

The weakness of 'powerful knowledge'

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Abstract

This article offers a philosophical critique of Michael Young's notion of 'powerful knowledge', as found largely in his own but also in others' writings since 2009. The first part of the article focuses on the definitional connection that Young makes between 'powerful knowledge' and systematic relationships between concepts. It argues that most of the school subjects that Young sees as providing 'powerful knowledge' fall short on this requirement. It also comments on the place of educational aims and of everyday concepts in Young's thinking. The second part of the article draws attention to similarities and differences between Young's notion and the philosopher Paul Hirst's notion of 'forms of knowledge', claiming that Young's position is vulnerable to many of the critiques of Hirst's notion formulated between the 1960s and the 1990s.

Keywords: knowledge; concepts; epistemology; philosophy of education; curriculum

In recent years the sociologist Michael Young has written several articles claiming that 'powerful knowledge' should be at the heart of the school curriculum. As well as scholars in South Africa and New Zealand the idea has attracted US academics like Walter C. Parker (2017) and a number of British educationalists and policymakers. The latter include academics like John Beck (2013), Jan Derry (2017), David Lambert (2017) and Michael Reiss (2017; see also Cambridge Assessment (2014a)) as well as heads of schools and colleges like Carolyn Roberts (2016) and Eddie Playfair (2015). Among policymakers are the Expert Panel of the National Curriculum Review, chaired by Tim Oates, which reported in December 2011 (DfE, 2011), and the think-tank Policy Exchange (2016).

What is 'powerful knowledge' (PK)?

This paper critically discusses this central concept in Young's thinking, comparing it with a similar and also influential idea in the work of the philosopher Paul Hirst in the 1960s and later. The first thing that may strike one about the idea of teaching students 'powerful' knowledge is that, whatever it is, it would seem to be preferable to 'weak' knowledge. The term carries a strong, positive emotional charge. I suspect this is partly why it has become attractive to many in the educational world. But when we try to see what the term means, the answer is elusive. Let us see how Young defines PK when arguing for a knowledge-rich curriculum. He writes that

powerful knowledge is systematic. Its concepts are systematically related to one another and shared in groups, such as subject or disciplinary associations. It is not, like common sense, rooted in the specific contexts of our experience. This means that powerful knowledge can be the

basis for generalisations and thinking beyond particular contexts or cases ... Powerful knowledge is specialised. In other words, it has been developed by clearly distinguishable groups with a well-defined focus and relatively fixed boundaries, separating different forms of expertise (Young, 2015: n.p.).

This quotation well articulates the two main features of PK, epistemological and social: (1) it has to do with bodies of knowledge built around their own, *sui generis* systems of interrelated concepts; and (2) it is the province of distinct specialized groups. This kind of knowledge is contrasted with 'common sense' or 'everyday' knowledge. This, too, depends on networks of interrelated concepts (think perhaps of 'chair' and 'furniture'), but children learn how to use these outside school, while acquiring PK requires formal education. I return to everyday knowledge later.

Young supports the idea of a subject-based school curriculum against those he sees as against it. I will come back to this, too. Meanwhile, a central question is: *which* school subjects are repositories of PK? Young sees PK as inhering in all academic subjects, 'from maths to dance' (Policy Exchange (2016), at 09:56 on the video). But problems arise over component (1), the epistemological requirement. In which school subjects do we find systems of *sui generis* interrelated concepts?

As Young says in the article from which the above extract is drawn (Young, 2015): 'The clearest examples both of the systematic structure of powerful knowledge and of its role as a resource for generalising are found in the natural sciences.' Mathematics, too, with its own tightly interconnected conceptual schemes, fits this pattern. But are things so straightforward once one leaves maths and science? Both these are among the EBacc subjects that the current UK government, which is responsible for the English educational system, presents as the hallmark of a good school education. Are the other EBacc subjects – history, geography, English and a foreign language – also built around PK? And – seeing that Young is an advocate not only for most or all of these allegedly 'core' subjects (I am not clear about his position on foreign languages), but also for a subject-based curriculum conceived more broadly – what shall we say of other familiar school subjects like (visual) art, music, drama, citizenship? Does his epistemological requirement distinguish which of these provide PK and which do not?

Young says of subjects beyond the sciences (and presumably mathematics):

other forms of subject knowledge, such as the social sciences, humanities and the arts, also have concepts that take us beyond particular cases and contexts in different ways, and offer us different capacities for generalisation, due to the nature of the phenomena they are concerned with (Young, 2015).

He also writes:

the curriculum must stipulate the concepts associated with different subjects and how they are related, whether they refer to energy, matter, literature or historical change. It is the systematic interrelatedness of subject-based concepts and how they take their meaning from how they relate to each other that distinguishes them from the everyday concepts of experience that pupils bring to school, which always relate to specific contexts and experiences (Young, 2014b: Chapter 3).

Let us begin with so-called 'core' subjects outside maths and the sciences – history, geography, English and a foreign language. Is historical knowledge an example of

PK? If so, it must be built around its own system of interrelated concepts. But what might these be? Should we say things like 'causation' and 'change'? There are two major problems here. First, learning history at school does not consist in getting inside schemes of concepts, as learning maths and science largely does: history students do not spend most of their time understanding interrelated historical concepts. Second, concepts like 'causation' and 'change' have to be understood in relation to specifically *historical* knowledge. The terms are also found in scientific subjects like chemistry and biology, but there their meaning is not connected with concepts peculiar to human life. Historical change and causation, however, have to do with the world of human goals, intentions and achievements. These concepts are not, importantly, *sui generis* to history as an academic discipline, but are of a piece with the conceptual schemes we use in everyday life to explain why people do the things they do. Explaining why there was a Puritan uprising against Charles I requires a larger and more complex story than explaining why a teacher gave a child a detention, but both accounts revolve around notions like norms that are followed or broken, what people want and the means they follow to reach their goals. All this casts doubt on Young's central claim that there is a gulf between subject-based and everyday knowledge. Technical concepts sometimes do occur in historical accounts, but they are drawn from other disciplines like economics, for example – or, like 'danegeld' and 'villein', are easily explicated in everyday concepts. History does not contain schemes of *sui generis* concepts as science and maths do.

This is also true of another allegedly 'core' subject, geography – now described in promotional material on the web as 'powerful geography' (see GeoCapabilities, n.d.). That iconic concept from my own schooling, 'ox-bow lake', and others like 'global warming' can be elucidated at a superficial level in non-technical terms, and more fully by drawing on concepts from natural science. Michael Young (2012) takes as a specifically geographical concept the concept of city, but on this is at odds with the geographer David Lambert, who states that PK in geography

should mainly emphasize the acquisition and development of systematic conceptual knowledge ... Here we are referring to what is sometimes called geography's 'big ideas' or 'key concepts' rather than a long list of substantive concepts such as city, river, industrial location, etc. How geographers argue about what these are! ... Even so, there is some international stability and agreement that geography is concerned primarily with place, space and environment (occasionally scale is added) – and these are complex and dynamic ideas that have evolved markedly with the development of geography as a discipline (Lambert, 2015: 403–4).

Are the key concepts Lambert mentions *sui generis*? Children pick up the notions of place and space early on, and the latter indeed, if Kant is right, is presupposed in any conceptual scheme. The concepts of environment and scale are explicable in more basic everyday terms and notions in science and maths. (There is more on geographical concepts as well as on other topics in an earlier debate about PK that I had with Michael Young in three online publications of the New Visions Group for Education: Brown and White (2012); Young (2012); White (2012).)

This leaves the EBacc subjects English and a foreign language. If we leave aside the 'English language' part of the former, which deals for the most part in everyday concepts, does 'English literature' go beyond these? As we have seen, Young includes literature among items possessing their own systematic, interrelated concepts. It is not clear whether he has in mind concepts used by aestheticians like 'form', 'aesthetic

value', 'aesthetic experience', etc., or concepts used by writers themselves. In elementary maths, students acquire *sui generis* concepts like 'multiplication', 'square root', etc.: learning how to operate with these is a large part of what doing maths involves. But in studying literature at school, students rarely if ever get to grips with aestheticians' concepts: the novelists, dramatists and poets they read use everyday, non-technical ones.

Another – and crucial – problem for Young about literature is how far it should count as a kind of *knowledge* at all, powerful or not. We can certainly learn all sorts of things from it about human nature, ourselves, our own or other societies. To that extent it can be said to give us knowledge in the shape of deeper understanding. But what students can get from literature goes beyond this. Poetry and its other forms centrally provide *aesthetic experience* of various kinds.

The same is true, even more obviously, in music, the non-verbal nature of which does not allow it to express propositions that could be true and thus could belong to the sphere of knowledge. If music's function were to give us knowledge, it would be hard to explain why we listen again and again to pieces with which we are thoroughly familiar. We do this to enjoy once again aesthetic delight that has entranced us before. The same is true, *mutatis mutandis*, of our experience of visual forms of art – and of dance, which as we have seen Young includes as a 'powerful knowledge' subject.

I have strayed beyond so-called 'core' subjects into other familiar areas of the school curriculum. If we come back to the core subjects for a moment, they also include a foreign language. Take French. French literature is not part of the GCSE, but if it were, it would fall under what has already been said about literature being a form of art. As for the language learning that constitutes the subject at GCSE, it is not a form of powerful knowledge because it does not induct the learner into systems of interrelated concepts *that he or she did not know previously*. What they learn is how to operate with words expressing in another language concepts with which they are already familiar.

This short survey has shown that the only subjects that so far meet both Young's criteria for PK are maths and science. We know that Young sees a PK-based curriculum as covering not only these two areas, but also history, geography, (other) social sciences and humanities, and the arts. The arguments presented in this section of the paper have shown that even when we broaden the canvas from just the 'core' subjects found in EBacc, maths and science seem to remain the only cases of PK-based subjects. At the end of a 2014 video discussion (03:41) on PK with Michael Reiss, Tim Oates makes it clear that in advocating 'powerful knowledge as a means to rejuvenate curriculum thinking in England' he is talking about 'knowledge from specific disciplines – science and mathematics' (Cambridge Assessment, 2014b).

The centrality of knowledge

The points just made about the arts reveal the shakiness of Young's assumption that the pursuit of theoretical knowledge is the first priority in school education. School education has *many* legitimate goals. This is not the place to unravel their complexities, but a longer treatment can be found, for instance, in Reiss and White (2013): their work makes clear that curriculum planning has first to ask what schools should be for. It should start from a judicious examination of candidate aims, since only then is one in a position to think about what priorities among acceptable ones should be. There may well be good grounds why academic pursuits like maths, science, history and geography should play a large role in school education *vis-à-vis* other curriculum activities, but this has to be *shown*, not assumed, to be so.

The pursuit of theoretical knowledge as a candidate aim has thus to be weighed against other aims that, even if they bring in such knowledge in some way, go beyond it. Practical know-how of many sorts, the world of the arts, personal development, and learning to become a citizen of a democracy are examples. Each of these areas needs further elucidation and critical discussion in its turn. Curriculum-making is a highly complex matter. Young provides no argument for the centrality of theoretical or subject knowledge.

Beginning with aims?

The only way to plan curricula is, as I have said, to begin with aims. This requires seeing what subordinate aims are derivable from more general ones and then which vehicles – e.g. subjects or non-subjects – are the most apt to achieve them. Michael Young is not happy with this aims-based approach. Picking up on the core idea in Reiss and White that schools should enable students to lead flourishing lives themselves and help others to do so, he writes

No one could disagree with Reiss and White that schools should promote well-being and human flourishing in what they do; however, that is what we expect of institutions that do not have curricula such as families, towns and businesses. What distinguishes schools is that their primary concern, as embodied in the specialist professional staff they recruit, and in their curriculum, is (or should be) to provide all their students with access to knowledge (Young, 2014a: 8).

The idea here is not spelt out as clearly as it might be, but it seems to be that we should start our curriculum thinking with what makes schools different from other institutions (i.e. that they do/should provide access for all to knowledge) and ignore what they have in common with them. But no reason is provided for this. Whether his view is that schools do or should provide access to knowledge, Young must be assuming that this is a good thing. This stands in need of justification. To pursue why knowledge is desirable takes one into an ethical discussion of what it should be for, i.e. what schools should be aiming at. Whether the aims one uncovers overlap with those of other institutions is irrelevant.

Rather than an aims-based approach, Young favours a subject-based one. His starting point, school subjects rather than aims, arises from his empirical observation of schools in their social and historical setting. He is impressed by the 150-year history of a subject-based curriculum in Britain, and the 'relative stability of subjects and their boundaries' (Young, 2012: n.p.). They involve 'rules agreed by subject specialists about what counts as valid knowledge; such criteria which derive from the pedagogic knowledge of subject specialist teachers and their links with discipline-based specialists in the universities provide access to the "best" knowledge that can be acquired by pupils at different levels' (Young, 2012: n.p.).

The points Young mentions about schools are empirical facts. The problem he faces is the classic one, of how one gets from what is the case empirically to what ought to be the case. His PK theory built around school subjects is intended to show what schools *should* be doing. What he needs is an ethical investigation into this, examining the credentials of different views about what they are for. This takes us back to aims and an aims-based approach.

At one point, it looks as if Young begins not with PK itself but with its usefulness. He equates it with the Chartists' notion of 'really useful knowledge'. This would seem to take us in an aims-based direction. But as the quote in question shows, instead of

extrinsic purposes all we get is *redescription* of what scientific and some other kinds of knowledge involve:

it [powerful knowledge] refers to what the knowledge can do – for example, whether it provides reliable explanations or new ways of thinking about the world. This was what the Chartists were calling for with their slogan ‘really useful knowledge’ (Young, 2009: 14).

Whether this is indeed what the Chartists meant by the term is a further question.

Everyday concepts

Young’s idea that PK should be at the heart of the curriculum is flawed. As I wrote in White (2012), he relies on Vygotsky to argue that school education should take students beyond their everyday concepts into theoretical ones associated with different subjects. He states that

The crucial difference between the two types of concept is that a pupil’s ‘everyday concepts’ limit them to their experience, whereas the theoretical concepts to which subject teaching gives students access enable them to reflect on and move beyond the particulars of their experience (Young, 2012: n.p.).

I do not think it true that ‘a pupil’s “everyday concepts” limit them to their experience’. As we saw earlier, pupils use these concepts when extending their understanding in studying subjects like history and literature. For a superb account of how, without transcending our ordinary, non-technical, concepts, we can achieve considerable depth of understanding of human beings and the world, see R.K. Elliott (1975: 66). As he says, ‘One could attain the level of understanding achieved by many great writers without undergoing an education in the disciplines, for though it has a craft tradition, Literature, as far as content is concerned, belongs entirely to common understanding’.

On the notion of ‘everyday’, in his contribution to a festschrift for Young that he has recently co-edited, Michael Reiss makes an interesting and engaging critical point. Taking his own upbringing as an example, he writes that the everyday world of his own family, with its intellectual richness stretching across politics, literature and other areas (his mother taught him multiplication at a very early age), would not match everyone’s: ‘What is everyday to one student may be exotic to another’ (2017: 125).

I do not think Reiss is right about the person-relatedness of ‘everyday’, at least as applied to Young’s Vygotskian notion of everyday concepts as contrasted with theoretical or academic ones. The technical concepts of fields like economics, engineering, computer science, logic, maths and the sciences are indeed distinct from the concepts we use in ordinary life. This is true regardless of different people’s experience. The concept of multiplication – as contrasted with the concepts of one to ten – may be said to belong in the foothills of the specialized subject mathematics. The fact that Reiss learnt it from his mother when he was very young shows not that it is an everyday concept in the Vygotsky–Young sense, but that he was acquiring *non-everyday, specialized* concepts, but not in school.

As a final point on Young’s distinction between everyday and theoretical concepts, I turn to another contribution to his festschrift. In a chapter supportive of Young’s PK theory, Jan Derry (2017: 91) relates Young’s work to points made by Cassirer, Durkheim and Habermas about human uniqueness resting on the use of different realms of interrelated concepts. I am sympathetic to the general claim about human distinctiveness. As Hamlyn (1978: Chapter 6) argued in a classic text in philosophy of

education, human beings are not unique simply because they possess concepts. Some non-human animals are capable of conceptual activity (for example, a dog seeing its master taking down its lead as a sign of going for a walk), but lacking language they are incapable of the kind of understanding of the world that symbols bring with them. Human beings are unique not in having concepts, but in having the sort of concepts – with all their interrelationships – that come only with language.

All this is true, but I cannot see how it supports Young's case for 'powerful knowledge' as, according to him, the 'everyday' concepts that lie outside the realm of theoretical concepts are also unique to our species. The point about our distinctiveness does nothing to strengthen the argument for a clearly delimited area of PK.

An echo of the 'forms of knowledge'

Young's PK theory strongly reminds me, as it has reminded Geoff Whitty (2010: 31), of similar ideas in P.H. Hirst's account of the 'forms of knowledge' (FK) (Hirst, 1965/1973). Had I been writing 20 or 30 years ago or longer, this survey of them would not have been necessary. The curriculum theory that Hirst (and later Hirst and Peters (1971) in collaboration) constructed around FK was familiar to virtually everyone in Britain interested in educational ideas, from teachers to teacher educators and policymakers like the Schools' Council and Her Majesty's Inspectors (HMI). These include Young himself, who critiqued it in Young (ed.) (1971: 23). In 2017, I suspect that far fewer are acquainted with it. This may be connected with the fact that Hirst himself publicly abandoned it as an educational theory in the early 1990s (Hirst, 1993: 184ff.). I will come back to this.

Hirst's FK theory was the basis of his notion of a 'liberal education'. It was not intended as an account of what the whole of an educational curriculum should be, but only of its core. The basic idea is that there are seven or eight distinct, and together comprehensive, forms of human understanding. Inducting students into them, not for extrinsic reasons but as an end in itself, is developing the rational mind that we possess as a uniquely human attribute.

Each of the seven or eight FKs has its own unique, interconnected concepts, and its own tests for truth. The concepts (e.g. number, integral) and truth tests (logical deduction) found in mathematics, for instance, are distinct from those in the natural sciences (gravity, hydrogen, photosynthesis, empirical observation). The original list of Hirst's FKs (he also called them 'disciplines') was eightfold: mathematics, physical sciences, human sciences, history, religion, the arts, moral knowledge, and philosophy (Hirst, 1965/1973: 45). Not all the familiar school or university subjects are closely connected with a particular form. Geography, for instance, is not included; neither is engineering. Hirst labels these 'fields' rather than 'forms' of knowledge, a theoretical field in the case of geography and a practical one in the case of engineering. They are 'held together by their subject matter, drawing on all forms of knowledge that can contribute to them' (Hirst, 1965/1973: 46).

It is not surprising that from the 1960s onwards Hirst's theory became a central focus for the development of school curricula, at a time before the introduction of the National Curriculum in 1988 when schools were wholly responsible for them, and simultaneously at the time of the 'comprehensive revolution' after 1965 when the newly created comprehensive schools wanted to introduce common curricula appropriate for the whole range of pupil ability in place of the radically different kinds of curricula found in the older system of grammar and secondary modern schools.

In many ways Hirst's FK theory resembles Young's PK theory, but in other ways it is different. The most obvious similarity is in making systems of *sui generis*, interrelated concepts the criterion for selecting central curriculum areas. Another is the link made with the defining significance, in the case of human beings, of the use of (symbolic) concepts.

A third is their questionable common starting point for a theory of curriculum, not with an ethical investigation into what aims are desirable, as in Reiss and White and many other writers, but with epistemological categories. We have already seen how this applies to Young. In Hirst's case, the justification of his theory rests on the ingenious but inadequate claim (see White, 1973: 78–9) that 'it is in fact a peculiar question asking for the justification for any development of the rational mind at all. To ask for the justification of any form of activity is significant only if one is in fact committed already to seeking rational knowledge' (Hirst, 1965/1973: 42). A somewhat different kind of justification comes two paragraphs later in Hirst's paper, where he sees a parallel between his theory and the Greek idea (found most notably in Plato's *Republic* – JW) of education as 'the freeing of the mind to achieve its own good in knowledge' (43). This appeal to the Platonic notion of human good as consisting in the pursuit of knowledge does indeed go beyond epistemology into ethics. Ethics is rightly where justifications of curricula begin, but the Platonic idea of well-being as the place to start would have few if any supporters today, as an investigation of competing views of well-being and of its place among candidate aims of education would show.

A fourth similarity is the *inadequacy* of the criterion they both use to select central curriculum areas: the possession of systems of *sui generis* interrelated concepts. We have seen that the only solid examples of PK in Young's case are maths and science. The same is true of Hirst's FKs. Outside these, for both theories, there are problems on every side. These became evident early on in Hirst's case. Within a few years (Hirst and Peters, 1971: 65) he had slightly changed his original – 1965 – list of forms, reducing it from eight to seven. Specifically, he removed history and the human sciences, replacing them by a wider category to do with understanding persons (63). In the intervening years, the notion that history is a separate form had been challenged very much on the same grounds as I challenged history – above – as a form of PK in Young's theory: history relies largely on the use of ordinary concepts (Dearden, 1968: 69). Other FKs in the original list were also under fire from an early date (see below the opening paragraph of the conclusion to this paper).

The question also arose for Hirst's theory, as it has arisen for Young (see above), whether the categories he was using were indeed forms of *knowledge*. In 1971 Hirst himself was already raising questions about morality, the arts and religion in this regard, given widespread doubts that philosophers had expressed about the objectivity of these domains (Hirst and Peters, 1971: 63–4). Two years later, I suggested that engagement with art was typically to do with aesthetic experience, not knowledge. 'In old-fashioned terms, the pursuit of Beauty is a different kind of endeavour from the pursuit of Truth' (White, 1973: 75; see also Pring, 1976: 43–5).

A fifth commonality between Hirst and Young is that each has acknowledged the existence of an area of understanding outside the specialized ones of FK and PK. Just as Young, following Vygotsky, posited a realm of everyday concepts, so Hirst stated that 'the various forms of knowledge can be seen in low level developments within the common area of our knowledge of the everyday world' (Hirst, 1965/1973: 44). This quotation also points to a disagreement: as we saw, Young makes a *sharp* distinction between everyday concepts and PK while Hirst saw FKs as embryonically embedded in everyday knowledge.

This brings us to another difference between Young's theory and Hirst's, despite all the parallels between them. This is that PK is directly related to *school subjects* and FK is not. This is most obvious, as we have seen above, with regard to geography. For Young (and Lambert) it is a form of PK with its own concepts; for Hirst, it is a 'field', not a 'form' of knowledge, as it lacks concepts of its own.

The fact that Young begins with subjects and Hirst with forms of knowledge reflects a wider, methodological difference between them. As we saw above, Young's approach is to look at empirical facts. He observes strong subject identities, the boundaries between them and specialization within them found in schools, and starts from there. Hirst's approach is *a priori* rather empirical. He arrives at his FKs from what he sees are the logical implications of the notion of possessing a rational mind. The methodological divergence is perhaps not surprising. Not only is Young a sociologist and Hirst a philosopher, but they also bring to these disciplines an earlier education in chemistry and mathematics respectively. This fact may be relevant to what was said above about the fourth similarity between them – about the inadequacy of the criterion of *sui generis* conceptual schemes they both use to pick out curriculum areas. As we have seen, the only solid examples that fit this model in both cases are maths and science. I wonder how far both writers had been influenced in their conception of knowledge by their background in one of these two interrelated subjects.

Conclusion

I finish on a related methodological issue. Work in philosophy of education on Hirst's FK theory – his own writings and critical discussion – continued for three decades after its first formulation in 1965. Objections and defences almost invariably took the form of careful, usually lengthy, arguments that drew attention to logical problems seen in others' positions, to hidden assumptions and inadequately supported claims (see Dearden, 1968: 61–78; Gribble, 1969: 49–56; Hindess, 1972; White, 1973: 73–87; Elliott, 1975: 49–66; Langford, 1975: 73–82; Pring, 1976: 37–46; Bailey, 1984: 68–82; Barrow, 1984: 90–3; Kleinig, 1984: 149–154; Walsh, 1993: 130–9).

This made progress in debate possible. Participants were able to converge on perceived weaknesses in the theory – not least the inapplicability of Hirst's criteria for a FK to all the forms he claimed existed. Crucially, these participants included Hirst himself. In 1971, as we have seen, he dropped the claim that history has its own conceptual scheme and redrew his map of the FKs accordingly. In his 1993 book he publicly abandoned his FK account altogether as an educational theory, while still adhering to it in general, if not in detail, epistemologically (196). And he was right to do the latter to an extent: the present paper, for instance, has made distinctions between *a priori* and empirical knowledge and contrasted factual knowledge of both kinds with considerations of value, both ethical and aesthetic. The main problem Hirst saw in his abandoned theory was that it was not rooted in an adequate account of aims: 'we must shift from seeing education as primarily concerned with knowledge to seeing it as primarily concerned with social practices' (Hirst, 1993: 184). This was to recognize that the starting-point for thought about what an educational curriculum should be must lie within ethics, not epistemology.

Although Young is well acquainted with Hirst's similar theory and has indeed both criticized it in the past (Young, 1971: 23) and more recently praised it (Young, 2014b: 3), he has not taken account of the many familiar objections made to it (see the list in the first paragraph above), the most important of which apply to his own theory. On a related point, his own and sometimes others' discussions of PK lack the careful

exposition and close argumentation that typified the FK debates. Although there has been plenty of enthusiasm expressed in print and online for a PK-based curriculum, as well as copious references to scholarly writers in many fields, there has been little meticulousness in stating the theory and discussing it. It should be clear from the first part of this paper that in discussing PK and asking what schools should centrally be for, these writings of Young and others have entered epistemological and ethical territory familiar to general philosophers and philosophers of education. But neither Young nor virtually any of his commentators uses philosophical methods – with all the careful attention to the logic of argument that come with them – to help make their case. It is ironic that a keynote of Young’s account is specialized learning within its own borders, since writings on powerful knowledge are often a frontier-less amalgam of ideas from many fields – social science, the history of sociology of education, contemporary educational politics, rickety epistemology and visions of what should be.

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