goals of mass education and the selection, failure and early leaving that was the reality of schooling for the majority in most countries was never going to remain unnoticed for long. Mass schooling was not achieving the social justice and equality goals set for it by the emerging democratic movements, nor fulfilling adequately the growing demand from a globalizing labour market for higher levels of knowledge and skills.

This was the context in the 1960s when the sociology of education was 're-established'³ in the UK, as a subdiscipline of sociology, and not, as it had tended to be, an aspect of social mobility and stratification studies. At that time, the central problematic of the sociology of education became, and it has largely remained, the discontinuity between the culture of the school and its curriculum and the cultures of those coming to school. It was partly as a critique of

existing approaches to access and equality, and partly to focus on the deeper cultural and political issues that underpinned the persistence of educational inequalities, that Bourdieu and Bernstein developed their early work on cultural capital, language codes and educability (Bernstein, 1971; Bourdieu and Passeron, 1977). One outcome of their ideas was that a focus on the sociology of the curriculum became a key element in what became known as the 'new sociology of education' (Young, 1971).

Despite starting with the theoretical goal of re-orienting the sociology of education towards the question of knowledge, the sociology of the curriculum in the 1970s took on many of the characteristics that Williams identified with muck-raking journalism rather than with social science. It knew the truth – the link between power and knowledge – and set out to show how this truth manifested itself in the school curriculum.⁴

It is not our intention to dismiss the new sociology of education's 'commitment to truthfulness' or its attempt to 'go deeper' and explore the links between curriculum organization and the wider distribution of power.⁵ Reminding educationalists that the curriculum, and indeed knowledge itself, is not some external given but a product of historical human activities – part of our own history – was an important task at the time and remains so. However, it would be foolish to deny that many of those working in the sociology of the curriculum at the time identified, albeit not always explicitly, with the prevailing scepticism about truth and knowledge itself (Jenks, 1977). This led many to question the idea that a curriculum committed to the idea of truth could 'truthfully' be the aim of the sociology of educational knowledge. As a consequence, the 'new' sociology of education that began, in Williams's terms, with a radical commitment to truthfulness, undermined its own project by its rejection of any idea of truth itself.

The aim of this article is to reflect on and explore the issues that Williams raises in the particular case of the sociology of education. Section 2 considers two questions. First, what went wrong with the sociology of knowledge in educational studies and the social constructivist approach with which it was associated? Second, what might be the basis of an alternative to social constructivism that retains a commitment both to truthfulness and to the idea of truth itself? Section 3 begins to suggest how an alternative might be developed by drawing on the work of the French sociologist and educationalist, Emile Durkheim. The issues that Durkheim posed in relation to the rise of pragmatism before the First World War (Durkheim, 1983) have extraordinary echoes in the dilemmas posed by the 'new sociology of education' in the 1970s. Section 4 revisits Basil Bernstein's development of Durkheim's ideas. We show that, despite Durkheim's remarkable insights and the highly original conceptual advances made by Bernstein, both remain trapped in the belief that the natural sciences

are the only model for objective knowledge and knowledge growth. This discussion paves the way for Section 5 when we draw on the work of Ernest Cassirer and propose a sociological approach to knowledge in terms of his idea of symbolic forms. Section 6 returns to our starting point: how far can a social realist approach to knowledge in educational studies that draws on Cassirer's idea of 'symbolic objectivity' come to terms with the tension between truth and truthfulness that was articulated so clearly by Bernard Williams and was left unresolved, even unaddressed, by the 'new' sociology of education of the 1970s?

We started by showing, via Bernard Williams, that if a commitment to truth is paired with a scepticism about truth, the latter inevitably corrodes the former. We end by arguing that sociology of education must re-align itself with realism, either of a naturalistic kind (after Durkheim, 1983 and perhaps Moore, 2004) that relies on the natural sciences for its model of objectivity or a formalist kind (after Cassirer and, although less clearly, after Bernstein). Nor need there be that kind of choice. The primary choice, we will argue, is between objectivity and antiobjectivity. There was a time when the idea of objectivity in the social sciences seemed to be aligned with oppression, and the route to an acceptable objectivity politically blocked. The time is ripe, we argue, to consolidate and develop the considerable advances made by current developments in the sociology of education that demonstrate the case for its potential objectivity (Nash, 2005).

2. SOCIAL CONSTRUCTIVISM IN THE SOCIOLOGY OF EDUCATION: WHAT WENT WRONG?

Our answer to the question 'what went wrong?' begins by accepting the premise that the 'new sociology of education' and its social constructivist assumptions were an important, albeit a seriously flawed, attempt to establish a sociological basis to debates about the curriculum. It undoubtedly represented an advance on the uncritical acceptance in England of the idea of liberal education (Hirst and Peters, 1970) and on the technicist tradition of curriculum theorizing prevalent in the USA at the time (Apple, 1975). It created considerable interest within educational studies as well as much opposition; however, it did not provide a reliable basis for an alternative curriculum. Nor did it provide an adequate theory of how, in practice, the curriculum was changing. Why was this so?

First it is important to recognize the extent to which the sociological approach to knowledge and the curriculum which emerged in the 1970s, and the social constructivist ideas which underpinned it, were neither new nor isolated developments. This was true in two senses. First, despite its claims to novelty at the time, the apparently radical idea that all knowledge is in some sense a product of human activities and that this leads at least implicitly and

sometimes explicitly to scepticism about the possibility of objective knowledge, was not itself new. It can be traced back to the sophists and sceptics in Ancient Greece and found a new lease of life in Vico's challenge to the emergent hegemony of natural science in the early eighteenth century (Berlin, 2000), and it survives to this day among those, like Richard Rorty, whom Bernard Williams refers to as the 'truth deniers' (Williams, 2002). It is also true that very similar sets of ideas could be found at the time in every discipline within the social sciences and the humanities. In other words we are dealing as much with the context of the time as with the content of this supposedly 'new' sociology of education.

If there was anything new about the 'new sociology of education', it was the educational contexts in which the idea of 'social constructivism' was applied, and the particular conclusions that were drawn from the assumption that the educational realities of curriculum and pedagogy were socially constructed and could be changed by teachers – almost at will (Gorbitt, 1972). The 'decisionism' that this displayed is typical of all cognate constructivisms.

For social constructivists, how we think about the world, our experience, and any notion of 'how the world is', are not differentiated. It follows that the idea that reality itself is socially constructed had two closely related implications as it was interpreted in the sociology of education. First, it provided the basis for challenging any form of givenness or fixity, whether political, social, institutional or cultural. It was assumed that challenging givenness was as applicable to science or knowledge in general as to the social rules, conventions and institutions that had traditionally been studied by sociologists.⁶ Secondly, it was able to treat all forms of givenness as arbitrary and, given different social arrangements, potentially changeable. It followed that insofar as a form of givenness persisted it was assumed to express the interests (political, cultural or economic) of some groups vis-a-vis others. The intellectual battle was between those, the social constructivists, who saw their task as exposing the apparent givenness of reality for 'what it really was' – a mask to obscure the deeper reality of arbitrariness and interests – and those who opposed them by defending as given what was 'in reality' arbitrary. The distinction between 'constructivists' and 'realists' is inevitably an over-simplification.⁷ The primary difference between them was that the constructivists claimed that the only reality was that there was no reality beyond our perceptions. With hindsight, what is puzzling is the combination of indeterminism – everything is arbitrary – and determinism – everything can be changed – that this led to.

Within the 'broad church' of social constructivism in educational studies, a range of different perspectives were drawn on that had little in common and sometimes directly contradicted each other. At different times, different theorists and traditions were recruited. Within the sociology of education, at least from

the early 1970s, the dominant perspectives from which the idea of social constructivism was drawn were the social phenomenology and ethnomethodology of Schutz, Merleau Ponty and Garfinkel, the symbolic interactionism of Mead and Blumer, the eclectic social constructivism of Berger and Luckman, the cultural anthropology of Robin Horton (and later Clifford Geertz), the neo-Weberian sociology of Pierre Bourdieu and, albeit slightly uneasily, the critical Marxism of the Frankfurt School. For Bourdieu, for example, the unmasking of arbitrariness was sociology's core problematic. What these writers had in common, or were interpreted as having in common, was a form of sociological reductionism. As everything was social, sociological analysis could be applied to and account for anything and everything – even though sociologists often disagreed about what the social was. In the 1980s these theoretical traditions were extended to include (and, for many, were replaced by) discourse and literary theories. The literary theories drew on writers such as Derrida, Foucault and Lyotard who treated the social as just another text, a discourse or, in the case of Lyotard, a language game. The reductionist logic, however, was the same.

Education was in a sense, a special – or even, one might say, an ideal – case for social constructivist ideas. This partly reflected the relative theoretical weakness of educational studies and hence its openness to (or inability to resist) any new theory that came along. However, the sociology of the curriculum and the idea that educational realities were socially constructed had a quite specific appeal in the often authoritarian, bureaucratic and always hierarchical world of schooling. It easily led to challenges to existing forms of school knowledge, subjects and disciplines and their familiar expression in syllabuses (Keddie, 1971; Whitty and Young, 1976). More fundamentally, social constructivism challenged and exposed what it saw as the arbitrariness of the most basic categories of formal education such as intelligence, ability and attainment (Keddie, 1971, 1973) and even of the institution of school itself. If social constructivism could show that all such categories, rules and institutions were arbitrary, this also made them potentially open to change, even if social constructivism could not say how or to what. The links between social constructivist ideas and the political left, or at least parts of it, were hardly surprising, although more often than not expedient.

Why did these ideas gain such a stranglehold in educational studies, and why later were they so easily criticized and rejected? Did this pattern of initial support but later rejection indicate some flaw in the basic idea of reality being 'socially constructed' or did the idea contain, as Marx said of Hegel, a 'rational kernel' that somehow got lost? Why were these ideas particularly seductive – and with hindsight we can see particularly disastrous – for educational studies and the sociology of the curriculum in particular?

Two different kinds of response to such questions can be given. One is an external or contextual argument. It is familiar, relatively uncontroversial and can

be dealt with briefly. It is relevant only to the extent to which it reminds us of the non-unique aspect of particular intellectual fields and that the sociology of education is no exception. Two kinds of external or contextual factors are worth mentioning that shaped ideas in the sociology of education – one social and one cultural. The first was the massive expansion and democratization of higher education, the parallel expansion and diversification of the social sciences and humanities, and the assumption, at least in educational studies, that these new types of knowledge could be used to transform what was widely recognized as an inefficient and unequal education system. These developments, magnified since the 1980s by globalization and the emphasis on markets in every sphere of life, created a quite new context for intellectual work in education that had considerable affinity with the new, relativist and supposedly more democratic ideas about knowledge. This new context for educational studies brought in new and sometimes already radicalized students and new lecturers and provided fertile ground for a range of cultural changes which all played a role in shaping the sociology of education. These included a much wider critical and, for a time, highly politicized academic climate, an affinity with populist ideas, a sometimes uncritical respect for the cultures of subordinate and minority groups and those from non-western societies, and a parallel scepticism about the academy and all forms of authority including science and other forms of specialist knowledge. All these developments drew on, and were implicitly or explicitly supportive of, social constructivist ideas (Benson and Stangroom, 2006).

It is the internal issues – developments within the intellectual field of educational studies – that we want to concentrate on in this article. From early in the 1970s, social constructivist ideas were challenged, usually by philosophers (Pring, 1972) but sometimes by other sociologists (Demaine, 1981; Gould, 1977). However, it was relatively easy for the ‘new sociologists’ to dismiss these critics by labelling them as reactionary,⁸ reformist⁹ or ‘social democratic’ (Young and Whitty, 1977).

In developing a less superficial response to its critics, social constructivism in educational studies only had two ways to go, at least within the terms it set itself as a radical theory. One direction was towards a politics that linked constructivist ideas to the privileging of subordinate (as opposed to ruling class or official) knowledge. Subordinacy could refer to the working class and be linked to Marxism, it could refer to women and be linked to feminism or it could refer to non-white groups and what later became known as post-colonial or subaltern studies. In a response that was quite specific to the sociology of education, identification with subordinacy was linked to a celebration of the culture of those who rejected and failed at school. Their language and their resistance to formal learning were seen as at least potentially supportive of a new ‘revolutionary’ consciousness (Willis, 1977).¹⁰ The other direction for social constructivism was

towards post-modern versions of a Nietzschean nihilism and the denial of any possibility of progress, truth or knowledge. Not only were such interpretations of Nietzsche somewhat dubious, as Bernard Williams shows (Williams, 2002: chapter 1); they offered little that was substantive to educational studies beyond a continuing, if largely empty, role for theory (or theorizing, as it became known).¹¹

To summarize our argument so far: social constructivism provided teachers and students of education with a superficially attractive but ultimately contradictory set of intellectual tools. On the one hand it offered the possibility of intellectual emancipation and freedom through education – we, as teachers, students or workers have the epistemological right to develop theories and to criticize and challenge scientists, philosophers and other so-called experts and specialists. Furthermore, in some unspecified way, this so-called freedom was seen as contributing to changing the world. This emancipation from all authoritative forms of knowledge was linked by many to the possibility of achieving a more equal or just world, which for some (but not all) meant socialism. On the other hand by undermining any claims to objective knowledge or truth about anything, social constructivism, at least in some of the ways it was (and could legitimately) be interpreted, denies the possibility of any better understanding, let alone of any better world. For obvious reasons, however, this denial tended to be ignored by educational researchers, at least most of the time.

The double-bind that combined emancipation and its impossibility was particularly problematic in education. If not only the selection of knowledge in the curriculum, but even the rankings, reporting and everyday judgments made by teachers about pupils were treated as arbitrary, continuing to be a teacher (let alone an educational researcher), became deeply problematic, except in ‘bad faith’. Furthermore such ideas have left their mark in today’s fashionable language of facilitation, group work and ‘teaching as a conversation’. All these pedagogic strategies can be seen as strands of an attempt to suppress hierarchy, or at least render it invisible (Muller, 2006). This new ‘language of practice’ or activity in educational studies, increasingly linked to the ‘promise’ of e-learning, mobile phones and the internet, is now with us and has close affinities with the language of the market. It is of course supported by many who know nothing of the original sociological critiques of pedagogic authority.

Why did such ideas persist and why are they resurrected again and again as if they were new? It is not because they are true, unless a fundamental contradictoriness and the consequent impossibility of knowledge can be the truth. Nor, as in the case of new ideas in physics and chemistry, can it be that the idea of reality being socially constructed is so powerful that it has been used to change the world in ways that no one can deny. At best social constructivism reminds us that, however apparently given and fixed certain ideas or institutions appear to be, they are always the product of actual human activities in history. They do

not have their origins solely in the material world external to us, nor can we find their origins, as Descartes thought, in our heads. In Cassirer's terms, as we shall see in a later section of this article, ideas and institutions are 'expressive': that is, they are part of social action that is of the objective social world, but suffused by subjective meanings which frequently push at the bounds of any objective categories. At worst, social constructivism has provided an intellectual legitimacy for criticizing and challenging any institution, any hierarchy, any form of authority and any knowledge as arbitrary. The superficial political correctness, and at times the idiocy, that this position leads to has been a heavy price to pay for the small 'moment' of emancipation that is expressed in the truth that reality is socially constructed. One response to this observation, widely if not always explicitly admitted, has been to reject the enterprise of the sociology of education and more particularly sociology as it is applied to the curriculum. This was the response of the political Right who labelled it as left-wing ideology (Gould, 1977). A more pragmatic and technocratic version of this position has since been adopted by most teacher training programmes and an increasing number of higher degrees in educational studies in the UK today. Programmes of initial teacher education or professional development that include the systematic study of the sociology of education are increasingly rare. This rejection of the sociology of knowledge was also, with rather more justification, the position taken by the group of natural scientists who waged the science wars (Sokal, 1998)¹² and who had, by the 1990s, become massively impatient with the patent circularity of constructivism. It is not unlikely that the latter provided the intellectual justification for the policy consequences of the former.

A more constructive alternative, in our view, is to begin by remembering something that was too easily forgotten in the heady days of the 1970s and often still is. That is that sociology itself, like all social life, institutions, knowledge and even science, has a history. It follows that we need not only to see society and education historically, but to recall the history of sociology and the sociology of education and to recognize that debates within one generation of sociologists always need to be extended to be debates with earlier generations.

The social constructivists were wrong, we have argued. However, as we shall see, like the pragmatists such as James and Dewey at the beginning of the last century and with whom they had much in common, they were not wholly wrong. They were right to emphasize the socio-historical character of knowledge (and therefore the curriculum) as against the prevalent view of its givenness. Their flaws, we can see in retrospect, were (i) in not spelling out the limits of the theory and (ii) in failing to give substance to their opening claim. The theory remained, therefore, largely rhetorical. Let us take one example. It is one thing to claim that such an apparently unquestionable idea like that of a liberal education is a social construct, and therefore no more than an exercise

of domination. It is quite another to document liberal education as a historically changing phenomenon – very different for Eliot, Leavis and C. P. Snow from what it had been for Arnold and Newman.

Social constructivism was fundamentally wrong in the conclusions that it drew about knowledge and the curriculum. The social character of knowledge is not a reason for doubting its truth and objectivity, or for seeing curricula as no more than politics by other means. Its social character is (even more truthfully) the only reason that knowledge can claim to truth (and objectivity) (Collins, 1998) and therefore the only reason for preferring some curriculum principles to others. To begin to see where this idea leads, we will turn to Durkheim's argument in his far too little known lectures published as *Pragmatism and Sociology* (Durkheim, 1983).

The remarkable thing about Durkheim's lectures is that, in the pragmatism of James (and to a lesser extent, Dewey), Durkheim confronted almost identical problems to those introduced by the sociology of education in the 1970s. He knew that pragmatism was an advance on the rationalism and empiricism of the time, just as social constructivism was an advance on the view of the curriculum and knowledge that treated it as an a-social given. At the same time he also saw that pragmatism's form of 'humanizing' or socializing knowledge and truth, if left unqualified, led to far worse problems than those it claimed to overcome. The next section draws heavily on Durkheim (1983) to suggest a basis for how we might develop an alternative to social constructivism for the sociology of education.

3. FROM SOCIAL CONSTRUCTIVISM TO SOCIAL REALISM: SOME LESSONS FROM DURKHEIM

There are significant but not complete parallels between our engagement in this article with the social constructivist ideas that became part of the sociology of education in the 1970s and Durkheim's engagement with the pragmatist ideas that were sweeping French intellectual life 60 years earlier. However, our interest in finding an alternative to social constructivism is somewhat different from Durkheim's concerns about pragmatism. As many writers have commented (Lukes, 1972), Durkheim was writing at a time of great social upheaval in France that had been triggered in large part by militant opposition to the powers of the Catholic Church. He saw pragmatism, with its antagonism to any notion of objective rationality and its linking of truth to its consequences, as adding to the disorder and providing no basis for the consensus that for him underpinned any just social order. His primary concern therefore was to develop an objective basis for the moral values that could constitute a new consensus. Ideas of truth and knowledge were important for Durkheim not primarily for

themselves but on account of their moral role. He saw them as binding people together as members of society. Without denying the moral role of knowledge and truth, our concern is rather different. It is with the intellectual basis of the curriculum and the nature of knowledge, and the way the former was undermined and the latter avoided by the relativist implications of social constructivism.

Both pragmatist and social constructivist approaches to knowledge arose as responses to the weaknesses of existing epistemologies – rationalist and empiricist. Both rationalist and empiricist epistemologies led to static and dualist assumptions about knowledge and its relationship to the world. In trying both to overcome this dualism and to ‘humanize’ knowledge by locating it ‘in the world’, Durkheim argued that pragmatism (and by implication, social constructivism) treats concepts and the world of experience as part of one seamless reality. In other words pragmatists assume that knowledge is undifferentiated from human experience. In contrast, for Durkheim, the humanness of knowledge can only be located in society and in the necessity of concepts being both ‘of the world’ (a world that includes society and the material world) and differentiated from our experience of it. The social was ‘objective’ for Durkheim at least in part because it excluded the subjectivities of the ego and the, for him, ‘profane’ world of individual action and experience.

Durkheim agrees with the pragmatists in not treating knowledge or truth as in some way independent of human society and history. However, this does not mean, as James assumed, that truth is subjective – or no different from people’s feelings and sensitivities. Truth and knowledge have a givenness but it is a givenness that is historical and social. We create knowledge, Durkheim argues, just as we create institutions: in relation to our history and on the basis of what former generations have discovered or created.

Perhaps surprisingly for someone so concerned with consensus, it is Durkheim, rather than the pragmatists with their obsession with problem solving, who, by recognizing the tension between knowledge as a social given and this givenness being historically formed, provides the basis for a social theory of innovation. The body of work in the sociology of science inaugurated by Robert Merton (1973) makes this plain. Furthermore, it was in the differentiation between the ‘sacred’ as an internally consistent world of concepts and the ‘profane’ as a vague and contradictory continuum of procedures and practices, that Durkheim found the social basis of science and the origins of speculative thought (Muller, 2000).

Another parallel between pragmatism and social constructivism is exemplified in Durkheim’s argument about how pragmatism resorts to an instrumental theory of truth, what he referred to as ‘logical utilitarianism’. Knowledge was true for the pragmatists if it satisfied a need. Similarly, social constructivism,

although not explicitly concerned with satisfying needs, emphasizes the situatedness of all knowledge, and therefore locates it in practice (hence we have the origins of what became known as ‘the practice turn’ in social theory). Furthermore social constructivism has also associated itself with the importance of knowledge ‘being socially relevant’ – a utilitarianism thinly veiled beneath a moral correctness. As Durkheim pointed out, satisfying a need could never account for the essential impersonality of truth that is not related to any specific individual, standpoint, interest or need.

A related problem with pragmatism, for Durkheim, was that if the truth can only be verified by its consequences – i.e. a posteriori – it always depends on what may (or may not) happen. As he points out, something cannot logically be judged true on the basis of what may happen; that is like relying on hope or ‘wishful thinking’, a tendency that has bedevilled much Marxist writing. To claim that because something works, it is true, is to confuse (or blur) two distinct categories – truth and utility. If something is true because it works, this either relies on an implicitly subjective and a priori criterion of ‘what works’ or it points to the need for a complex consideration of what working means and for whom, and on its own tells us little. Durkheim argued that truth must be a priori – not a priori in the Kantian sense, which makes it rigid and abstracted from human life, but a priori in the social sense – it is prior and it relies on what society has demonstrated to be true. Likewise for social constructivists, knowledge and truth are located in who the knowers are and in their interests.¹³ Just as with pragmatism we are left with consequences, so with social constructivism we are left only with interests. In each case, both truth and knowledge disappear.

Durkheim’s strongest objection to pragmatism was that it neglected what he saw as the unique character of truth – its external, constraining, obligatory and, for him, moral force. When applied to social constructivism, Durkheim’s insight emphasizes the limits that the social (for him, society) imposes on our ability to socially construct reality. It is those limits – the boundaries as Bernstein would put it – that free us to search for the truth. To paraphrase Durkheim, we feel the pressure of the truth on us – we cannot deny it even if we do not like it. Satisfying a need or relating to an interest are ultimately subjective criteria and can never be adequate as criteria of truth. Sometimes the truth does exactly the opposite to satisfying a need and does not seem to be in one’s interest; however, that does not stop it from being true.

Let us summarize this section so far. We have argued that in his critique of pragmatism Durkheim offers us at least the beginning of an alternative to social constructivism that retains the idea that knowledge has a social basis but does not reduce the idea of ‘the social’ to interest groups, activities or relations of power. At the same time, in his sacred/profane distinction, which underpins the separation of objective concepts from practical subjective reality, and in his

recognition of the continuity in modern societies of both mythological and scientific truths, his theory recognizes the crucial importance of the social differentiation of knowledge.

Finally, there remains the issue which we touched on earlier. For Durkheim, the social is the moral: it is about values. Insofar as knowledge (and the curriculum) are social, they too for Durkheim are primarily moral issues. This makes it difficult to use his framework to explore questions of knowledge content and structure that are avoided by the reductionist implications of social constructivism. Is Durkheim right in equating the social with the moral, even when it comes to the question of knowledge? Or can we envisage a non-moral concept of the social? We think the answer to the latter question must be yes; furthermore, a cognitive as well as a moral concept of the social is essential if we are to develop an alternative to social constructivist sociologies of knowledge (Moore and Young, 2001; Schmaus, 1994).

Durkheim seems to focus more on the shared values on which the objectivity of knowledge depends rather than the nature of the knowledge itself. A clue to this feature of Durkheim's work may be found in his indebtedness to the Kantian tradition of apriori-ism. In his short book with his nephew Marcel Mauss (Durkheim and Mauss, 1967), Durkheim makes clear that it is not knowledge in the sense of what we know about the world that he is concerned with but the foundations of that knowledge – how it is possible. In other words he is interested in the social basis of notions such as logic and cause without which knowledge would not be possible. For Durkheim the objectivity of morality and logic have the same basis: society.

Paul Fauconnet, in his introduction to Durkheim's *Education and Sociology* (Durkheim, 1956), offers an interpretation of Durkheim's sociology of education which gives more attention to his intellectual (or cognitive) concerns. In commenting on Durkheim's rejection of pragmatism's utilitarian concept of education, he writes that

the transmission [of knowledge] through the teacher to the pupil, the assimilation by the child of a subject seemed to him [Durkheim] to be the condition of real intellectual formation ... [our emphasis]. One does not recreate science through one's own personal experience, because [science] is social not individual; one learns it. (Durkheim, 1956: 48)

So much for ideas like 'pupil as scientist' (or theorist) popularized by constructivists (Driver, 1982). Fauconnet continues:

Forms (of the mind) cannot be transmitted empty. Durkheim, like Comte, thinks that it is necessary to learn about things, to acquire knowledge. (Durkheim, 1956: 48)

For us, therefore, despite Durkheim's stress on the moral basis of society, issues of the structure and content of knowledge must lie at the heart of the sociology of the curriculum. Although Fauconnet notes that Durkheim prepared lectures on

specialist pedagogies in mathematics, physics, geography and history, no texts survive. Durkheim leaves us, therefore, with only some very general propositions about the social basis of the foundations of knowledge and its differentiation. However, it is precisely the issue of differentiation, so crucial to a sociology of the curriculum, that the English sociologist Basil Bernstein addressed in his early papers on classification and framing, and in a paper published towards the end of his life in which he introduces the distinction between vertical and horizontal knowledge structures. It is therefore to Bernstein's ideas that we turn in the next section.

4. BERNSTEIN'S TYPOLOGY OF VERTICAL AND HORIZONTAL KNOWLEDGES

This section begins with a brief description of Bernstein's ideas on the differentiation of knowledge. He intervened decisively in the discussion about the form of symbolic systems (or knowledge) and set out to delineate the 'internal principles of their construction and their social base' (Bernstein, 2000: 155). As is by now well known, he distinguishes between two forms of discourse, horizontal and vertical, and within vertical discourse, between two kinds of knowledge structure: hierarchical and horizontal.

For Bernstein, knowledge structures differ in two ways. The first way is in terms of what may be called verticality. Verticality has to do with how theory develops. In hierarchical knowledge structures, it develops through the integration of propositions, towards ever more general sets of propositions. It is this trajectory of development which lends hierarchical knowledge structures their unitary triangular shape. In contrast, horizontal knowledge structures are not unitary but plural; they consist of a series of parallel and incommensurable languages (or sets of concepts). Verticality in horizontal knowledge structures occurs not through integration but through the introduction of a new language (or set of concepts) which constructs a 'fresh perspective, a new set of questions, a new set of connections, and an apparently new problematic, and most importantly a new set of speakers' (Bernstein, 2000: 162). Because these 'languages' are incommensurable, they defy incorporation into a more general theory.¹⁴ The level of integration, and the possibility for knowledge progress in the sense of greater generality and hence wider explanatory reach, is thus strictly limited in horizontal knowledge structures.

Before we proceed to discuss grammaticality, the second form of knowledge variation, it is worth making a few observations on verticality. The first is that it artfully incorporates and recapitulates the fierce dispute in the philosophy and sociology of science between the logical positivists and the non-realists. Bernstein is implicitly asserting that the logical positivists (or realists) were right, but only in respect of hierarchical knowledge structures, and that the

non-realists (Kuhn and those who followed him) were likewise right, but only in respect of horizontal knowledge structures. In other words, encoded into Bernstein's principle of verticality are the terms of the debate in the philosophy of science.

Secondly, we note that horizontal knowledge structures span a surprisingly broad range; they include not only sociology and the humanities but logic and mathematics. The anomaly is that in the latter exemplars of horizontal knowledge structures, we have a form of verticality that is almost equivalent to that obtained in hierarchical knowledge structures. The germane question then becomes, not so much what hinders progression in all horizontal knowledge structures, but rather what internal characteristics distinguish those horizontal knowledge structures that proliferate languages (such as the social sciences) from those like mathematics where language proliferation is constrained. It was in search of a sociological answer to this question and to provide an alternative to Bourdieu's sociological reductionism (Bernstein, 1996), that Bernstein began by setting out his distinction between vertical and horizontal knowledge structures.

We turn now to the second form of knowledge variation: grammaticality. We have suggested that verticality has to do with how a theory develops internally (what Bernstein later referred to as its internal language of description). In contrast, grammaticality has to do with how a theory deals with the world, or how theoretical statements deal with their empirical predicates (what he later referred to as its external language of description: Bernstein, 2000). The stronger the grammaticality of a language, the more stably it is able to generate empirical correlates, and the more unambiguous, because it is more restricted, the field of referents is. The weaker the grammaticality, the weaker is the capacity of a theory to stably identify empirical correlates, and the more ambiguous, because it is much broader, the field of referents becomes. Thus knowledge structures with weak grammars are deprived of a principal means of generating progress (or new knowledge), namely empirical disconfirmation. As Bernstein puts it, 'Weak powers of empirical descriptions remove a crucial resource for either development or rejection of a particular language and so contribute to its stability as a frozen form' (Bernstein, 2000: 167–8). To summarize, whereas grammaticality determines the capacity of a theory to progress through worldly corroboration, verticality determines the capacity of a theory to progress integratively, through explanatory sophistication. Together, we may say that these two criteria determine the capacity a particular knowledge structure has to progress.

However, for all its rigour and suggestiveness, this analysis merely starts the ball rolling, so to speak. What it provides is a survey of the range of variation, but even the charitable must admit that the poles remain clearer than the intermediate zones of the range. This is partly because the precise nature of, and relation between, verticality and grammaticality is unclear. A plausible surmise could be

the following. Verticality is a categorical principle; it consigns knowledge structures to either a theory-integrating or a theory-proliferating category. On the other hand, grammaticality is an ordinal principle, constructing a continuum of grammaticality within each category, or perhaps across the entire spectrum. Although at one point Bernstein depicts grammaticality as a feature only of horizontal knowledge structures (Bernstein, 2000: 168), at another point he refers to physics, his paradigm of verticality, as having a 'strong grammar' (Bernstein, 2000: 163). What this means is that Bernstein at times uses the 'grammar' metaphor to refer to the internal language, though mostly it refers to the external language.

However, even if we grant the surmise, anomalies persist, none more so than in the case of mathematics. In Bernstein's account, mathematics is a horizontal knowledge structure with a strong grammar. However, the principal criterion of strong grammaticality – how the theory deals with the world – doesn't quite fit. As Bernstein (2000: 163) concedes, mathematics does not progress by empirical corroboration, like physics does. It is a deductive system, and its grammar appears to be a purely internal one. This depicts mathematics as a knowledge structure with a strong internal but weak external language of description – the latter categorizing it as similar in type to the social sciences. However, the history of mathematics suggests this picture is far from adequate. As Penrose argues in his remarkable book *The Road to Reality* (Penrose, 2006), time and time again, mathematical concepts at extraordinary levels of abstraction (one of his examples is the patterning of prime numbers) and with no apparent relationship to the material world turn out to be integral to our understanding of both the structure of the universe and the structure of matter (Cassirer, 1943). Such examples are not evidence of a 'weak external language of description' but perhaps of the need for a more developed sense of what grammaticality involves. Perhaps, as Kay O'Halloran (2006) suggests, mathematics is the language the empirical sciences must use to generate verticality in their internal languages. If that is so, then its lack of an external language ceases to be strange.

The difference between sociology and mathematics is strikingly brought out by Moore and Maton's (2001) example of the epistemic continuity displayed in the story of the proof of Fermat's last theorem:

What is so striking about this story is its sheer scale in historical time and in geographical and cultural space. It tells a story of a mathematician in late-twentieth century England effectively communicating with a French judge at the court of Louis XIV, and through him with Babylonians from three millennia ago. It represents an epistemic community with an extended existence in time and space, a community where the past is present, one in which, when living members die, will be in turn the living concern of future members (Moore and Maton, 2001: 172)

Things could not look more different in sociology.¹⁵ On the other hand, mathematics also shares this temporal feature with literature. Gyorgy Markus

(2003) has remarked that the 'tradition' in the Arts is 'ever expanding' and 'of great depth in time' (p. 15), a feature he contrasts to science which has a 'short-term' tradition, because it is ever 'evolving' (p. 15). Which knowledge form is nearer to which? Maths and science in one sense; and maths, literature and perhaps sociology in another? The fact is, which forms comprise the middle of the knowledge range is not clear at all. Is geography closer to physics than to biology, for example, and how would we know? Would we count their respective numbers of languages? It is certainly the case that empirical study would help to shed light on the theory, but it is also likely that the theory stands in need of some elaboration.

5. TOWARDS A LOGIC OF THE SOCIAL AND HUMAN SCIENCES

As we saw in the previous section, Bernstein develops a language of description for dealing with variations in knowledge structure that provides us with tools for discussing variation that are so far unmatched in sociology, with the possible exception of Randall Collins (Collins, 1998). Bernstein's main intent was to develop a way of discussing how different symbolic ensembles become socially distributed. In so doing, he had also to confront the age-old question as to how knowledge progresses. The conciseness of the concepts of verticality and grammaticality have taken us a considerable way towards those goals. And yet the long shadow of physicalist idealism falls over this attempt as it does over practically all other attempts in the history of philosophy and social thought. When the chips are down, Bernstein's model for knowledge progression is ineluctably that of physics, or more precisely, as Cassirer expresses it, that of the mathematical sciences of nature. Here the recurrent problem for sociology rears its head again: is there only one ideal form of objectivity, namely that of physics? Or is there another?

Bernstein certainly strives to distinguish the form of progression in hierarchical knowledge structures from that in horizontal knowledge structures. But the difficulty is apparent in the name he gives to the latter. These progress, says Bernstein, by developing parallel theoretical languages, that is, horizontally. It is not hard to see that, while this might account for how knowledge elaborates, it cannot account for how it grows. The pathos of this description is sharpened when we consider it in the light of Bernstein's own strenuous attempts to develop a more vertical and robust language of description for sociology. Yet according to his own account of how sociological knowledge develops, his attempt can at best contribute another parallel language. It is not expressly said in these terms, but it is hard to avoid the conclusion that, unless and until sociology can stiffen its vertical spine and develop more powerful

worldly corroborations – that is, become more like physics – sociological knowledge will not progress.

We return inevitably to the dilemma that we raised earlier (Muller, 2006). We argued that Bernstein characterizes hierarchical knowledge growth in a way that parallels the accounts of the logical positivists, and horizontal knowledge growth after the accounts of Kuhn and the constructivists. This effectively rules out the possibility of growth or progress in the social sciences. We are thus left with a position that is uncomfortably close to the relativism of pragmatism and constructivism, a position that Bernstein in his larger intents certainly did not align himself with. As we saw at the beginning of this article, for Bernard Williams the two views – a commitment to verticality or truthfulness on the one hand and scepticism about its realization on the other – do not co-exist happily. The latter must inexorably corrode the former.

At least the outlines for a route out of this impasse can be gleaned from another of Bernstein's favourite sources, Ernst Cassirer (Durkheim being the first). Cassirer wrote in the period between the two world wars, at a time when natural science, especially physics, was at a peak of creative flowering, when the humanities were in something of a decline and when philosophy, at least in Germany, 'enfeebled and slowly undermined the forces that could have resisted the modern political myths' (Cassirer was referring here to Heidegger's tacit endorsement of Nazism: Cassirer, 1943). Whereas mathematics provided a meta-language for organizing the burgeoning knowledge of nature (O'Halloran, 2006), philosophy, which had since Descartes and Kant played a similar organizing role also for the humanities, had begun to fragment, helped on in no small measure by the range of 'vitalisms' associated with the work of Bergson, Heidegger, Nietzsche and the pragmatists we discussed earlier in this article. For the 'vitalists', as physics and the mathematical world had become severed from Life, and philosophy had been consumed by the arid abstractions of Logic (logical positivism), the consequent aridity was threatening Life itself.

Not only were the humanities internally fragmenting (proliferating parallel languages, in Bernstein's terms) unconstrained by a unifying philosophical meta-language, but they were decisively parting company with the natural sciences. Cassirer, like Hegel and Husserl before him, felt the need to return to first principles, to re-assert the unity of man, as both a part of nature and separate from the rest of nature, and therefore the unity of all knowledge, while giving each branch of knowledge its distinctive due.

Cassirer's fundamental gesture was to assert, against the vitalists and the pragmatists, that knowledge, indeed all culture, was fundamentally formal in the sense of being necessarily symbolically mediated. In order to understand a knowledge form one had to understand the logical structure of the symbols that constituted it. Cassirer distinguished, in his four-volume work *The Philosophy of*

Symbolic Forms (Cassirer, 1996), between three principal forms of knowledge, a threefold division somewhat reminiscent of Bernstein's horizontal discourse, hierarchical and horizontal knowledge structures. But whereas Bernstein distinguished the internal structure of these forms principally in terms of their distributive potential, Cassirer discusses them more fundamentally in terms of their function, as to how each relates a symbol to its object. In the expressive function of symbols (paradigmatically found in mythic thought), the relation is mimetic: there is a unity of symbol and object, and the two are not distinguished. It follows that there can only be different myths, not better myths. In the representational function of symbols (paradigmatically, the case of language), the relation is analogical; there is an absolute disjunction between symbol and object, producing metaphorically a distancing of symbol-category from the world of particulars. In the conceptual function of symbols (paradigmatically the case of science), the relation is properly symbolic (or conceptual); the object is viewed as a construction of the symbol. This frees the symbol-category to be a general case untied to any one particular or determinate context, and hence able to function as a signifier for the entire class of particulars (Verene, 1969: 38). It is only with this disarticulation of symbol-category and particulars that we are able to generate stable conceptual descriptions of the world that are not dependent on any one particular part of it, the condition for any objective description (Habermas, 2001: 18). This progressive abstraction of the symbol system from particulars comes at a price, the loss of the 'living body' and an increasing dependence on 'a semanticised nature' (Habermas, 2001: 24). Only the fourth symbolic form, art (the others being myth, language and science), for Cassirer successfully balances freedom and abstraction. The others all, to a greater or lesser extent, pay 'Descartes' price', the loss of immediacy for greater generalizing power (O'Halloran, 2006).

We can see more clearly here than we can in the case of Bernstein how Cassirer extrapolates a set of distinctions drawn from a traditional evolutionary account of the history of consciousness to its 'systematic dimensions' (Verene, 1969: 44), from an account of stages of development to differences of logical structure. To put this another way, Cassirer's theory of civilization presumes an increasingly sophisticated symbolic distancing of symbolic forms from their object domains, the costs mitigated by the re-unifying power of the arts.¹⁶ The conceptual extrapolation is identical in each case. We can also see an intriguingly parallel argument to that of Durkheim's, with both deriving the lineaments of scientific thought from that of mythic, or for Durkheim religious thought. Yet Cassirer was acutely aware of the need to avoid the trap of setting up science (or at least physical science) as the prototype of all knowledge, and likewise of setting up strict logic as the prototype of intelligibility for all forms of the human spirit, as Hegel had done.

Cassirer regards his philosophy of symbolic forms as an attempt to create a system that overcomes the tendency towards logic inherent in Hegel's system (Verene, 1969: 35)

In the terms developed in this article, Cassirer intended his system to provide an account of verticality (general/particular relations) that did not reduce all knowledge progression to the verticality requirements of physics. So where Durkheim had attempted to deal with the pragmatists' 'reduction to scepticism' with a purely conceptual attack on their principal premises, Cassirer attempts to avoid the cognate trap of the cultural pessimism of the vitalists by avoiding the subordination of spirit to logic in philosophy that culminated in the logical positivism that our contemporary vitalists (constructivists and pragmatists both) are trying to extricate themselves from. Cassirer's attempt is based on the differential internal structure of different knowledge forms, as it was for Bernstein and for Durkheim in his *Elementary Forms of Religious Life* (Durkheim, 1995). Where Bernstein's account was based on the results of structural difference (pyramids and parallel languages), whose differential distribution he then set out to account for, Cassirer aimed for the principle that constructed the difference by theorizing the differential relation of concept to object in terms of differential objectification.

Cassirer starts by delineating two broad families of scientific concepts. The conceptually organized perception of things is organized into a set of organic forms, which constitute the sciences of nature; and the conceptually organized perception of expressions is organized into a set of symbolic forms, or sciences of culture. Organic forms (or natural concepts) differ from symbolic forms in the form of objectification they effect. In organic forms the object is accounted for entirely – subsumed – by the natural concept via mathematicization; this is a subsumption that can be expressed in formal mathematical terms. The natural concept, expressed ideally as a law, allows for (in theory) the complete deduction of the object. In symbolic forms, or cultural concepts, by contrast, the concept and its properties characterizes but does not (cannot precisely) determine the object.

What Cassirer is here setting out as the key logical distinction between the two families of concepts is the subsumptability of particulars by a structural law. As he puts it, 'We understand a science in its logical structure only once we have clarified the manner in which it achieves the subsumption of the particular and the universal' (quoted in the Translator's Introduction, Cassirer, 2000: xxxv). Where the natural sciences aim for perfect subsumption, leading to a 'unity of being' (of a concept united with a particular), the cultural sciences aim for imperfect subsumption, leading to a 'unity of direction' whereby a concept indicates certain features of the particular but does not exhaust its semantic potential. The idea of 'imperfection' here should not be interpreted as some kind of deficit. Rather, the principal objects of the cultural sciences, expressions, exhibit a freedom that natural objects do not have because cultural objects

are always mediated, in ways that natural objects are not, by a certain self-consciousness or reflexiveness. In other words whereas the natural sciences generate concepts of things, the cultural sciences generate concepts of concepts. This places strict limits on the subsumptability of particulars by concepts claiming universality in the cultural sciences. The result is that descriptions in the cultural sciences can express regularities that have all the lineaments of truth but whose description may not be found in all details in any one particular case. The particular is classified by, but not subordinated to, the universal.

Cassirer's example is of Burkhardt's concept of the 'renaissance man', which provides a generic description that will not be found in all aspects in any one particular renaissance man. Bernstein's vertical and horizontal discourses and knowledge structures are themselves examples of such concepts; there are others in sociology, although there are few in the sociology of education.

What we see Cassirer doing here is conceding the first part of the critique that Vico and the vitalists launched against scientific naturalism, namely, that the *mathesis universalis* (or mathematicization) is unable to explain cultural objects. In other words, for Cassirer, scientific naturalism is a special case, not the general case. But a special case of what? Cassirer provides the surprising answer: it is a special case of constituting objectivity. Perfect subsumption is one, but only one, form of constituting objectivity; imperfect subsumption is another. Both aim at the same end, namely, achieving the maximum absorption of the object by the concept taking account of the particular form of resistance offered by the kind of object in question. Two conclusions follow: cultural objects are not analysable like natural objects; but that does not, in the least respect, absolve the cultural sciences from the obligation to truth, which is to aim for the maximum amount of abstraction or objectification possible under the circumstances consistent with the nature of the objects under study. Durkheim would not have conceded as much to the pragmatists, but curiously, the end result is the same: for both Durkheim and Cassirer, knowledge of the social must be objective in order to be knowledge.

The place of Cassirer in our account should be getting clearer. Whereas Durkheim asserts the objectivity of the social ('social facts'), he does so without showing in his methodological discussions in what way objectivity in 'social facts' might be differently constituted from the way it is in 'natural facts' – the primary and common feature of both for Durkheim is their externality. For this omission – since the discussion on pragmatism clearly shows it to be an omission – he is still in some ill-informed circles considered to have been a positivist. Bernstein, on the other hand, displays what Cassirer might have called a 'conceptual formalism' which was not so much wrong as partial, a partiality that he only belatedly situated in a broader methodological framework with his discussion of internal and external languages of description. For his inadvertent

imputed omissions he is still regarded, probably in the same ill-informed circles, as a 'structuralist'.

In his fourth study in *The Logic of the Cultural Sciences*, Cassirer (2000) makes perhaps his most daring move, which is to argue that formal and causal explanations are artificially separated, not only in the natural sciences since post-Newtonian science excised Aristotelian formalism,¹⁷ but also in the cultural sciences. Both branches of science need re-integrating but how could that be understood without a reversion to naturalism? It is this that Cassirer set out to do.

Cassirer distinguishes between four forms of analysis that together constitute a general approach to the sciences of culture. The first he calls the 'analysis of work' (as in the 'works of culture'), by which he means a general empirical classification of the object-types to be studied in the cultural sciences. Having isolated the object-types – the different material classes of culture such as art, religion, pedagogy etc. – a second analysis is called for, which he refers to as the 'analysis of form' – that is, a morphology of the different forms in terms of structure and function.¹⁸ Having established the essential formal properties of a cultural form, Cassirer argues that we need next to explore how the contents of these forms vary across social groups and temporal periods. This calls for what he refers to as an 'analysis of cause': a causal analysis of social and historical variation of formal configurations. Finally, and this mode of analysis can only come at the end, he suggests that we initiate an 'analysis of act', that is, an analysis of dispositions or habitus which constitute the subjective experiences of the cultural forms. What this betokens is a presumptive sequence of analyses that shows how descriptive, conceptual, causal and interpretive moments of analysis can be considered as parts of an overall analytical strategy. There are two points that deserve emphasis. The first is that each moment constitutes an 'objective' analytical move; the second is that 'causal' and 'formal' moments do not belong to organic and symbolic forms respectively. All scientific analysis in the cultural sciences can, in principle, embrace all of these analytical methods. With this, the unity of knowledge is once more preserved.

Crude as this may be, this approach displays Cassirer's cardinal virtue, which is to have demonstrated the essential unity of conceptual inquiry by showing the way out of the impasse that scientific naturalism, the dominant account of unity, had created. At the same time, and in the most civil way possible, he shows why the constructivist/vitalist alternative turns out to be the 'false sortie' that it is. The truth is that the failure of the natural sciences to deal adequately with cultural phenomena is no reason to reject a science of culture or a social science. In other words, Cassirer provides the outline of a philosophical justification for scientific objectivism in both the natural and social sciences.

6. THE SOCIOLOGY OF KNOWLEDGE IN EDUCATIONAL STUDIES: A WAY FORWARD

Arising from the tension between being truthful and the idea of truth that was identified by the philosopher Bernard Williams, this article has taken four steps in the journey to find an adequate basis for the sociology of knowledge in educational studies (and more generally). First we set out to document the weaknesses of the social constructivist position as it emerged in the 1970s, and which, with few changes, is still with us today (and largely, but not entirely, unchallenged) (Weiss, McCarthy and Dimitriadis, 2006; Young, 2006). To do this we drew on the remarkable parallels between Durkheim's diagnosis of the weaknesses of pragmatism and the problems that the 1970s social constructivism gave rise to. Our second step was to extend the discussion to Durkheim and establish his two fundamental insights for the sociology of knowledge. The first was that the sociality of knowledge does not undermine its objectivity and the possibility of truth, but is the condition for it. The second is the key role that he gives to differentiation (for him between the sacred and the profane) as the origins of speculative thought and the growth of knowledge. Despite these insights, Durkheim was more concerned with the conditions for the possibility of knowledge – the Kantian question expressed in sociological terms – than the development of knowledge itself. Furthermore, just as Kant's model of truth was Euclid's geometry, so for Durkheim it was the natural sciences. This limits the extent to which Durkheim's sociology of knowledge can, on its own, provide an adequate alternative to pragmatism and social constructivism.

Our third step was to turn to the work of the leading contemporary Durkheimian, Basil Bernstein, and his highly original analysis of knowledge structures and their variation. Bernstein takes Durkheim's insights further than anyone else. However he is, like Durkheim, trapped in the assumption that physics represents the model for all knowledge growth. Ironically this leads to his inability to provide the grounds for the progress that his own theory makes. Our fourth step is to turn to the German philosopher, little known among sociologists, Ernest Cassirer. Rather than classifying different knowledge structures, Cassirer classifies different types of objectivity, according to the relationship that the concepts of knowledge form have to their object. Crucially, this allows sociology to free itself from the trap of comparison with the mathematical sciences at the same time as not thereby renouncing the possibility of objective sociological knowledge; the natural sciences for Cassirer are a special case of objectification, not a model for objectivity itself.

We argue that Cassirer takes us further than Bernstein by theorizing the wellspring of knowledge progression – objectification – in terms of two different forms of subsumption. To put that in plainer terms: while Bernstein, despite his own best efforts, left us with an unsatisfactory account of knowledge

progression for sociology, as lateral sprawl of new languages, Cassirer on the other hand explains the differential prospects for knowledge growth in sociology in terms of the expressiveness of its object domain. Whereas it could be argued that Bernstein conceded too much to the sceptics in his account of sociological progress in terms solely of horizontal proliferation, not in terms of verticality, Cassirer allows us to reconsider sociology's prospects in terms of a different verticality. In addition, Cassirer's analysis suggests that sociology could be examined in terms of his four modes discussed in Section 5 – 'work', 'form', 'cause' and 'act'. His argument is that these modes are equally applicable to all forms of knowledge. We have hardly begun to explore the implications of our journey for the sociology of education. Suffice to say it would take us far from the well-intentioned naiveties of social constructivism.

For sociology in general it should be clear that it has an embarrassment of riches in terms of Cassirer's fourth mode (the interpretative, where the subjective outweighs the objective) and the first mode (where particularity is weakly subsumed into a generalizing conceptual framework if at all). Where we remain weak is in the second and third modes, which refer to conceptual and causal analysis. This is manifestly where our best efforts should now be directed.

To return to Williams one last time: in his most artful way, Williams suggests that a commitment to truthfulness shorn from a commitment to truth ends up in a bogus valorization of sincerity, that principle most prized by the image industry. To imagine that sincerity, a commitment to knowing our inner selves, is sustainable without a commensurate commitment to knowing our external world, natural or social, is possibly the central illusion of our age. As Harry Frankfurt puts it in his unexpected and heartening little bestseller, *On Bullshit*,

The contemporary proliferation of bullshit also has deeper sources, in various forms of scepticism which deny that we can have any reliable access to objective reality ... [which leads to the] pursuit of an alternative ideal of sincerity ... Our natures are, indeed, elusively insubstantial – notoriously less stable than the natures of other things. And insofar as this is the case, sincerity itself is bullshit. (Frankfurt, 2005: 64–7)

It is the world beyond bullshit that is the one worth exploring. Further, it is (or should be) the world that education is about. The nature of that world and the conditions under which it shapes the curriculum defines the project of the sociology of educational knowledge.

NOTES

1. This is a revised version of a paper presented to the Sociology of Education Research Committee of the International Sociology Association at the World Congress of Sociology, Durban, 23–28 July 2006.
2. See Nozaki (2006) and Moore and Muller (1999) for useful discussions of the problems that 'standpoint' theories give rise to.

3. It was of course over half a century since Durkheim made the theoretical case for the sociological study of education (Durkheim, 1956). In the UK, Karl Mannheim had been appointed as the first Professor of Sociology of Education in 1946. However, he died within a year and, despite the efforts of those like Jean Floud and A H Halsey in the 1950s, it was not until the late 1960s that sociology of education in the UK became a distinct field of research and teaching within educational studies.
4. Perhaps the most sophisticated and influential example of this genre is the work of the American critical curriculum theorist, Michael Apple (1975).
5. One of the authors of this paper was personally involved in these developments within the sociology of education (Whitty and Young, 1976; Whitty and Young, 1977).
6. An example of the time is the Reader edited by John Beck and colleagues (1977) in which there were chapter headings such as education, rationality, ability and childhood as social constructs. We are not denying that such categories are, and can be usefully seen as, social constructs, but that social constructivism in the sociology of education set no limits on what could and could not be constructed in a particular context or over time. As Ian Hacking (1999) noted so perceptively, the idea of anything being a social construct is always true at a trivial level; the conceptual issue is in what circumstances is this of more than trivial significance.
7. The terms 'radical' and 'moderate' social constructivism are frequently found in the literature. However, from the point of view of our argument in this article, this differentiation misses the point that for even moderate forms of social constructivism, the limits on what can be 'constructed' are always only implicit.
8. Philosophers were easily seen as merely defending their professional interests; an example of what later became generalized as standpoint theorizing!
9. The idea of 'non reformist reforms' was popular among left educationalists at the time, but never given much substance.
10. The idea of 'resistance' took on a life of its own far removed from Willis's original study and became elevated to the status of a 'theory' (Giroux, 1983).
11. Whereas in North America this 'theorizing' took the overtly political form of the 'critical pedagogy' associated with writers such as Peter McLaren and Henry Giroux, in England a less clearly defined body of 'educational theory' emerged that was exemplified in the work of academics such as Usher and Edwards (1994).
12. For a more measured commentary on these issues see Haack (1998).
13. This, of course, is the premise of standpoint 'theory' referred to earlier. The kind of difficulties that such an approach to knowledge gets into are well brought out, if unresolved, by Nozaki (2006).
14. This is not to say that such incorporation has not been attempted in a horizontal knowledge structure like sociology. From Max Weber and Talcott

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- Parsons onwards, sociological theory is strewn with largely unsuccessful attempts to integrate diverse sets of concepts into a single conceptual whole.
15. Or could they? Is not an epistemic community within sociology in which 'the past is in the present' assumed when we, in the first decade of the twenty-first century, engage with Durkheim's concept of anomie or Weber's concept of bureaucracy?
 16. There are echoes here of Weber's far more pessimistic idea of disenchantment.
 17. An excision that some argue is being rectified by 'modern' quantum physics.
 18. An example of the kind of analysis that Cassirer is pointing to is Bernstein's famous morphologies of code orientation and pedagogy.

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