

Introduction: knowledge and the curriculum: new perspectives from social realism.

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Chapter 1 – Knowledge and the curriculum: new perspectives from social realism” [or title of the book]

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Introduction

Social realism has become an influential approach that addresses one of the major questions in the sociology of education, that is, how do we ensure education’s role in building equitable societies by providing an excellent education for young people from all backgrounds. Social realism has been outlined by a number of foundational writers (Muller, 2000, 2016; Moore, 2007, 2009, 2013; Wheelahan, 2010; Young & Muller, 2010; Young, 2008; Maton, 2014) and in edited collections (Maton & Moore, 2010; Barrett & Rata, 2014; Barrett, Hoadley, & Morgan, 2018) and while it remains a broad church, it is unified by a central concern with knowledge - its types, forms, and structures - and the influence knowledge has on the formation of curricula, pedagogy, identity, and equity in educational contexts. Maton and Moore (2010) justify this focus on knowledge arguing that while knowledge is not the only concern of education “to understand education we need to understand knowledge” (p. 2).

The internationalisation of curriculum, and associated pedagogies and forms of assessment, is increasingly important for universities and schools, especially in the light of global educational policy transfer and the impact of international student assessments (Pountney and Yang, 2021). While curricula need to take account of contextual specificity and cultural sensitivity, responses to the effects of globalisation and neoliberalism have highlighted the significance of decisions taken by teachers in all phases of education, including reform of the curriculum, teacher education, and student assessment. Called into question, as a result, is the traditional role of disciplines and school subjects and how they can respond to these influences. This collection of papers examines viewpoints concomitant with the notion of an international perspective on the curriculum, and the ways in which equity and social justice can create civil and inclusive communities of learners, with fair access to academic participation. Central to this fairness is access to knowledge as a social justice issue and the need to understand how this can come about.

The theoretical and philosophical principles that social realists draw on provide the underlying basis for theorisation of curriculum and practice and provide “an alternative to the relativist tendencies of constructivist, post-structuralist and postmodernist approaches in the sociology of education” (Morgan et al. 2017, p. 1). Drawing on concepts from realism and

critical realism (Moore, 2007, 2013a; Wheelahan, 2010, 2023) social realists work from the premise of a “realist ontology (the real world exists), a fallibilist epistemology (we might be wrong), and judgmental rationality” (Wheelahan, 2023, p. 87). Social realist theorists have drawn on these principles to develop their own conceptual language, elaborated through a number of core concepts including knowledge differentiation, powerful knowledge, knowledge of the powerful, and the curriculum pedagogy distinction. Each of these key concepts infers related concepts, for example, in the case of knowledge differentiation, hierarchical and horizontal knowledge structures (Bernstein, 1999) and the recognition of conceptual systems of meaning in vertical discourse (Bernstein, 1999; Rata, 2017); in the case of powerful knowledge, the distinction between concepts and content (Rata, 2021); and in the case of the curriculum/pedagogy distinction, the differentiation of design and enactment (Rata, 2021). Of these, powerful knowledge has perhaps drawn the greatest attention, and possibly misinterpretation, and in this chapter we revisit and expand this concept.

The developing suite of social realist concepts is put to use in service of the overriding social justice argument that schooling includes not only the development of social identities but also epistemic ones (Davis & Ensor, 2017; see Duarte & Durte and de Carvalho & Galian, this volume). Moreover, we acknowledge, as Maton and Moore did in the first social realist collection in 2010, the significant influence of the ideas of Basil Bernstein on this project and note that “above all, his ideas serve as a principal starting point for social realist thinking and continue to provide a source of inspiration for its development” (2010, p. 11).

It is also important to note that social realism is an evolving research programme that “continues to develop as it engages with the problem of educational inequality” (Rata and Barrett, 2014, p. 3) and this current collection brings together research largely from a ‘second generation’ of scholars who presented their research at the Sixth Cambridge Symposium on Knowledge in Education in July 2022. Following in the wake of the seminal work of Basil Bernstein, Rob Moore, Joe Muller, Michael Young, Leesa Wheelahan, and Karl Maton, the authors in this book show a new concern with bringing the key ideas and concepts of social realism to bear on current problems in the field. This is indicative of the emergence of the next generation of thinking and theory building, as represented by authors in this collection (see below).

Our aim in this introductory chapter is not to rehearse the key ideas that underpin social realism, as that has been done very effectively in many other places, but rather we aim to discuss several key concerns raised in critiques of social realism particularly in relation to equity and social justice which we link to two key areas central to this collection: responses to

the growing call for ‘non-traditional’ knowledge to become part of national curricula (for example in South Africa and New Zealand) and the tension between theoretical and practice knowledge (for example in the field of teacher education). This introductory chapter ends with a brief outline of each chapter and the way in which each contributes to the deeper ideas at work in the collection as a whole.

Social realism: a theory of knowledge

One of the recurring criticisms of SR is that its aim of epistemic access to vertical discourse for all students has not been supported with sufficient theorising and empirical investigation directly applicable to the classroom (Gericke, 2018). Social realists argue that access to vertical discourse is enabled through contact with powerful knowledge, knowledge that has power because it provides access to the natural and social worlds and allows participants to participate in debates and controversies about society, their field of practice, and in making decisions about their lives. However, some scholars argue that the concept of powerful knowledge may in fact work counter to its espoused aim, that of alleviating social exclusion and inequality in education. We will refer intermittently to an example of a recent critique offered by Zavitz (2023) who interrogates the social realist claim that access to powerful knowledge is likely to afford a more socially just, inclusive education for all. He asks important questions such as ‘what do epistemically situated knowledges look like? What are the characteristics of powerful knowledge and what does access look like?’ (p. 37). He concludes that “SR scholarship may in fact work counter to its espoused aims” (p. 13). But before considering Zavitz’s questions, and in response to more general critiques of social realism, we firstly reiterate two key points made by Young (2015) and Muller (2022) about social realism in general and powerful knowledge in particular. The first point to note is that social realism is primarily a “theory of knowledge, not of education” (Young, 2015). Secondly, Young and Muller’s (2013) original definition of powerful knowledge describes it as a “sociological concept and a curriculum principle”. We suggest that many critiques overlook these foundational definitions and as a result have unrealistic expectations for how theoretical concepts can answer curricular and social concerns (Rudolph, Sriprakash, & Gerrard, 2018). Moreover, Muller (2022) has explained the nub of the matter with his distinction between theories ‘of’ education, which are developed and elaborated by curriculum theorists, and theories ‘for’ education which require the input of subject specialists so there is a more direct empirical focus:

This difference comes to the fore in criticisms of ‘powerful knowledge’ that expect it to deliver outcomes that seem to be a matter for the didacticians rather than the theorists. For example, when didacticians reproach ‘powerful knowledge’ as being of little help to them in deciding which content to select for the curriculum, this expects too much from a concept that is a general and future oriented one; that is to say, pointing towards a more desirable future (Muller, 2022, p. 6).

Nevertheless, Muller (2022) has acknowledged “it has become clear that ‘powerful knowledge’, or social realism more generally, must deal with what it might mean to put ‘powerful knowledge’ to work in the classroom” (p. 7). A number of scholars have put the concepts of SR to work in practice-oriented ways, aiming to bridge the gap between a theory of knowledge and classroom practice with the underlying aim of equitable access to disciplinary knowledge. There is an expanding literature across a broad range of subjects (e.g., Chapman, 2021; Hudson, 2018; Maude, 2020; McPhail, 2023a) and early on Young et al. (2014) contributed to the recontextualisation of social realist ideas, particularly the concept of powerful knowledge, into an accessible form for teachers and head teachers in the UK in the book *Knowledge and the Future School: Curriculum and Social Justice*.

Regarding criticisms of social realism, in his recent critique Zavitz (2023) raises a number of points, which are also raised by Alderson (2020), about the theorisation of knowledge. We will address these here as they relate to our main thesis in this chapter that social realism contains a number of key theoretical concepts that can be put to work as curriculum principles. However, these principles require recontextualisation to become more concrete so they might act as guidelines for curriculum design and pedagogy. Recurring critiques concern both knowledge differentiation – what Zipin et al. (2015) describe as the overstated binary distinction between the sacred and profane – as well as the apparent valorising of the sciences because of their hierarchical knowledge structures where knowledge integration and subsumption are the norm.

Young and Muller have responded to these criticisms by arguing that the distinction between horizontal and vertical discourse remains a major theoretical pillar of social realism (for example see Young, 2015 and also McPhail, this volume) but they have conceded that by relying on too narrow a definition of powerful knowledge, they “risked leaving the Humanities and the Arts out of the reckoning” (Young & Muller, 2019, p. 198). However, we also note that the inferential concepts associated with powerful knowledge as theorised by Young and Muller (2013) such as knowledge differentiation, specialisation and systematicity, predictive

and explanatory potential, and fallibility - were put to use in subjects other than the natural sciences early on. In other words, there has been a ‘translation’ of the way the initial concepts can be applied and developed from the perspective of a variety of subjects (see for example Maude, 2015 in geography; Morgan, 2014 in geography; Morgan and Lambert, 2017 in music; Lambert, 2017 in geography; McPhail, 2014 in music; Ormond, 2014 in history; Yates, 2017 in history; Yates & Millar, in physics 2016). One challenge in applying the original set of concepts is to account for the ways in which disciplines or subjects with segmented knowledge structures create powerful knowledge. Nevertheless, using the social realist concept of ‘context-independence’, we suggest that the initial core concepts of SR are sufficiently abstract to ‘travel’ or to be ‘moved around’ and adjusted in various contexts without losing their applicability and epistemic integrity. An understanding of the potential epistemological and cognitive affordances of an expanded view of powerful knowledge is likely a prerequisite for realising the concept’s full potential in practice. We discuss some more recent developments of the concept in the following section.

An expanded view of powerful knowledge

The power of concepts

The work of Lambert (2017), Maude (2020), Rata (2020), and McPhail (2023a) has expanded the notion of what powerful knowledge might look like in curricula design practice, and what the concept’s affordances might be in the context of the school. McPhail (2023a) for example makes the case for understanding powerful knowledge fundamentally as inferentially and hierarchically structured disciplinary concept networks which encapsulate and condense explanations about the world (in critical realism, transitive knowledge of the intransitive domain). In this definition, powerful knowledge as a curricula principle refers to conceptual systems of meaning and not to lists of contents (e.g. see Philpott, 2023). In his recent work McPhail (2023a) explains in some detail how the concept of powerful knowledge can be put to use in the secondary school music classroom. He demonstrates that despite the segmented structure of the subject and its context-dependent nature, the concept of powerful knowledge can provide a mechanism for design cohesion which is at the same time inclusive of varied musical genres and styles (content) i.e., powerful knowledge moves beyond the traditional ‘knowledge of the powerful’ to be inclusive of ‘non-traditional knowledge’. This occurs primarily through what the differentiation of concepts and content allows theoretically. In the example of Music, abstract, generative concepts, which are broadly agreed upon in the discipline and wider musicking communities (e.g., Hijleh, 2012; McPhail, 2023; Thomas,

1970), provide a mechanism for students to develop an understanding of the relationships between the abstract and the particular that can contribute to developing a deep understanding of music. Ideally students need explicit introduction to the way knowledge is produced so they are aware of its dynamic and contested nature and of the varying “criteria for judging knowledge claims” (Wheelahan, 2023, p. 93). When studying knowledge from non-Western cultures students and teachers also require a sensitivity to epistemological and ontological differences (McPhail, 2023b).

In the context of geography, Maude (2022, p. 232) provides us with a succinct definition of powerful knowledge that captures its essence as knowledge “that gives students the intellectual ability to analyse, explain, predict, evaluate and think about the world in ways that are beyond their personal experience”. In alignment with the work of Rata (2021) and McPhail (2020 a&b, 2023a) Maude (2022) theorises that PK is operationalised when students are enabled to utilise the power of concepts to “think in new ways” and “to make generalisations and apply them to new contexts” (p. 232). Ormond (2014), in the case of history, suggests history knowledge “needs to take students beyond their existing experiences into the ‘unknown’...” (p. 166). Maude (2020) has specified powerful knowledge as a curriculum design principle for geography by identifying a small number of superordinate concepts (place, space, environment, and interconnection) that meet epistemic criteria of (i) being at the top of a hierarchy of concepts, (ii) having the potential to be applied to a great variety of topics and content, and (iii) serving a number of functions (e.g., as analytical tools, categories etc.). With these three characteristics the key concepts create a conceptual canopy that can reach across a variety of topics and enables students’ capacity “to analyse, explain, predict, evaluate and think about the world in ways that are beyond their personal experience” (Maude, 2020, p. 232).

These examples from music and geography illustrate that it is concepts that provide the means for learning that can take us beyond the limitations of experience. As Wheelahan (2023, p. 88) has pointed out “our knowledge of the world is always concept dependent”. Moreover, it is disciplinary and subject concepts that provide the means for critique and expansion of dominant discourses or ways of thinking in a discipline or subject. This generative quality of disciplinary knowledge is made possible because of its inferential and context-independent nature and the fact that disciplinary knowledge is emergent - contested and revisable. It is then, also *the structure* of this knowledge – its systematicity (Lambert, 2017) - that makes it powerful, not necessarily the specific content the concepts may point to (Muller & Young, 2014). Understanding powerful knowledge as fundamentally conceptual knowledge, rather than as a fixed set of content, is paramount for putting the concept to use in some way in the

service of curriculum design that might lead to a Future 3 realisation (Young & Muller, 2010) - a realisation that combines access to PK through progressive pedagogies of engagement (Pountney & McPhail, this volume; Barrett & McPhail, 2021). Moreover, exposure to this type of knowledge systematicity is likely to afford the development of critical and inferential thinking. This is Winch's (2017) notion of expertise that requires inferential ability derived from deep familiarity with both the 'knowledge-that' and the 'know-how-to' of the knowledge domain and teachers' 'panoramic expertise' of what it is they are teaching (Winch, 2017; see also Rata, this volume).

The bringing together of the key concepts (knowledge-that), the key procedural knowledge (know-how), and applied knowledge (know-how-to) is likely to lead to the development of deep learning and expertise. This is one of the key propositions underpinning the Curriculum Design Coherence Model (Rata, 2021 and this volume; McPhail, 2020a, 2023) which Muller (2022) has noted as a clear example of "a deductive model derived from social realism first principles" (p. 30). Readers are referred to Rata (2021), Rata & McPhail (2020), McPhail, (2020b), McPhail, et al. (2022), Pountney & Swift (2022); Pountney, Rata, & Swift (in-press), Naidoo (2020), Tian et al. (2022), and Rata (this volume).

The application of the CDC Model has been undertaken by Pountney and Swift (2024) in a teacher professional development context, offering an alternative approach to the largely transactional model that predominates in the English context, one based on developing teachers' relationship with knowledge and foregrounding teachers as professionals with agency. This is further discussed in relation to curriculum coherence and professional knowledge (Pountney, Rata and Swift, in press) as epistemic coherence and a conceptual language for teachers to assert authority over their curriculum and to defend curricular decision making.

The concept of powerful knowledge has also been elaborated and extended by Lambert in the context of the GeoCapabilities project (<https://www.geocapabilities.org/geocapabilities-3-old/about/principles/>). Lambert's work answers some of the criticisms of powerful knowledge as unrelated to the broader, non-cognitive concerns of education and having only weak links to the espoused social realist aim of social justice. Firstly Lambert (2017) rephrases powerful knowledge as PDK - powerful disciplinary knowledge - and secondly, he draws on Bernstein's pedagogic right of enhancement (see below) linking this right to the concept of human capabilities – the cultivation of human powers and “the development of human agency and potential” (Deng, 2022, p. 604). Drawing on the work of Sen and Nussbaum, Lambert et al. (2015, p. 731) suggest that a capabilities approach “could provide a way to frame curriculum

making by bridging purely subject matters to some specific emancipatory educational outcomes. It links the teaching and learning of powerful disciplinary knowledge to the notion of developing human potential...”. PDK is seen as the central means through which students’ capabilities are developed and it is far more than the transmission of isolated facts, which Lambert (2017) notes in and of themselves are not particularly powerful. The power emerges as students come to know the interconnected nature of their subject - “what is potentially powerful is understanding [a subject’s] systematicity” (Lambert, 2017, p. 133). This in turn provides the means to apply knowledge in practical, new, and creative ways and to also critique knowledge and have grounds for the critique. Access to, facility with, and capacity to critique theoretical knowledge in one's domain of practice is a fundamental capability that is needed to realise particular functionings - to make choices about what to do and why. However, Lambert’s elaboration of powerful knowledge is very much intertwined with the potential for teachers to enact powerful knowledge in curriculum contexts as ‘curriculum makers’ and ‘leaders’. This involves empowering teachers so that their work in turn empowers students in that it develops in them “an ability or capacity to do something that has an effect or an outcome” (Maude, 2016, p. 71). Herein lies a major challenge for the profession – the need for understanding the symbiotic relationship between theoretical and practice knowledge in the field of teacher education (see for example Swift, this volume).

Challenges for the teacher

The application of powerful knowledge certainly requires teachers themselves to be able to move beyond accepted, taken for granted norms in relation to what should be taught at school and to consider how the curriculum can be put to use in the name of equity and social justice. We argue that the social-epistemic theory of knowledge drawn on by social realists is the best theory we currently have that allows both epistemological and social dimensions of knowledge to be brought together into some form of equilibrium (Maton, 2014). Moreover, this matters because there can be no social access, no grounds for critique of knowledge on its terms, without epistemic access. Without this access, students are locked out and don't know why they are locked out.

The case for curriculum design as a judgement layer in teachers’ professional practice, connecting the knowledge’s epistemic structure to the student’s cognitive structure, from which learning results is made by Rata (2016; 2021). Teacher’s professional development is central to this (Rata and McPhail, 2020) so that sufficient subject knowledge can be understood and applied: “Teachers themselves must comprehend what they are teaching in order to understand

their role in the cumulative sequencing of academic concepts and content” (Rata and Barrett, 2014, p. 5). The case is made for teachers having a level of curriculum literacy and for curriculum studies to be part of teacher education courses to promote teachers’ curriculum thinking (Pountney, 2020).

Challenges for enactment

Zavitz (2023) and others ask whether an emphasis on powerful knowledge risks maintaining the reification of certain knowledge categorisations and maintaining arbitrary divisions (such as between popular music and classical music for example) rather than enabling students and teachers to challenge them. We argue that a conceptual view of powerful knowledge goes some way to answering these concerns. Young and Muller (2019, p. 202) have pointed out that we cannot underestimate the potential of powerful knowledge to generate new possibilities – *potentia* – or ‘epistemic power’, rather than *potestas* (power over), nevertheless the key tenets of social realism will always come up against structural and political impediments present in any particular context as well as political and cultural agendas. As principles for curriculum conception and enactment however social realist ideas remain powerful because they are part of a logically connected theoretical structure for understanding knowledge. The key tenets, which are essentially sociological and derived from Bernstein’s concepts of knowledge differentiation, may well be misunderstood and misapplied. Some instances in the UK for example include advocacy of ‘knowledge-rich’ curricula that draws on a misreading of powerful knowledge, misinterpreted as primarily a content rather than a concept based curriculum (e.g., Philpott, 2022) and one that emphasises the ‘canon’ as important because it is authoritative knowledge bequeathed to us without necessarily providing students with the knowledge they need to evaluate, judge, and critique knowledge claims. Young and Muller refer to this approach as ‘knowledge as authority’, as in ‘Future 1’, in which knowledge is ‘frozen’ in its authoritative state and beyond critique, whereas they refer to the capacity of students to engage with systems of meaning, evaluate and critique knowledge claims, and participate in debates as ‘Future 3.’

A key point to note about Zavitz’s critique that enables him to reach the conclusion that social realism may in fact work counter to its aims is that he draws on a somewhat reductive account of powerful knowledge, equating it with a rather narrow set of concepts and contents, presumably drawn from his empirical context (tertiary music education), which is likely to reinforce certain normalised forms of cultural capital. He does not quite get to the core of the matter by asking “is there something to be taught that is greater than the interests and

perspectives of particular groups” (Rata & Barrett, 2024, p. 14). Such an approach requires teachers to adopt a doubly critical perspective and understanding. As Wheelahan (2023) puts it, while “theoretical knowledge will always reflect notions of power, this does not mean that such knowledge is reducible to power. This is because such knowledge is *about* something *other* than relations of power” (p. 88, italics in original). Zavitz (2022) however claims that where students are presented with singular ways of explaining the world this “may dilute social justice”.

In Ravitz’s context, social justice means a jazz student’s’ access to finding a personal improvisatory ‘voice’ rather than having one imposed on them. However, entering into a specialised world may require that students, at least initially, acquire certain knowledges and associated attributes before they are able to challenge or extend them (Carver, 2020; McPhail, 2023a; Richardson, 2020). Moreover, as Wheelahan (2010) has argued “induction into the disciplinary structures of knowledge is important even if we wish to overturn elements of those structures, because understanding those structures is a necessary condition for revolutionizing them” p. 78).

In the case of jazz for example, there are many criticisms of its systemisation within education – for example to the detriment of ‘true’ and more ‘authentic’ improvisation abilities (Wilf, 2014). But equally, there are critiques that argue how *within an educational context* – rather than a socio-cultural context – some explicit systemisation is required so the knowledge for success can be made visible for students (Richardson, 2020). We suggest that Zavitz’s scenario in his paper describes a certain type of perspectivism and is a misunderstanding of the concept of powerful knowledge and as such the problem he identifies is pedagogical rather than a problem with the knowledge itself or the concept of powerful knowledge. For example, where pedagogy becomes a form of authoritative rote or unquestioned transmission - *potestas* (power over) - rather than a conceptual exploration - *potentia* (power to) – the learning is unlikely to provide the means for a student to ‘think the unthinkable’ (Bernstein, 2000). It is exactly this type of *potentia* derived from epistemically structured knowledge made available and accessible to students through an engaging ‘Future 3’ type approach (Young & Muller, 2012) that is likely to be required for the pedagogic right of *enhancement* to occur as new and old knowledge create tension points between “past and possible futures” (Bernstein, 2000, p. xx). Moore (2013b) has described this as the key ‘interruption’ rather than ‘reproduction’ purpose of education. Finding the means to demonstrate how powerful knowledge can stand free of the undue influence of social interests is a key challenge for the pedagogue. A key mechanism is to share with students how knowledge can also be ‘knowledge of the powerful’

and how knowledge itself is developed and contested over timeⁱ. This is to acknowledge, as Muller (2022) notes, “the pathos of specialised knowledge, a precarious public good with the potential to both liberate and alienate” (p. 8).

Powerful knowledge and the everyday world

A further criticism of PK noted by Zavitz (2022, p. 36), and also raised by Alderson (2020, p. 33) and others (e.g., White, 2018) is that “powerful knowledge has no relation to power unless it works through real daily life” (p. 33). In other words, it is in the everyday application of powerful knowledge that it realises power for students. This appears to be closely related to the idea that powerful knowledge requires the enlistment of other concepts for it to be activated and to realise its potential (Gericke et al., 2018). We have two responses to this point. The first is that we hypothesise that encountering powerful knowledge in the various subjects that students experience at school, and particularly in the specialisations they choose, very likely does change their responses and awareness of everyday life and the way they look at the world. Apart from a general ‘washdown’ effect from specialised knowledge, even if students do not necessarily gain mastery, scholars note the potential effects. For example, Karpov (2003) suggests “‘students’ spontaneous concepts become structured and conscious [and] as a result, students’ thinking becomes much more independent of their personal experience ... and [they] develop the ability to operate at the level of formal-logical thought’ (p. 66). Moreover, drawing on the work of Geary (2016) and Sweller (2019), McPhail (2020a) and Rata (this volume) also suggest that coming into contact with epistemically structured knowledge affects the development of the cognitive architecture of the mind. In other words, “how optimal learning occurs is very likely analogous to the way epistemic knowledge is structured” (McPhail, 2020a, p. 396).

This idea is also suggested by scholars such as Erickson and Lanning (2014) who argue that transfer and synergistic thinking occur as a result of engaging in conceptual thinking; concepts are the mechanism which enable humans to “transfer understandings to multiple concrete examples [to] develop brain schemata for insightfully seeing patterns and connections between new knowledge and prior knowledge” (p. 36). So, where Zavitz and others are cautious about the ‘higher value’ afforded to vertical discourse, we argue there is considerable merit in considering its structural affordances as particularly significant in the development of human cognition via curriculum design (Geary, 2024; Geary & Berch, 2016; van Merriënboer & Kirschner, 2018; Sweller, 2016, 2024) and the resulting political and moral implications that may result (Rata, 2017b). Van Merriënboer and Kirschner (2018, p. 2) argue that where

integration and transfer are key design components there can be transfer to both work settings and daily life. Moreover, conceptual thinking provides us with “a language for engaging in political, moral, and other kinds of debates” (Young, 2008, p. 14).

Secondly in relation to the relationship between powerful knowledge and everyday life, we enlist the idea of developing “a relationship to knowledge” or an epistemic identity as significant in impacting the everyday lives of students (Young, 2020). Barnett’s (2009) work for example theorises the connection between what becomes epistemologically known and the effects this has on the development of dispositions and identity. In this theorisation, not only is knowledge acquired but ‘the self’ is changed. Gamble (2014), drawing on the philosopher Charlot (2009), has enlisted a similar idea as ‘the epistemic self’. Bernstein also argues that contact with disciplinary knowledge develops ‘a specialised consciousness’; ‘a sense of the sacred, the otherness of educational knowledge’, ‘[a sense of] the subject as the linch-pin of identity’ (Bernstein, 1971, quoted in Beck, 2002, p. 619).

Many social realists acknowledge the importance of students' everyday knowledge and the potential for learning this knowledge can bring while also acknowledging that at times school knowledge will be counter-intuitive and removed from everyday concepts and understandings (Rata & Barrett, 2014; Gamble, 2014; Pountney & McPhail, 2019; Rata, 2016; Barrett & McPhail, 2021). McPhail (2023a) for example suggests that accepting the affordances of knowledge differentiation, “does not preclude recognition of the unique and idiosyncratic dimensions of informal knowledge ... or of students’ prior knowledge” (p. 105). This may be particularly so in the arts and humanities where students may arrive at school with well-developed knowledge acquired in informal or semi-formal contexts (e.g., community drama, art, or music lessons). Such instances may require us to reconsider the rather strict binaries of Bernstein’s conceptualisation of horizontal and vertical discourse (see McPhail, this volume). Ideally specialist subject knowledge can come into play with students’ pre-existing knowledge through a processes of recontextualisation and ‘thingification’ (Martin, 2007) - the conceptual naming of experiential or every day and specialised understandings to enable conversations, deliberations, and uses of concepts (McPhail, 2023a).

In summary, the expanded view of PK we have discussed comprises emergent, generative, and revisable conceptual systems of meaning. Designing and teaching from a conceptual standpoint provides the means to see why particular knowledge has been regarded as powerful in the sense that it is ‘truthful’ as a referent to reality. Teachers and students can consider what new knowledge might be also regarded as powerful. This is a conception of powerful knowledge as dynamic and one that works at the more abstract level, one step

removed from content itself. Moreover, powerful knowledge within an educational setting is the means to an end - deep understanding and critical thinking - not the end in itself. As suggested above, social realists are likely to argue that it is the power of concepts that enables outcomes of criticality so desired in the wider field of education which in turn provides the mechanism for linking powerful knowledge to criticality and social justice.

The contribution of this book to the debate

The thirteen chapters of this book are divided into four sections. The first, *Theoretical Matters*, of which this first chapter forms a part, primarily considers how theory informs the curriculum, beginning with Joe Muller's appraisal in Chapter 2 of the contribution of the European tradition of Didaktik to the specialisation of knowledge and knowledge structures, and how curricular subjects relate to the particular mix of concepts, content and skills that are salient to them. In Chapter 3 Newton and Elaine Duarte consider the curriculum as a relationship between knowledge of reality and the development of the individual, drawing on the work of Vygotsky and Gramsci to consider progressive pedagogies.

In *Curriculum Contestations*, the second section of the book Mauricio Braz de Carvalho and Valentina A. Galian provide us with an account of the discourses surrounding the development of a new music curriculum in Brazil. The context is "a broad curriculum reform underway in Brazil, which has triggered some fierce debates about the role and shape of school subjects". The authors draw on policy and academic commentary and research that highlights in particular an intellectual-affective tension in the music education field. In Chapter 5 Barbara Ormond considers the current powerful global discourse of decolonisation of the curriculum from the New Zealand perspective. She utilises draft 'refresh' of the New Zealand curriculum as an example of the decolonisation and considers this across a range of subjects. In Chapter 6 Graham McPhail considers the proposition that socio-cultural knowledge of certain types might well be recontextualised into the vertical discourse of the school. He uses re-colonial Māori music as a case to consider how such inclusion of 'non-traditional' knowledge into the curriculum might occur. Similar issues of curriculum inclusion are explored by Mandy Carver in Chapter 7 from the context of South Africa. Drawing on tertiary music education as an example, her analysis reveals how inclusion of different types of knowledge may not necessarily result in equitable outcomes for students.

In the third section, *Knowledge and Teacher Education*, Rata, in Chapter 8, draws deeper into her realist theory of knowledge to develop the theoretical and philosophical intricacies of

the Curriculum Design Coherence Model, elaborating ‘reasoned connection’, insights with reference to an empirical study, the *Knowledge Rich School Project*. In Chapter 9, Richard Pountney and Michael Coldwell, take a case of teacher mentoring to make a realist analysis of teachers’ professional learning, formulating the complementary features of realist evaluation and social realism as a conceptual/theoretical model. Yael Shalem and Stephanie Allais, in Chapter 10, consider the curriculum of teacher education programmes to identify how education studies has changed over time, viewing this through the lens of *learner-centred pedagogy*, *pedagogical reasoning*, and *Bildung-centred Didaktik*. In Chapter 11, Diane Swift examines the practicum element of teacher education programmes by means of Bernstein’s concepts of vertical and horizontal discourse and Barad’s quantum epistemology to show how each form of discourse has distinctive time and space characteristics.

In the final section, *Crossing Boundaries*, interdisciplinarity is explored in Chapter 12 and Chapter 13. Firstly, Leesa Wheelahan and Gavin Moodie explore the concept of the interdisciplinary curriculum and equity. They argue that an interdisciplinary approach requires acknowledgement of disciplinary knowledge and its boundaries as the means to the necessary criteria to evaluate knowledge claims. Without this recognition and engagement with disciplinary knowledge the authors argue that an interdisciplinary curriculum could further exclude students from disadvantaged backgrounds. In the final chapter of the book Richard Pountney and Graham McPhail utilise Young and Muller’s ‘Future 3’ ideal as a means to consider curriculum developments in a school in the UK. The school takes an innovative expeditionary and interdisciplinary approach to curriculum that is both knowledge-led and learner-engaged.

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ⁱ See for example the CDC Model, Element 2, criterion 2 in Rata, 2021, p. 467.