

2022-03-04

Powerful knowledge and knowledgeable practice

Hordern, Jim

<http://hdl.handle.net/10026.1/20527>

10.1080/00220272.2021.1933193

Journal of Curriculum Studies

Informa UK Limited

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.



Powerful knowledge and knowledgeable practice

Jim Hordern

To cite this article: Jim Hordern (2022) Powerful knowledge and knowledgeable practice, Journal of Curriculum Studies, 54:2, 196-209, DOI: [10.1080/00220272.2021.1933193](https://doi.org/10.1080/00220272.2021.1933193)

To link to this article: <https://doi.org/10.1080/00220272.2021.1933193>



© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 01 Jun 2021.



Submit your article to this journal [↗](#)



Article views: 4536



View related articles [↗](#)




View Crossmark data [↗](#)



Citing articles: 3 View citing articles [↗](#)

Powerful knowledge and knowledgeable practice

Jim Hordern 

Department of Education, University of Bath, Bath, UK

ABSTRACT



This paper argues that Young and Muller's 'powerful knowledge' requires a more extensive conceptualization of the relation between knowledge and practice. However, rather than focus on the 'practice turn' in social theory as Carlgren has suggested, it is argued that what Rouse terms a 'normative practice' can help explicate the specialized activities that make powerful knowledge possible. The idea of normative practice provides a basis for the systematic revisability and specialized communities that are said to underpin powerful knowledge, while also illuminating how teachers recontextualise knowledge and reconciling the role of experience with other types of knowledge in a curriculum. Normative practice provides a basis for specialized and 'knowledgeable' purposeful practice which suggests that knowledge is never 'for its own sake', but always in pursuit of something 'at stake', although that which is at stake is always prospective. Furthermore, it is only through generating inclusive and participative forms of (normative) knowledgeable practice that communities can acquire the characteristics that enable knowledge to become meaningful and accessible to all in society without retreating into elitism and obsolescence.

KEYWORDS

Curriculum; practice; teacher knowledge; subjects; experience

Introduction

The notion of 'powerful knowledge' (hereafter PK) (Muller & Young, 2019; Young & Muller, 2013, 2016) has had an impact in both academic circles and in the domains of educational policy and practice and has been used as a justification for a subject-based curriculum. In England, the reforms of the conservative-led coalition government of 2010–5 have shifted the national curriculum in a 'knowledge-based' direction, and PK has become an inspiration for 'knowledge-led' curriculum change in schools in England (Counsell, 2018). The revised school inspection framework in England, and the research supporting its development, has focused extensively on subject knowledge in the curriculum (Ofsted, 2018), and the Chartered College of Teaching (CCT), the new professional body for teachers in England, have highlighted PK within their publications for teachers (Chartered College of Teaching (CCT), 2018). Conservative politicians have been particularly enthusiastic, identifying a 'knowledge-based' curriculum as aligned with a focus on improving pupil assessment outcomes and a 'driver of true meritocracy' (Gibb, 2017). Policy makers have increasingly identified PK as a 'curriculum principle' (Carlgren, 2020, p. 323), using it as a basis to justify curriculum interventions in schools. However, Young has exposed the differences between the arguments for PK and those of the conservative politicians (Young, 2011, 2015), and it is questionable whether contemporary curriculum interpretations of PK adequately reflect the underpinning arguments for PK in the sociology of educational knowledge (Hordern, 2019). Meanwhile, substantive work has been done

CONTACT Jim Hordern  j.hordern@bath.ac.uk  Department of Education, University of Bath, Bath BA2 7AY, United Kingdom

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

to articulate the implications of PK for school subjects, such as History and Geography, and influenced the thinking of subject specialists and educationalists internationally, including in countries such as Sweden, Australia and South Africa (Bertram, 2019; Maude, 2018; Nordgren, 2017). It appears that the influence of PK is unlikely to wane.

While PK has enjoyed a growing impact in schools and in some policy circles, and amongst some subject-focused curriculum thinkers, it has met increasing critique from sociologists, curriculum theorists and philosophers of education. Zipin et al. (2015) were amongst the first to articulate a challenge, arguing that PK's focus on disciplinary knowledge offered an inadequate basis for social justice through the curriculum, while White (2018) has provided criticism of various conceptual aspects of PK. Recurrent criticisms include those that argue that PK is epistemologically unsound (Alderson, 2020; Wrigley, 2018), misunderstands the nature and value of experience (Wrigley, 2018), and demonstrates a lack of attention to power differentials and disadvantage (Rudolph et al., 2018; Zipin et al., 2015). Curriculum scholars such as Carlgren (2020) and Deng (2020) have provided recent engagement. Carlgren (2020) has suggested that PK is constrained by its rationalism and Cartesianism and needs to engage to a greater extent with social practice theory, suggesting that PK should be rethought as powerful knowings and knowns. Deng (2020), while remaining supportive of elements of PK, suggest that PK needs rethinking with closer engagement with Bildung-centred Didaktik and Schwab's work in order to support the development of content that will be meaningful in teaching contexts.

This paper argues that Powerful Knowledge (PK) can be usefully reconsidered in the light of the idea of normative practice (Rouse, 2007), as this provides for a fuller understanding of processes and accountabilities which are not discussed in the PK thesis, and a more incisive grasp on the relation between knowledge, knowing and experience. In contrast to Carlgren's (2020) advocacy of the 'practice turn' in social theory, it is argued that greater engagement with normative and 'less attenuated' (Hager, 2013) conceptualizations of practice can explicate what is distinctive about how PK is constituted and recontextualised. Drawing on the work of (inter alia) Rouse (2007), MacIntyre (2007), and Dunne (2005), it is argued that powerful knowledge is sustained by normative specialized and knowledgeable practices that are defined by shared purposes, mutual accountability, prospectivity and the generation of practice 'goods'. Notions central to the PK thesis, such as systematic revisability and the role of specialized communities (Young & Muller, 2013) can thus be more fully understood via the idea of (normative) knowledgeable practice. The argument has implications for how the work of teachers as recontextualisers of disciplinary knowledge and shapers of the subject curriculum is understood, and for how the curriculum is conceptualized in terms of the relation between knowledge and experience.

Unpacking knowings and knowns

In a recent paper critiquing PK, Carlgren argues for a 'shift in focus from the knowns to the knowings' and a 'widening of the concept of knowledge ... to also include the tacit aspects' (Carlgren, 2020, p. 324). Carlgren makes the persuasive argument that much of what constitutes knowledge is 'invisible', like an iceberg beneath the surface (p. 324), implying that curriculum thinkers such as Young and Muller (2013) are mistaken to focus solely on the explicit propositional knowledge which is visible, tangible and can be expressed in curriculum documents and text books. According to Carlgren, PK is guilty of carrying a 'ballast of Cartesian, rationalist thinking' and gives 'priority to theory over practice with propositional knowledge as the most valuable and a foundation for good practical action' (Carlgren, 2020, p. 324). The 'conceptual pile' therefore takes on a 'godlike appearance' (p. 328), which relegates or renders invisible the purposeful practical action that could be seen as a constituent element of any subject. Carlgren draws on Wittgenstein in arguing that 'practice is a necessary prerequisite for knowledge' (p. 326), highlights Polanyi's 'relational view of knowledge' (p. 327) and discusses Paul Hirst's 'troubled rationalism' and 'practice turn' (pp.328–330). In so doing, Carlgren argues for a shift to the 'tacit dimensions of knowledge ... its embeddedness in action' and

its 'practical foundation' (Carlgren, 2020, p. 326), while noting that such a move does not 'replace knowledge with practice' or 'give practice a primary position in relation to theory' (p. 327). Underpinning Carlgren's arguments is the assertion that this 'epistemology of practice' advanced by the 'practice turn in social theory' (Carlgren, 2020, p. 324) has been ignored in the PK thesis, and this has resulted in an excessive focus on propositional knowledge at the expense of other aspects (on the knowns rather than the knowings). The authors of PK have therefore erroneously misconstrued the epistemology of practice by suggesting that it reduces 'all knowledge to know how' and 'knowing ... to doing' (Carlgren, 2020, p. 327). 'Know that' has thus been given underserved priority in PK, and the 'know how' advanced by Ryle, Wittgenstein and Polanyi has been sidelined. The consequence is a devaluation of the intangible epistemological glue that holds the visible propositional elements of a discipline or subject together.

It is possible to view PK as less rationalist and Cartesian than Carlgren's (2020) interpretation. For example, Young and Muller acknowledge the arguments for inferential know-how in the realization of meaning from propositional knowledge (Young & Muller, 2016, pp. 171–2). In other words, propositions and concepts can only be fully understood in relation to other propositions and concepts, and this is only possible if we know how to infer meaning in the relevant norm-governed 'space of reasons' (Derry, 2018, p. 96; see also Young & Muller, 2016, pp. 169–170). Derry (2018), drawing on Vygotsky's work, also emphasizes the 'systematic relations between concepts' (p. 89) which provides them with their purchase and power, remarking also that 'the existence of a concept as a living idea ... results from the normative constraints within which it is articulated' (p. 89). While Carlgren notes PK's engagement with inferentialism (Carlgren, 2020, p. 328), the implications for how 'practice' might be accordingly conceptualized have not been fully elaborated, either by Carlgren (2020) or Young and Muller (2010, 2013, 2016).

The PK thesis also acknowledges the importance of what Winch (2010) calls procedural know how, in other words the processes by which new claims to knowledge are evaluated (see Young & Muller, 2016, pp. 100–101). While Carlgren (2020) also notes this, the implications in terms of the type of practice required to sustain this procedural dimension of PK are not addressed. Would such a practice be built only on 'invisible' or 'tacit' knowings, or might there be a role for more explicit criteria (Addis & Winch, 2019)? Young and Muller (2013) suggest that PK is 'systematically revisable', and thus for the power of the knowledge to be sustained the practice must enact systematic revision via a specialized community with sufficient expert knowledge to make decisions. Such a view of knowledge highlights its fallibility, revisability, contingency and questionability (Young & Muller, 2010, 2013), all characteristics which offer scope for a less Cartesian interpretation than Carlgren suggests, and points to the importance of specific types of practice that can underpin the processes of systematic revision and the enactment of procedures and criteria.

Young and Muller (2010) make a clear distinction between a Future 1 curriculum based upon a 'naturalised and under-socialised concept of knowledge' and a Future 3 curriculum based upon the ideas that there are 'specific kinds of social conditions under which powerful knowledge is acquired and produced' (p. 19), suggesting that PK emerges from and is relayed within specific specialized social practices. While Oates (2018) suggested that there was considerable proximity between a Future 1 and Future 3 curriculum, Morgan, Hordern and Hoadley contend that these should be interpreted as 'strongly differentiated' (Morgan et al., 2019, p. 108), with PK (as represented by Future 3) 'emergent, non-reducible and socially differentiated', and socio-historically constructed through the disciplinarity of 'communities of enquirers' (Young & Muller, 2010, p. 14). A Future 3 curriculum, which Young and Muller (2010, 2013) see as the appropriate vehicle for powerful knowledge, emphasizes the historicity and evolution of knowledge, and also needs to acknowledge the socio-epistemic processes by which judgements are made about revisions to the knowledge base of any subject or discipline.

Carlgren (2020) does, however, agree with Young and Muller (2013) that the curriculum should offer something different from the 'everyday', and that schools should 'offer experiences of a different kind than pupils can have in everyday life', and 'not least important is the experience of

theoretical work' (p. 333). Zipin et al. might thus interpret Carlgren's position as aligned with Young and Muller (2013) 'deficit view' of the lifeworld (Zipin et al., 2015, p. 19), drawing a clear boundary between the school and the everyday life of students. But Carlgren's (2020) emphasis is on a broader conception of knowledge which derives from a practice-based understanding, as opposed to the (assumed) over-emphasis on propositional or conceptual knowledge in the PK arguments. Carlgren's argument is that curriculum thinking should start with 'the practice-based theories of knowledge' which can stipulate 'how the everyday world differs from disciplinary and other expert worlds, which in turn differ from each other', and stipulates that 'specific kinds of practices are necessary for the development of specific powerful ways of knowing' (Carlgren, 2020, p. 333). However, Carlgren does not outline the characteristics of a 'disciplinary' or 'expert world' as opposed to an 'everyday world', or discuss the processes by which any activity within such expert worlds would be established as an appropriate performance of the expertise. And yet such processes and characteristics would be central to the formulation and enactment of a curriculum based on such principles. How, therefore, can we differentiate between specialized and non-specialized (everyday) practices, if such a distinction is possible?

Yet there is a further important question which Carlgren's (2020) arguments pose. If 'practice is a necessary prerequisite for knowledge' (and those practices may be expert, disciplinary and specialized), then to what extent can knowledge 'emerge' from those practices and have resonance in other related (or possibly unrelated) practices? The claim that PK is 'emergent' is central to Young and Muller (2013) arguments, and by this they mean that PK is 'produced by social conditions and contexts but cannot be reduced to them' (Young & Muller, 2013, p. 237), while 'criterial rules for acceptability' and the 'social norms' (p. 237) of disciplinary practices are important for evaluating claims to emergence. However, the notion of emergence and a degree of independence from context also suggests that knowledge may take a pathway independently of the (specialized) practice that produced it. Specialized knowledge may prove useful in new contexts separated in time and space from its original context of production, as for example, in the case of Greek thought in the early modern period (Valleriani, 2014). However, what is needed when (powerful, emergent) knowledge is brought into a new practice is the capacity to 'select', 'appropriate' and 'transform' (or recontextualise) this knowledge so that it meets the purposes of the new practice in which it is to play a role (Hordern 2021). The explicit, tangible, knowledge is incorporated into a fresh practice and may be further recontextualised, disassembled and reassembled in order to address new problematics and concerns, a process that may nevertheless be shaped by the Wittgensteinian 'games and rules' (Carlgren, 2020, p. 326) of the receiving practice.

If knowledge is 'emergent' it is not therefore solely dependent on the practice which produced it for its existence as it can remain 'in storage' in libraries and databases (perhaps indefinitely), but to *exercise* its power it needs to be employed within a practice to answer a problematic. While certain types of specialized practice may be needed to produce PK, and to recontextualise it for the development of curriculum and for teaching, propositional knowledge and other forms of testimony can exist semi-independently of the practices in which they were produced, and may be available for recontextualisation into different practices for different purposes. While practice may be a 'prerequisite' (Carlgren, 2020, p. 326) for knowledge production, knowledge can also move *between* practices, and in so doing be appropriated, selected and transformed in various ways (Bernstein, 2000). Moreover, the capacity for the storage, transmission and reconfiguring of knowledge since the early modern period has a considerable impact on the potential for recontextualisation, including for teachers interested in using a range of material for the teaching of subjects (Hordern, 2021).

Differentiating subject and disciplinary practices from the everyday: the importance of normative practice

While Carlgren (2020) has importantly drawn attention to conceptualizations of practice, the 'practice turn in social theory' (Schatzki et al., 2001) is a broad church, and there are important

conceptualizations of practice that have longstanding roots that arguably *sit outside* the practice turn. It can be argued that instead of the predominant versions of the 'practice turn' there are particularly fruitful conceptualizations of subject and disciplinary practice in the 'normative' (or 'less attenuated') versions of practice (Hager, 2013; Rouse, 2007), as these offer explanations for how purposeful forms of expertise can be identified and sustained over time while considering inclusivity and participation. A normative or 'less attenuated' conception of practice, as will be outlined below, offers a framework for identifying the characteristics and processes of a specialized disciplinary or subject practice, thus suggesting what could comprise a curriculum offer.

Practice theories fall into two principal camps located 'along a continuum', according to Hager (2013, pp. 94–96), with conceptions of practice inspired variously by Wittgenstein, Heidegger and Aristotle (p. 85). In the first camp, there are the 'more attenuated' versions of practice, often inspired by Wittgensteinian philosophy and its interpretation in social theory. In these versions 'practice' is often used as a 'collective term for a whole host of disparate activities' or as 'micro level human behaviours, activities or, even, actions' (Hager, 2013, p. 95). The focus of such versions of practice could be on quite 'mundane doings' such as making phone calls or cooking a meal (Nicolini, 2013, p. 10). Hager criticizes such excessively attenuated uses of practice as 'neither particularly explanatory nor enlightening' (Hager, 2013, p. 95), suggesting that the term is often used as a catch-all for all phenomena. While it could be argued that the attention to describing micro-level behaviours could give rise to focused and rich descriptive work, there is a risk of an absence of analytical purchase if there is no explanation for the organizing principles of the practice and how activities are sustained over periods of time. Those 'more attenuated' versions of practice which have greater analytical utility, according to Hager, have at *least some criteria for what constitutes a practice*, and provide some explanation for the 'interconnectedness' of activities (Hager, 2013, p. 95). A focus on interconnectedness could entail highlighting how mental, material, bodily and emotional states are interrelated or somehow co-dependent. Various forms of 'more attenuated' versions of practice have been very influential in organizational studies (Nicolini, 2013), in some areas of social theory and in learning theory (as Carlgren, 2020, p. 324) notes.

The second camp Hager (2013) identifies is the 'less attenuated' versions of practice, which stipulate more detailed criteria to determine what constitutes a practice, and therefore what can be identified as 'a practice' is more constrained and clearly defined. Drawing inspiration from Aristotelian thought, a less attenuated version of practice is likely to stipulate the necessary constituent elements, such as 'goal directed activity' (Hager, 2013, p. 98), the generation of 'goods internal to that form of activity' and the achievement of 'standards of excellence', as in MacIntyre's (2007, p. 187) influential conceptualization. MacIntyre's notion of practice can be summarized as a 'coherent, complex set of activities that has evolved cooperatively and cumulatively over time' (Dunne, 2005, p. 368), sustained by a committed community of practitioners, a notion that Nicolini suggests 'points towards stability' (Nicolini, 2013, p. 9). Such less attenuated versions of practice suggest that processes within practice are interdependent and co-related, although these processes and the standards of excellence by which they are evaluated are continuously iterating to align with the goals to which they are directed (which might be a disciplinary problematic, for example). And while the goals, goods and standards may adapt over time to a changing environment, they do so synergistically, and with the consent of the practitioners and remaining 'true to their proper purpose' (Dunne, 2005, p. 367). A further example of a less attenuated practice is provided by Addis and Winch's (2019) sketch of a 'criterial practice', which arises through the processes of making judgements about claims to expertise, with such claims evaluated 'in relation to the aims' of the practice and to its internal goods (Addis & Winch, 2019, p. 9). The discursive practice of judging and evaluating claims to expertise leads to criteria which need to be 'sustained by a common view about how those criteria can be applied' (Addis & Winch, 2019, p. 8), and therefore the practice is held together by both a sense of purpose and interactions that have special resonance for practitioners as they seek to evaluate claims to expertise.

By focusing on how normative action is constituted, Rouse (2007) also differentiates between two ways of conceptualizing practice that resonate with Hager's (2013) distinction. On the one hand, Rouse identifies (i) regularist and regulist conceptions, which understand practice as 'exhibited regularities or presupposed rules' (Rouse, 2007, p. 48) respectively. Practices appear, therefore, where there are regular patterns of behaviour or assumptions about rules, and this might include relatively mundane activities. Rouse argues that these notions of practice do not provide a means for explaining how the 'identity' of a practice is 'maintained across multiple iterations' (p. 47), and thus do not help explain the durability of activity over time, or why it may be held in special regard by its practitioners.

On the other hand, Rouse outlines (ii) a 'normative conception' of practice, in which a practice is 'maintained by interactions among its constitutive performances that express their mutual accountability' (Rouse, 2007, p. 48). Such a practice is bounded 'by the ways in which its constitutive performances bear on one another' (ibid., p. 49), as any activity within the practice is undertaken somehow in response to other practice activities. Activities are accountable to each other, and thus criteria or 'standards of excellence' (MacIntyre, 2007, p. 187) are generated within the practice to evaluate activities. However, in order for these sequences and patterns of interactivity to persist, there must be something 'at issue' or 'at stake' (Rouse, 2007, p. 50), a purpose or 'telos' which propels the practice and provides a basis for evaluating activities. But, in Rouse's conception, the nature of what is at issue, and the means of achieving it, is 'not already settled' (p. 50). There is thus 'no agreed-upon formulation' of what is at issue, and therefore this is constantly a matter of discussion and re-formulation within the practice, with the 'definite resolution' of what is at stake 'always prospective' (ibid., pp. 50–51). Rouse thus claims that this notion of practice offers a 'more adequate understanding of normativity in terms of accountability to what is at issue' (Rouse, 2007, p. 46). Normativity is thus not defined by observable repetition of performances, or in terms of presuppositions, but instead in terms of the 'appropriateness' of an action or claim in the context of the purposeful activity to which it seeks to contribute.

The normative conception that Rouse outlines has much in common with Hager's (2013) 'less attenuated' practices. Both aim to refine what is understood by 'practice' by seeking to explain what generates and sustains practice activity over time. Both also seek to explain the 'connectedness' that various authors have identified as central to conceptualizations of practice, and to distinguish their model from those notions of practice that seem all-encompassing, vague or solely descriptive. Not all human activity will qualify within Rouse's (2007) conception of normative practice, and any given practice may only demonstrate some of the characteristics outlined. However, the normative conception suggests a useful ideal type for evaluating longstanding disciplinary or professional practice, including the specialized practice of teaching (Hordern, 2015; and see; Noddings, 2003 for a discussion of the goods in teaching practice). It provides a focus on criteria, commitment to a purpose, and beneficial goods which can explain the pursuit of 'truth and truthfulness' that Young and Muller (2016) put at the heart of the quest for PK, while acknowledging fallibility and prospectivity. The characteristics and processes of normative practice also provide a means for differentiating between specialized 'disciplinary and expert worlds' and those of the 'everyday' (Carlgren, 2020, p. 333), and thus to delineate the specialized knowledgeable practice that underpins PK and makes it possible.

Drawing on Rouse's (2007) idea of a normative practice, it is possible to delineate some 'ideal type' features that can be said to underpin knowledgeable and specialized disciplinary and subject practices, and indeed educational practice itself (Hordern, 2015, 2020; Noddings, 2003), and thus enable the generation of PK. Such knowledgeable practice is defined by: (i) an 'issue' or 'something at stake', which could be the defining problems of a discipline and the pursuit of greater understanding of the world; (ii) prospectivity, which might entail emphasizing truthfulness and continual challenge in the teaching of a subject as much as a belief in truth itself; (iii) mutual accountability of constitutive performances of the practice, so that inferences and claims to knowledge within a subject are made cognizant of the implications of those inferences and claims for wider understanding and the subject

as a whole; (iv) criteria or standards of excellence by which the actions seeking to be performance of the practice can be judged, so that claims to knowledge can be evaluated and subject expertise identified; and (v) the commitment of those involved in the practice to its continuation (and iteration), as could be demonstrated in teacher involvement in professional associations, curriculum theorization and debate or in ongoing academic and professional development. Claims to contribute to the practice are held to account against the practice criteria or standards of excellence (Addis & Winch, 2019; Rouse, 2007), necessitating specialized communities who can enact judgements cognizant of the purpose of the practice and its existing understandings.

These characteristics cumulatively enacted give rise to 'goods' generated through the (subject, disciplinary or professional) practice which may be publicly held to be of value to society. These might include the uplifting quality and social utility of public buildings (Hager 2011), informed and productive citizens (Hordern, 2015; Noddings, 2003), the 'formation of the full individual' and the 'cultivation of human powers' (Deng, 2020, p. 59), 'the process of unfolding individuality by learning' (Hopmann, 2007, p. 115), or the development of a 'communitas' in which there is a possibility for inclusion and meaningful participation of all citizens (Bernstein, 2000). While the specific enactment of the characteristics of normative knowledgeable practices may differ in the history, mathematics, science, geography or design and technology curriculum, the characteristics outlined above provide a basis for determining what makes such activities knowledgeable or expert and what differentiates them from 'everyday' practices. In the practice of history teaching, for example, what is at stake is the opportunity for all children to develop 'historical consciousness' or a 'historical gaze' (Bertram, 2012), with interpretations of historical events presented as prospective and open to question, while maintaining a commitment to introducing criteria by which new claims to historical interpretation can be evaluated. This gives rise to a social good which would be a commonly held historical consciousness which would inform social discourse and democratic processes within a society.

Normative knowledgeable practice as an underpinning for powerful knowledge

Following the discussion above, we can perceive how the idea of knowledgeable practice provides an underpinning for PK by specifying the characteristics of practice that can generate and sustain PK in specialized communities. Young and Muller's PK is founded on Durkheim's (1912/2001) differentiation between the sacred and profane and its manifestation in Bernstein's (2000) work, and this provides PK with a sociological grounding as much as a prescription for the curriculum. For Young and Muller (2013), it is the intricate sociality of Durkheim's 'collective representations' shaped in specialized communities that offer a template for contemporary disciplinary knowledge and for all expert practice in society (Wheelahan, 2015). The properties of PK, including its materiality, sociality, emergence from 'originating contexts' and systemic revisability (Young & Muller, 2013, pp. 236–238), represent the distinguishing features of PK as opposed to everyday non-specialized knowledge. For Young and Muller (2013) the differentiating boundaries between PK and other forms of knowledge are necessary for society to have a conversation about itself and to organize human understanding. The purpose of PK is therefore not 'knowledge for its own sake' but the sustenance of society and the discourse that is necessary for continual societal development. Claims to contribute to PK make sense if they are accountable to previous claims, if they demonstrate their commitment to the purpose of the field of inquiry and if they acknowledge their prospectivity. PK can only be sustained therefore if underpinned by a normative knowledgeable practice that stipulates the purpose for which the knowledge is generated, formulates the criteria of excellence by which claims can be judged, and ensures that claims are accountable to the existing practice and the knowledge it sustains.

The idea of normative knowledgeable practice thus provides the parameters for purposeful activities of social value through which PK can be revised so that alternatives can be envisaged and society's conversation perpetuated (Wheelahan, 2015). The distinguishing features of normative practices (prospectivity, purposefulness, the generation of goods, criteria of excellence, and the

accountability of claims and performances) enable a boundary to be drawn between those activities considered knowledgeable practices and those that are more ephemeral and transient (e.g. everyday habitual activities and patterns of behaviour). The idea of normative knowledgeable practice thus establishes the conditions within which collective representations (and therefore PK) can be formulated, stipulating the requirements for the 'socio-epistemic' production, revision and recontextualization of PK. The idea of knowledgeable practice makes it possible to draw boundaries between types of practice, just as the idea of PK provides for boundaries between categories of knowledge.

However, while a boundary exists between specialized normative knowledgeable practices and 'everyday' practices, this does not mean that such a boundary is impermeable or static. While some specialized practices become embedded in the fabric of societies, this does not mean they are ahistorical or universal. Durkheim's (1912/2001) work draws attention to the changing nature of the sacred (specialized) and profane (everyday), while asserting that the boundaries between these change over time. Societies may come to the realization that a practice that has hitherto been understood as 'everyday' is becoming increasingly specialized as it is recognized as of particular value to society, and here processes may be enacted to 'specialize' the underpinning practice through clarifying what is at stake and determining what can be identified as an appropriate performance of the practice. Collective social experiences which may express a view of the world hitherto marginalized or ignored by society, for example, the narratives of disadvantaged groups, may need to be carefully recontextualised so that their power can be relayed to the rest of society. But in such a process, the criteria by which claims are evaluated may themselves need to be refined to take account of new voices and new perspectives. What is now established as specialized powerful knowledge may not be so in the future, and new knowledgeable practices may arise to meet new problematics.

Recontextualisation, revisability and knowledgeable practice

The supplementing of powerful knowledge with normative knowledgeable practice offers a more dynamic view of knowledge and practice, and their interrelation. While Carlgren (2020) makes a persuasive argument about the invisibility of much of knowledge with the analogy of the iceberg, what is omitted in her conception is Young and Muller's (2013) emphasis on the fallability, revisability and contingency of knowledge. In other words, the structure of the iceberg is constantly being (re) constituted as new knowledge is added and older knowledge reformulated and discarded. With new discoveries or insights, the iceberg may melt and freeze to acquire a new shape and structure. The disciplines and subjects are never static, unless they become moribund and float away (potentially to be rediscovered and reinterpreted by a fresh generation of explorers at a later date)!

Normative knowledgeable practice places an emphasis on the pursuit of something 'at issue' or 'at stake' in the practice 'whose definitive resolution is always prospective' (Rouse, 2007, p. 51). Therefore, within a knowledgeable practice, there will be considerable ongoing debates amongst practitioners leading to (re) definitions of the issues 'at stake' and the best means of pursuing, investigating and communicating these to others. Such normative practices are generative of 'goods' which may nevertheless undergo processes of constant change, although the rate of change may not necessarily be rapid. Some change may be stimulated by external pressures, or internal misconceptions within the practice, and lead to some cul-de-sacs which do not result in new insights. The practice is only sustained ultimately through new insights that contribute to the definition of what is 'at stake' and how it can be beneficially pursued.

This conception of knowledgeable practice represents the conditions that would be needed to underpin what Young and Muller (2010) describe as a Future 3 curriculum, in which 'there are specific kinds of social conditions under which powerful knowledge is acquired and produced' (Young & Muller, 2010, p. 19) sustained within 'domain-specific but increasingly global specialist communities' (p. 20). Young and Muller (2013) have foregrounded the processes of 'systematic revisability' as a defining characteristic of PK, with disciplinary communities exercising continuous judgements on new claims to knowledge and revisions to the knowledge base according to criteria

of 'bestness', and different interpretations of 'bestness' 'differentially influential over the ages' (Young & Muller, 2013, p. 236). The continuous revision that maintains the resonance and purchase of PK is only possible if underpinned by a practice that recognizes the prospectivity of the knowledge and the problematic that new claims to knowledge are seeking to address. The purpose of the practice, in terms of a shared sense that something is 'at stake' is what holds the participating practitioners together and informs the ever-evolving criteria of 'bestness' which shapes the knowledge base. If the notion of prospectivity is lost or the issue 'at stake' devalued then the knowledge will lose something of its resonance and explanatory power, and become increasingly moribund, relying on false certainties or distortions that may suit some of the 'powerful' but undermine PK. Furthermore, if particular voices or perspectives are deliberately excluded from the practice then the revision of the knowledge is undermined, and the knowledge loses power as some challenges and lines of questioning are sidelined. The practice must be inclusive and participative and must have outcomes (Bernstein, 2000).

An important further point is the issue of emergence—knowledge can move between practices, but it requires a knowledgeable practice to reinterpret that knowledge. Subject practices are not necessarily congruent with disciplinary practices and may have different purposes (Yates & Millar, 2016), but yet disciplinary knowledge feeds the teaching of subjects. The structure of the disciplinary knowledge and the emergent power it offers needs recognition, but this may need to be reconfigured and transformed in the making of 'content' for teaching purposes (Deng, 2020). Recontextualisation to adjust disciplinary knowledge to the needs and purposes of the subject practice is a core curriculum-making activity, lying at the heart of teacher expertise. Yet the process of recontextualisation arguably requires knowledge to be selected, appropriated and transformed in accordance with a principle that is generated and sustained through the practice. The fragmented educational knowledge base and contested purposes of education found in the Anglophone world make it difficult to establish such principles, while notions of *Bildung* provide an important educational recontextualisation principle in some continental European contexts (Hordern, 2021).

The subject as a knowledgeable practice can provide a framework for recontextualisation, providing the subject practice is fostered by a community with the capacity to specify its own normative purposes and develop its own standards of excellence against which claims can be judged. Communities of subject specialist teachers, supported, for example, through the Historical Association and Geographical Association in the UK, are vehicles through which the subject practice is defined and sustained. These subject communities are then collectively able to make judgements about curriculum reforms and educational material, reinterpreting and recontextualising disciplinary knowledge and other sources as necessary in the interests of the teaching of the subject to students (Hordern, 2021). Educational material must be developed and used in a way that is accountable to the practice, acknowledging its purpose in the educational context, which may be to provide the basis for progress within the discipline, but may also have a broader societal purpose amongst other curriculum objectives (Yates & Millar, 2016). The teacher would, nevertheless, need to be aware of the previous learning, children's capabilities and the purpose of using the material in order to recontextualise the material effectively.

Knowledge and experience in knowledgeable practice

The idea of normative knowledgeable practice also provides for a reconsideration of the relation between knowledge and experience in the curriculum. Carlgen (2020) draws attention to the necessity of 'specific experiences from specific kinds of practices . . . for the development of specific powerful ways of knowing', and argues that a 'central task of the school is to offer experiences of a different kind than pupils can have in their everyday life' (p. 333). Carlgen makes a distinction between the attention to 'previous experiences' and the offering of 'new experiences as a foundation for the development of powerful knowings' (Carlgen, 2020, 333). In foregrounding the role of

experience, this position is contrasted with that of Young and Muller who instead foreground the 'conceptual pile' and the importance of theoretical knowledge (Carlgren, 2020, p. 328).

Carlgren's emphasis on the absence of a discussion of the relationship between knowledge and experience in Young and Muller's work has something in common with the concerns of Wrigley (2018) and Zipin et al. (2015) in their criticisms of PK. Wrigley, who is supportive of some aspects of the PK argument, including its exposure of the 'technical instrumentalism' (Wrigley, 2018, p. 4) that has dominated curriculum policy in England, nevertheless critiques the 'radical divorce between academic and everyday knowledge' that he perceives as central to the PK thesis, and the 'neglect of the interrelationship between sensory experience and abstract concepts' (p. 11). Wrigley asserts that PK is seen 'almost entirely in terms of abstract concepts' leading to a 'deeply reductionist view of knowledge' (p. 12). Zipin et al. concur with this, suggesting that the hinterland to PK offers 'a deficit view' of everyday experience 'that misses rich potentials to use life-world knowledge for curriculum learning purposes' (Zipin et al., 2015, p. 19). They also suggest that the thinking behind PK 'disputes the possibility of 'rich curricular interaction between everyday and scientific knowledge' (Zipin et al., 2015, p. 21), and that 'well-selected lifeworld knowledge offers depth and vitality to schooled thinking and learning' (p. 22). Importantly, they also argue that 'both epistemological and ethical purposes are crucially relevant, and not actually separable, for curriculum knowledge selection' (p. 22).

It is important to note that 'everyday'/lifeworld knowledge can vary considerably from person to person, and some such knowledge may be shaped considerably by experiences in families or communities. Reiss makes the important point that 'what is everyday to one student may be exotic to another' (Reiss, 2018, p. 126), by explaining how his parents taught him multiplication at home but never played any music. His 'sensory experience' (of music at least) was thus limited and influenced his engagement with music at school, but his head start in Maths and the priority it was given in his homelife would have blurred boundaries between his 'everyday' and the subject knowledge of Maths. While music may have felt rarified and remote, mathematics would not. Reiss (2018) goes on to make the point that technology has changed what is possible in terms of exposure to specialized knowledge outside educational or public institutions. The child with a particular interest in mechanics or in history can now access enormous volumes of material online, although it could also be argued that understanding of these is likely to be considerably enhanced via a pedagogical relationship that can facilitate a way through the maze of online resources.

The category of 'everyday experience' or 'lifeworld knowledge' can thus be misleading if considered *in opposition* to the specialized—as experience is central to all knowledgeability. Becoming knowledgeable in any discipline or subject requires some experience in certain activities (Winch, 2010): knowledge by acquaintance draws from experience, and experiential knowledge can be transformative to understanding. Lifeworld knowledge may be considerably enhanced, or even transformed, through engagement with the 'collective representations' (Durkheim 1912/2001) of the wider community, and the lifeworld knowledge may potentially contribute to the transformation or recalibration of the 'collective' view. Lifeworld knowledge can be seen from a range of perspectives, and a process of coming into dialogue with others could enable new unexpected insight. It is this juxtaposition and interrelation between collective representations and our rich experiences which is central to the enactment of the curriculum and pedagogic practice (Gamble 2014). While some experiences and some subject knowledge may maintain a degree of separation, pedagogic work is about enabling experiences to be brought into relation with subject knowledge, and for the 'everyday' to be reconsidered in specialized terms.

McCrory (2015) introduces some helpful distinctions which can help further reframe the knowledge–experience relation, by exploring the differences between a referential and an inferential approach to meaning-making. A word or phrase can both refer directly to an object or phenomenon (referentially) and can be understood as having a role within a chain of inferences which conjure particular meaning in certain contexts and for certain people. The inferentialist arguments suggest that for those who have a certain level of initiation into a knowledge domain certain phrases or ideas will resonate within that domain, whereas for the uninitiated those phrases or

ideas may only refer to physical objects or phenomena: any wider meaning remains obscured. Nevertheless, the initiated are likely to be able to switch between two experiential understandings. The furniture maker *perceives* a chair differently from the child at play, although they can also see it as 'just a chair'. The astronomer understands the significance of discovering a new galaxy differently from the non-scientist, although they can both wonder at its enormity and distance from us. New academic arguments have resonance for those who have a grasp of their provenance and are aware of which other conjectures they contest. But induction into whichever forms of reasoning requires specialized experience provided through the knowledgeable practice, so that meanings can resonate in the context of their application—depending on the subject this may entail participation in debates (Politics, Philosophy), experimental work (chemistry, physics), field or project work (geography), or a collaborative workshop task (design and technology).

The role of experience set out here and its relation to knowledgeable ability in a knowledgeable practice is notably different from Carlgren's (2020) position. While it is possible to make a distinction between previous and new experiences, and between 'everyday life' and 'experiences of a different kind' (Carlgren, 2020, 333) it is also true that once we are engaged within a knowledgeable practice (such as a disciplinary or subject practice) we may acquire new insight into our previous and current experiences, and actively choose to engage in specific novel experiences. New insights are *not products of the experience itself alone*, but rather products of the practice, and thereby part of the process of engaging with the propositional, inferential, procedural and experiential knowledge that constitutes the subject. The same events can be experienced differently depending on the degree of induction into the knowledgeable practice of the subject, whether that be History, Maths or Design. The role of the teacher is in providing pathways into that knowledgeable practice, through educational experiences that illustrate the knowledge of the subject in-practice, and thereby enabling young people to interpret events or propositions in different ways. Gamble demonstrates that the process of becoming a competent craftsperson, or acquiring design capability in a classroom context, is through visualization and performance, rather than explicit pedagogical transmission (Gamble 2014, pp. 62–3), and through this process, the student acquires a specialized lens through which the standards of excellence of the specialized craft practice can be recognized and achieved. The 'material item' that students are working on becomes a specialized or 'theoretical object' (Gamble 2014, p. 64), and thus the competent designer or craftsperson starts to recognize the specialized qualities, and areas for potential improvement, in finished objects and works-in-progress. The experience of engaging in craft, and witnessing the practice and finished products of the craft practice, is understood differently depending on the level of induction into the knowledgeable practice. The 'everyday' activities of making things at home can now be seen differently, with new potential. The pedagogic practice may thus often involve making the familiar strange (Wright Mills, 1959) so that objects and experiences can be interpreted differently.

Concluding remarks

Normative practice suggests that the process of becoming knowledgeable is *not* 'an end in itself'—but a 'for purpose activity' with its own self-governed norms, criteria, goods and sense that something is 'at stake', and therefore worthwhile pursuing. We become knowledgeable about fishing, craft, mathematics or history not purely to enjoy the activity or to improve ourselves, but because these are purposive practices which produce beneficial goods and outcomes for individuals and society (Bernstein, 2000; MacIntyre, 2007). Carlgren's charge that Young and Muller (2013) betray a 'knowledge-as-an-end-in-itself thinking' (Carlgren, 2020, p. 328) is less accurate if we consider a view of disciplines and subjects as normative knowledge practices which always answer to problematics, and exist to produce goods of benefit to society (Hager 2011), as could be understood via Young and Muller's (2010) Future 3.

If knowledgeable practices are constantly undergoing change to reflect the redefinition of what is at stake, then what implication does this have for the constitution and recontextualisation of PK and

the role of teaching in the formation of the individual in society? Bernstein (2000) foregrounds the need for 'enhancement', 'inclusion' and 'participation' in the formulation of the 'pedagogic rights' that underpin an authentically democratic society. The challenge for normative knowledgeable practices is to ensure that they are inclusive and participative, while offering enhancement to all those engaged in the practice. If such practices do not include or allow full participation, then the knowledge that they seek to iterate may become increasingly irrelevant to the rest of society as it starts to lose its purchase on social problems of concern. Additionally, it may become increasingly alien to those who feel excluded from the practice, inaccessible or not seen as meaningful to them. With the increasing complexity of disciplinary knowledge production, this raises questions also for the school curriculum and how the purposes of subjects are conceived. It also highlights the recontextualising role of teachers as curriculum-makers, charged with offering possibilities for inclusion and participation and constructing curricula which do not alienate and instead provide pathways to enhancement.

Disclosure of potential conflicts of interest

No potential conflict of interest was reported by the author(s).

Notes on contributor

Jim Hordern works at the Department of Education, University of Bath, and is a Visiting Professor at the University of Derby. His research interests are in educational knowledge and practice.

ORCID

Jim Hordern  <http://orcid.org/0000-0002-2933-7593>

References

- Addis, M., & Winch, C. (2019). Introduction. In M. Addis & C. Winch (Eds.), *Education and expertise* (pp. 1–20). Wiley.
- Alderson, P. (2020). Powerful knowledge, myth or reality? Four necessary conditions if knowledge is to be associated with power and social justice. *London Review of Education*, 18(1), 96–106. DOI:10.18546/LRE.18.1.07
- Bernstein, B. (2000). *Pedagogy, symbolic control and identity* (2nd ed.). Rowman and Littlefield.
- Bertram, C. (2012). Exploring an historical gaze: A language of description for the practice of school history. *Journal of Curriculum Studies*, 44(3), 429–442. <https://doi.org/10.1080/00220272.2012.668939>
- Bertram, C. (2019). What is powerful knowledge in school history? Learning from the South African and Rwandan school curriculum documents. *The Curriculum Journal*, 30(2), 125–143. <https://doi.org/10.1080/09585176.2018.1557536>
- Carlgen, I. (2020). Powerful knowns and powerful knowings. *Journal of Curriculum Studies*, 52(3), 323–336. <https://doi.org/10.1080/00220272.2020.1717634>
- Chartered College of Teaching (CCT). (2018). *Designing a curriculum, impact 2*. CCT.
- Counsell, C. (2018). Taking curriculum seriously. In *Designing a curriculum, Impact vol. 2*. CCT. <https://www.charteredcollege.co.uk/taking-curriculum-seriously> | <https://www.charteredcollege.co.uk/impact>
- Deng, Z. (2020). *Knowledge, content, curriculum and didaktik: Beyond social realism*. Routledge.
- Derry, J. (2018). What is educationally worthwhile knowledge? Revisiting the case for powerful knowledge. In D. Guile, D. Lambert, & M. J. Reiss (Eds.), *Sociology, curriculum studies and professional knowledge: New perspectives on the work of Michael Young* (pp. 84–96). Routledge
- Dunne, J. (2005). An intricate fabric: Understanding the rationality of practice. *Pedagogy, Culture and Society*, 13(3), 367–390. <https://doi.org/10.1080/14681360500200234>
- Durkheim, E. (2001). *The elementary forms of religious life*. OUP.
- Gamble, J. (2014). Approaching the sacred': directionality in the relation between curriculum and knowledge structure. *British Journal of Sociology of Education*, 35(1), 56–72 doi:10.1080/01425692.2012.740802
- Gibb, N. (2017). *The importance of knowledge-based education*. HMGOV. <https://www.gov.uk/government/speeches/nick-gibb-the-importance-of-knowledge-based-education>
- Hager, P. (2011). Refurbishing MacIntyre's account of practice. *Journal of Philosophy of Education*, 45(3), 545–561. <https://doi.org/10.1111/j.1467-9752.2011.00810.x>

- Hager, P. (2013). Practice as a key idea in understanding work-based learning. In P. Gibbs (Ed.), *Learning, work and practice: New understandings* (pp. 85–103). Springer.
- Hopmann, S. (2007). Restrained teaching: The common core of Didaktik. *European Educational Research Journal*, 6(2), 109–124. <https://doi.org/10.2304/eeerj.2007.6.2.109>
- Hordern, J. (2015). Teaching, teacher formation, and specialised professional practice. *European Journal of Teacher Education*, 38(4), 431–444. <https://doi.org/10.1080/02619768.2015.1056910>
- Hordern, J. (2019). Exercise and intervention: On the sociology of powerful knowledge. *London Review of Education*, 17(1), 26–37. DOI:10.18546/LRE.17.1.03
- Hordern, J. (2020). Why close to practice is not enough: Neglecting practice in educational research. *British Educational Research Journal*. <https://doi.org/10.1002/berj.3622>
- Hordern, J. (2021). Recontextualisation and the teaching of subjects. *The Curriculum Journal*. <https://doi.org/10.1002/curj.110>
- MacIntyre, A. (2007). *After virtue: A study in moral theory*. University of Notre Dame Press.
- Maude, A. (2018). Geography and powerful knowledge: A contribution to the debate. *International Research in Geographical and Environmental Education*, 27(2), 179–190. <https://doi.org/10.1080/10382046.2017.1320899>
- McCrory, C. (2015). The knowledge illusion: Who is doing what thinking? *Teaching History*, 161, 37–47. <https://www.history.org.uk/publications/resource/8786/the-knowledge-illusion>
- Morgan, J., Hordern, J., & Hoadley, U. (2019). On the politics and ambition of the ‘turn’: Unpacking the relations between Future 1 and Future 3. *The Curriculum Journal*, 30(2), 105–124. <https://doi.org/10.1080/09585176.2019.1575254>
- Muller, J., & Young, M. (2019). Knowledge, power and powerful knowledge re-visited. *The Curriculum Journal*, 30(2), 196–214. <https://doi.org/10.1080/09585176.2019.1570292>
- Nicolini, D. (2013). *Practice theory, work and organisation: An introduction*. Oxford University Press.
- Noddings, N. (2003). Is teaching a practice? *Journal of Philosophy of Education*, 37(2), 241–251. <https://doi.org/10.1111/1467-9752.00323>
- Nordgren, K. (2017). Powerful knowledge, intercultural learning and history education. *Journal of Curriculum Studies*, 49(5), 663–682. <https://doi.org/10.1080/00220272.2017.1320430>
- Oates, T. (2018). Powerful knowledge – Moving us all forwards or backwards? In D. Guile, D. Lambert, & M. J. Reiss (Eds.), *Sociology, curriculum studies and professional knowledge: New perspectives on the work of Michael Young* (pp. 157–168). Routledge.
- Ofsted. (2018). *An investigation into how to assess the quality of education through curriculum intent, implementation and impact*.
- Reiss, M. (2018). The curriculum arguments of Michael Young and John White. In D. Guile, D. Lambert, & M. J. Reiss (Eds.), *Sociology, curriculum studies and professional knowledge: New perspectives on the work of Michael Young* (pp. 121–131). Routledge.
- Rouse, J. (2007). Social Practices and Normativity. *Philosophy of the Social Sciences*, 37(1), 46–56. <https://doi.org/10.1177/0048393106296542>
- Rudolph, S. A. S., Gerrard, J., & Gerrard, J. (2018). Knowledge and racial violence: The shine and shadow of ‘powerful knowledge’. *Ethics and Education*, 13(1), 22–38. <https://doi.org/10.1080/17449642.2018.1428719>
- Schatzki, T., Knorr Cetina, K., & Von Savigny, E. (2001). *The practice turn in contemporary theory*. Routledge.
- Valleriani, M. (2014). Introduction: Appropriation and transformation of ancient science. *Nuncius*, 29(1), 1–8. <https://doi.org/10.1163/18253911-02901001>
- Wheehahan, L. (2015). Not just skills: What a focus on knowledge means for vocational education. *Journal of Curriculum Studies*, 47(6), 750–762. <https://doi.org/10.1080/00220272.2015.1089942>
- White, J. (2018). The weakness of “powerful knowledge”. *London Review of Education*, 16(2), 325–335. DOI:10.18546/LRE.16.2.11
- Winch, C. (2010). *Dimensions of expertise: A conceptual exploration of vocational knowledge*. Continuum.
- Wright Mills, C. (1959). *The sociological imagination*. OUP.
- Wrigley, T. (2018). ‘Knowledge’, curriculum and social justice. *The Curriculum Journal*, 29(1), 4–24. <https://doi.org/10.1080/09585176.2017.1370381>
- Yates, L., & Millar, V. (2016). ‘Powerful knowledge’ curriculum theories and the case of physics. *The Curriculum Journal*, 27(3), 298–312. <https://doi.org/10.1080/09585176.2016.1174141>
- Young, M. (2011). The return to subjects: A sociological perspective on the UK Coalition government’s approach to the 14–19 curriculum. *The Curriculum Journal*, 22(2), 265–278. <https://doi.org/10.1080/09585176.2011.574994>
- Young, M. (2015). Curriculum theory and the question of knowledge: A response to the six papers. *Journal of Curriculum Studies*, 47(6), 820–837. <https://doi.org/10.1080/00220272.2015.1101493>
- Young, M., & Muller, J. (2010). Three educational scenarios for the future: Lessons from the sociology of knowledge. *European Journal of Education*, 45(1), 11–27. <https://doi.org/10.1111/j.1465-3435.2009.01413.x>
- Young, M., & Muller, J. (2013). On the powers of powerful knowledge. *Review of Education*, 1(3), 229–250. <https://doi.org/10.1002/rev3.3017>
- Young, M., & Muller, J. (2016). *Curriculum and the specialisation of knowledge*. Routledge.

Zipin, L., Fataar, A., & Brennan, M. (2015). Can social realism do social justice? Debating the warrants for curriculum knowledge selection. *Education as Change*, 19(2), 9–36. <https://doi.org/10.1080/16823206.2015.1085610>