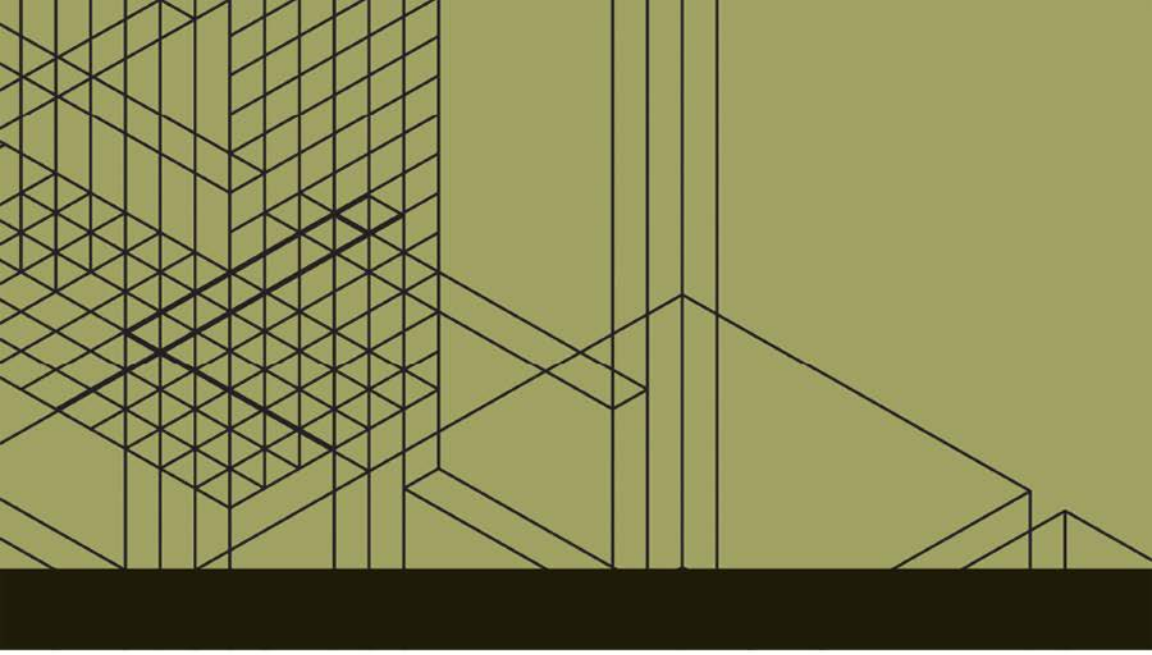
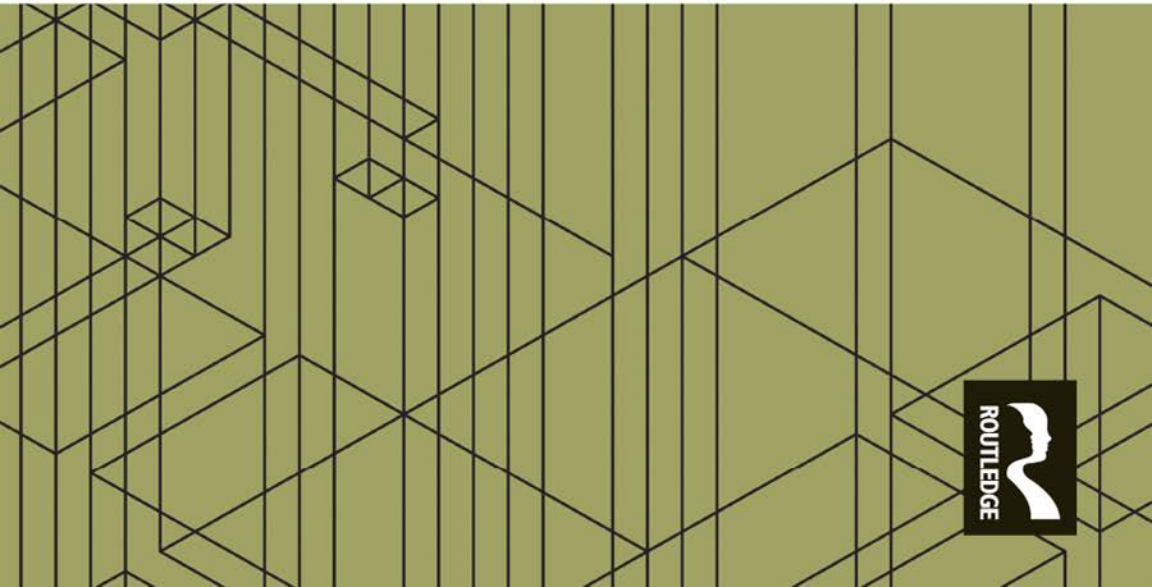


KNOWLEDGE, CONTENT, CURRICULUM AND *DIDAKTIK*

BEYOND SOCIAL REALISM

Zongyi Deng



There is no book that covers the same territory around curricula and teaching as *Knowledge, Content, Curriculum and* Didaktik. Deng draws on a wide variety of contemporary and classical English-language resources as well as less well-known – in the English-speaking world – but very important German-language resources. I believe Deng's book constitutes a fundamental resource for discussions of both practical curriculum-making and teaching and educational and curriculum theory. *Knowledge, Content, Curriculum and* Didaktik will be a basic text wherever curricula and teaching are thought about and studied.

Ian Westbury
Emeritus Professor of Curriculum Studies
University of Illinois at Urbana-Champaign

This book's primary argument that questions of knowledge are central to curriculum is ancient but mostly ignored, even denigrated, in contemporary English-speaking literature. The originality of Deng's take on these questions flows from his global experience and ability to cross-cultural lines to draw out the best in different traditions. He was educated in mainland China, studied in the USA, worked in Singapore and Hong Kong, and currently teaches in England. He knows and understands Asian, European and North American curricular traditions and has studied the best offered by each. There is no other book on curriculum with this rich intellectual history.

F. Michael Connelly
Emeritus Professor of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education, University of Toronto

This is a welcome and ambitious book which challenges those who work in the field of curriculum studies, as well as the sociologists of education who have tried to reform it. The author's advice to the former is that not only are there lessons to be learned from the sociologists concerning the neglect by mainstream curriculum studies of the question of knowledge and its acquisition, but that they need to extend their over-parochial focus and learn lessons from Europe and beyond, especially the German Didaktic tradition. The author's recommendations for the

sociologists is that they too have to look beyond their discipline if they are to have the influence that they seek on what happens in classrooms.

Michael Young
Professor of Sociology of Curriculum
UCL Institute of Education, London

Some school leaders appear to see teaching as merely an instrumental 'factor' contributing to school performance, with the curriculum crisis being fixable by the provision of scripted lessons. This book comes as a relief therefore. Deng not only rebalances curriculum thought towards a meaningful focus on knowledge questions but roams lucidly over related fields with a truly international perspective. This book is weighty, thorough and very stimulating in its analysis. It should provide a foundation and reference point for those interested in the quality of education for years to come. It is forward facing and provides theoretical heft to the vision offered by the creation of Future 3 curriculum scenarios as an alternative to 'twenty-first century competence'. In the broader context of 'post truth', alternative facts and the existential challenges of the Anthropocene, society requires a serious *educational* response. This book contributes to that.

David Lambert
Emeritus Professor of Geography Education
UCL Institute of Education, London

Knowledge, Content, Curriculum and *Didaktik*

Bringing to bear a wealth of literature from curriculum theory, *Didaktik*, philosophy of education and teacher education, this book broadens and enriches the conversation initiated by Michael Young and his colleagues on 'bringing knowledge back in' (Young, 2007). *Knowledge, Content, Curriculum and* Didaktik is distinctive in providing a comprehensive and multifaceted analysis of the role of knowledge, and in particular curriculum content, in relation to curriculum policy, curriculum planning and classroom teaching. It makes a case for linking knowledge and content to the development of human powers or capabilities needed for the 21st century and unpacks the challenges for curriculum policy, curriculum planning and classroom teaching. The book discusses, among other issues:

- Educational aims and theories of knowledge
- School subjects and academic disciplines: differences and relationships
- School subjects and theories of content
- Understanding the content for teaching

The book will be relevant for scholars, researchers, policy makers and curriculum developers who seek a more sophisticated, more balanced and philosophically better grounded understanding of the role of knowledge and content in education and curriculum.

Zongyi Deng is Professor of Curriculum and Pedagogy at the UCL Institute of Education, University College London. He is also an executive editor of the *Journal of Curriculum Studies* (*JCS*) and has held faculty positions at Nanyang Technological University and the University of Hong Kong. His interest areas include curriculum content or subject matter, curriculum theory, didactics (*Didaktik*), curriculum policy and reform, and comparative and international education. His publications appear in *JCS, Curriculum Inquiry*, *Comparative Education*, *Teaching and Teacher Education*, *Teachers and Teaching*, *Cambridge Journal of Education*, *Science Education* and other international journals. Edited books include *Re-envisioning Chinese Education: The Meaning of Person-Making in a New Age* (with Guoping Zhao; 2015) and *Globalization and the Singapore Curriculum: From Policy to Classroom* (with S. Gopinathan and Christine Lee; 2013).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Knowledge, Content, Curriculum and *Didaktik*

Beyond Social Realism

Zongyi Deng

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My sincere thanks as well go to Professor Michael Young (UCL Institute of Education [IOE], University College London) whose remarkable, extremely timely scholarship concerning 'bringing knowledge back in' has inspired, stimulated and informed my recent research and inquiry, culminating in the completion of this book project. It is Michael who challenged me to write this book when we met at the IOE in July 2017. He has profoundly impacted my intellectual life and career. I am particularly grateful for his remarkable vision, wise consult, generosity and unceasing support.

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Last but not least, I would like to thank my colleagues and friends who, on various occasions and in varying ways, have provided direct or indirect support in relation to this book project: Allan Luke (Australia), Stefan Hopmann (Austria), Johan Muller (South Africa), S. Gopinathan (Singapore), Walter Parker (the United States), Bill Green (Australia), David Lambert (the United Kingdom) and Michael Uljens (Finland). Please forgive me if I have left out any other names. I am also grateful to the following publishers for granting permission to reuse material from the following articles:

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Preface

Knowledge questions – 'What knowledge is of most worth?', 'How is knowledge selected and organised into curriculum content?' and 'How is content taught in classroom?' – have all but disappeared in current global trends in curriculum policy and practice. There has been a shift in curriculum policy from a concern with what is taught in school to a preoccupation with competences and academic outcomes. Accompanying this shift is a move to bypass knowledge-based curriculum planning in favour of developing academic standards and competency frameworks.

Over the last ten years, UK-based sociologist of curriculum Michael F. D. Young and his colleagues have embarked on a project of 'bringing knowledge back in' to the recent global discourse on curriculum policy and practice. Disciplinary knowledge, they argue, is *powerful knowledge* because the acquisition of this knowledge allows students to move beyond their everyday experience, to envisage alternatives and to participate in social and political debates. Therefore, helping students gain access to disciplinary knowledge that they cannot acquire at home is the central purpose of schools – an entitlement for *all* students. Their project has given rise to the emergence of the social realist school, *social realism*, in the United Kingdom, South Africa, Australia, and some Latin American and European countries – a distinctive research tradition particularly concerned with the role of knowledge in education and curriculum.

Building on, but going beyond, the social realist school, this book explores knowledge questions by bringing to bear a wealth of literature from curriculum theory, *Didaktik*, philosophy of education and teacher education. It has three unique features. First, the book makes a distinction between knowledge and content (knowledge selected into the institutional curriculum) and regards the latter as being at the heart of curriculum planning and classroom teaching and, therefore, an essential topic of curriculum inquiry. Second, content is viewed as entailing not only *epistemological* issues (concerning ways of classifying and conceptualising knowledge) but also *teleological* issues (having to do with purposes of school education) and *practical issues* (concerning curriculum planning and classroom teaching). Third, the book employs *Bildung*-centred *Didaktik* and Schwabian curriculum thinking – both of which hold the cultivation of human powers (capacities or abilities, ways of thinking, understanding worlds) as the

central purpose of education – to tackle knowledge questions across policy, programmatic and classroom arenas.

In short, *Knowledge, Content, Curriculum and* Didaktik provides a comprehensive and multifaceted analysis of the role of knowledge in relation to curriculum policy, curriculum planning and classroom teaching. Furthermore, it makes a case for linking knowledge and content to the development of human powers needed for the 21st century. The book discusses, among other issues:

- Educational aims and theories of knowledge
- School subjects and theories of content
- *Bildung*, liberal education and the cultivation of human powers
- Rethinking teaching and teachers
- Reconceptualising pedagogical content knowledge

This book is relevant for scholars, researchers, policy makers and curriculum developers who seek a more sophisticated, more balanced and philosophically better-grounded understanding of knowledge and content in relation to education and curriculum.


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1 Introduction

In curriculum no questions are more fundamental than 'What knowledge is of most worth?', 'How is knowledge selected and organised into the curriculum for educational purposes?' and 'How is curriculum content taught in classroom?' Such knowledge questions are at the heart of teaching and learning – the curriculum. However, knowledge questions have all but disappeared in current global trends in curriculum policy and practice. Over the last two decades there has been a shift in curriculum policy from a concern with what is taught in school to a preoccupation with competences and academic outcomes (Yates & Collins, 2010; Young, 2009a). Accompanying this shift is a move to bypass knowledge-based curriculum planning – centring on knowledge selection and organisation for teaching and learning in school – in favour of developing academic standards and competency frameworks (Hopmann, 2008; Karseth & Sivesind, 2010). Behind these developments is the pervasive rhetoric of the *knowledge society*, which, ironically, eschews knowledge in favour of generic competences – such as problem-solving, critical thinking, innovation and creativity – deemed necessary for the twenty-first century. The neglect of knowledge questions, too, has to do with the 'learnification' of educational discourse (Biesta, 2010) – in which teaching is construed as the facilitation of learning rather than the imparting of knowledge, with little or no regard for the 'why' (purpose) and 'what' (content) of education (Biesta, 2005).

Knowledge questions, too, have vanished from the horizon of much contemporary curriculum theory and theorising that has been fundamentally shaped by neo-Marxism, postmodernism and related discourses such as poststructuralism, deconstruction and feminism (see Deng, 2018). In neo-Marxist curriculum theorising schooling is seen as a mechanism for reproducing social and economic inequality in which the curriculum, a selection of knowledge, is a political construction reflecting the interest and ideology of those who hold power (e.g., Apple, 2004; McLaren, 2015). From this perspective, 'What knowledge is of most worth?' is no longer an important curriculum question *but* 'Whose knowledge is of most worth?' – in terms of class, race, gender and power relation (Apple, 2004). 'How is knowledge selected and organised into the curriculum for educational purposes?' is replaced by the political question of how the selection and organisation of knowledge 'reflects both the distribution of power and

the principles of social control' (Bernstein, 1971, p. 47; also see Apple, 1990, 2004). In postmodern, poststructural and feminist curriculum theorising knowledge questions as such have no place at all because knowledge is merely the perspective/standpoint of its producers and because there is no better or worse knowledge (Moore, 2009).

'Bringing knowledge back in' and social realism

Over the last ten years, UK-based sociologist of curriculum Michael F. D. Young, and his colleagues have embarked on a project of 'bringing knowledge back in' to the recent global discourse on curriculum policy and practice (e.g., Young, 2008a; Young, Lambert, Roberts, & Roberts, 2014; Young & Muller, 2015).Their project has given rise to the emergence of a distinctive *social realist school* – under the banner of *social realism* – a coalition of scholars in the United Kingdom, South Africa, Australia and some Latin American and European countries, with seminal writers such as Michael Young, Johan Muller and the late Rob Moore. They have formed a distinctive research tradition, *social realism*, particularly concerned with the role of knowledge in education and curriculum.

Originating as a critique of social constructivism which has plagued the field of the sociology of education in the United Kingdom,[1] social realism provides a powerful defence of knowledge based on critical realism and the works of Émile Durkheim (1858–1917) and Basil Bernstein (1924–2000). From the perspective of critical realism, knowledge, albeit socially constructed under given historical conditions, has an 'objective' character because it is produced by specialised communities that are 'relatively independent from any particular social [experiential] base' (Moore, 2013, p. 346). The objectivity is achieved through the employment of various methodologies for generating and validating knowledge claims. Furthermore, there are 'criteria for differentiating between bodies of knowledge and for deciding that some are better than others' (p. 339) – which are to constitute the basis for curriculum development.

For Michael Young and Johan Muller, such criteria can be found in the works of Durkheim and Bernstein. Durkheim's distinction between the sacred and the profane provides the basis for differentiating academic, disciplinary knowledge from everyday knowledge:

> the conceptual and social differentiation of the everyday world of survival (the profane) from the totemic systems which allowed people in primitive societies to speculate about the afterlife (the sacred) became the social basis of science and other forms of knowledge that could be developed free from the exigencies of everyday contexts and problems.
>
> (Young & Muller, 2013, p. 234)

On this account, disciplinary knowledge is characterised by vertical discourse which is 'systematically principled', 'specialised' and 'context-independent' whereas everyday knowledge is by horizontal discourse which is 'local,

context-dependent', 'non-specialised' and 'common-sense' (Young & Muller, 2013; also see Young, 2008b).

Drawing on Bernsteinian distinction between vertical (or hierarchical) and horizontal knowledge structures, Young and Muller further differentiate between two broad types of specialised disciplinary knowledge: natural sciences on the one hand and social sciences and humanities on the other.

> The first is that they build cumulatively and progressively, with earlier formulations being subsumed by later formulations. Bernstein called this form a hierarchical knowledge structure, in terms of which different knowledge structures and their bodies of theory differ in terms of their degrees of verticality (Muller, 2007). This clearly describes the family of the natural science. . . . The second typical form is that the internal relations – theories and relations between sets of concepts – accrue not by one subsuming the other, but by the addition of parallel theories (languages, or sets of concepts), or in Bernstein's terms, horizontally. These parallel languages (bearing in mind that variants like historical narrative also belong here) co-exist uncomfortably but necessarily, because the unavoidable context-boundedness of their concepts limits inter-translatability and hence their epistemic guarantees. This clearly describes many of the social sciences and, somewhat more ambiguously and in some cases in different ways, the humanities.
>
> (Young & Muller, 2013, p. 239)

The vertical or hierarchical type of disciplinary knowledge is more exemplified by STEM subjects and less by social sciences, arts and humanities, which tend to exhibit the horizontal type.

By way of these distinctions, Young and Muller develop *a theory of powerful knowledge* that posits the characteristics and powers of specialised disciplinary knowledge. As a product of human achievement, disciplinary knowledge is *powerful* because it represents the 'best' understanding of the world human beings can develop. Developed by specialised communities of scholars, this knowledge is inexorably associated with specialisation: 'Like human progress, better ways of knowing are always associated with specialisation, with the intellectual division of labour, and its relationship with the social division of work and occupations' (p. 231). In specialised communities there exists a set of generally agreed-upon norms, criteria and procedures that can 'distinguish the best proposition from other likely contenders' (p. 236). Therefore, while produced under social conditions and contexts, disciplinary knowledge has value or power that 'is independent of these originary context and agents' (p. 237).

Disciplinary knowledge is powerful also because of the powers that knowledge gives to those who possess it. This knowledge provides students with 'more reliable explanations and new ways of thinking about the world' and 'a language for engaging in political, moral, and other kinds of debates' (Young, 2008b, p. 14). Acquisition of this knowledge allows students to move beyond their particular experience and to 'envisage alternative and new possibilities' (Young & Muller,

2013, p. 245; Young, 2013). Furthermore, the possession of this knowledge gives students control over their own knowledge: this knowledge 'allows those with access to it to question it and the authority on which it is based and gain the sense of freedom and excitement that it can offer' (Young, 2014, p. 20).

On the basis of this theory of knowledge, Young theorises about the central aim of schooling, curriculum planning and classroom teaching. The central purpose of the institution of schooling is to help students gain access to disciplinary knowledge which they cannot acquire at home. Access to powerful disciplinary knowledge is an 'entitlement' for *all* students regardless of their socioeconomic status, races and genders. It is therefore a social justice issue (Young, 2013). Curriculum planning involves a process of 'recontextualising' an academic discipline into a school subject – selecting, sequencing and pacing academic knowledge in view of the 'coherence' of the discipline and constraints created by the developmental stages of students (Young, 2013). Classroom teaching is a process of passing on, or helping students to acquire, a body of disciplinary knowledge that they cannot acquire at home and of taking students beyond their everyday experience.

Furthermore, based on an analysis of trends in educational policy and informed by their theory of powerful knowledge, Young and Muller identify three curriculum scenarios, *Future 1*, *Future 2* and *Future 3*.

- **Future 1** is represented by the traditional academic curriculum directed towards the transmission of academic disciplinary knowledge which stands for 'the best which has been thought and said' (Arnold, 1869/1993). Fundamentally uncontested, this knowledge consists of 'sets of verifiable propositions and the methods for testing them' (Young & Muller, 2010, p. 14). In the curriculum the boundaries between school subjects are given and fixed and knowledge is treated as given, absolute and unchanging.
- **Future 2** is exemplified by a competences- or skills-based curriculum directed towards the development of generic skills or competences, with the adoption of a constructivist pedagogy which puts the learner at the centre and construes the teacher as the facilitator of learning. This curriculum 'plays down the propositional character of knowledge and reduces questions of epistemology to "who knows?" and to the identification of knowers and their practices' (p. 14)
- **Future 3** is best represented by a 'knowledge-led' curriculum directed to promoting epistemic access to powerful knowledge for all students, in which 'knowledge is seen as bounded [in that it is made within a disciplinary epistemic framework] but also dynamic [changing]' (Mitchell & Lambert, 2015, p. 375). It is underpinned by a social realist theory of knowledge that 'sees knowledge as involving a set of systematically related concepts and methods for empirical exploration and the increasingly specialised and historically located "communities of enquirers"' (Young & Muller, 2010, p. 14). As a result, knowledge is viewed not as 'given' but as 'fallible and always open to change through the debates and research of the particular specialist community' (Young et al., 2014, p. 67).

There are signs that the social realist school has been effective in bringing knowledge back into the current global discourse on curriculum policy and practice. There has been a 'knowledge-turn' in the recent development of the national curriculum in the United Kingdom and in South Africa (cf. Lambert, 2011; Hoadley, 2015). The turn leads to a revival of the discussion of the 'knowledge-driven' curriculum informed by social realism (e.g., McEneaney, 2015; Nordgren, 2017). There is also an emergence of a significant body of literature that examines the role of specialised disciplinary knowledge in educational policy, curriculum and classroom practice from social realist perspectives (e.g., Barrett, Hoadley, & Morgan, 2017; Barrett & Rata, 2014; Young et al., 2014). In addition, the concept of powerful knowledge has captivated the interest of subject specialist educators; rich discussions of the concept are found particularly in the areas of geography, history and mathematics (e.g., Maude, 2017; Nordgren, 2017; Hudson, 2018).

The social realist school, originating from the criticism of social constructivism that has severely 'inflicted' the sociology of education in the United Kingdom, as mentioned earlier, provides a unique perspective and insights for dialogising the 'crisis' in curriculum theory in North America. According to Young (2013), the crisis has to do with the loss of the 'primary object' – that is, with the neglect of knowledge taught and learned in school. Like the advocates of the new sociology of education,[2] neo-Marxist critical curriculum theorists have devoted themselves to investigating 'Not what knowledge, but whose knowledge, not which truths, but whose power' (Moore, 2009, p. 5). Reconceptualist postmodern curriculum theorists, on the other hand, have reduced school knowledge to the standpoint and perspective of dominant groups and advocated a relativistic stance towards the nature of knowledge (see Deng, 2018). As a result, curriculum theorists are left on the sidelines of any serious contemporary debate about what important knowledge students should acquire in school.

Furthermore, the discussion of powerful knowledge provides a remedy to the over-politicisation of knowledge by neo-Marxist critical curriculum theorists. For Young and his colleagues, disciplinary knowledge cannot be reduced to merely the perspective and ideology of those who are in power – that is, to 'knowledge of the powerful' (Young, 2008b). This knowledge is *powerful* because it has 'emergent' properties that 'allow it to apply in contexts beyond the conditions of its production' (Morgan & Lambert, 2017, p. 34). Disciplinary knowledge is powerful also because of its impact or effect on individuals who possess knowledge, as mentioned earlier – in addition to the explanatory and technological or utilitarian powers such knowledge has (Young, 2008b). However, this sense of 'power' or 'powerful' has been hollowed out by neo-Marxist critical curriculum theorists, with their exclusive emphasis on knowledge of the powerful – 'powerful' in the sense of dominance, hegemony and social control. As a result, they conceive of schooling as primarily a mechanism for reproducing existing social structures and power relation – rather than an institution with a distinctive function of passing on a body of disciplinary knowledge to the future generation (see Deng, 2018).

The discussion, too, provides a much-needed corrective to the relativistic stance towards knowledge endorsed by reconceptualist postmodern curriculum theorists (cf. Pinar, Reynolds, Slattery, & Taubaum, 1995; Pinar, 2008). Knowledge is not 'arbitrarily' constructed and cannot be reduced to merely the standpoint and experience of producers. There exists an external real world that exerts powerful constraints on what constitutes valid knowledge (Peterson, 2018; also Chapter 2). Not all knowledge is the same; 'some kinds of knowledge are, without question, more powerful than others' (Young, 2008a, p. 6). Scientific disciplinary knowledge has demonstrated immense powers or contributions to both individuals and human society – powers or contributions which have been completely ignored and downplayed by postmodern curriculum theorists (see Chapter 2).

So Much for the contribution of the social realist school. I now turn our attention to four important issues which require attention. First, it is unjustifiable to base the solution to what should be taught in school on a theory of knowledge – or a social realist theory of knowledge – alone. In the curriculum field it has long been recognised that three fundamental factors – the world of knowledge, the social conditions and needs of a society, and the nature and needs of the learner – determine what constitutes the content or subject matter of the school curriculum (see Deng & Luke, 2008). Furthermore, what should be taught is inexorably intertwined with what we believe about the purposes of schooling. Apart from the academic purpose (passing on disciplinary knowledge to future generations), schools are believed to serve three other purposes, the *economic* (preparing students for jobs), the *cultural and social* (socialising students into social and cultural orders), and the *educational* (fostering students' self-actualisation and flourishing). Each of these purposes calls for a different answer to what should be taught from the one provided by the social realist school (see Chapter 3 for a more detailed discussion).

The second issue is related to the first one. It is immediately clear that a curriculum based on a social realist theory of knowledge or Young and Muller's theory of powerful knowledge tends to ignore or exclude other kinds of knowledge – physical, technological, aesthetic, experiential, etc. These different kinds of knowledge can be potential sources of the content or subject matter of the school curriculum (see Chapter 2).

The third issue, also related to the first one, concerns how the role of knowledge is thought of in relation to education and the curriculum. With an exclusive focus on the internal properties and powers of knowledge, Young and his colleagues take knowledge as an end in itself *rather than* as a means to some larger purposes of education noted previously. In other words, they see knowledge as being 'powerful in itself' rather than 'powerful for' broad educational purposes (Nordgren, 2017). They are largely concerned with, to borrow from David Hamilton, the immediate, present question of 'what should they [students] know?' *rather than* the future-oriented question of 'what should they [students] become?' (Hamilton, 1999, p. 136).

The last and fourth issue concerns the formation of a school subject construed as a recontextualisation of its parent academic discipline noted earlier. This conception ignores the complexities involved in the formation of a school subject within the context of schooling as a social institution. School subjects, after all, are 'uniquely purpose-built educational enterprises, designed with and through an educational imagination toward educative ends' – academic, social and cultural, and educational (Deng & Luke, 2008, p. 83). The formation of a school subject entails 'framing a set of arguments that rationalise the selection and arrangement of content [knowledge, skills, and dispositions] and the transformation of that content' for classroom use, in view of a set of purposes or goals (Doyle, 1992, p. 71). Therefore, what enters into the curriculum is *content* or *subject matter* – not disciplinary knowledge per se – a very special kind of knowledge that results from a special selection, organisation and transformation of knowledge for social, cultural, educational and pedagogical purposes. In other words, content or subject matter is inherently a *curriculum* concept. It is content or subject matter that gives meaning and significance to teaching and learning in classroom (see Deng & Luke, 2008; also see Chapter 3). Yet the term 'content' or 'subject matter' seldom figures in the discourse of social realists; it is often equated with or replaced by 'knowledge'.

In addition to these four issues, I want to point out that Young and his colleagues investigate the questions of what schools teach and how knowledge(s) is selected and organised into the school curriculum within the tradition of the sociology of education, with a relatively short history.[3] Yet these two are fundamental curriculum questions which have a long history and have been studied in other traditions. In Germany, there exists the *Didaktik* tradition, which has grappled with such questions for more than 400 years (see Hopmann, 2007). In the United States there is the curriculum tradition which has been concerned with these questions over a hundred years. Even in the United Kingdom, these questions have been thoughtfully tackled by educational philosophers within the tradition of liberal education – notably John Henry Newman (1801–1890) and Paul Hirst.

I will revisit these four issues in the ensuing chapters of the book.

Beyond social realism

Informed by, but going beyond, the social realist school, in this book I tackle knowledge questions by bringing to bear a wealth of literature from curriculum theory, *Didaktik*, philosophy of education and teacher education. Three features make this book distinctive. First, the book makes a distinction between knowledge and content and regards the latter as being at the heart of curriculum planning and classroom teaching and, therefore, an essential topic of curriculum inquiry (see Chapter 3).

Second, content is viewed as entailing not only *epistemological* issues (concerning ways of classifying and conceptualising knowledge) but also teleological

issues (having to do with conceptions of what schools are for) and *practical issues* (having to do with curriculum planning and classroom teaching). In other words, content is explored not only in the epistemological arena but also at the three levels of curriculum making: *the policy* (purposes and expectations in relation to society and culture), *the programmatic* (school subjects that translate purposes and expectations into curricular forms) and *the classroom* (instructional events and activities that reflect a teacher's interpretation of the content of a school subject) (see Chapter 3 for a detailed discussion).

The third feature is that the book employs *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education – also called 'Schwabian curriculum thinking' – both of which hold the cultivation of human powers (capacities or abilities, ways of thinking, understanding worlds) as the central purpose of education. Among many models or branches of *Didaktik* in Germany and German-speaking countries,[4] *Bildung*-centred *Didaktik* is selected because it provides a sophisticated, elaborate theoretical account of content in relation to education, curriculum planning and classroom teaching. This branch of *Didaktik* is inextricably connected with the rich tradition of European education and *Didaktik* thinking associated with Kant, Schleiermacher, Humboldt, Comenius, Herbart, Dilthey, Nohl, Weniger and Klafki, among many others. It has been 'at the centre of most school teaching and teacher education in Continental Europe' (Hopmann, 2007, p. 109).

Likewise, among many traditions or schools of curriculum theory, the Schwabian model of a liberal education is selected because Schwab is one of the very few US theorists who has provided a sophisticated, elaborate account of the role of knowledge and content in relation to education and curriculum. The model best represents Schwabian curriculum thinking concerning knowledge and content, which is rooted in and developed out of the rich tradition of curriculum thinking – notably represented by John Dewey (1859–1952), Joseph Schwab (1909–1988) and Ralph Tyler (1902–1984), among others – within the University of Chicago, arguably the birthplace of American curriculum studies. The model is also inextricably embedded within and shaped by the tradition of liberal education associated with Robert Hutchins (1899–1977), Richard McKeon (1900–1985), Joseph Schwab (1909–1988) and Donald Levine (1931–2015), among others at the University of Chicago (see Levine, 2006; Ward,1992; Westbury & Wilkof, 1978).[5]

Overview of the book

The book consists of eight chapters. Chapter 1 (this one) starts with describing the social realist project of 'bringing knowledge back in' and the theoretical underpinnings of the project. Afterwards, it discusses the contributions of the social realist school and identifies four major issues associated with the school. The chapter concludes by outlining the purpose, distinctive features and content organisation of the book.

Chapter 2 tackles knowledge questions in the epistemological arena. It describes major philosophic approaches to classifying and conceptualising knowledge. It

next examines neo-Marxist and postmodern critiques of disciplinary knowledge which have been vital for the development of contemporary curriculum theory. The chapter concludes by questioning those critiques and reaffirming the important role of knowledge in education and curriculum.

Chapter 3 deals with issues pertaining to the formation of a school subject or a course of study from the perspective of schooling as an institution. It starts with looking at diverse conceptions of the central aim of schooling embedded in various curriculum conceptions and discourses in the policy arena. It next analyses and unpacks the differences and relationships between school subjects and academic disciplines. This is followed by a discussion of the formation of a school subject in terms of three levels of curriculum making – the policy, the programmatic, and the classroom – and of three kinds of knowledge questions pertaining to what is taught and learnt in school and classroom.

Chapter 4 tackles knowledge questions in the policy or teleological realm through examining two distinctive ways of thinking about the role of knowledge in the cultivation of human powers, the knowledge-its-own-end thesis and cultivation-via-knowledge platform. It argues for a theory of knowledge that not only differentiates different types of knowledge but also elucidates the concepts, theories, methods and habits of mind within a particular knowledge type that contribute to the cultivation of students' intellectual and moral powers.

As a continuation of Chapter 4, Chapter 5 examines knowledge questions at the programmatic and classroom arenas through analysing how the knowledge-its-own-end thesis and cultivation-via-knowledge platform are translated into curriculum planning and classroom practice. It argues for a theory (or theories) of content that addresses how knowledge is selected and transformed into curriculum content, what educational potential content has, and how such potential can be disclosed or unlocked for the cultivation.

Chapter 6 brings Young and his colleagues' work of 'bringing knowledge back in', *Bildung*-centred *Didaktik* and Schwabian curriculum thinking together to argue for a rethinking of teaching and teachers in terms of content. The discussion yields an educational, curricular understanding of teaching and teachers by making three arguments – concerning teaching as (1) an intergenerational task, (2) an encounter between content and students and (3) an embodiment of curriculum thinking.

Chapter 7 contributes to a reconceptualisation of pedagogical content knowledge through exploring what is entailed in teachers' understanding of content within the framework of the institutional curriculum, with a central concern for the development of human powers. The contribution is made through examining David Lambert's capabilities approach and *Bildung*-centered *Didaktik*. The central thesis is that a teacher necessarily interprets the content contained in the institutional curriculum, identifying its elemental elements and ascertaining its educational potential. The interpretation calls for curriculum thinking informed by a theory of content.

The final chapter (Chapter 8) weaves together the arguments of foregoing chapters and makes a case for linking knowledge and content to the development of human powers needed for the 21st century. It starts with examining two visions

of a future curriculum advanced by social realists as alternatives to the 2014 version of the English national curriculum – heavily influenced by E.D. Hirsch's idea of core knowledge. Based on the cultivation-via-knowledge platform, the chapter articulates a curriculum vision that goes beyond the social realist ones. It concludes by making a case for the cultivation-via-knowledge platform as a viable alternative to the current global discourse on 21st century competences.

Notes

1 See Young (2008a) and Moore (2013) for the critique of social constructivism in relation to the sociology of education in the United Kingdom.
2 The advocates of the new sociology of education embraced an 'over-simplistic' version of social constructivism that reduces knowledge to interest, ideology or standpoint (Moore, 2009; Young, 2008b).
3 Sociology of education arguably started with the work of Émile Durkheim (1858–1917) on moral education as a basis for organic solidarity and with research by Max Weber (1864–1920) on the Chinese literati as an instrument of political control.
4 There are *Bildung*-centred *Didaktik* (*Bildungstheoretische Didaktik*), Berliner *Didaktik,* psychological *Didaktik* and experimental *Didaktik*, to name just a few.
5 In particular, Schwab's curriculum thinking was built upon the thinking of McKeon and Dewey and developed from his involvement as a key figure in the collegiate curriculum reform initiated by Hutchins (see Levine, 2006; Westbury & Wilkof, 1978).

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2 Knowledge, disciplinarity and postmodern critiques

What are the different kinds of knowledge? What are the different ways of conceiving or conceptualising knowledge? These epistemological questions prefigure any discussion of content or subject matter. In this chapter I start with describing major philosophic approaches to classifying and conceptualising knowledge and then examine postmodern critiques of disciplinary knowledge which have been vital for the development of contemporary curriculum theory (cf. Deng, 2018). What follows are a critical analysis of issues inherent in the critiques and a defence of the role of disciplinary knowledge in education and curriculum.

Classifying and conceptualising knowledge

The classification of human knowledge into fields of study has been a scholarly and educational endeavour since the emergence of literate culture in the fourth century BCE (Ong, 1959). This can be traced to Aristotle's organisation of the disciplines into three major groups: the theoretical, the practical and the productive. Theoretical disciplines include mathematics, natural sciences and metaphysics. Practical disciplines consist of ethics, politics and human conduct. The productive disciplines were the fine arts, the applied arts and engineering. This parsing of knowledge into different fields was premised on the assumption, contra Platonic dialectics, that different domains of human inquiry yielded distinctive truths, affiliated ways of knowing, procedures of inquiry and representational codes (cf. McKeon, 1947).

In the 19th century Auguste Comte proposed a positivist classification scheme that supplanted Aristotle's. His positive hierarchy prioritised mathematics as the natural logic governing all fields. This was followed, in order, by physics, chemistry, biology and social sciences (Cassirer, 1950). The logical positivist organisation of knowledge, Schwab (1964) observed, has become 'the most tyrannical and unexamined curriculum principles' (p. 19). And it continues to drive curriculum sequences in secondary schools across the United States, the United Kingdom, Europe and Asia. It is the basis for the relative allocations of value to different school subjects in senior secondary examination, matriculation and certification systems in many Commonwealth and postcolonial states.

These categorical divisions were translated into three groups of disciplines in universities: natural sciences, social sciences and humanities (Machlup, 1982). Each field is affiliated with different hierarchical relationships of power within the academy (Bourdieu, 1992). In this way, schools and universities structurally reproduce hierarchical knowledge and/or power relationships based on the categorical grids of logical positivism. The valorisation of scientific knowledge is being reinvented and reinterpreted in the corporatisation of university funding, structure and power (Graham, Luke, & Luke, 2008), particularly in a post-9/11 environment that has refocused on the production of competitive expertise in the new biosciences, digital communications and business. In the new geopolitical economy, *Sputnik* is upon us again.

There are, of course, powerful contradictions here. At once, knowledge that Aristotle would have considered practical and productive realms tends to be reframed as if it were theoretical (Schwab, 1964) in bids for the legitimacy of applied fields (e.g., the melding of arts and digital technologies into creative industries). At the same time, the new political economies of knowledge societies have tended to devalue those theoretical elements of pure science that appear to lack practical translation into commodities and strategic economic advantage (e.g., the closure of physics departments). Nonetheless, the logical positivist hierarchical organisation of knowledge, as we will show here, is deeply embedded in contemporary discourse on subject matter. In secondary schools, it constitutes a 'cognitive architecture' (Teese, 2000) that differentially values specific fields and capacities in the rewarding of stratified educational credentials and outcomes.[1] There is, therefore, a need to look at alternative classifications of knowledge that relocate and revalue knowledge in the practical, informal and experiential realms of human experience, a longstanding claim of feminists, indigenous educators and critical race theorists.

Gilbert Ryle (1949) distinguished between knowing that and knowing how. The former can be enabled by the kind of propositional, theoretical or formal knowledge that derives from disciplines, and the latter involves the use of practical knowledge embodied in human practice and actions. Similarly, Pears (1971) made a tripartite distinction among (a) propositional knowledge, (b) knowledge of how to do things and (c) knowledge by acquaintance. The first two categories parallel Ryle's, and the last category refers to what we learn from everyday experience with objects and events, including firsthand and commonsense knowledge (cf. DeCerteau, 1986). In this regard, knowing by acquaintance tends to resemble experiential knowledge based on everyday problem identification and solution described in the social interactionist models of Dewey (1916/1966) and Mead (1932). Further, Michael Polányi (1964, 1966) used the term *tacit knowledge* to capture a special kind of knowing embedded in practice, arguing that we can occasionally know more than we can tell. In his early work on European attempts to order the world through discourse, Foucault (1972) distinguished between discourses of practice and discourses on practice and between the classifications deployed in practice and those that are used to name and frame these and other domains in more formal theoretical taxonomies.

Three conceptions of knowledge can be derived from the aforementioned disciplinary and epistemological classification schemes. First, there is a disciplinary conception of knowledge that construes human knowledge in terms of canonical academic knowledge contained in various intellectual disciplines. This is associated with what Aristotle (trans. 1941, Book IV) characterised as episteme, formal knowledge for purposes of understanding and explaining the world. Testing the validity of knowledge is a primary concern of disciplinary inquiry. Knowledge is here conceived of as a corpus of facts, concepts and ideas that have been formulated and verified through the logical and discursive procedures of discourse communities (Schwab, 1964, 1978). Bourdieu (1990) refers to these as 'systems of objectification', institutionally legitimated ways of rationalising and ordering the world under study. These in turn yield distinctive 'grids of specification' (Foucault, 1972): namings ordered in hierarchical rank, category and taxonomy that in effect populate and constitute worlds.

Second, there is a practical conception of knowledge that construes knowledge in terms of knowing what to do in practices and actions, with an emphasis on the application of knowledge to practical and sociocultural problems. Narrowly conceived, knowing what to do in practice involves knowing a set of procedures that may require mastery of artefact and technology (Cole, 1996). This can range from an embodied activity, such as riding a bicycle, or a more explicitly cognitive activity, such as reading a book or running software. These constitute and require procedural knowledge. However, practical knowledge cannot be reduced to merely knowing a set of procedures or skills; it involves making choices and actions based upon deliberate decisions, the metacognitive strategies that feature in learning theories and the kinds of embodied knowledge that feature in sociological models of habitus (Bourdieu, 1990). Aristotle characterised this knowing as 'phronesis', standing for practical wisdom centred upon the contingent world of action (Aristotle, trans. 1941, Book VI). In contrast to episteme, one is less concerned with testing the validity of knowledge than with evaluating the utility of knowledge in light of the results of everyday actions. In practical realms, knowledge is viewed as the means of facilitating the solving of sociopractical problems; it is valued in terms of guides or scripts (Cole, 1996) for action, social experience and everyday practice. Reflexively, we could argue that all practices, no matter how apparently habituated and mundane, taken together constitute particular cultural 'logics of practice', coherent systems of exchange and value (Bourdieu, 1990).

Third, there is an experiential conception of knowledge, focusing on the social and cognitive, dispositional and practical elements entailed in making sense of the phenomena of everyday life. Whereas the disciplinary conception emphasises knowledge as a final product or consummation of human knowing that has been set apart from ordinary affairs of life, this conception locates knowledge in the realm of ordinary human experience. According to Dewey (1916/1966), knowledge and ideas emerge only from situations in which the learners have to draw them out of experiences that have meaning and importance to them. In this sense, knowledge cannot be separated from the knower and affiliated forms

of meaning, both theoretically and practically construed. In his early epistemological theory, Dewey attempted to describe the dialectical reciprocity and codependency expressed in subject–object, actor–environment relations (Dewey & Bentley, 1949). In later formulations, Dewey (1934) viewed both education and art as the products of organism environment disequilibria, whereby the identification and solution of problems generated a movement from inchoate to choate experience. By this pragmatist account, knowledge is an ongoing construction of meaning by social actors in relationships of exchange with their biosocial environments. In its later symbolic interactionist version (Mead, 1932), it is contingent upon the availability of linguistic and semiotic, interactional and social behavioural resources.

These three alternative notions of knowledge – disciplinary, practical and experiential – constitute analytically distinctive, though not practically separate, modes of human knowing. There are, of course, other ways of conceptualising knowledge and affiliated ways of knowing. For example, in the 84th yearbook of the National Society for the Study of Education, *Learning and Teaching the Ways of Knowing*, ways of knowing are conceptualised in terms of scientific, practical, interpersonal and aesthetic modes (Eisner, 1985).

Critiques of disciplinarity

This discussion brings to the fore what is called the *doctrine of disciplinarity*, which since the 19th century has undergirded the development of the secondary school curriculum in many parts of the world. According to this principle, what should be taught in school is derived from and organised according to canonical academic disciplines. Obviously, as noted in Chapter 1, the social realist school holds a rather similar assumption about what needs to be taught and learnt in school and classroom.

The doctrine can be questioned in view of the previous discussion. There are alternative conceptions of knowledge and competing bids over what will count as the content of the school curriculum. By delimiting the content of the school curriculum to disciplinary knowledge, the doctrine fails to recognise or at best appropriate other kinds, sources and modes of knowledge (e.g., practical knowledge, tacit knowledge and commonsense knowledge; local community knowledges, received wisdom, oral narrative and, certainly, nondominant cultural knowledges, rituals and practices). As a result, the disciplinary doctrine promotes 'knowledge purity and abstraction at the expense of practical application and relevance to the life of the learner' (Tanner & Tanner, 1995, p. 437).

Furthermore, the critique of academic disciplines as artifactual and arbitrary, produced by socioculturally and historically situated human subjects, has been central to decades of feminist, postcolonial and postmodern theory. The general critique of science as discourse and grand narrative emerged from Lyotard's (1984) 'Report on Knowledge' to the Social Science and Humanities Research Council of Canada. Describing the postmodern condition, Lyotard argues that while the traditional fields of humanities and hard sciences were positioned

hierarchically (pace Comte), a binary relationship reinforced the distinctive narrative Eurocentric histories of technology and capital. Further, he argues that the truths of science and of literary texts were affiliated with different expository and narrative claims, with the former privileged since the Enlightenment. This remains a principal feature of the modernist assumptions underlying all approaches to the disciplinary doctrine to curriculum: that real truths about the biosocial world are the exclusive purview of the levels of technicality and exposition featuring in the hard sciences. Harding (1996), Haraway (1999) and others have examined the gendered assumptions underlying several strands of dominant Western science, examining both biological and social science constructions of gender, society and the human subject. Indigenous and critical multicultural educators also argue that the force of Eurocentric discipline and discourse has served purposes of economic and political colonisation and, indeed, set the conditions for cultural genocide, environmental degradation and language loss (Smith, 2000).

The critiques, also informed by neo-Marxism, are predicated on the notion that all knowledge and truth are human constructs and thus never impartial; they reflect subjective beliefs, opinions and interests. In Frankfurt School sociology, Marxian ideology theory is developed into a recognition that knowledge is never ideologically and socioculturally neutral or disinterested, and it necessarily reflects historically located and performed human interests (Habermas, 1982). In feminist and postcolonial theory, knowledge formation is explained in terms of a historically located and gendered standpoint, as always the product of identifiable class, gender and racialised relationships of power (e.g., Harding, 1989; Smith, 2000). Therefore, it is impossible to gain objective knowledge that is unaffected by subjective beliefs and opinions and to develop any better understanding of the world.

Furthermore, all claims to disciplinary knowledge and truth are constructed to serve those in power. The hegemony of disciplinarity, its truth claims and rituals, is deeply interwoven with questions of ideology, privilege and power (e.g., Bourdieu, 1992; Harding, 1996). Once operationalised in the institutional domains of education, bids to define knowledge mark out a concrete linkage between epistemology and identifiable particular cultural and social, political and economic standpoints. The reliance on academic disciplines as the fountain of school subjects 'privileges the interests and concerns of those who already won the position of intellectual' (Stengel, 1997, p. 589). It entails drawing on and expressing the 'disciplinary power' (Foucault, 1977) of university academicians through the definition and production of school knowledge as scholarly knowledge. In this connection, a sociopolitical approach construes knowledge as historical, material and discourse construction, reflecting interests, power and ideologies that underlie relations between individuals and between groups. The sociology of knowledge focuses on how formations and classifications of knowledge are produced in historical and cultural, social and economic context, ideologies arising from political economic and state structures (Whitty, 1986). In this regard, any formations of content or subject matter can be taken as acts of power, as bids for the reproduction of particular knowledge and

the exclusion or marginalisation of others with effects including, inter alia, the stratification of educationally produced capital (Bourdieu & Passeron, 1990): the educational construction of differing kinds of knowing, speaking and acting human subjects.

Given such neo-Marxist, post-structural, postmodern and feminist critiques of disciplinarity, it would be theoretically naïve for curriculum practice to institutionally embrace a disciplinary conception of knowledge to the exclusion of others. A sensible consequence is a commitment to a vision of a multicultural curriculum that celebrates a diversity of knowing, affirms and validates 'every voice in the school community' (Slattery, 1995), and pursues social justice for the dispossessed and underprivileged.

Problems of postmodern critiques

I am concerned that the aforementioned critiques of disciplinary knowledge run the risk of over-ideologising and over-politicising knowledge and of endorsing a relativistic stance towards knowledge. Taken as a whole, the critiques are informed by or based on postmodernism – a sophisticated philosophical movement against modernism and Western civilisation (Hicks, 2004). Postmodernism can be seen as a philosophical transformation of Marxism or Neo-Marxism,[2] with theoretical expansions including feminism, multiculturalism, poststructuralism and postcolonialism, among others. Underpinning the critiques are three doctrines that, in varying ways, repudiate the objectivity and truth claims of disciplinary knowledge.

1 All knowledge is socially constructed, inexorably intertwined with the standpoints and perspectives of knowledge producers. On this account, it is impossible to use objective reason to gain objective knowledge and truth that are untainted by subjective beliefs and opinions.
2 There is no better or worse knowledge. In the words of Michael Young, 'all knowledge, whether based on professional expertise, research, or the experience of particular groups, is of equal value' (Young, 2008b, p. 22).
3 The development of disciplinary knowledge is shaped in the interest of those in control and motivated by the gaining of power. Disciplinary knowledge thus reflects the priority and commitment of those in power and their need for control.

The commitment to Doctrine 2 entails an embrace and celebration of a diversity of knowledge and alternative ways of knowing as noted earlier. However, postmodernists tend to endorse the knowledge of the oppressed and marginalised groups such as women, ethnic minorities and LBGT and to denigrate disciplinary scientific knowledge, which is seen as the product of 'dead while European males' (see Hicks, 2004).

Postmodernism has been challenged by a host of scholars (e.g. Hicks, 2004; Sokal & Bricmont, 1998; Peterson, 2017, 2018). Based on or informed by their

work and that of social realists, I now venture to question these three doctrines. To be clear, this is by no means a thorough philosophical critique; a critique of that kind is beyond the scope of this book and is better to be pursued on another occasion.

With respect to the first doctrine, it is correct that knowledge is socially constructed, reflecting the standpoints and perspectives of producers. However, it is incorrect to assert that those standpoints and perspectives are necessarily 'contaminated' by their subjective opinions and personal biases. In scientific communities there are methods, criteria and norms that can ensure the generation of 'objective' statements 'purged of any prejudices and predilections of individual participants in the enterprise' (Klotz, 1996). Take scientific observations as an example. To detect the 'regularities' of a natural or social phenomenon, scientists start with stringently specifying the condition under which the regularities occur. Next, multiple researchers observe the phenomenon separately and make detailed records of what consequences are. Afterwards, they look for commonalities across the set of observations – which constitute the description of the objective world. In other words, the elimination of subjective opinions and personal biases is made possible by institutionalised social processes in which knowledge is developed and verified in accordance with rigorous and systematic procedures and norms. The construction of scientific knowledge, after all, is an extraordinary endeavour involving real scientific work, which is 'all about the details – experimental design, careful execution, analysis of results' (Bailey & Borwein, 2017). More importantly, it is grounded in the real world – which exercises powerful constraints over what counts as valid and reliable knowledge – and involves the use of scientific reasoning where 'evidence, method, logic, or even the necessity for coherence' matters (Peterson, 2018, p. 314).

In a similar vein, social realists argue that while disciplinary knowledge is a social product, it has an emergent 'objective' character that is guaranteed by distinctive 'codes' and 'practices' employed in creating, verifying and defending disciplinary knowledge within specialist communities (Moore & Young, 2001). It has value or power that 'is independent of these originary context and agents' (Young & Muller, 2013, p. 237). Disciplinary knowledge, after all, is developed by specialist communities within universities and research institutions (Young, 2009; Young & Muller, 2013). There are 'criteria for differentiating between bodies of knowledge and for deciding that some are better than others' (Moore, 2013, p. 339).

The problem of the first doctrine, then, has to do with the reduction of scientific knowledge and truth claims to the mere 'standpoints or perspectives of particular (invariably dominant) social groups' (Young, 2008b, p. 3). Such a reduction ignores the fact that there is an external world that provides the necessary grounding and constraints for the development of knowledge. The problem also has to do with the rejection of the possibility of obtaining objective knowledge through the use of reason and scientific methods, enabled by the 'knowledge producing' communities as 'distinctive specialist collectivities'(see Young, 2008a, 2008b; Young & Muller, 2013).

I now turn to the third doctrine. It cannot be denied that in developing scientific knowledge some scientists are motivated by the attainment of power, recognition and prestige. However, there are many other motivations – including discovering unobservable entities, solving complex problems and explaining unknown phenomena, among others, And, as noted earlier, the development of scientific knowledge is guided and regulated by a set of norms – such as rules for argument and debate – for generating and testing a hypothesis. Schmaus calls such motivations and rules 'cognitive values' and 'cognitive norms', respectively.

> Cognitive values specify the aims of science, while cognitive norms specify the means to achieve these goals. Both cognitive values and norms range widely. Cognitive values may include everything from a scientist's position regarding the ontological status of unobservable entities to the desire to solve a specific set of problems or to explain a particular set of facts. Cognitive norms may range from rules governing the forms of persuasive argument that can be brought in defence of one's theory in a journal article to procedures for manipulating 'inscription devices' in the laboratory.
>
> (Schmaus, 1994, p. 263, cited in Moore & Young, 2001)

Such cognitive values and norms determine that the development of scientific knowledge cannot be reduced to merely a political endeavour driven by political gains and power struggles. At the heart of the development is an intellectual and cognitive undertaking directed towards the advancement of scientific understanding.

Another issue concerns the connotation of power used in the third doctrine. It foregrounds the 'tyrannical' power of those who construct and possess knowledge – i.e. 'power over' – but completely ignores or overlooks the power that knowledge bestows to those who possess it – i.e. 'power to'. In the words of Young (2013), the doctrine construes disciplinary knowledge as *knowledge of the powerful* to the neglect of *powerful knowledge*. As indicated in Chapter 1, disciplinary knowledge has emancipative power because the acquisition of this knowledge allows individuals to move beyond their particular experience, gain a better understanding of the world and envisage alternatives (Young & Muller, 2013; also see Young, 2008b). Furthermore, it is beyond doubt that scientific disciplinary knowledge has enormous explanatory, technological and creative powers. The application of scientific knowledge to various realms of the world has led to unprecedented scientific advancement, technological revolution, human flourishing, and social and economic progress (see Hicks, 2004; Pinker, 2018).[3]

Taken together, the problem of the third doctrine is twofold. First, the cognitive interests in developing disciplinary knowledge are replaced by 'the sectional interests of power and domination' of scientists (Young, 2008b, p. 30). Second, the exclusive focus on the 'tyrannical' power of scientists or knowledge producers entails the neglect of the emancipatory, explanatory, technological and creative power of knowledge.

The foregoing questioning of the first and the third doctrines leads to a repudiation of the second one. All knowledge is not equal in epistemological status and power. As a special product of specialised communities, scientific disciplinary knowledge is constructed in a way that can transcend not only the standpoint, perspective and interest of the special group but also the context in which it is developed or acquired. This knowledge is more powerful than other kinds of knowledge because it is 'more reliable' and 'nearer to truth about the world we live in and to what it is to be human', albeit 'always fallible and open to challenge' (Young, 2013, p. 107; also see Young, 2008a, 2008b). It is also because of explanatory, technological and creative power this knowledge has, as noted earlier.

Concluding remarks

This critical examination of the three doctrines behind postmodern critiques of disciplinary knowledge leads to reaffirming the social realist position regarding the nature of disciplinary knowledge and its role in education and schooling. Disciplinary knowledge cannot be reduced to mere perspective, standpoint, ideology or power relation. Albeit socially constructed, this knowledge has an 'objective' conceptual structure with properties and powers of its own. As a human achievement, disciplinary knowledge has demonstrated tremendous explanatory, technological, creative and innovative powers. An essential purpose of schooling as an institution, as Young (2013) rightfully argues, is to pass on this knowledge from one generation to the next. This purpose or function is vital for enabling the next generations to create new knowledge built on existing knowledge (see Chapter 7).

However, unlike social realists, I do not treat disciplinary knowledge as an end in itself *but* as an indispensable powerful recourse/vehicle for the cultivation of human powers – which is vital for self-formation and human flourishing (see Chapter 4). I also regard knowledge as a means to some larger purposes of education – social, cultural and educational (see Chapter 3). In this regard, what should be taught in school should not be confined to disciplinary knowledge alone. There are, as noted previously, other kinds of knowledge and ways of knowing – technological, practical, experiential, aesthetic, etc. – which could contribute to the broader purposes of education and thus need to be considered as potential forms of curriculum content. I thus reject the doctrine of disciplinarity which can be traced back to Comte's organisation of knowledge in the 19th century.

Informed by social realists and other scholars, I take issue with postmodern doctrines concerning the nature of knowledge. If knowledge cannot be reduced to a mere social and political construction, and if different kinds of knowledge have different epistemological status and powers, then we must identify knowledges that are more 'truthful' and have more 'powers' in the light of the purposes of education. Furthermore, we must address questions of how knowledges are

selected and organised into curriculum content and how content is taught in classroom in view of educational aims. In other words, we must go beyond the *epistemological* issues focused on in this chapter to engage *teleological issues* (having to do with conceptions of what schools are for) and *practical issues* (having to do with curriculum planning and classroom teaching), as far as knowledge questions are concerned – which is the focus of Chapter 3.

Notes

1 It is worth noting that in the United States the school systems once acknowledged the practical and productive types of knowledge (pertaining to technological application, plumbing, auto-mechanics, etc.). However, in the 1940s and 1950s, the creation of comprehensive high schools with their pre-university bias served to delegitimate these knowledge types in the curriculum (see Trow, 1961).
2 The key figures of the postmodern vanguard, Michel Foucault, Jacques Derrida, Jean-François Lyotard and Richard Rorty, were or were very close to being Marxists during the 1960s and 1970s. According to Hicks (2004), 'postmodernism is a symptom of the far Left's crisis of faith. Postmodernism is a result of using sceptical epistemology to justify the personal leap of faith necessary to continue believing in socialism' (p. 181).
3 It is important to note that when malevolently employed, scientific knowledge can lead to catastrophic disasters and human destruction. Gas chambers in Nazi concentration camps and atomic bombs dropped in Hiroshima and Nagasaki are two notorious examples.

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3 Aims of schooling, school subjects and knowledge questions

This chapter tackles knowledge questions from the perspective of schooling as an institution embedded in sociocultural, organisational and instructional contexts. It begins by looking at diverse conceptions of the aim of schooling embedded in various curriculum conceptions and discourses in the policy arena. It next analyses and unpacks the differences and relationships between school subjects and academic disciplines and, in so doing, clarifies their distinction. This is followed by a discussion of the formation of a school subject in terms of three levels of curriculum making – the policy, the programmatic and the classroom. The chapter concludes by arguing that content constitutes an important topic of curriculum inquiry characterised by three kinds of questions centring around the formation of a school subject.

Aims of schooling: competing curriculum conceptions and discourses

Over the last century schooling has been asked to perform four different aims that are reflected in four curriculum conceptions, namely *academic rationalism*, *learner-centrism*, *social efficiency* and *social reconstructionism*. Academic rationalists hold that the primary purpose of schooling is intellectual development through initiating students into specific bodies of knowledge, techniques and ways of knowing embedded in academic disciplines. Child-centred educationists, on the other hand, define the central goal of schooling as fostering students' potential and self-actualisation through providing opportunities for each individual child to engage in a voyage of 'discovery' in the classroom or wider contexts of learning. For the advocates of social efficiency, the central purpose of schooling is to meet the current and future manpower needs of a society by training the youth to become contributing members of society. For social reconstructionists, schooling is primarily an instrument for ameliorating social problems and issues (inequalities, injustice, poverty, etc.) and engendering social reform and reconstruction (Eisner & Vallance, 1974; McNeil, 1996; Moore, 2000; Schiro, 2008).

Primarily within the Anglo-Saxon tradition of curriculum theory, these four competing curriculum conceptions have continued salience in ongoing curriculum policy debates, each of which embodies a distinct version of what schooling is for and what should constitute the content of the curriculum. They entail four

different points of departure for thinking about content selection and organisation in the school curriculum: (1) academic disciplines, (2) student interests and existential experience, (3) social expectations and demands and (4) social problems and issues (for a detailed discussion see Deng, 2015).

It is worth noting that four largely parallel starting points for thinking about content selection and organisation are also entailed in four types of didactics (*Didaktik*) in European educational thinking. As Nielsen (2005) observed,

- The first type I call 'basic subject didactics' in which the point of departure is the subject [discipline] itself and its structure.
- The second type is 'ethno-didactics' in which the point of departure is pupil culture and the everyday experience of the pupils or criteria arising out of current local culture.
- The third type is 'challenge didactics' in which the point of departure is the great social problems, such as environmental issues, global North-South relations, conditions of democracy, or for that matter terrorism.
- The fourth type is 'existence didactics' in which the point of departure is a person's fundamental existential condition, that is, the question and view of what it means to be a human being.

(pp. 6–7)

In the 21st century three curriculum discourses, *autonomous learners*, *participatory citizenship* and *globalisation*, have become rather influential in the debates, which can be viewed as 'new' learner-centrism, social efficiency and, to a certain extent, social reconstructionism. These conceptions argue that contemporary schooling should allow individual learners to construct their own knowledge base and competences. It should prepare young people for their future role as active, responsible and productive citizens in a democratic society. Furthermore, schools are expected to be instrumental in equipping individuals for the challenges created by economic and cultural globalisation. These discourses have been employed by governments across the globe as the rationales for changing curriculum content (see Rosenmund, 2006).

However, what is missing in the aforementioned curriculum conceptions and discourses is a vision of education centred on self-formation and the cultivation of human powers as embedded in *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education. As will be seen in Chapter 4, these two theories or models are markedly different from the social realist school which, fundamentally akin to academic rationalism, employs the academic discipline as the essential point of departure for thinking about content selection and organisation.

School subjects and academic disciplines: the differences

It is essential to draw a distinction between academic disciplines and school subjects, As Israel Scheffler observed over three decades ago:

> Subjects are not, in fact, drawn directly or readily from their parent studies, and parent studies are not all disciplines. . . . Neither adult studies [academic

> discipline] nor school subjects are written in the sky. The former are arranged for the expedient advancement of investigations and researches, the latter for the facilitation of learning and teaching in particular contexts – purposes that generate independent and powerful constraints. Neither studies nor subjects are internally homogeneous, nor are they wholly discrete. Their aims, structures, methods, and boundaries change over time, and there are overlappings and branchings of various sorts at any given time.
>
> (Scheffler, 1991, p. 71)

Following Scheffler, I refer to an academic discipline as a field or branch of learning affiliated with an academic department within a university formulated for the advancement of research and scholarship and the professional training of researchers, academics and specialists. As noted in Chapter 2, academic disciplines are conventionally organised into three groups: natural sciences, social sciences and humanities. By a school subject, I refer to an area of learning within the school curriculum that constitutes an institutionally defined field of knowledge and practice for teaching and learning. By this account, school subjects can be traditional academic subjects such as mathematics, history and geography that could have direct affiliations with their parent academic disciplines. They can also be unconventional ones such as tourism and media studies that have no or minimal connections with conventional academic disciplines.

School subjects can have different and variable relationships to academic disciplines, depending on their aims, contents and developmental phases. According to Stengel (1997), there are three possible juxtapositions between school subjects and academic disciplines:

- School subjects and academic disciplines are essentially continuous.
- School subjects and academic disciplines are basically discontinuous.
- School subjects and academic disciplines are different but related.

Each of the juxtapositions implies a particular curricular position concerning how school subjects are constructed with respect to academic disciplines, reflecting a particular curricular conception or a combination of curriculum conceptions discussed earlier.

Continuous

The continuous position is embedded in academic rationalism – a curriculum platform that underscores the importance of transmitting disciplinary knowledge for the development of the intellectual capacity of students and for the maintenance or reproduction of academic culture. This is epitomised in what is called the doctrine of disciplinarity, according to which school subjects are derived from and organised according to the 'structure' of academic disciplines – natural sciences, social sciences and humanities (Tanner & Tanner, 1995; also Chapter 2). For academic rationalists, the central purpose of a school subject, like that of a discipline, is to initiate the young into the academic community of scholars.

School subjects, therefore, are supposed to 'derive their life, their viability, from their related intellectual disciplines' (Davis, 1998, p. 207). They constitute a faithful and valid introduction to the academic disciplines whose names they bear. While students are admittedly dealing with relatively simple ideas and methods, they nonetheless study the same ideas and methods known by experts in the academic disciplines. Disciplinarity is alive and well in contemporary discourse on curriculum policy and teachers' professional development, albeit in different forms. (For a detailed discussion, see Deng & Luke, 2008.)

Obviously, the social realist school endorses the continuous position. As noted in Chapter 1, the central purpose of schooling is the transmission of a body of disciplinary knowledge to students. In this regard, school subjects are 'the forms of social organization of knowledge that best guarantee that pupils will have "epistemic access" ' (Young, 2012). They are the products of 're-contextualising' their parent academic disciplines in the sense that they 'draw on disciplinary concepts and organize, sequence and select from them in ways that have proved most reliable pedagogically'. As will be noted in Chapter 4, the continuous position is also endorsed in what is called the 'knowledge-its-own-end' thesis associated with educational philosophers like John Henry Newman and Paul Hirst within the traditions of liberal education in the UK.

This curricular position, however, is fraught with problems. Its exclusive reliance on academic disciplines in defining and delineating school subjects leaves out other kinds of knowledge (e.g., practical knowledge, technical knowledge, tacit knowledge, local community knowledge, etc.) that, as noted in Chapter 2, could be potential curriculum content. Curriculum development framed by this approach ignores the interests, attitudes and feelings of learners. Furthermore, with the one-dimensional focus on the academic purpose of schooling, this curricular position shows little concern about meeting social, economic and political needs and is silent on issues about social reform and reconstruction. According to Tanner and Tanner (1995), the world of knowledge, the needs of learners, and the needs and demands of society are three essential factors that determine and shape what should count as curriculum content (also see Chapter 1) – factors that set school subjects apart from academic disciplines.

Discontinuous

One could reject the continuous position by arguing that school subjects and academic disciplines are essentially discontinuous in purpose and substance and thereby allow for opportunities of the construction of school subjects that could get beyond the narrow academic or disciplinary concern (Stengel, 1997). The discontinuous position finds support in learner-centrism, social efficiency and social reconstructionism. Learner-centred educators argue that school subjects are created to provide students with 'intrinsically rewarding experiences' that contribute to the pursuit of self-actualisation, personal growth and individual freedom (McNeil, 1996). School subjects, therefore, need to be formulated according to the interest, attitudes and developmental stages of individual students. They need

to derive content from a wide range of sources – such as personal experiences, human activities, and community cultures and wisdoms. Disciplinary knowledge might (or might not) be useful for the formation of school subjects.

From the perspective of social efficiency, school subjects are constructed for the primary purpose of maintaining and enhancing economic and social productivity by equipping future citizens with the requisite knowledge, skills and capital. The formation of school subjects, therefore, is justified with close reference to the needs of occupation, profession and vocation. Specialised and applied fields (e.g., engineering, accounting and marketing, among others), therefore, are the primary sources from which the contents of school subjects are derived. Academic disciplines are drawn upon only when they demonstrate their efficacy in promoting those skills and knowledge actually needed in occupations.

For social reconstructionists, school subjects are created to provide students with meaningful learning experiences that might lead to emancipation and engender social agency. To this end, the formation of school subjects is based upon an examination of social contexts, social issues and futures, with the intention of helping individuals reconstruct their own analyses, standpoints and actions. Like learner-centred educators, social reconstructionists believe that school subjects derive contents from a wide range of sources. Academic disciplines are used only as they relate to the contexts and issues examined.

The three contemporary curriculum discourses – autonomous learners, participatory citizenship and globalisation – further set school subjects apart from academic disciplines. These discourses call for a learner-oriented (rather than discipline-centred) approach to the construction of a school subject that allows learners to construct their own knowledge according to their individual needs and interests. They require the school subject to be formulated in ways that help students cultivate certain kinds of sensitivity, disposition and awareness needed for responsible civic participation in an increasingly globalised society. They call attention to the need of equipping students with generic competences and lifelong learning abilities considered to be essential for facing the challenges of globalisation and the knowledge-based economy (see McEneaney & Meyer, 2000; Rosenmund, 2006).

Different but related

Representing more sophisticated views, the third juxtaposition has three possible permutations that demonstrate the relationship between school subjects and academic disciplines can exist in one of three ways: (a) that academic disciplines precede school subjects, (b) that school subjects precede academic disciplines, or (c) that the relation between the two is dialectic (Stengel, 1997). Position (a) holds that a school subject results from the transformation of an academic discipline. This taken-for-granted view is always employed in conjunction with the continuous position, viewing the purpose of education as the acquisition of disciplinary knowledge. The two other positions are of more theoretical than practical interest. Position (b) is reflected in Herbartian theory of recapitulation,

according to which parallels exist between the stages in the historical development of disciplinary knowledge and the stages through which the individual passes on the way to maturity, and therefore, school subjects are formulated to reflect those parallels (Kliebard, 1992). School subjects come first and academic disciplines later in one's learning journey from school to university. Position (c) can be viewed as a combination of positions (a) and (b), which is epitomised in Dewey's (1902/1990) classic text, *The Child and the Curriculum*. For Dewey, an academic discipline provides the endpoint for the formation of a school subject and the school subject furnishes the avenue for getting to know the academic discipline (for a detailed discussion, see Stengel, 1997; Deng, 2007).

As will be seen in Chapter 4, *Bildung*-centered *Didaktik* and the Schwabian model of a liberal education provide a unique way of thinking about how school subjects are different but related to academic disciplines. School subjects (or courses of study) are formulated for self-formation centring on the cultivation of human powers, with academic disciplines as an indispensable 'powerful' resource for achieving the purpose. The selection and organisation of the content of a school subject takes into account not only the educational potential of disciplinary knowledge but also the experience and background of students.

So far our discussion is primarily at the theoretical level, with a focus on curriculum conceptions and discourses that distinguish and relate school subjects and academic disciplines.

The discussion supports that school subjects are distinctive, purpose-built enterprises constructed in response to different social, cultural and political demands and challenges and towards educational aims. The discussion now examines, from the perspective of curriculum making, how particular curriculum ideologies and discourses are translated into a school subject and how the school subject, in turn, is interpreted and enacted in classroom.

The formation of a school subject and curriculum making

The formation of a school subject can be seen as involving three levels of curriculum making, the policy, the programmatic and the classroom, each of which yields a distinct kind of curriculum. The *policy curriculum*, also called the ideal or abstract curriculum, embodies a conception of what schooling should be with respect to society and culture. Curriculum making at this level is informed by curriculum conceptions and discourses at the intersection between schooling, culture and society. The policy curriculum 'typifies' what is desirable in social and cultural orders, what is to be valued and sought after by members of a society or nation (Doyle, 1992a, 1992b, 2008). Because social and cultural contexts often change rapidly, policy curriculum making or remaking is always employed by the government as a 'convenient instrument' to communicate responsiveness to outside communities and to provide directions for reforming the school curriculum (Doyle, 1992b).

The programmatic curriculum, or the technical or official curriculum, is contained in curriculum documents (e.g., syllabus) and materials for use in school

and classroom. Curriculum making – also called *curriculum planning* – at this level translates the policy curriculum into school subjects or courses of study provided to a school or system of schools (Doyle, 1992a, 1992b; Westbury, 2000); it stands for the practical task of making an official curriculum. The process of constructing a school subject or a course of study entails the selection and arrangement of content (knowledge, skills and dispositions) and the transformation of that content for school and classroom use. It hence involves a 'theory of content' with respect to both the societal expectations (in the policy curriculum) and the activities of teaching (Doyle, 1992b).

The classroom curriculum – i.e. the enacted curriculum – is characterised by a cluster of events jointly developed by a teacher and a group of students within a particular instructional context (Doyle, 1992a, 1992b). Curriculum making at this level involves transforming the programmatic curriculum embodied in curriculum documents and materials into 'educative' experiences for students. It requires further elaboration of the programmatic curriculum, making it connect with the experiences, interests and the capacities of students (Westbury, 2000).

Taken as a whole, the policy and the programmatic curricula together form the *institutional curriculum* which concerns the provision of teaching and learning experiences for an education or school system, the responsibility of which is always the province of national ministries or state departments of education.[1] The institutional curriculum comprises an array of school subjects represented by a set of syllabi, each of which provides 'a structured summary or outline of what should be taught and learned across the schooling years' concerning a particular school subject (Luke, Woods, & Weir, 2013, p. 10). Therefore, the syllabus formation of a school subject is not merely a process of 'recontextualising' its parent academic discipline as seen by social realists (see Chapter 1). A school subject is formed as the result of institutional selection, organisation and framing of content for social, economic, cultural, curricular and pedagogical purposes. The formation of a school subject involves, among other things, responding to institutional expectations and imperatives, setting social, cultural and educational goals for particular groups of students, and laying out the grounds and directions for teaching and learning in classroom (Luke, Woods, & Weir, 2013).

The institutional curriculum depends, for its effect, on teachers' enactment as curriculum making in classroom. A teacher necessarily interprets and translates the content of a school subject in the institutional curriculum into instructional events and tasks with reference to both its institutional goals and its theory of content, and in light of students' existing knowledge and experience. This interpretation, as will be argued in Chapters 5 and 7, gives educational potential to the content in the institutional curriculum.

It is important to note that to achieve intended outcomes for all students, teacher enactment of the institutional curriculum needs to be supported 'at multiple levels through aligned preservice training, professional resources, inservice training and annual local system of school curriculum planning' (Luke, Woods, & Weir, 2013, p. 18), although this is not the focus of the book.

Three kinds of knowledge questions

In the light of the three levels of curriculum making involved in the formation of a school subject, three kinds of knowledge questions can be asked pertaining to what is taught and learnt in school and classroom. The first type of knowledge questions is normative and teleological, concerning the 'what' and 'why' of schooling in relation to society and culture. What is the knowledge of most worth? What should the knowledge be that is taught and learnt in school and classroom? What significance and value does knowledge have in education and curriculum? What contributions might various academic disciplines and fields of knowledge make to education and human flourishing? In what sense is disciplinary and specialised knowledge 'powerful'? How would the educational potential or power of knowledge be thought of or conceptualised? Questions such as these are inextricably intertwined with questions about the purposes of schooling, as indicated in curriculum ideologies and discourses discussed earlier. What are schools for? What are the purposes of schooling as a social institution? The first type of knowledge questions thus calls for a theory or theories of knowledge that not only identifies various kinds of knowledge but also addresses the significance and contribution of knowledge in education at the interplay of schooling, society and culture.

The second kind of questions is practical, programmatic and deliberative in orientation, having to do with the syllabus construction of a school subject or a course of study. How would knowledge be selected and organised into the content of a school subject, say, geography, in a way that serves the institutional purposes of education and supports classroom enactment by the teachers? In addition to disciplinary and specialised knowledge, what are the other kinds of knowledge and ways of knowing that can be potential content? How would the educational potential or power of content be conceptualised or thought of in a way that contributes to the institutional purposes of schooling? How would content be depicted in a way that encourages rather than discourage the professional autonomy and professionalism of teachers? The formation of a school subject is a complex, practical, deliberative process. It calls for a theory (or theories) of content – a special way of selecting, organising and framing content for social, cultural, educational, curricular and pedagogical purposes.

The third kind of questions is also practical and deliberative, pertaining to classroom enactment of the institutional curriculum (in the form of curriculum documents and materials). How would a teacher interpret the content of a school subject? What meaning and significance would the content have? How would students experience the meaning and significance? How would content be interpreted and transformed in ways that allow content to open up manifold opportunities for the cultivation of human capabilities or powers (abilities, dispositions, ways of thinking, understanding worlds) for all students?

As alluded to in Chapter 1, knowledge questions as such have long been tackled in the fields of German *Didaktik* and American curriculum theory. In the

ensuing chapters, I will examine *Bildung*-centred *Didaktik* and Schwabian curriculum thinking to illustrate how these questions are addressed when the central purpose of education is conceived as the cultivation of human powers.

Concluding remarks

In this chapter I frame an approach to knowledge questions with reference to three levels of curriculum making concerning the syllabus formation of a school subject. Let us not forget some other questions centring on the political nature of the formation of a school subject. At the policy level, the process of reaching a settlement on what should be taught in school is always 'subject to academic, public, media and political contestation' (Luke, Woods, & Weir, 2013, p. 9). In the programmatic or institutional arena, the formation of a school subject is inexorably social and political, intertwining with questions about social class, race, gender and power relations (Apple, 1990, 2004; Goodson & Marsh, 1996; Popkewitz, 1987). At the classroom level, the enactment of a school subject has consequences for identity formation and social reproduction (Anyon, 1981; Apple, 2004). What versions of knowledge, then, are being constructed by whom and in whose interests? Who controls what counts as the content of a school subject within school curriculum? How do the selection and organisation of content for a school subject reflect and work in the interests of particular social classes and groups? How would different ways of selecting, organising and sequencing content produce different identities and relations in classroom? Such questions are inextricably social and political in nature and have been at the heart of critical curriculum inquiry.

Notwithstanding their importance, social and political questions ignore the actual curriculum-making process involved in the formation of a school subject. I want to assert that there are knowledge questions – as represented by the three kinds of questions mentioned earlier pertaining to what is taught and learnt in school and classroom – that are not political *but* educational, curricular and pedagogical. Such questions, which have been largely overlooked in contemporary curriculum theory literature (Deng, 2018), are the focus of this book.

Note

1 In countries like France and Germany with a national or state curriculum, curriculum guidelines, syllabi and frameworks are authoritative documents issued by national or state ministries or departments of education. The United States seems to be an exception as a national or state (institutional) curriculum does not exist, and as state-developed curriculum frameworks and guidelines have no formal authority over the work of teachers (Cohen & Spillane, 1992).

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4 Liberal education, *Bildung* and theory of knowledge

In this chapter I address knowledge questions in the policy arena; that is, at the interplay *between* schooling *and* society and culture. As indicated in Chapter 3, curriculum making at the policy level involves articulating a vision of what education is for, which in turn calls for a theory of knowledge – concerning what knowledge is of most worth or what knowledge should be taught.

Since the cultivation of human powers is seen as a central purpose of education in this book, I examine the two distinctive ways of thinking about the role of knowledge in liberal education, namely the *knowledge-its-own-end thesis* and the *cultivation-via-knowledge platform*. In the knowledge-its-own-end thesis knowledge is seen as intrinsically worthwhile because the pursuit of such knowledge entails the development of intellectual powers or capacities, irrespective of whether it has some extrinsic end in addition to this. In the cultivation-via-knowledge platform knowledge is regarded as an indispensable resource/vehicle for the cultivation of human powers – rather than something to be studied for its own sake.

These two ways of thinking lend support to two types of theory of knowledge: one is concerned with epistemological questions about the nature, scope and kinds of knowledge per se, whereas the other is with questions of how knowledge is related to the cultivation of human powers.

Knowledge-its-own-end thesis

As suggested in Chapter 1, the social realist argument regarding the educational power or significance of knowledge, albeit developed within the tradition of sociology of education, bears resemblance to the knowledge-its-own-end thesis – notably advanced by educational philosophers like John Henry Newman (1801–1890) and Paul Hirst – within the traditions of liberal education in the United Kingdom (R. White, 1986). Behind the thesis is a vision of a liberal education based on the nature of knowledge and directed towards the intellectual and cognitive development of mind. The thesis entails a theory of knowledge that addresses what constitutes knowledge and how knowledge is classified.

Newman

The knowledge-its-own-end thesis is arguably first formally expounded in the mid-19th century by Newman. In his seminal *The Idea of a University* he provided

an eloquent, forceful defence in the post-Enlightenment era of the virtue of what he thought of as a liberal education against the demand for utility, the growing scepticism concerning liberal education, and the questioning of the place of theology in a university (Ker, 1990). According to Newman, liberal education, unlike professional education, is centred on the development of the intellect for its own sake: '(L)iberal education, viewed in itself, is simply the cultivation of the intellect, as such, its object is nothing more or less than intellectual excellence' (Newman, 1852/1982, p. 92). The cultivation is achieved through the study of knowledge, which is valuable in itself and is its own end.

Behind this vision of a liberal education is a theory of knowledge that construes all knowledge as a unified and organic whole consisting of various branches of learning which are in relationship to one another:

> all knowledge is a whole and the separate sciences parts of one . . . all branches of knowledge are connected together, because the subject matter of knowledge is intimately united in itself, as being the great Creator and his work. Hence it is that the Sciences, into which our knowledge may be said to be cast, have multiplied bearings one on another, and an internal sympathy, and admit, or rather demand, comparison and adjustment. They complete, correct, and balance each other.
>
> (Newman, 1852/1982, p. 75)

These various branches including sciences (theology, science and literature) represent varying ways of arranging and classifying phenomena, uniting them under common laws and tracing effects to causes.

Such a theory of knowledge provides the essential basis for the discussion of the nature of a liberal education. The cultivation of the intellect is achieved by way of imparting to students various branches of knowledge and their interrelationships. When proceeding in an active, in-depth manner, the acquisition of knowledge entails the cultivation of mind: it allows us to grasp things as they are, view things as a whole, and develop the capacity of 'discriminating between truth and falsehood', of 'arranging things according to their real value' and of making normative judgements (Newman, 1852/1982, p. 115). Therefore, 'Knowledge is capable of being its own end. Such is the constitution of the human mind, that any kind of knowledge, if it be really such, is its own reward' (Newman, 1852/1982, p. 77).

Hirst

The thesis of Newman prefigures the 'forms of knowledge' thesis Hirst advanced in the mid-1960s. In his celebrated classic essay 'Liberal education and the nature of knowledge', Hirst (1965) developed a theory of a liberal education 'based fairly and squarely on the nature of knowledge itself' (p. 113).[1] Like Newman, he held the rational development of mind through the pursuit of knowledge as the central purpose of liberal education (Hirst, 1965; Hirst & Peters, 1970). And knowledge is pursued to its own end; it 'is in itself the good of the mind' (Hirst, 1965, p. 126).

This vision of a liberal education is undergirded by a relatively contemporary theory of knowledge, which can be seen as developing Newman's proposition of the unity and interconnectedness of knowledge (Ozoliņš, 2013). According to Hirst (1965), knowledge is made up of seven fundamental, logically distinctive forms of knowledge – mathematics, physical sciences, human sciences, history, religion, literacy and the fine arts, and philosophy – which are interconnected, forming a unified whole. Each of these forms has four distinguishing structural features:

1 Each form of knowledge has 'certain central concepts that are peculiar in character to the form'.
2 'In a given form of knowledge these and other concepts . . . form a network of possible relationships in which experience can be understood. As a result this form has a distinctive logical structure'.
3 A form of knowledge, 'by virtue of its particular terms and logic, has expressions or statements . . . that in some way or other . . . are testable against experience'.
4 'The forms have developed particular techniques and skills for exploring experience and testing their distinctive expressions' (Hirst, 1965, pp. 128–129).

These seven forms of knowledge, overall, represent how the human mind thinks, organises and structures experience.

It is with such a theory of knowledge that Hirst justifies the central task of a liberal education – that is, to initiate students into these seven forms of knowledge that are necessary for the full development of mind. The acquisition of these knowledge forms allows students to see things in perspective and relate things to one another and 'to see, to experience the world in a way otherwise unknown' (Hirst, 1965, p. 125). A particular knowledge form, 'if it is to be acquired beyond a general and superficial level, involves the development of creative imagination, judgment, thinking, communicative skills, etc., in ways that are peculiar to itself as a way of understanding experience' (Hirst, 1965, p. 122).

Overall, the knowledge-its-own-end thesis, in the form of Newman or of Hirst, asserts that liberal education is centrally concerned with the development of mind through the acquisition of academic knowledge and that such development must be based upon or informed by a well-articulated theory of knowledge.[2] Nevertheless, this vision of a liberal education has been subject to numerous criticisms. Chief among those criticisms is that the thesis espouses a vision of a liberal education which is indifferent to the social and economic needs of a society and excludes other kinds of knowledge (practical, experiential, social) that can be resources for the development of human powers broadly construed (e.g. Martin, 1994; Mulcahy, 2009; Pring, 1993). With the growing demand for vocational and professional education for all students, as Pring (1993) asserts, the development of mind needs to be:

> not only in the acquisition of different forms of [academic] knowledge but also through the application of useful knowledge, through practical

> 'know-how' in the world of business, through the virtues of enterprise and entrepreneurship, through the espousal of social dispositions such as citizenship, and through the formation of appropriate social skills.
>
> (pp. 50–51)

Another related main objection is that the curriculum, with its exclusive emphasis on the development of the intellect, ignores the development of capacities for practical, moral and ethical reasoning and dispositions or virtues such as caring, empathy, compassion and social responsibility (e.g. Martin, 1994; Mulcahy, 2009; Ozoliņš, 2013; Pring, 1993). As such, the curriculum is geared to produce 'human being as knower' rather than as 'human being as agent' (cf. J. White, 2004).

All these issues surrounding the knowledge-its-own-end thesis derive from the use of a theory of knowledge per se as a point of departure for theorising the nature of liberal education. This approach to theorising, as will be shown in the next section and in Chapter 5, prevents educational theorists from adequately seeing the role and significance of knowledge in education and subsequently from understanding what is entailed in curriculum planning and classroom practice concerned with realising the significance of knowledge. After all, with an exclusive focus on the intellectual development of an individual, such an approach to theorising liberal education entails a distortion of the ancient Greek ideal of liberal education (*paideia*) – the well-rounded formation of the self through culture (Elvin, 1977; Tingley, 2002).

Cultivation-via-knowledge platform

The cultivation-via-knowledge platform is particularly typified in *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education, both of which entail a reinterpretation of *paideia* as a response to the challenges confronting education within a particular social and historical context. Both employ an innovative, reconstructive approach to the significance of knowledge with regard to the development of human powers. In contrast to the knowledge-its-own-end thesis, the platform construes knowledge not of and in itself but as a resource/vehicle for the development of human powers. The starting point is a vision of education centred on the development of a broad range of human powers.

Bildung-*centred Didaktik*

Bildung-centred *Didaktik* provides a theory of curriculum, teaching and learning that seeks to translate *Bildung* into state curriculum planning and classroom teaching. Such a theory consists of three essential components: (1) a concept of *Bildung*, (2) a theory of knowledge for *Bildung* and (3) a theory of content that serves to inform curriculum planning and classroom teaching (to be discussed in Chapter 5).

As the product of neo-humanism that flourished in Germany between 1770 and 1830, the concept of *Bildung* was articulated as a response to the challenge

of modernity posted by the Enlightenment and as a revolt against the then Christianity dominant ideology in schooling. Inspired by the ancient Greek notion of *paideia*, neo-humanists reconceived of education as the development of the full potential of an individual as an independent human being – rather than in the image of God (Løvlie & Standish, 2002; Nordenbo, 2002). On this account, *Bildung* refers to the formation of the full individual, encompassing the development of intellectual and moral powers, the cultivation of sensibility, self-awareness, liberty and freedom, responsibility and dignity (von Humboldt, 2000; also see Hopmann, 2007). The concept is later extended to include the development of self-determination (autonomy), co-determination (participation) and solidarity (Klafki, 1998). In short, underpinning *Bildung*-centred *Didaktik* is an image of a 'responsible and socially aware person contributing to his or her own destiny and capable of knowing, feeling, and acting' (Gundem, 2000, p. 242) – which constitutes an end-in-view in education.

As a result of an individual's interaction with culture and society, *Bildung* is achieved through linking the self to the world in 'the most general, most animated and most unrestrained interplay' (von Humboldt, 2000, p. 58). The individual seeks to 'grasp as much [of the] world as possible' and to make a contribution to humankind through developing his or her own unique self and intellectual and moral powers (von Humboldt, 2000). The world, independent of human thinking and practice, is processed by human thought represented by academic disciplines such as the humanities and sciences (Lüth, 2000).

With *Bildung* as a point of departure, neo-humanists 'translated the general problem of how to conceive of historical knowledge into the educational question of how to forge the link between the person and his culture' (Løvlie, 2002, p. 467). With a central concern for the contribution of human knowledge to *Bildung*, a theory of knowledge is articulated wherein the role or significance of knowledge is thus conceived of as:

- a means of expressing, exercising and intuiting powers;
- a potential stimulus for human development;
- a counterpart to mark out the boundaries of the individual; and
- a means of objectivizing ideas and powers in order to leave traces in the world.

(Lüth, 2000, p. 77)

As such, knowledge is 'used in the service of intellectual and moral *Bildung*' (Lüth, 2000, p. 77) – rather than sought for its own end or for its own sake. There are different forms of human experience and understanding (embodied in academic disciplines) – the *exemplary* (sciences), the *typical* (geography), the *representative* (history), the *classical* (linguistics), the *aesthetic* (visual arts and music) and the *symbolic* (religion). Each of these forms gives us access to a particular aspect of reality and has potential for the cultivation of a particular type of human power (Klafki, 1959; cited in Künzli, 2013). Within each knowledge form there

are elemental categories – ideas, concepts, themes, techniques – which determine the cultivation potential of knowledge (see Chapter 5 for a discussion).

Schwabian model of a liberal education

As indicated in Chapter 1, the Schwabian model is deeply embedded in and shaped by the Chicago tradition of liberal education. Like *Bildung*-centred *Didaktik*, this model can also be seen as consisting of three essential components: (1) a vision of a liberal education, (2) a theory of knowledge for the kind of liberal education envisaged and (3) a theory of content that seeks to inform curriculum planning and pedagogical practice (which will be discussed in Chapter 5).

Schwab's vision of a liberal education is centred on an image of an educated person who possesses an understanding of culture and the world and a set of powers that allows him or her to face the challenges and problems in the society of his times (see McKeon, 1937). Also inspired by the ancient Greek notion of *paideia*, such an image was first articulated by McKeon in 'Education and the disciplines' – in which he attempted to restore the ancient notion of liberal arts to the centre of the curriculum (Westbury & Wilkof, 1978):

> Whether it is called the trivium or not, whether it is applied to old books or new books or even to oral presentations, whether or not principles are thought to determine the sequence, a student should emerge from such a general education with a knowledge of how problems, whether of life or science or of art, have been treated, and with some insight therefore into how problems may be treated; and, joined to that knowledge, he should possess an ability to understand positions other than his own, to present his own convictions relevantly, lucidly, and cogently, and finally to apply informed critical standards to his own arguments and those advanced by others.
>
> (McKeon, 1937, p. 377)

The powers of an educated person, later further articulated by Schwab, include a 'capacity for "syntactical communication"', a disposition to 'quest, beyond mere survival, for a state called "happiness"', an ability to 'deliberate wisely about technologies based on science' and 'to choose thoughtfully among several technological methods' (Levine, 2006, p. 119). The powers too include 'abilities and insights to face the new problems of our times and to use the new instrumentalities with wisdom and freedom' (McKeon, 1953, p. 113) and 'critical and organising power and deliberative command over choice and action' (Schwab, 1978, p. 125), among others.

The cultivation of such intellectual, social and civic powers is achieved through the interaction of individual students with various forms of knowledge embodied in contemporary academic disciplines. A theory of knowledge is articulated that identifies various types of academic disciplines which have potential for the cultivation of human powers and (re)conceives of the essence of each type in ways that

are productive of the cultivation. According to McKeon (1949), there are three types of academic disciplines – natural sciences, social sciences and humanities – distinguished by 'three distinct sets of problems and arts', each manifesting distinctive human powers. Therefore, the significance of each type of these disciplines for cultivating human powers is determined by a distinct set of *arts* or *methods of inquiry* rather than content or subject matter per se:

> The place of the natural sciences in general education is determined by the arts and skills required to analyse problems, validate knowledge, and formulate or understand statements about natures and things. . . . The place of the social sciences in general education is determined by the arts and skills required to analyse problems, validate knowledge, and formulate or understand statements about associations, communities, and institutions set up by men to achieve common values. . . . The place of the humanities in general education is determined by the arts and skills required to analyse problems, validate knowledge, and formulate or understand statements about the appreciation and use of the great achievements of man. All three of these arts are applicable to all subject matters.
>
> (p. 295)

Building on McKeon, Schwab (1978) conceives of an academic discipline as consisting of not only statements/conclusions but also arts or methods employed in disciplinary inquiry, an understanding and mastery of which enables the development of liberating human powers that are applicable to wide-ranging situations and practices:

> The 'intellectual' arts and skills with which the liberal education curriculum is concerned are not then intellectual as to subject matter, and thus exclusive of other subject matters, but intellectual as to quality. They are the arts and skills which confer cogency upon situations and actions whether these be scientific, social, or humanistic, general and abstract or particular and concrete. The liberal arts, however formulated, are to be understood as the best statement of our present knowledge of the human make, of various means – some special in their application to specific subject matters, some general – by which the understanding frees us from submission to impressions, beliefs, and impulses, to give us critical and organizing power and deliberative command over choice and action. A liberal curriculum is one concerned that its students develop such powers.
>
> (p. 125)

Such an exposition of the significance of arts or methods of enquiry in liberal education is also influenced by Dewey's (1938/1998) construction of experience. As the 'pattern and ideal of intelligent exploration and exploitation of the potentialities inherent in experience' (p. 108), Dewey argues, the scientific method has liberating powers in terms of 'getting at the significance of our

everyday experiences of the world' and providing 'a working pattern of the way in which and the conditions under which experiences are used to lead ever onward and outward' (pp. 111–112). Like Dewey, Schwab was to 'invest the problem of knowledge with great significance' in the belief that 'the fate of a whole society might depend on the correct analysis of scientific method' (M. White, 1976, p. 301, cited in Fenstermacher, 1980).

The exposition, overall, represents an important contribution that Schwab made to the reformulation of the liberal curriculum in Chicago (Westbury & Wilkof, 1978). He later characterised the arts of enquiry in terms of the *substantive structure* (essential concepts, principles and frameworks that guide inquiry) and the *syntactic structure* (modes of inquiry, canon of evidence and ways of proof) of an academic discipline (Schwab, 1962). The articulation of these two concepts were animated by and directed towards the previously outlined version of a liberal education (see Westbury & Wilkof, 1978). They were intended to serve as 'an enlightened and illuminating means to engage persons in structuring their experiences in ways that continually enlarge their knowledge and understanding, their autonomy and authenticity, and their sense of place in the past, present, and future of the human race' (Fenstermacher, 1980, p. 196).

Convergence and divergence

With respect to the cultivation-via-knowledge platform, there are significant signs of convergence between *Bildung*-centred *Didaktik* and the Schwabian model. Both employ as a point of departure for thinking about liberal education an image of an active individual – an intellectual and moral agent – with developed human powers (capacities, ways of thinking, dispositions) in a changing society. Both treat knowledge not in and of itself but as a resource for the cultivation of human powers. Accordingly, both are concerned with how knowledge can contribute to the cultivation. And both articulate a theory of knowledge in which the significance of knowledge is reconceived in ways that are productive of the cultivation.

There are, of course, differences between *Bildung*-centred *Didaktik* and the Schwabian model. The former views the cultivation of human powers as resulting from interactions with not only academic knowledge but also society and culture, whereas the latter conceives the cultivation as primarily resulting from interactions with disciplinary and, to some extent, practical knowledge (see Schwab, 1969). The former tends to view academic disciplines as established bodies of knowledge, whereas the latter sees them in terms of not only achievements but, more importantly, also arts or methods of inquiry.

Differences aside, both *Bildung*-centred *Didaktik* and the Schwabian model diverge markedly from the knowledge-its-own-end thesis. As noted earlier, in the thesis the central purpose of a liberal education is the development of certain intellectual capacities which involves the transmission of academic knowledge. In this connection, knowledge is conceived in its own right and as being taught for its own end (i.e. the development of certain intellectual capacities). Both

Newman and Hirst were concerned with epistemological questions about the nature, types and constituent elements of knowledge.

Behind these signs of convergence and divergence are two rather different orientations or approaches to liberal education. The concept of *Bildung* and the Schwabian vision of a liberal education are reformative. Both entail a reinterpretation of the ancient ideal of liberal education as a response to the social and cultural challenges to education in a particular historical context. By contrast, the orientation associated with the knowledge-its-own-end thesis is largely defensive or restorative. What Newman or Hirst provides is a defence or restatement of an idea of liberal education in response to the 'crisis' of identity of liberal education in society (R. White, 1986). As noted earlier, their visions of a liberal education are directed towards preparing the human being as knower rather than as moral agent.

Concluding remarks

As noted in Chapter 1, the central intent of this book is to enrich and go beyond the recent conversation initiated by Young and his colleagues on the role of knowledge in education. Their argument regarding the significance of knowledge in education, as mentioned earlier, finds resonance in the knowledge-its-own-end thesis within the traditions of liberal education in the United Kingdom. This thesis, in turn, lends support to their argument that helping students gain access to disciplinary knowledge is an essential function of schooling and that this function needs to be informed by a well-articulated theory of knowledge. Furthermore, the acquisition of disciplinary knowledge entails the development of intellectual powers – such as analytic skills, logical reasoning and making normative judgements – in addition to those identified by Young and his colleagues noted earlier.

However, linking the acquisition of disciplinary knowledge to the development of intellectual powers captures only in part the role and significance knowledge can play in the development of human powers – broadly construed. The examination of the cultivation-via-knowledge platform embedded in *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education makes it clear that knowledge constitutes as an important resource for the cultivation of human powers rather than as something taught for its own end. To this end, a theory of knowledge is needed that (re)conceives the significance of knowledge in ways that are productive for the cultivation. The cultivation-via-knowledge platform, as will be argued in Chapter 8, provides the basis for developing a viable alternative to the OECD discourse of 21st century competences.

Notes

1 Hirst retracted this theory 30 years later, partly because of numerous criticisms of the theory from the academic community, and partly because of the 'practice turn' in his thinking about liberal education and the curriculum (see Mulcahy, 2009).

2 To regard Newman and Hirst as spokesmen for the knowledge-its-on-end thesis is not to imply that there are no differences between these two thinkers. In terms of philosophical orientation, the writing of Newman is informed by his Catholic religious belief and commitment (see Ker, 1990), whereas the writing of Hirst is grounded in the analytical tradition of educational philosophy associated with the University of London (see Pring, 1993; White, 2009). In terms of epistemology, Newman holds that knowledge found in academic disciplines is a true account of reality, whereas Hirst rejects such a claim yet holds on to the belief that academic disciplines or the various forms of knowledge embody ways of understanding reality (Mulcahy, 2009).

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5 Liberal education, *Bildung* and theory of content

In this chapter I tackle knowledge questions in the programmatic arena – concerning the formation of a school subject or course of study. As indicated in Chapter 3, curriculum making at the programmatic level – also called *curriculum planning* – translates the expectations and purposes of schooling in the policy arena into school subjects or courses of study provided to a school or a system of schools (Doyle, 1992a, 1992b; Westbury, 2000). The process of constructing a school subject tackles issues pertaining to the selection and organisation of content and the transformation of that content for classroom use. It is informed by a theory of content – concerning how knowledge is selected and organised into the content of the curriculum. Such a theory serves to inform classroom teaching as well.

The chapter focuses on issues concerning a theory of content entailed in the knowledge-its-own-end thesis and the cultivation-via-knowledge platform. As will be shown, in the former a theory of content is supplanted by a theory of knowledge that deals with epistemological issues concerning the nature, forms and features of knowledge. In the latter a theory of content results from the necessity of selecting and transforming knowledge into content for the cultivation of human powers. Such a theory – fundamentally different from a theory of knowledge or epistemology per se – deals with issues of what content is, what educational potential content has and how the potential can be analysed and released.

Knowledge-its-own-end thesis

As indicated in Chapter 4, the 'knowledge-its-own-end' thesis – as typically advanced by John Henry Newman and Paul Hirst – is articulated within the traditions of liberal education in the United Kingdom (R. White, 1986). It can be seen as a particular kind of academic rationalism which, as noted in Chapter 3, foregrounds the importance of transmitting disciplinary knowledge for the development of the intellectual capacity of students. Knowledge is 'powerful in itself' because of its effect on the development of desirable states of mind. School subjects and academic disciplines are seen as essentially continuous, with no essential difference between content (of the school subject) and knowledge (of the

academic discipline). Accordingly, a theory of content is replaced by a theory of knowledge as the essential basis for curriculum planning and classroom teaching.

Newman

As noted in Chapter 4, for Newman, the central purpose of a liberal education is the development of the intellect. This is informed by a theory of knowledge that 'construes all knowledge as a unified and organic whole consisting of various branches of learning which are in relationship to one another' (Chapter 4, p. 37). The various branches – theology, science and literature – represent 'varying ways of arranging and classifying phenomena, uniting them under common laws and tracing effects to causes' (p. 37). The acquisition of these various branches of knowledge entails the cultivation of the mind. Accordingly, the development of the intellect is achieved through the study of knowledge – embedded in academic disciplines – for its own sake and to its own end. Knowledge is 'powerful in itself'.

With this theory of knowledge, Newman addressed what curriculum planning and classroom teaching entail. Curriculum planning is primarily a conceptual task of identifying and justifying a core of studies to ensure that all students learn the main outlines of knowledge, based on the theory of knowledge. The curriculum espoused by Newman comprises seven liberal arts of the medieval university (grammar, rhetoric, logic, geometry, arithmetic, astronomy and music) together with science, theology and literature. They are 'the best instruments of mental cultivation, and the best guarantees for intellectual progress' (Newman, 1852/1982, p. 197). Classroom teaching is a process of imparting to the student the knowledge of these disciplines and their interrelations.

Hirst

As indicated in Chapter 4, for Hirst, the central purpose of a liberal education is the rational development of the mind through the pursuit of knowledge. Underpinning this vision of a liberal education is a theory of knowledge – according to which there are seven forms of knowledge: mathematics, physical sciences, human sciences, history, religion, literacy and the fine arts, and philosophy. These seven forms of knowledge in general outline the traditional groups of academic disciplines from Aristotle to Comte. Each knowledge form has four distinguishing structural features – (1) central concepts, (2) relationships, (3) principles and (4) methods and techniques of inquiry, generating and testing knowledge (Hirst, 1965). It is assumed that through understanding these different forms of knowledge as well as their concepts, relationships, principles and methods, students could develop desirable states of mind, certain kinds of habits and attributes that will enable them to deal with the vicissitudes of life. Therefore, knowledge is 'powerful in itself'.

It is with such a theory of knowledge that Hirst discussed the nature of curriculum planning and classroom teaching. Curriculum planning, first and foremost,

is a philosophical or theoretical endeavour consisting of identifying 'the central concepts, modes of enquiry and distinctive truth-tests of different forms of knowledge as the basis for establishing curriculum aims' (Hirst, 1965; Pring, 1993, p. 50). School subjects and academic disciplines are essentially continuous, with differences only in the level and degree of difficulty. The liberal education curriculum is directed to the transmission of the different forms of knowledge for their own sake. Classroom teaching entails an initiation of students into these various forms of knowledge.

Cultivation-via-knowledge platform

As noted in Chapter 4, the cultivation-via-knowledge platform, well exemplified in *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education, espouses a vision of education centred on the cultivation of human powers through knowledge. Academic knowledge is treated as an indispensable resource for the cultivation – rather than as something pursued to its own end. The platform, as will be shown here, calls for the formation of school subjects or courses of study which are related to but fundamentally different from their parent academic disciplines. The formation of a school subject is informed by a theory of content – concerning what content is, what educational potential content has and how such potential can be disclosed or unlocked for the cultivation of human powers.

Bildung-*centred Didaktik*

As indicated in Chapter 4, *Bildung*-centred *Didaktik* involves three essential components: (1) the concept of *Bildung*, (2) a theory of knowledge for *Bildung*, (3) a theory of content that serves to inform curriculum planning and classroom teaching. *Bildung* refers to self-formation and the cultivation of human intellectual and mover powers achieved through the interaction of the individual with the broader society and culture. To this end, a theory of knowledge is articulated in which knowledge is to be 'used in the service of intellectual and moral *Bildung*' (Lüth, 2000, p. 77). There are several forms of disciplinary knowledge – historical, social, linguistic, geographic, mathematical, physical and chemical – each of which gives us access to a particular aspect of reality, and each of which has potential for the cultivation of a particular type of human power (see Chapter 4).

Translated into the institutional context of teaching and learning, the concept of *Bildung*, together with its attendant theory of knowledge, calls for the formation of a school subject in which knowledge is selected and transformed into content for *Bildung*. It requires positing a connection between students' encounter with a piece of content and *Bildung*, calling for a particular way of theorising content. Accordingly, a theory of content is articulated which consists of four interrelated notions: *contents of education* (*Bildungsinhalt*), *educational substance* (*Bildungsgehalt*), *the elemental* (*das Elementare*) and *the fundamental* (*das Fundamentale*). As the material of the institutional curriculum, contents of education

result from a deliberative process of selection and organisation of the wealth of academic knowledge, experience and wisdom for *Bildung*. Such contents, set aside for teaching, are seen as embodying educational potential for *Bildung*:

> these contents, once the children or adolescents have internalized and thus acquired them, would enable them to 'produce a certain order' (Litt) in themselves and at the same time in their relation to the world, to 'assume responsibility' (Weniger), and to cope with the requirements of life, and take the free chances of life. The contents of teaching and learning will represent such order, or possibilities for such order, such responsibilities.
>
> (Klafki, 2000, p. 150)

The educational potential or power lies in the educational substance (*Bildungsgehalt*) of content comprised by the *elemental* categories or aspects (concepts, principles, relations, values, methods) that could contribute to *Bildung*. In other words, *the elemental* refers to concentrated, reduced educational content. Content, by virtue of its educational substance, can bring about a *fundamental* change in the perspectives, modes of thinking, dispositions and ways of being-in-the-world of individual students (Krüger, 2008).

This theory of content provides an essential basis for curriculum planning and classroom teaching. All German states have a state curriculum guideline, the *Lehrplan*. Curriculum planning at the state level entails a deliberative and interpretative process of selecting contents from academic disciplines and other sources (e.g., human experience and wisdom) within a particular social context, with specific groups of learners in mind (Klafki, 2000; Weniger, 2000). For a school subject, the state curriculum guideline specifies the content (topics, themes, issues) to be taught in school but *not* the educational substance and meanings – which are to be identified, interpreted and unpacked by teachers in their classroom situations (Hopmann, 2007). Classroom teaching is viewed as a 'fruitful encounter' between content and the learner (Klafki, 2000) rather than a mere acquisition of academic knowledge. In this context, instructional planning entails a *Didaktik* analysis of content informed by the theory of content. The teacher is to identify those essential elements (categories or aspects) of content that could contribute to *Bildung* and to unpack their educational meanings with particular students in mind and within a particular historical context (present and future) (Klafki, 2000). As such, the teacher *reduces* content to 'what is basic, elementary, *the elemental*' (Krüger, 2008), acting as an 'unlocker' of the 'reality' for the learner. Likewise, the learner is to open up or unlock himself or herself for the reality disclosed. In other words, teaching 'opens up a world for the student, thus opening the student for the world' (Hopmann, 2007, p. 115; also see Klafki, 2000).

Such a theory of content represents a reconstructive, categorical approach to the significance of knowledge for *Bildung*. It is *reconstructive* because knowledge is not taken in and of itself but reconceived or reconstructed in ways that are productive of *Bildung*. It is *categorical* in the sense that categories are used to 'open up' the world and the learner (see Hopmann, 2007). This way of theorising is

typical in humanistic pedagogics (*Geisteswissenschaftliche Pädagogik*) rooted in the phenomenological and hermeneutic tradition – a strand of continental philosophy that foregrounds, as the point of departure for theorising, human existence and human being as active agents interacting with the world (see Hopmann & Riquarts, 2000; Krüger, 2008; Westbury, 2000).

The Schwabian model of a liberal education

As noted in Chapter 4, like *Bildung*-centred *Didaktik*, the Schwabian model can also be seen as consisting of three essential components: (1) a vision of a liberal education, (2) a theory of knowledge for the kind of liberal education envisaged and (3) a theory of content that seeks to inform curriculum planning and pedagogical practice. The vision of a liberal education is centred on the cultivation of intellectual, social and civic powers through the interaction of individual students with various forms of knowledge embodied in contemporary academic disciplines. To this end, a theory of knowledge is articulated that conceives of the essence of academic disciplines in ways productive of cultivating human powers. An academic discipline is seen as consisting not of only statements/conclusions but also of arts or methods employed in disciplinary inquiry, an understanding of which enables the development of liberating human powers that are applicable to wide-ranging situations and practices.

As with *Bildung*-centred *Didaktik*, this vision of education, together with the attendant theory of knowledge, calls for the construction of a course of study (or school subject) in which content is selected and organised for the cultivation of human powers. This entails posting the connection between students' interactions with content and that cultivation, calling for a special way of theorising content as indicated in the theory of content – consisting of a notion of content and three *faces* (purport, originating discipline and access disciplines).

Identified from the fund of academic knowledge, contents take the form of scholarly materials (histories, scientific reports, literacy works etc.) that reflect the 'revisionary' character of knowledge rather than just 'rhetoric of conclusion' (Schwab, 1962). The educational potential – in terms of educational possibilities – of a particular piece of material is analysed by means of three interpretive categories called *faces*. The first face is the *purport* conveyed by scholarly material, e.g. an account of a past event by a piece of history, a moral dilemma or an image of a person or society by a piece of literature, or a way of classifying a group of natural phenomena by a scientific report. For students, understanding the purport can give rise to the broadening of knowledge horizon, transformation of perspectives, cultivation of moral sensitivity and so forth – educational functions or 'powers' of powerful knowledge that are also recognised by Young and colleagues (see Young, 2013; Young & Muller, 2013).

The second face concerns the *originating discipline* from which scholarly material derives, standing for a coherent way of inquiry – a problem formulated, an investigation carried out, the data or argument sought and a conclusion reached. Having students understand and experience the problem, method, principle and

conclusion of a particular inquiry allows them to develop independence in thinking, an ability to judge the reliability of knowledge claims, and an understanding of the merits and limitations of a particular mode of inquiry.

The third face concerns certain *access disciplines* that need to be brought to bear on scholarly material to reveal its full complexity and sophistication. A particular piece of material is scrutinised in terms of different types of questions, different perspectives and different methods of inquiry from various disciplines. In other words, it is subject to treatment in a variety of ways and according to a variety of methods. As such, the material renders diverse opportunities for the cultivation of critical thinking, freedom of thought, self-understanding and prudent thought and action.

This theory of content serves to inform curriculum planning concerning the formation of a school subject or course of study. Curriculum planning entails a deliberative and interpretive process of selecting and translating knowledge from academic disciplines within a particular instructional context, with a particular group of learners in mind. The selection process necessitates a discovery of the educational potential of a particular piece of material (from academic disciplines) under consideration by means of three faces. An analysis of educational potential is required for all pieces of scholarly material competing for a place in the curriculum. The final decision on the inclusion of a particular piece of content in the curriculum is made with reference to its educational potential and in view of the four curriculum commonplaces – the subject matter (content), the learner, the teacher and the milieu (Schwab, 1973). From this perspective, school subjects are related to but fundamentally different from academic disciplines. In his attempt to reform the collegiate curriculum in Chicago, Schwab advocated an issues-focused approach to the selection and organisation of the content of a course of study, so that perspectives and methods from multiple academic disciplines are brought to bear on investigating a set of issues or problems (see Levine, 2006).

The theory of content also serves to inform classroom teaching construed as an encounter of students with the essence of content. As with *Bildung*-centred *Didaktik*, instructional planning presupposes a careful analysis and unpacking of the educational substance, meaning and significance of content. This can be seen in *College Curriculum and Student Protest* in which, Schwab (1969), using as its pretext the student protest movement in the 1960s, provides a restatement of his conviction about the nature of liberal education. He illustrates how to recover the meaning in scholarly material through 'arts of recovery' – in terms of the meaning conveyed (the purport), a particular way of inquiry involved (the originating discipline) and multiple ways of inquiry brought forth (access disciplines) that could be brought to bear on the material. By means of these three categories (faces), a scholarly material or text is made to open up manifold opportunities for challenging the understandings of students and cultivating their intellectual and moral powers.

It is worth noting that, like German *Didaktikers*, in theorising content Schwab took a reconstructive, categorical approach to the significance of academic disciplines. It is *reconstructive* because the outcomes (concepts and principles) and

methods of a discipline are not taken in and of themselves *but* reconceived or reconstructed for the cultivation of human powers. It is *categorical* in that a set of categories is used to reveal the possibilities of content for the cultivation. The Schwabian way of theorising content, as will be further explained in the next section, is also informed by the phenomenological and hermeneutic tradition (see Reid, 1980; Westbury & Wilkof, 1978).

Convergence and divergence

With respect to the formation of a school subject, there are significant signs of convergence between *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education. Both see a school subject or course of study as a purposeful construction geared towards the cultivation of human powers and adopt a reconstructive, categorical approach to theorising content within the institutional context of teaching and learning. Both see curriculum planning as a deliberative and interpretive undertaking involving selecting and organising content in terms of educational potential. And both see classroom teaching as an encounter between students and the essence of content.

Both *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education diverge markedly from the knowledge-its-own-end thesis. As noted earlier, in the thesis a school subject derives from a recontextualisation of its parent discipline directed towards the imparting of disciplinary knowledge. Curriculum planning is largely a theoretical undertaking consisting in identifying the key forms of academic knowledge and their respective central concepts, principles, methods and techniques. And teaching is seen as a process of transmitting academic knowledge.

Behind these signs of convergence and divergence are two rather different approaches and traditions. Both *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education treat liberal education as a 'practical' undertaking in the Aristotelian sense. Both are concerned with what it means to develop the individual for political, social and cultural participation in a changing society. Both Klafki (a key representative of *Bildung*-centred *Didaktik*) and Schwab took the burden of translating a vision of a liberal education into curriculum planning and teaching within a particular instructional context (Reid, 1980). And both *Bildung*-centred *Didaktik* and the Schwabian model were rooted in or informed by phenomenological and hermeneutic philosophy.

By contrast, both Newman and Hirst treat liberal education as largely a *theoretic* undertaking concerned with establishing theoretical principles that underpin the liberal education curriculum. As such, both Newman and Hirst engage themselves in analysing what a liberal education entails and what knowledge best trains the mind for 'intellectual excellence' – rather than addressing how to educate the active, participatory individual in a changing society. Base on the analyses, both draw implications for curriculum planning and classroom teaching. And, their works are largely situated within the British philosophical tradition deeply influenced by science and logic and related modernist, scientific and empiricist way

of thinking associated with René Descartes, Isaac Newton, John Locke, Auguste Comte and John Stuart Mill, among others (Hamilton, 2001; Reid, 1980). The remarkable resemblance of the Schwabian model to *Bildung*-centred *Didaktik* has something to do with the legacy of Germanic scholarly tradition and neo-Aristotelianism at the University of Chicago. As Reid (1980, p. 259) observed,

> For Schwab, however, and some of his contemporaries at the University of Chicago, an inheritance of Germanic rather than English styles of scholarship, combined with the need to view educational problems in terms of the social and political conditions of a mature republican democracy, produced circumstances under which a brand of neo-Aristotelianism became both possible and attractive.

On the other hand, the Aristotelian practical spirit of mind, once highly influential, 'was progressively abandoned by English educators of the eighteenth and nineteenth centuries' (Reid, 1980, p. 252). They adopted modernist, scientific and empiricist thinking – rather than the neo-humanistic thinking of Germany.

Concluding remarks

I have examined issues concerning a theory of content entailed in the knowledge-its-own-end thesis and in the cultivation-via-knowledge platform. As noted earlier, in the former *a theory of knowledge* and *a theory of content* are largely equivalent because of the assumed continuity between school subjects and academic disciplines. If we, following Newman and Hirst, see knowledge as 'powerful' in terms of its effect on the development of the mind, then we must ask such questions concerning the formation of a school subject as: within a particular discipline, what are the ways of arranging and classifying phenomena? What are the essential concepts, principles and relationships? What are epistemic rules and methods of developing, testing and verifying knowledge? To ask such questions is to invite social realists to pay more attention to the conceptual and methodological aspects of an academic discipline – aspects which could have arguably the most impact on the intellectual development of students. A knowledge-led curriculum can be developed which is directed to the development of students' intellectual capabilities, through initiating them into those powerful way of classifying social and natural phenomena, essential concepts, principles and relationships, and epistemic rules and methods of inquiry.

The intent of this book, as indicated in Chapter 1, is to go beyond the work of Young and his colleagues within the social realist paradigm. With respect to the formation of a school subject, curriculum planning is not just a matter of selecting, sequencing and pacing disciplinary knowledge as held by Young and his colleagues. If we, following Klafki and Schwab, regard knowledge as a 'powerful' resource/vehicle for the cultivation of human powers, then we must conceive of a school subject as a purposeful construction which is related but fundamentally

different from its parent academic discipline. The construction of a school subject calls for reconstructive, creative, innovative ways of selecting, organising and transforming content for the cultivation of human powers. Questions concerning a theory of content are in order, such as: How would knowledge be selected and translated into the content of the curriculum geared towards cultivating human powers? How would content be analysed and unpacked in ways that open up manifold opportunities for the cultivation? How would the organic power of the contents become a formative force in the life of the student?

To be clear, there are two major issues in *Bildung*-centred *Didaktik* and the Schwabian model. Like the knowledge-its-own-end thesis, these two models have a tendency, particularly evident in the latter, to overlook other forms of knowledge (practical, experiential, common-sense or everyday knowledge) that could be meaningful resources for developing human powers. The second issue, closely related to the first, has to do with an elitist orientation associated with both *Bildung*-centred *Didaktik* and the Schwabian model. The former is largely employed for teaching academically inclined students in *Gymnasium* (academic-track high schools), while the latter was developed for the first two years (general) education of a highly selected group of youngsters (grades 11–14) at the University of Chicago's undergraduate college (Levine, 2006). Therefore, when applying these two models to the current context, it is necessary to take account of other pertinent forms of knowledge (see Chapter 2). Furthermore, it is necessary to extend the cultivation-via-knowledge function of schooling to *all* students regardless of their background, gender or ethnicity. This is a social justice issue because the development of human powers or capabilities is inevitably tied to the 'pedagogic rights' of all students to individual enhancement, social inclusion and political participation (McLean, Abbas, & Ashwin, 2013).

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6 Rethinking teaching and teachers

Bringing content back into conversation

As indicated in Chapter 1, *content* refers to a very special kind of knowledge which 'enters' into the school curriculum. It results from a special selection, organisation and transformation of knowledge for social, cultural, educational and pedagogical purposes. As such, content is an indispensable, vital concept in talking and thinking about classroom teaching within the institutional context of schooling. In the German *Didaktik* tradition, teaching is conceptualised by way of the *Didaktik* triangle – comprised of three general, essential elements: content, teacher and student (Hopmann, 2007). In US curriculum theory, teaching is construed as involving four indispensable, and equally important, curriculum commonplaces: subject matter (content), teacher, learner and milieu (Schwab, 1973).

However, content as a topic of discussion has disappeared from current global policy discourse concerning teaching and teachers. Across the globe there has been a shift in curriculum policy from a concern with content selection and organisation to a preoccupation with academic standards, learning outcomes and high-stakes testing (Yates & Collins, 2010; Young, 2009a; also see Chapter 1). Accompanying that shift is a move to depict teaching as focused on promoting students' academic outcomes measured by high-stakes tests and teachers as accountable for students' learning outcomes through the employment of evidence-based practices (Hopmann, 2008).

The omission of content, too, is evident in the current popular discourse on teaching and teachers framed by 'a new language of learning' – a learning discourse which has been widely adopted by education policymakers in different parts of the world (Biesta, 2005). In that discourse teaching is construed as the facilitation of learning that is constructivist and learner-centred and the teacher as one who no longer passes on content (knowledge) to learners but who instead supports and facilitates the learning process (Biesta, 2005, 2010). In other words, the teacher does not teach. There is a shift in role from the 'sage on the stage' to the 'guide on the side' and even the 'peer at the rear' (Biesta, 2017).

In the academic literature on teaching and teachers, content is also the least discussed commonplace. Much of the discussion on teachers has centred on teachers' characteristics, self, identity, agency, learning and professional development. Most discourse on teaching has focused on instructional strategies and

models, the student–teacher relationship, the context in which teaching takes place (classroom, school, national, international or global), the social and political nature of teaching, and instructional policy and reform (see Saha & Dworkin, 2009; Biddle, Good, & Goodson, 1997). When content is discussed, it is often treated as something to be transferred to or constructed by students, apart from a concern for the broader purpose of education (see Chapter 7).

In this chapter I attempt to reintroduce content into the conversation on teaching and teachers through revisiting the recent work of Michael Young and his colleagues concerning 'bringing knowledge back in' as well as *Bildung*-centred *Didaktik* and Schwabian curriculum thinking (see Chapters 1, 4 and 5). The examination of these three schools of thought, as will be seen, yields an educational, curricular understanding of teaching and teachers that goes far beyond what current policy and academic discourses can capture.

Bringing knowledge back in, *Bildung*-centred *Didaktik* and Schwabian curriculum thinking

Bringing knowledge back in

As indicated in Chapter 1, over the last ten years, Michael Young and his colleagues have embarked on a project of 'bringing knowledge back in' to the recent global discourse on curriculum policy and practice. Informed by critical realism and based on the works of Émile Durkheim and Basil Bernstein, they develop a social realist theory of knowledge that differentiates between academic, disciplinary and everyday knowledge and, further, between different types of disciplinary knowledge. While reflecting human interests or standpoints, disciplinary knowledge has its own properties, trustfulness and explanatory power (Young, 2008). Created by specialist communities of scholars, this knowledge is *powerful knowledge* because it provides the best understanding of the natural and social worlds. The acquisition of this knowledge facilitates the imagining of alternatives and enables people to move beyond their particular experience (Young & Muller, 2013). As such, disciplinary knowledge is worthy of being taught in its own right and to its own end.

With this theory of knowledge as an essential point of departure, Young and his colleagues argue that the central purpose of schooling is to help students gain access to disciplinary knowledge that they cannot acquire at home (Young, 2009b). Furthermore, access to this knowledge is an entitlement of *all* students – and (thus) a social justice issue. After all, this purpose is essential if we are to enable the next generations to create new knowledge based on existing knowledge. In this connection, curriculum planning is a process of recontextualising an academic discipline into a school subject (see Chapter 1).

Accordingly, teaching is viewed as a process of passing on a body of disciplinary knowledge that students cannot acquire at home. The central task of a teacher is to promote epistemic access to disciplinary knowledge and to take students beyond their existing experience or what they already know. To do this, the teacher needs to interpret the national curriculum to identify *what* knowledge is

powerful for students at different ages, in light of the central purpose of schooling – the *why* of teaching – with a view to creating educational encounters in the classroom. As such, teachers need to have a theory of the curriculum – a theory of the knowledge students must acquire at various grade levels – in addition to disciplinary knowledge and general pedagogical knowledge (Young, Lambert, Roberts, & Roberts, 2014).

In short, by way of a social realist theory of knowledge, Young and his colleagues have contributed to bringing knowledge back into the conversation on teaching and teachers. However, there are two issues. With an exclusive focus on the internal properties and the explanatory and emancipatory power of knowledge, they take knowledge as being an end in itself rather than as a means to some larger purpose of education. They seem to be concerned with, borrowing from David Hamilton, the immediate, present question of 'What should they [students] know?' rather than the future-oriented question of 'What should they [students] become?'(Hamilton, 1999, p. 136). Another issue, related to the first, concerns the focus of their discourse – *knowledge* rather than *content*. As indicated in Chapter 3, content results from institutional curriculum making – a special selection and organisation of knowledge for the school curriculum – that takes place prior to and independent of classroom teaching (Karmon, 2007; also see Deng, 2009; Chapter 3). Such content constitutes the locus of classroom teaching: it frames a teacher's practice and perspective on teaching (Deng, 2009).

These two issues, overall, have to do with the theoretical underpinnings – *sociological* rather than *curricular* and *educational* – of the work of Young and his colleagues. As I have indicated elsewhere, Young and his associates have ignored two bodies of literature – one on curriculum theory and the other on *Didaktik* – that examine the role of knowledge and content in education, curriculum planning and classroom teaching from educational and curricular perspectives (Deng, 2015). As such, they have lost touch with deeper questions about educational purpose, content and teaching that 'have animated pedagogics and didactics' (Hamilton, 1999, p. 136) – and curriculum theory as well.

Bildung-*centred Didaktik*

Bildung-centred *Didaktik* provides a theory of teaching and learning that pertains to implementing the state curriculum in classroom. As already noted in Chapter 4, central to it are (1) a concept of *Bildung*, (2) a theory of knowledge for *Bildung* and (3) a theory of educational content that serves to inform curriculum planning and classroom teaching. Standing for the German ideal of (liberal) education, *Bildung* refers to the formation of the full individual, the cultivation of human powers, sensibility, self-awareness, liberty and freedom, responsibility and dignity (von Humboldt, 2000; also see Hopmann, 2007). *Bildung* is achieved through linking the self to the world (social and natural) in 'the most general, most animated and most unrestrained interplay' (von Humboldt, 2000, p. 58). The world, independent from us, is processed by human thought represented by academic disciplines (Lüth, 2000).

With this concept of *Bildung* as a point of departure, German *Didaktikers* articulated a theory of knowledge which conceives of the role of disciplinary knowledge in relation to education and the curriculum. Knowledge is to be 'used in the service of intellectual and moral Bildung' (Lüth, 2000, p. 77) rather than something that is to be gained for its own sake. Academic disciplines are an indispensable resource or vehicle for *Bildung* (Klafki, 2000). There are several forms of disciplinary knowledge – historical, social, linguistic, geographic, physical, chemical and biological – each of which gives us access to a particular aspect of reality and each of which has potential to cultivate a particular type of human power (for a more detailed explanation, see Chapter 4).

Furthermore, German *Didaktikers* established a theory of educational content (*Theorie der Bildungsinhalte*) that serves to inform curriculum planning and classroom teaching for *Bildung*. It consists of four related concepts: *contents of education* (*Bildungsinhalt*), *educational substance* (*Bildungsgehalt*), *the elemental* (*das Elementare*) and *the fundamental* (*das Fundamentale*). I have explained these four concepts in Chapter 5:

> As the material of the institutional curriculum, contents of education result from a deliberative process of selection and organisation of the wealth of academic knowledge, experience and wisdom for *Bildung*. Such contents, set aside for teaching, are seen as embodying educational potential for *Bildung*. . . . The educational potential or power lies in the educational substance (*Bildungsgehalt*) of content comprised by the *elemental* categories or aspects (concepts, principles, relations, values, methods) that could contribute to *Bildung*. In other words, *the elemental* refers to concentrated, reduced educational content. Content, by virtue of its educational substance, can bring about a *fundamental* change in the perspectives, modes of thinking, dispositions and ways of being-in-the-world of individual students.
>
> (pp. 49–50)

Informed by such a theory of educational content, the state curriculum framework only lays out school subjects and their contents to be covered in schools but does not specify the educational substance, meaning and significance of content – these are to be identified and interpreted by a teacher in a specific classroom situation (Hopmann, 2007). Teachers are entrusted with a high level of professional autonomy to interpret the state curriculum framework. They are viewed as curriculum makers 'working within, but not directed by' the state curriculum framework, informed by the idea of *Bildung* and the *Didaktik* way of thinking (Westbury, 2000, p. 26).

With reference to the notion of *Bildung* and the theory of educational content, German *Didaktikers* articulated what teaching is and what responsibility a teacher needs to have. Classroom teaching is seen as a 'fruitful encounter' between content and the learner for *Bildung* (Klafki, 2000), rather than as the mere transmission of academic content. Such an encounter leads to a deeper understanding of the world, modifications in perspectives and the cultivation of human capacities

or powers. Students are seen as unique individuals, with their own experiences, motivations and interests. Therefore, in instructional planning, the teacher must identify the elemental aspects of content (penetrating cases, basic ideas, concepts and methods) and ascertain the value and significance of content with reference to individual students 'with a particular human context in mind, with its attendant past and its anticipated future' (Klafki, 2000, p. 148). Furthermore, they are to transform content into forms that are perceived as meaningful by students themselves. Klafki (2000) formulated a five-step set of questions that serves to facilitate teachers' *didaktik* thinking during instructional planning, directed towards identifying the educational substance and exploring the educational potential of content and its realisation (see Chapter 7). The model comprises five questions in terms of (1) exemplary value, (2) contemporary meaning, (3) future meaning, (4) content structure and (5) pedagogical representations that a teacher should ask during lesson planning to explore the educational potential of content and its actualisation (Gudmundsdottir, Reinertsen, & Nordtømme, 2000).

Schwabian curriculum thinking

As already mentioned in Chapter 4, central to Schwabian curriculum thinking – represented by the Schwabian model of a liberal education – are (1) a vision of a liberal education, (2) a theory of knowledge for the kind of liberal education he envisaged and (3) a theory of content that serves to inform curriculum planning and move classroom teaching towards that vision. For Schwab, the central purpose of liberal education, which is akin to *Bildung*, is the development of an empowered, autonomous and active individual. Such individuals possess a set of human powers (capabilities, dispositions, understanding worlds) that allows them to face the challenges and problems in the society of their times. The cultivation of human powers is achieved through the interaction of individual students with various forms of knowledge embodied in contemporary academic disciplines and practical disciplines or fields (e.g., laws and medicine).

Accordingly, Schwab articulated a theory of knowledge that conceives of the essence of academic disciplines in ways that are productive in cultivating those human powers and dispositions. Following McKeon, he identified three types of academic disciplines – natural sciences, social sciences and humanities – each of which has the potential to develop a particular type of human power and disposition. The significance of each discipline is determined by a distinct set of *arts* or *methods of inquiry* instead of content or subject matter. In this connection, Schwab argues that the contribution of an academic discipline to the cultivation of human powers lies in the methods or arts of inquiry embedded within the discipline. An academic discipline consists not only of statements and conclusions but also arts or methods employed in disciplinary inquiry, an understanding of which enables the development of liberating human powers that are applicable in wide-ranging situations and practices (see Chapter 4).

Consistent with this theory of knowledge, Schwab formulated a theory of content that serves to inform curriculum planning and classroom teaching. This

theory consists of a particular notion of content and a set of categories that could serve to reveal the educational potential of content for the cultivation of human powers. Identified from the fund of academic knowledge, it takes the form of scholarly materials (histories, scientific reports, literacy works and so on) that reflect the revisionary character of knowledge (concerning how knowledge was developed) rather than just the 'rhetoric of conclusion' (knowledge as a final product) (Schwab, 1962). The set of categories, called *three faces*, is explained as follows:

- The first face is the *purport* conveyed by the material, referring to, for instance, an account of a political event by a historical segment, a way of classifying physical phenomena by a scientific report, a moral dilemma or an image of a person by a literary work. Having students encounter the purport as such can open up opportunities for widening their horizons, transforming their perspectives and cultivating their moral sensitivity.
- The second face is the *originating discipline* from which scholarly material derives, referring to a coherent way of inquiry – a problem identified, an investigation executed, the data or argument sought and a conclusion reached. Having students understand and experience the problem, method, principle and conclusion of a disciplinary inquiry can give rise to the development of independent critical thinking, an ability to judge the validity and reliability of knowledge claims, and an understanding of the merits and limitations of a particular mode of inquiry.
- The third face refers to *access disciplines* that can be brought to bear on scholarly material to disclose its full complication and sophistication. When a piece of material is scrutinised by asking different types of questions, using different perspectives and different methods of inquiry, it can render diverse opportunities for cultivating critical thinking, freedom of thought, self-understanding and prudent thought and action.

(Chapter 5, pp. 51–52; also see Deng, 2018, p. 343; Schwab, 1973)

Informed by this theory of content, curriculum planning entails a deliberative and interpretive process of selecting the content from academic and practical disciplines with a view to their educational potential, within a particular instructional context and with a particular group of learners in mind. The process entails identifying the educational potential of the scholarly material under consideration, by means of the three faces – purport, originating discipline and access disciplines. The final decision to include a particular piece of scholarly content in the curriculum is made with reference to both its educational potential and the four curriculum commonplaces: subject matter, milieus, learner and teacher (Schwab, 1973; also see Chapter 5).

What teaching is, and what responsibility teachers need to have, take on a special meaning in regard to the vision of a liberal education, the theory of knowledge and the theory of content. As with *Didaktik*, classroom teaching is seen as an encounter between students and content to achieve the kind of education

envisioned. A student is seen as a unique individual with *eros* ('the energy of wanting') – an instrument that the teacher needs to make use of (Schwab, 1978). In instructional planning, the teacher is to recover the significance in scholarly material through 'arts of recovery' – in terms of the meaning conveyed (the purport), the particular way of inquiry involved (the originating discipline) and multiple ways of inquiry brought forth (access disciplines) which could be brought to bear on the material (Schwab, 1969). By means of these three categories, scholarly material or a text is made to open up manifold opportunities for challenging the understanding of students and cultivating their intellectual and moral powers and dispositions.

Theorising content, teaching and teachers: comparison and contrast

Despite being developed in different social, historical and cultural milieus, *Bildung*-centred *Didaktik* and Schwabian curriculum thinking have significant similarities with respect to theorising teaching and teachers. Both employ, as a point of departure, a vision of education – centred on the cultivation of human powers – for thinking about the role of knowledge in education and curriculum. Both treat disciplinary knowledge not in and of itself but as a resource or vehicle for that cultivation. Both view content that results from the deliberate selection of academic knowledge as embodying educational potential. Both see classroom teaching as an educational encounter or meeting between students and content, and stress the necessity of unlocking the educational potential of content for cultivating human powers (also see Chapters 4 and 5).

Both *Bildung*-centred *Didaktik* and Schwabian curriculum thinking are markedly different from that of Young and his colleagues. The latter employs a sociological theory of knowledge – rather than a vision of education – as their point of departure for thinking about the purpose of education, curriculum planning and classroom teaching. Disciplinary knowledge is viewed as having its own powers, worthy of being taught for its own sake or to its own end. Classroom teaching is seen as a process of transmitting disciplinary knowledge to students.

Behind these similarities and differences are two rather different types of educational theorising that are associated with two distinctive traditions of educational thinking. Both *Bildung*-centred *Didaktik* and Schwabian curriculum thinking exemplify a way of theorising rooted in the northern European tradition of educational thinking – in particular, the *Pädagogik* tradition[1] – which is distinctively *educational*, *normative* and *hermeneutic*. (For an explanation on the convergence in educational theorising between Schwab and *Didaktikers*, see Künzli, 2013; Reid, 1980.) This way of theorising is educational because it is centrally concerned with questions pertaining to human formation and flourishing. It is normative because the theorising is informed by a conception of what education ought to be. Furthermore, both *Bildung*-centred *Didaktik* and Schwabian curriculum thinking have a strong hermeneutic and interpretive inclination, a proclivity towards interpreting and unpacking the meaning and significance of

content by means of a set of categories. After all, the European tradition seeks to establish *Pädagogik* as a distinctive human science with 'its own terminology, its own points of departure, its own methods of investigation and verification' (Krüger, 2008, p. 216).

By contrast, the way of theorising used by Young and his colleagues reflects the Anglophone *disciplines of education* tradition in which the perspectives or theories that are used to think about education are derived or developed from theories of foundational disciplines (psychology, sociology, philosophy and history) (Furlong & Whitty, 2017). Such perspectives or theories are then used to establish theoretical principles concerning curriculum planning and classroom teaching. The tradition has a strong dependency on foundational disciplines for its language, theoretical perspectives and methods.

Towards an educational and curricular understanding of teaching and teachers

This chapter is concerned with the disappearance of content in current global policy and academic discourses concerning teaching and teachers. These two discourses, as noted at the start, have been respectively shaped by the accountability movement, which reduces teaching to the promotion of students' academic outcomes through evidence-based practices, and a language of learning that reduces teaching to the facilitation of learning. In view of the previous discussion, I now present three arguments that seek to move beyond current policy and academic discourses and towards an educational and curricular understanding of teaching and teachers.

The first argument is that *Teaching is an 'intergenerational' task vital for social reproduction and innovation*. Teaching, according to Biesta (2012), 'is always framed by a *telos* – that is, by a sense of purpose – which means that teachers always need to make judgements about what is desirable in relation to the different purposes that frame their practice' (p. 36). As noted earlier, according to Young and his colleagues, the central purpose of schools is the transmission of a body of disciplinary knowledge that allows students to move beyond their particular experience, envisage alternatives and participate in social and political debates. This purpose is also vital for enabling the next generations to create new knowledge built on existing knowledge. Therefore, by passing on disciplinary knowledge to students, a teacher contributes to the process of social reproduction and change – that is, 'reproducing human societies' and 'providing the conditions which enable them to innovate and change' (Young, 2009b, p. 10).

This distinct purpose of schooling calls for teachers to make deliberate, well-informed decisions on what 'powerful' knowledge or content they want all their students to have access to. This requirement is inextricably connected with the ethical responsibility of a teacher, which is aptly captured by the intergenerational question: 'What does the older generation want with the younger?' first raised by the German philosopher Friedrich Schleiermacher (1768–1834). Concerning this question, Uljens and Ylimaki (2017) observe that 'Teaching . . . is about dealing with how to live out our responsibility to support the student's stepwise

development toward an independent cultural being and citizen able to participate in common tasks of the society, culture, politics and economy [labour market]' (p. 28). Furthermore, Friesen argues that the ethical responsibility of teachers with regard to Schleiermacher's question takes on greater significance in the current world:

> we must prepare them to inherit the world we have helped to create. This is a world characterized by rapid change, radical uncertainty and sometimes rabid competition, but it is also one that can be secured by ties of family, love, identity and belonging. It is also a world where adults and previous generations have made irreversible decisions regarding the lives of children and future generations. In this sense too, we adults want – or have in effect demanded – something from them.
>
> (p. 7)

In view of this, thinking of teachers and teaching in terms of learning or via the learning discourse 'simply darkens or conceals the question of adult responsibility' and 'distracts and detracts' from Schleiermacher's urgent question of 'why the older generation is doing what it is doing' (Friesen, 2017, p. 8).

The second argument, closely related to the first, is that *Teaching, by way of a meaningful encounter between content and students, contributes to their self-formation and the development of human powers.* Teaching is an educational intervention that aims to bring about something new, something that has an impact on students. This intervention, for Young and his colleagues, is achieved through passing on a body of disciplinary content that can take students beyond their immediate, surrounding experience. From the perspective of both German *Didaktikers* and Schwab, the formation and cultivation occurs in terms of a student–content encounter that gives rise to opportunities for students to cultivate intellectual, moral and social powers. By making such an encounter possible, the teacher 'opens up a world for the student, thus opening the student for the world' (Hopmann, 2007, p. 115). Teaching, Biesta (2012) observes, involves 'an ongoing dialogue between "self" and "other" [in the widest sense of the word "other"] in which both are formed and transformed – a process through which we come "into the world" . . . and the world comes into us'(p. 43). To argue for teaching as an educational intervention is to counter the pervasive, popular learning discourse that reduces teaching to the facilitation of learning and a teacher to a facilitator of learning. A teacher must be positioned as someone who is at the heart of the educational process rather than as someone 'who literally stands at the sideline in order to facilitate the learning of his or her "learners"' (Biesta, 2012, p. 38).

The third (and last) argument is that *teaching is a practical, interpretive act that calls for curriculum thinking that is centred on the 'what' (content) and 'why' (purpose) of teaching.* Teaching is a *practical* endeavour because a teacher works with specific content, specific students and specific materials in a specific classroom context (Schwab, 1970/2013). It is also an *interpretive* act because it involves content (in the form of curriculum texts) that must be interpreted and acted upon by a teacher to an educational end. For Young and his colleagues, a teacher

necessarily identifies what powerful knowledge is by interpreting the national curriculum, so as to help students to gain epistemic access to disciplinary knowledge. From the perspective of *Didaktik* or Schwabian curriculum thinking, a teacher necessarily interprets the content in the institutional curriculum, identifying its elemental elements and ascertaining the educational potential of content for developing human powers. In both cases, the interpretation calls for a special kind of curriculum thinking that is centred on the 'what' and 'why' of teaching – that is, on the content and purpose questions. In this regard, a teacher can be seen as a 'curriculum theorist'. Doyle (1992) explained:

> Teaching is, at its core, an interpretive process grounded in conceptions of what one is teaching and what value that content has for students and society. And the choices that teachers make with respect to their content have enormous consequences for the lives of students and the health of the society. To teach effectively, teachers much be responsible curriculum theorists. (p. 77)

In other words, a teacher has an ethical responsibility to reflect on the what and why of education – for which the learning discourse is empty (Biesta, 2012).

Concluding remarks

These three arguments, overall, outline a curricular and educational contour of the meaning of teaching and being a teacher that goes far beyond what current policy and academic discourses can capture, due to the omission or neglect of the content question. My attempt to bring content back into the conversation on teaching and teachers, I hope, makes it clear that teaching is an ethical and intellectual undertaking that is vital for social reproduction and innovation, human development and the flourishing of students – and for which content is an essential resource. And teachers, being (as they are) at the heart of such an undertaking, are curriculum makers (or theorists) who must grapple with the intellectual and moral questions of what content should be taught, why it should be taught and how it should be taught within a particular classroom context.

Note

1 *Pädagogik* refers to a distinct discipline or science of education relating to the work and practice of schooling, which is widely accepted in Northern European countries as an important educational discipline for teacher education (Biesta, 2011). *Didaktik* is a central component of pedagogics.

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7 Pedagogical content knowledge reconceived

Bringing curriculum thinking into conversation on teachers' understanding of content

This chapter contributes to a reconceptualisation of pedagogical content knowledge (PCK) through exploring what is entailed in teachers' understanding of content within the framework of the institutional curriculum, with a central concern for the development of human *powers* (capacities or abilities, ways of thinking, understanding worlds). The reconceptualisation is made by way of a curriculum-making framework articulated by Walter Doyle and Ian Westbury (see Chapter 3) and by examining the capabilities approach developed by David Lambert and *Bildung*-centred *Didaktik*.

To begin with, I provide a brief review of the concept of PCK. I next expound the role of the institutional curriculum with respect to teachers' understanding of content by way of the aforementioned curriculum-making framework. Afterwards, I move to examine the capabilities approach and *Bildung*-centred *Didaktik* to illustrate what is entailed in a teacher's understanding of the content in the institutional curriculum, with a central concern for the development of human powers or capabilities. What follows is a comparison of the way of conceptualising teachers' understanding of content for teaching in the capabilities approach and *Bildung*-centred *Didaktik* with that which underpins PCK. I conclude by discussing the implications of the argument for reconceptualising PCK.

PCK: background, conceptualisation, issues and developments

The rise of PCK is inextricably connected with the attempt to professionalise teaching in the United States in the 1980s. As a response to the growing criticism over the quality of American schooling, teacher educators argued for professionalising teaching as a means to raise the standards of teachers and teacher education (Bullough, 2001). Underlying their argument is the belief that teaching as a profession, like medicine and law, has a knowledge base – a codifiable aggregation of knowledge, understanding, skills and dispositions possessed by professional teachers (Shulman, 1986b, 1987; Wilson, Shulman, & Richert, 1987).

The articulation of the concept, too, has to do with the attempt of Shulman and associates to address the 'missing paradigm' in research on teaching and teacher knowledge – the absence of attention to content or subject matter.

Within the various research programs on teaching and teacher knowledge under the 'presage-product' and 'teacher thinking' paradigms in the 1970s and 1980s, the question of how a teacher transforms his or her content knowledge into forms suitable for teaching was never asked or investigated. Yet a teacher's ability to *transform* the content he or she possesses for classroom teaching lies at the heart of teachers' specialised content expertise (Shulman, 1986a, 1986b, 1987; Wilson et al., 1987).

The transformation process entails three kinds of *content knowledge for teaching*, (1) *content knowledge*, (2) *PCK*, and (3) *curricular knowledge* (Shulman, 1986b). Content knowledge refers to 'the amount and organization of knowledge per se in the mind of the teacher' (p. 9), including knowledge of the *substantive structure* (essential concepts, principles, frameworks) and the *syntactic structure* (modes of inquiry, canons of evidence, ways of proof) of an academic discipline – terms coined by Schwab (1964). This concept implies no fundamental difference between the kind of content knowledge possessed by a teacher and the kind possessed by a scholar in the academic community.[1] Therefore, related to PCK is the belief that deep and sophisticated disciplinary content knowledge is crucial to 'good' teaching.

As a special domain of teachers' content knowledge, PCK allows the teacher 'to transform the content knowledge he or she possesses into forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by students' (Shulman, 1987, p. 15). It includes knowledge of pedagogical representations, of students' prior knowledge, learning difficulties and misconceptions, and of instructional strategies that tap into their prior knowledge and address their learning difficulties and misconceptions. The third category, curricular knowledge, involves an understanding of curricular and instructional programs available for teaching a subject at various grade levels, from which a teacher draws 'tools' for classroom teaching (for a detailed unpacking of PCK, see Deng, 2018).

In short, content knowledge, PCK and curricular knowledge constitute three essential components of content knowledge for teaching. Underpinning the idea of PCK is the assumption that a teacher necessarily transforms the content knowledge of an academic discipline he or she possesses into pedagogical forms. Furthermore, according to Shulman and associates, the transformation entails pedagogical reasoning comprising four aspects – *preparation*, *representation*, *adaptation* and *tailoring* – directed towards the selection and identification of pedagogical forms catering to students of particular backgrounds and characteristics. And the transformation is informed by the teacher's knowledge of educational purposes, of learners, of the school curriculum, of general pedagogy and of the school context (Shulman, 1987; Wilson et al., 1987).

However, numerous issues or criticisms have been raised concerning PCK as a special form of content knowledge for teaching (for more discussions, see Depaepe, Verschaffel, & Kelchtermans, 2013; Hashweh, 2014; Van Driel & Berry, 2010). Among those issues or criticisms is a concern over the conception

of teaching promoted by PCK. With the foregrounding of 'the ways of representing and formulating the subject that make it comprehensible to others' (Shulman, 1986b, p. 9), PCK tends to endorse a transmissive view of teaching – the imparting of a body of knowledge and skills from a teacher to students (Meredith, 1993, 1995; also see McEwan & Bull, 1991). A second issue concerns whether PCK can be separated from cultural values and normative orientations (e.g., Gudmundsdottir, 1990; Tirosh, Tsamir, Levenson, & Tabach, 2011; Van Driel & Berry, 2010). As Gudmundsdottir (1990) argues, it is only in theory that one can set value apart from PCK; in practice these two are inextricably intertwined. Furthermore, according to Tirosh et al (2011), PCK is inevitably normative; what is accepted as the PCK of expert teachers is shaped by 'culturally accepted norms'. Third, some scholars question whether PCK can be theoretically distinguished from content knowledge (e.g., Bromme, 1995; McEwan & Bull, 1991; McNamara, 1991; Segall, 2004). Content knowledge, McEwan and Bull (1991) and Segall (2004) argue, is inherently *pedagogical*, with built-in pedagogical forms and meanings.

Partly as an attempt to address these issues, scholars have broadened the idea of PCK by incorporating other types of knowledge – together with beliefs and orientations – into this special knowledge domain (e.g., Grossman, 1990; Magnusson, Krajcik, & Borko, 1999; Mark, 1990). In English teaching, Grossman asserts that PCK involves four knowledge types: (1) knowledge and beliefs about the purposes of teaching the subject, (2) knowledge of students' understanding, (3) curricular knowledge and (4) knowledge of instructional strategies. In school science, Magnusson, Krajcik and Borko conceptualise PCK as consisting of five components: (1) science teaching orientation, (2) knowledge of curricula, (3) knowledge of learners, (4) knowledge of instructional strategies and (5) knowledge of assessment.

In school mathematics, Ball and her colleagues have further articulated and refined Shulman's conception of content knowledge for teaching and, in doing so, made some refinement to PCK (Ball, Thames, & Phelps, 2008; Hill, Ball, & Schilling, 2008; Hill, Rowan, & Ball, 2005; Hill, Schilling, & Ball, 2004). They use the term 'mathematical knowledge for teaching' or 'content knowledge for teaching mathematics' to encompass both PCK and content knowledge. PCK is elaborated to include three subdomains: (1) knowledge of content and students, (2) knowledge of content and teaching, and (3) knowledge of content and curriculum.

Making a distinction between personal practical knowledge and theoretical or formal knowledge, some researchers point out that PCK in Shulman and associates' conceptualisation is a form of personal practical knowledge that, developed by teachers, is contextualised and experience-based (e.g., Fenstermacher, 1994; Friedrichsen & Berry, 2015; Gess-Newsome, 2015). It is argued that PCK, like content knowledge and general pedagogical knowledge, can also be a form of theoretical or formal knowledge that, developed by researchers or experts, is normative and context-independent. Furthermore, a teacher's PCK is a complex

construct involving the transformation and integration of several knowledge types – content knowledge, knowledge of learners, general pedagogical knowledge and curricular knowledge.

However, despite the criticisms and developments mentioned, two issues have not received sufficient attention. First, in general, there is a lack of concern for the role of the institutional curriculum – in the form of state or nation curriculum guidelines, frameworks, syllabi and textbooks – in shaping and determining teachers' knowledge of content. Following Shulman and associates, researchers seem to have taken for granted that the content of an academic discipline possessed by a teacher provides an essential starting point for the transformation of content for teaching in classroom. It is important to note that PCK is a construct developed in the United States in the mid-1980s, where a national or state (institutional) curriculum did not exist, where state-developed curriculum frameworks and guidelines had no formal authority over the work of teachers (Cohen & Spillane, 1992). However, in countries like France, Germany and Singapore with a national or state curriculum, curriculum guidelines, syllabi and frameworks are authoritative documents issued by national or state ministries or departments of education. As such, these curriculum documents or materials are not just 'tools' to be used by teachers, as conceived by Shulman and associates. As embodiments of the institutional curriculum, these documents outline what content should be taught, why it should be taught and, to some extent, how teaching should be conducted (Westbury et al., 2016). In such a context, teachers are expected to work with such documents, interpreting and translating the content in the institutional curriculum when teaching a particular topic to students of particular backgrounds and experiences.[2]

The second issue, closely related to the first, concerns the lack of research on the nature of teachers' understanding of the content of a school subject in the institutional curriculum (for exceptions, see Deng, 2007a, 2009; Deng & Luke, 2008). As mentioned earlier, this content results from an institutional process of selection, organisation and transformation of content (a body of knowledge, skills and values) for social, cultural, educational and pedagogical purposes – a process pertaining to the formation of a school subject within the framework of the institutional curriculum (see Deng, 2009; Deng & Luke, 2008). However, this institutional process of content selection, organisation and transformation has not been accounted for by Shulman and associates in their conceptualisation of content knowledge for teaching nor by researchers who adhere to their conceptualisation (see Bromme, 1995; Deng, 2007b; Kansanen, 2009). After all, in their conceptualisation, transforming the content of an academic discipline into the content of a school subject is construed as a pedagogical task undertaken by an individual teacher (Deng, 2007b). A teacher is to see the content 'as a discipline with its own rules and demands' (Doyle, 1992a, p. 499) – rather than as a school subject within the framework of the institutional curriculum. Yet their assumption about the centrality of an academic discipline has been called into question by scholars who clarify the distinction between school subjects and academic disciplines and argue for the vital role of a school subject in determining

and shaping teachers' understanding of content (e.g., Deng, 2007a, 2012; Deng & Luke, 2008; Stengel, 1997).

The institutional curriculum and teachers' understanding of content for teaching

The place of the institutional curriculum in relation to teachers' professional understanding of content can be expounded by way of a curriculum-making framework articulated by Doyle and Westbury from the perspective of schooling as an institution. Curriculum making, broadly construed, operates across three types of context, the policy (educational policies and discourse), the programmatic (programs, school subjects, school types, streams or tracks), and the classroom (teacher–student interactions, classroom activities, instructional events), yielding three distinct kinds of curriculum (also see Chapter 3):

- *The policy curriculum*, embodied in educational policies and discourse, defines the relation between schooling and both society and culture. It frames what should be going on in a school system in terms of broad purposes or goals and general approaches to teaching and learning (Doyle, 1992a, 1992b).
- *The programmatic curriculum*, embodied in curricular structures, programs and school subjects for a school system (including school types or tracks), translates the purposes and expectations in the policy curriculum into programmatic forms.
- The *classroom curriculum* – characterised by a cluster of events or tasks jointly developed by a teacher and a group of students within a particular classroom (Doyle, 1992a, 1992b). It reflects the teacher's interpretation and translation of what is in the programmatic curriculum in a classroom context.

The policy and programmatic curricula together constitute the *institutional curriculum* – in the form of curriculum guidelines, syllabi and related instructional materials provided to a school system – that gives meaning to and seeks to direct and support the practice of teaching in classroom (see Westbury, 2008). As an organising and operational unit of the institutional curriculum, a school subject constitutes the 'locus' of classroom teaching (Grossman & Stodolsky, 1995). The process of constructing a school subject entails a selection and organisation of content in view of the goals and expectations in the policy curriculum and a transformation of that content for classroom use (Doyle, 1992a, 1992b; Westbury, 2000). On this account, a school subject embodies a 'theory of content' – concerning what the content is, how the content is selected, organised, and transformed, and what educational value and significance the content has for students (as future citizens) within wider social and cultural orders (Doyle, 1992b; also see Chapter 3; Deng, 2009).

The institutional curriculum depends, for its effect, on teachers' enactment in terms of curriculum making in classroom. A teacher is a 'curriculum maker' in the sense that he or she *translates* the institutional curriculum into the classroom

curriculum. The translation requires a further elaboration of the content of a school subject within the framework of the institutional curriculum, making it connect with the experience, interest and capacity of students (Westbury, 2000).

Therefore, viewed from the perspective of schooling as an institution, the institutional curriculum needs to be employed as an essential frame of reference for conceptualising what a teacher needs to know and be able to do with regard to content. A teacher necessarily interprets and translates the content of a school subject in the institutional curriculum into instructional events and tasks with reference to *both* its institutional goals *and* its theory of content, and in light of students' existing knowledge and experience (Chapter 3). This interpretation, as will be argued, gives educational potential to the content in the institutional curriculum.

The capabilities approach

The capabilities approach was developed by David Lambert in his attempt to articulate what it means to engage with the revised national (geography) curriculum introduced in 2014 (see Lambert, 2014a, 2014b; Lambert & Hopkin, 2014; Lambert, Solem, & Tani, 2015). In the United Kingdom the national curriculum was first introduced in 1988 and subsequently revised in 2008 and in 2014 (for a more detailed discussion, see Chapter 8). The recently modified national curriculum emphasises subject-based learning through providing an explicit framing of what counts as essential knowledge for teaching in various school subjects (Lambert & Biddulph, 2015). However, it only presents a 'short and rather spare' curriculum framework comprised by traditional school subjects (Lambert & Hopkin, 2014).

Lambert's capabilities approach is informed by the theory of human development developed by Amartya Sen and Martha Nussbaum, according to which the central aim of education is human development and flourishing through the expansion of human capabilities. *Capabilities* (which can also be called *powers*) denotes what people can actually be and do, including 'the different combinations of human functionings that can be achieved by people, groups, or both' (Lambert et al., 2015, p. 724). Moreover, the development of human capabilities is seen as inextricably connected with what Bernstein calls the 'pedagogic rights' of young people to individual enhancement, social inclusion and political participation (Lambert, 2014b; Lambert et al., 2015).

Furthermore, Lambert bases the capabilities approach on Michael Young and Johan Muller's theory of powerful knowledge (see Young, 2008; Young & Muller, 2013). According to that theory, disciplinary knowledge, albeit socially constructed and reflecting human special interest and standpoints, has an 'objective' conceptual structure with properties and powers of its own (cf. Young, 2008; Young & Muller, 2013). Often theoretical, abstract and specialized, disciplinary knowledge is *powerful knowledge* because the acquisition of this knowledge equips students with powers to think beyond their everyday experience, to think the 'not yet thought', to envisage alternatives, and to participate in social and

political debates (Young & Muller, 2013; also see Chapter 1). By this account, the development of human capabilities entails 'initiating' individual students into various forms and fields of specialised knowledge represented by academic disciplines, particularly in the sciences, arts and humanities. Without the acquisition of specialised, disciplinary knowledge, students 'are deprived and restricted in their personal and intellectual growth into fully capable adults' (Lambert, 2014b, p. 13).

With such theoretical underpinnings, Lambert discussed what it means to engage with the newly revised national curriculum, with a central concern for the development of human capabilities through the teaching of geography (see Chapter 8). He made a distinction between the national (institutional) curriculum and the classroom/school curriculum and, in doing so, argued for the importance of teachers' interpretation of the national curriculum:

> Even so, the formalized curriculum, especially when it is as brief as in the case of England, is a statement of intent or a set of guidelines only. It offers no guarantees over what is actually taught and learned in schools. This is why it is important to distinguish between a National Curriculum and the curriculum of individual schools. . . . The geography curriculum *as it is implemented by teachers and experienced by students* is always open to interpretation which is why we do need specialist trained teachers – teachers who are able to interpret the official intentions laid down in statute through the lens of their specialist knowledge, for it is this that provides the subject curriculum with its educational potential.
>
> (Lambert, 2014a, p. 167)

In this connection, the teacher is viewed as a curriculum maker who interprets the national curriculum to create 'educational encounters' with powerful disciplinary knowledge – encounters that can take students beyond their everyday experience and equip them with capabilities (Lambert, 2014a, 2014b; Lambert et al., 2015).

The interpretation of the national curriculum calls for a particular kind of curriculum thinking centring on the 'what' and 'why' questions around teaching. Using the national curriculum as a guide, the teacher is to ask *what constitutes powerful knowledge* in the form of ideas, concepts, methods or procedures. Furthermore, the teacher needs to address *why the powerful knowledge is worth teaching* or *in what ways such knowledge is powerful*, ascertaining its potential in terms of the powers or capabilities this knowledge would give to students who possess it (for a detailed explanation, see Chapter 8). The teacher, too, needs to engage with the 'who' question, understanding what 'naïve knowledge' and 'everyday experiences' students bring to a classroom – knowledge and experiences that can be meaningful resources for helping them to acquire powerful disciplinary knowledge (Lambert et al., 2015). The teacher also needs to grapple with the 'how' question, identifying 'powerful pedagogies' that ensure the realisation of meaningful educational encounters with powerful knowledge in classroom (cf. Roberts, 2013).

Such curriculum thinking needs to be undertaken before the teacher starts to think about how to represent and structure a topic in the national curriculum (Lambert, 2014a). It needs to be informed by a teacher's understanding of the central purpose of school geography construed as developing human capabilities. Furthermore, it needs to be enabled by specialist curriculum knowledge – i.e., knowledge of a theory of content as represented by Young and Muller's theory of powerful knowledge – that can inform the teacher's thinking about what should be taught in view of that central purpose (see Mitchell & Lambert, 2015).

However, it is important to note that the kind of curriculum thinking espoused in the capabilities approach is 'framed by an overarching context of the discipline of geography' (Mitchell & Lambert, 2015, pp. 375–376). Disciplinary knowledge is seen as essential for the teacher to engage in curriculum thinking when interpreting and enacting the UK national curriculum in classroom (Lambert et al., 2015). Therefore, like Shulman and associates, Lambert believes that the teacher needs to have substantive and syntactic knowledge of an academic discipline concerning the school subject to be taught (Mitchell & Lambert, 2015). This is important because the academic discipline needs to be employed as a resource for 'nurturing and developing in children the capacity to "think geographically" ' (Lambert & Hopkin, 2014, p. 73).

Nevertheless, this foregrounding of an academic discipline in curriculum thinking entails bypassing the purpose and related theory of content (if any) embedded in the institutional curriculum. In the words of Doyle (1992a), it in effect allows a teacher to 'lift the [institutional] curriculum away from texts and materials to give it independent existence' (p. 499). After all, the kind of curriculum thinking espoused by Lambert is, as already mentioned, informed by Sen's and Nussbaum's theory of human development and Young and Muller's theory of powerful knowledge. As such, it champions a 'possibilist' interpretation of the national curriculum that 'could be different from that which the government may have intended' (Lambert & Hopkin, 2014, p. 64). It is also important to note that Young and Muller's theory of powerful knowledge is not particularly formulated for the purpose of developing *general* human powers or capabilities stressed by Sen and Nussbaum. It only purports that the acquisition of powerful disciplinary knowledge entails the development of intellectual powers or capabilities that are distinctive and largely disciplines-based (e.g., scientific, historical, geographical, artistic). As such, the theory itself does not tells us much about what potential content has for developing general human powers or capabilities and how that potential can be disclosed in classroom.

Bildung-*centered Didaktik*

As indicated in Chapter 5, *Bildung*-centred *Didaktik* has to be concerned with the enactment of the state curriculum in classroom for *Bildung* – referring to the process and outcomes of self-formation, encompassing the cultivation of intellectual and moral powers, the developments of dispositions such as sensibility, self-awareness, liberty and freedom, and dignity (Hopmann, 2007; von Humboldt,

2000). To attain *Bildung*, the individual seeks to 'grasp as much [of the] world as possible' and to make a contribution to mankind through cultivating his or her unique self and intellectual and moral powers (von Humboldt, 2000). The world, independent of human thinking, is processed by human thought – represented by academic disciplines (humanities and sciences) – and general action (Lüth, 2000). Academic disciplines are an indispensable resource/vehicle for *Bildung*.

Underpinning *Bildung*-centred *Didaktik* is a well-articulated *theory of educational content* (*Theorie der Bildungsinhalte)* that seeks to inform curriculum planning and classroom practice directed towards *Bildung*. Central to that theory are four related concepts, *contents of education* (*Bildungsinhalt*), *educational substance* (*Bildungsgehalt*), *the elemental* (*das Elementare*) and *the fundamental* (*das Fundamentale*). As I explained in Chapter 5,

> As the material of the institutional curriculum, contents of education result from a deliberative process of selection and organisation of the wealth of academic knowledge, experience and wisdom for *Bildung*. Such contents, set aside for teaching, are seen as embodying educational potential for *Bildung*. . . .
>
> The educational potential or power lies in the educational substance (*Bildungsgehalt*) of content comprised by the *elemental* categories or aspects (concepts, principles, relations, values, methods) that could contribute to *Bildung*. . . . Content, by virtue of its educational substance, can bring about a *fundamental* change in the perspectives, modes of thinking, dispositions and ways of being-in-the-world of individual students.
>
> (pp. 49–50)

Informed by this theory of content, the state curriculum framework only lays out school subjects and their contents to be covered in school but does not specify educational substance, meaning and significance (Hopmann, 2007). In classroom teachers are entrusted with a high level of professional autonomy to interpret the state curriculum framework. Curriculum making in classroom is enabled by lesson planning aiming to design opportunities for students to make 'fruitful encounters' with the content. The teacher starts with understanding the content contained in the state curriculum – i.e., the content of education.

Furthermore, lesson planning entails a kind of curriculum thinking called *Didaktik thinking* (paralleling to the kind of thinking in the capabilities approach) – centring on the what and why of teaching – informed by the previously mentioned theory of content and directed towards *Bildung*. The teacher is to identify the elemental elements that constitute the educational substance of a particular content, with particular students in mind and within a particular historical context – present and future (Klafki, 2000). Furthermore, the teacher is to ascertain the educational potential of content through analyzing and unpacking the educational meaning and significance of the elementary elements from the perspective of *Bildung*.

Klafki (2000) provided a model of instructional planning based on the aforementioned theory of content and directed towards *Bildung*. The model consists of a five-step set of questions that serves to facilitate teachers' *Didaktik* thinking during instructional planning, directed towards identifying the educational substance and exploring the educational potential of content and its realisation:

1 What wider or general sense or reality does this content exemplify and open up to the learner? What basic phenomenon or fundamental principle, what law, criterion, problem, method, technique or attitude can be grasped by dealing with this content as an 'example'?
2 What significance does the content in question, or the experience, knowledge, ability, or skill, to be acquired through this topic, already possess in the minds of the children in my class? What significance should it have from a pedagogical point of view?
3 What constitutes the topic's significance for the children's future?
4 How is the content structured (which has been placed in a specifically pedagogical perspective by questions 1, 2, and 3)?
5 What are the special cases, phenomena, situations, experiments, persons, elements of aesthetic experience, and so forth, in terms of which the structure of the content in question can become interesting, stimulating, approachable, conceivable, or vivid for children of the stage of development of this class?

(pp. 151–157)

Questions 1, 2 and 3 concern the educational substance and potential of content – in terms of what should be taught, what the content signifies, and why it is significant for students. These questions go beyond a teacher's understanding or comprehension of the content in terms of big ideas, concepts and methods. They speak of 'the ways in which a teacher makes connections with the deepest objective substance of the cultural asset' (Vâsquez-Levy, 2002, p. 122) and unlocks its potential for human formation and flourishing. Questions 4 and 5 deal with the means of teaching the content and actualising its educational potential – in terms of content structure and pedagogical representations. As with the aforementioned capabilities approach, addressing the what and why questions is prior to, and a precondition for, addressing the how question. In *Didaktik* the search for methods (the how) is the final step – the 'crowning' moment in lesson planning (Klafki, 2000).

Conceptualising teachers' understanding of content for teaching: comparison and contrast

There are significant parallels between the capabilities approach and *Bildung*-centered *Didaktik* with respect to conceptualising teachers' understanding of content for teaching. In both theories the central purpose of classroom teaching is seen as developing human capabilities or powers. The institutional

curriculum – in terms of curriculum guidelines – is held as an essential starting point for curriculum making in classroom, with a teacher interpreting the content in the curriculum to create educational encounters with the 'essence' of that content for students. The interpretation entails curriculum thinking – centring on the 'what' and 'why' of teaching – directed towards determining the essence of content – comprised by powerful, elemental elements – and ascertaining its educational potential for developing capabilities or powers.

There are, of course, important differences. The capabilities approach stresses the development of discipline (geography)-based capabilities – also called *geocapabilities* – for the promotion of "human potential and well-being both as individuals and as members of a society" (Lambert et al., 2015, p. 724). *Bildung*-centred *Didaktik*, on the other hand, emphasises the cultivation of general human powers for the formation of autonomous, independent, participatory and responsible human beings. In the former, the development of human capabilities is achieved through an 'initiation' into the powerful disciplinary knowledge in school geography. In the latter, by contrast, the cultivation of human powers is through the 'fruitful meetings' of students with content in a way that content is made to open up manifold opportunities for the cultivation. Furthermore, in the former, a teacher's ascertaining of the educational potential of content is informed by a theory of content – i.e., Young and Muller's theory of powerful knowledge – that might be different from the theory of content embedded in the institutional curriculum. In the latter, by contrast, a teacher's analysis of educational potential is informed by a theory of content that also undergirds the institutional curriculum.

Differences aside, both the capabilities approach and *Bildung*-centred *Didaktik* contrast sharply with Shulman and associates with respect to conceptualising teachers' understanding of content for teaching. For Shulman and associates, the central purpose of teaching is the transmission or imparting of disciplinary knowledge to students. The content of an academic discipline possessed by a teacher – rather than the content in the institutional curriculum – provides an essential point of departure for instructional planning, with the teacher transforming his or her disciplinary content into pedagogical forms. The transformation calls for pedagogical reasoning – centring on the how of teaching – geared towards the search for effective ways of representing and reformulating content that makes it comprehensible for students.

Behind these differences are two distinctive ways of theorising teachers' content understanding. In both the capabilities approach and *Bildung*-centred *Didaktik*, theorising teachers' understanding of content is largely a *normative* and *institutionally oriented* undertaking, focusing on what teachers *should* understand about the content, that is, on the formal, theoretical knowledge for teaching. It is normative because the theorising is normatively informed by a conception of education as the development of human powers or capabilities. It is institutionally oriented because the theorising conceives the work of a teacher as embedded in the institutional context of schooling and proceeds from the practical requirement of a teacher to interpret and enact the institutional curriculum in classroom.

After all, what the capabilities approach or *Bildung*-centred *Didaktik* provides is a 'knowledge base' articulated by teacher educators to inform preservice teacher education and continuous professional development, with a concern for enacting the institutional curriculum and for developing human powers or capabilities.

By contrast, the way of theorising employed by Shulman and associates is largely *descriptive* and *empirical research-oriented*, with a focus on what teachers understand about the content – that is, on the personal practical knowledge of teachers. It is not directed towards any explicit normative conception of education, nor is it concerned with how the institutional curriculum should regulate and frame the work of teachers. It too does not address the need of a teacher to work with the institutional curriculum in classroom. What this way of theorising renders is largely research models that seek to guide and advance further inquiry into teacher characteristics and teaching practice, whereas such models are also applicable for designing programmes for teacher education and professional development (Kansanen, 1995).

Conclusion: towards reconceptualising PCK

This chapter contributes to a reconceptualisation of PCK through an exploration of what is entailed in teachers' understanding of content within the framework of the institutional curriculum, with a central concern for the development of human powers or capabilities. By way of a curriculum-making framework and in light of Lambert's capabilities approach and *Bildung*-centred *Didaktik*, I argue that a teacher necessarily interprets the content in the institutional curriculum, identifying its powerful, elemental elements and ascertaining its educational potential for developing human powers or capabilities. The interpretation calls for a special kind of curriculum thinking – centring on the what and why of teaching – which is informed by a theory of content concerning what content is, what educational potential content has, and how content can be made to open up opportunities for cultivating human powers.

This curriculum thinking – directed towards identifying the powerful, elemental elements and ascertaining the educational potential of content – needs to be seen as being at the heart of teachers' professional understanding of content. It provides an essential basis for pedagogical reasoning concerned with the identification and selection of pedagogical forms (representations, instructional strategies, activities) – an essential component of PCK. *Those powerful, elemental elements (basic ideas, concepts, themes, methods) can be seen as constituting another important component of PCK* on two grounds. First, as indicated in the preceding discussion, those elements are inherently *pedagogical*, an understanding of which allows a teacher to penetrate into the essence of content and to help students grasp the content and develop intellectual and moral powers through encounters with the essence. In the words of Shulman (1986b), the elements embody 'the aspects of content most germane to its teachability' (p. 9). Second, identified by a teacher through interpreting the institutional curriculum in a particular classroom context, those basic elements stand for a special kind of personal practical

(content) knowledge which can set a teacher apart from a non-teaching subject matter expert (for a more detailed discussion, see Deng, 2001, 2007a).

Furthermore, *a theory of content – that seeks to inform curriculum thinking in classroom – constitutes specialist curriculum knowledge for classroom teachers* – a form of theoretical or formal knowledge developed by curriculum developers, researchers or theorists. This theory of content can also be a form of personal practical knowledge developed by teachers as a result of their interactions with the institutional curriculum, shaped by their teaching experience and professional development. Teachers need such specialist curriculum knowledge if they are to be integral to the institutional curriculum as enacted in classroom.

To argue for the place of curriculum thinking, alongside a theory of content, in teachers' professional understanding of content is particularly timely and pertinent in view of the current global movement towards academic standards, outcomes and accountability. The 'curriculum' literally disappears in educational policy and discourse concerning the purposes of teaching, teachers and teaching, particularly evident in the United States. As schools are held accountable for delivering academic standards and outcomes, the central purpose of teaching becomes promoting students' academic achievement as measured by standardised tests. And a teacher is seen as an educational technocrat who employs so-called best practices or prescribed methods that can get students to meet the academic standards (Hopmann, 2008; also see Au, 2011).

Through bringing curriculum thinking into the conversation on teachers' content knowledge, this chapter serves to remind us of an essential purpose of school education – the development of human powers or capabilities. This purpose, as noted earlier, is vital for human development and flourishing. This is a social justice issue as well since the development is an entitlement for all young people, regardless of their socioeconomic status, race or gender (cf. Lambert, 2014b). To achieve this essential purpose requires teachers to be curriculum makers who identify the powerful or elemental elements of content and interpret its educational potential. This identification and interpretation, in turn, calls for curriculum thinking, alongside specialist curriculum knowledge, that goes far beyond the employment of best practices or prescribed methods espoused in the standards and accountability movement.

Notes

1 According to Shulman (1987),

> Teaching is, essentially, a learned profession. A teacher is a member of a scholarly community. He or she must understand the structures of subject matter, the principles of inquiry that help answer two kinds of questions in each field: What are the important ideas and skills in this domain? and How are new ideas added and deficient ones dropped by those in this area? That is, what are the rules and procedures of good scholarship or inquiry?
>
> (p. 9)

2 Interestingly, as result of the curriculum standards movement – epitomised in the No Child Left Behind and Race to the Top acts – over the last two decades, now

even the United States has a de facto national curriculum in the form of academic standards, outcomes, and prescribed content. Teachers have been increasingly required to plan and conduct their lessons according to those standards and outcomes so as to prepare students for high-stakes tests (see Au, 2011; Hopmann, 2008).

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8 Conclusion

Beyond social realism

As stated in Chapter 1, this book intends to build upon and go beyond the work of the social realist school concerning the role and significance of knowledge in relation to curriculum policy, curriculum planning and classroom teaching. In this concluding chapter I weave together the arguments of foregoing chapters to show that the cultivation-via-knowledge platform – as exemplified in *Bildung*-centred *Didaktik* and the Schwabian model – yields a better vision of a Future 3 curriculum.

I start with a discussion of the development of the national curriculum in England by means of the three curriculum scenarios, Futures 1, 2 and 3, articulated by Young and Muller (2010) (see Chapter 1). I next examine a social realist vision of a Future 3 curriculum – as a response to the knowledge-turn in the 2014 version of the national curriculum – and discuss its problems and limitations. Afterwards, I discuss a vision of a Future 3 curriculum articulated by David Lambert based on the capabilities approach and a vision based on the cultivation-via-knowledge platform, both of which, in different ways, go beyond the social realist one. The chapter concludes by making a case for the cultivation-via-knowledge platform as a viable alternative to the current global discourse on 21st-century competences.

The English national curriculum and three curriculum futures

The national curriculum in England was established through the Education Reform Act of 1988, which was part of the government's response to national economic and social declines in the 1980s. Since then, the national curriculum has undergone several revisions. The national curriculum now is comprised by core school subjects (English, mathematics and science) and foundational school subjects (art and design, citizenship, computing, design and technology, languages, geography, history, music and physical education). Each school subject is organised according to four key learning stages (ages 5–7, 7–11, 11–14 and 14–16), with corresponding programmes of study outlined in the national curriculum framework. In retrospect, three distinct curriculum versions can be identified in terms of the three educational scenarios, Future 1, Future 2 and Future 3.

This is particularly evident in view of the case of school geography, as discussed by David Lambert and his colleagues.

The 1988 version of the national curriculum is a quintessential Future 1 curriculum. Highly resembling the typical curriculum of grammar schools, this curriculum comprises traditional school subjects such as natural sciences, mathematics, history and geography, with fixed and given boundaries between subjects. Historically, it is associated with the curriculum for the elitist, with the transmission of the 'knowledge of the powerful' – the best knowledge of mankind – as the central purpose. It is a highly descriptive curriculum which 'spell[s] out in detail the extensive coverage of the subject as a whole in every key stage' (Lambert & Hopkin, 2014, p. 71) – in which knowledge is taken as given, static and unchanging.

The version introduced in 2008 stands for a Future 2 curriculum. Heavily influenced by a learning and a competency discourse, the national curriculum embraces the global trend towards delineating the central purpose of education in terms of generic competences. For every school subject, there is a significant slimming down of content, together with a reduction in content prescription in the national curriculum framework, so as to create space for cross-curricular themes, personalised learning and the development of generic competences. Consequently, boundaries between school subjects are relaxed or loosened. More flexibility is provided to schools in curriculum decision making, and teachers are encouraged to adopt progressivist pedagogies such as problem-based earning, experiential learning and project work (Lambert & Biddulph, 2015; Lambert, Solem, & Tani, 2015).

As a response to the concern for the weakening of knowledge, the revised national curriculum introduced in 2014 moves away from the emphasis on generic competences and refocuses on content knowledge, thus signifying a 'knowledge turn' in the curriculum. It foregrounds 'the core subject knowledge that every child and young person should gain at each stage of their education' (Department of Education [DfE], 2010, p. 11). For each school subject, the national curriculum framework lays out the content in terms of knowledge, understanding and skills – which constitute the 'core of essential knowledge' – with attainment targets for each learning stage (Mitchell & Lambert, 2015, p. 373). This version of the national curriculum is deeply influenced by the work of American educationist E.D. Hirsch, who posits that pupils need a body of information, knowledge and skill to gain the 'cultural literacy' required to function in society (Hirsch, 1987, 2007).

The 2014 version of the national curriculum has been subject to numerous criticisms. The curriculum, seen as a return to Future 1, is deeply conservative and backward looking. To employ the Hirschian concept of 'things we all need to know' in writing the national curriculum framework is to embrace a reductionist, superficial conception of knowledge (see Lambert & Solem, 2017). Knowledge is treated as predetermined, stable and unchanging, without organising structures and coherence. And it is disconnected with wider specialised, disciplinary

communities and with the ways in which knowledge is developed in academic disciplines (see Muller & Young, 2019; Lambert & Hopkin, 2014). Consequently, the national curriculum runs the risk of pursuing the 'trivial', failing to serve the essential purpose of schooling as an institution – passing on a body of powerful disciplinary knowledge to the future generation. Lacking in the curriculum, too, are a sense of overarching educational purpose and a concern for human flourishing and the intellectual and moral development of students as individuals (Lambert & Solem, 2017; Lambert et al., 2015).

Social realists and a Future 3 curriculum

As an alternative to the 2014 version of the national curriculum, a vision of a Future 3 curriculum – a 'knowledge-led curriculum' – is articulated by Young and his colleagues on the basis of a theory of powerful knowledge. As indicated in Chapter 1, Young and Muller make a distinction between specialised disciplinary knowledge and the everyday knowledge that pupils bring to school. Disciplinary knowledge is dynamic, not static and nor eternally given; it is open to debates and contestations. Developed by specialised 'communities of enquirers', this knowledge is 'powerful' because it is 'objective' and 'real', with its own properties, trustfulness and explanatory powers. It 'provides more reliable explanations and new ways of thinking about the world' (Young, 2008b, 14). Acquisition of this knowledge allows students to move beyond their particular experience, imagine alternatives and participate in social and political debates (Young, 2008b; Young & Muller, 2013).

To be knowledge-led, the national curriculum must be based on a theory of powerful knowledge, with helping students gain access to disciplinary knowledge as the main purpose. Access to powerful disciplinary knowledge is an 'entitlement' for *all* students regardless of their socioeconomic status, race and gender (Young, 2013). Conventional school subjects are the best way to organise a knowledge-led curriculum (Young, 2009). A school subject results from a 'recontextualisation' of its source academic discipline – selecting, sequencing and pacing disciplinary knowledge in view of the 'coherence' of the discipline and constraints created by the developmental stages of students (Young, 2013). The knowledge to be selected includes not only substantive content (the 'what') but also 'disciplinarity' (the 'how') – how knowledge is developed by researchers in academic, disciplinary communities (see Young, Lambert, Roberts, & Roberts, 2014).

At the school level the curriculum is 'made' by teachers through interpreting the national curriculum in the form of standards and guidelines. They are to identify 'what knowledge is powerful for pupils at different ages' based on their disciplinary knowledge. Teachers are to help students acquire powerful knowledge and take them beyond their experience or what they already know. To do this, they need to have not only the substantive knowledge of the discipline but also knowledge of the disciplinary root of their subject. They need to have knowledge of how students acquire subject knowledge as well (see Young et al., 2014).

In other words, this social realist vision of a Future 3 curriculum is set to challenge the conservative call for a return to Future 1, as epitomised in the 2014 version of the national curriculum. It is 'progressive' – in terms of a more sophisticated conception of knowledge and a commitment to social justice. However, like the Hirschian Future 1 curriculum, this model of a Future 3 curriculum involves the use of a theory of knowledge – albeit a more sophisticated one – as the essential point of departure for determining the central purpose and substance of schooling. Knowledge is taken as an end in itself rather than a means to larger purposes of education (see Chapter 1). And knowledge is treated as if it has nothing to contribute to the development of generic competences – a central purpose of the curriculum stressed in Future 2.

Beyond the social realist school – the capabilities approach

There is a need to envision a Future 3 curriculum in a way that overcomes the issues associated with the social realist model noted earlier. To some extent, such a vision is found in the recent work of Lambert on school geography based on the capabilities approach (see Chapter 7). Lambert, albeit being a colleague and collaborator of Young and affiliated with the social realist school, adopts a different position concerning the purpose of school education and the attendant role of knowledge.

The central purpose of geography education, according to Lambert, is the development of geocapabilities as a result of possessing powerful disciplinary knowledge. This is in stark contrast to the development of generic competences stressed in Future 2, which are free-floating, independent of disciplinary knowledge. Geocapabilities include, for example, an ability to '*think geographically*; that is, to analyse, explain, etc. with geography' and to 'think about themselves in the world, and about the changing relationship human beings have with the environment' (Lambert & Solem, 2017, p. 8). They also include a disposition to take 'environmental and global responsibility', an understanding of 'physical and human environments and of different cultures' (Uhlenwinkel, Béneker, Bladh, Tani, & Lambert, 2017, p. 331). To this end, 'school geography . . . should not be posited as an end in itself, but as a means to serve wider aims' (Lambert, 2016, p. 396).

In classroom teachers act as 'curriculum makers' who interpret and enact the national curriculum (e.g., standards and curriculum guidelines) to bring about the 'engagement with powerful knowledge' – rather than merely to transmit knowledge. The engagement 'encourages productive, rigorous and critical thought as developed in specialist *disciplinary communities* such as geography' (Lambert & Solem, 2017, p. 9). The knowledge taught in classroom is seen as developed within the specialist communities of researchers in a particular field, with the employment of epistemic rules and methods of inquiry. This knowledge is fallible and open to questions and challenges.

The interpretation and enactment call for 'Future 3 curriculum thinking' centring on 'What should I teach?' and 'In what way is knowledge powerful?' These

two questions are inextricably intertwined with the question of why I teach geography, connecting curriculum thinking to the broader purpose of geography education – the development of geocapabilities. A well-informed understanding of the characteristics that make geographic knowledge powerful and the powers this knowledge gives to those who possess it is essential for Future 3 curriculum thinking. Based on Young and Muller's theory of powerful knowledge, Alaric Maude (2017) formulated a framework which, firmly endorsed by Lambert (2017), contributes to this understanding. The characteristics that make knowledge powerful include being reliable, fallible, and potentially testable by specialist communities. The powers of disciplinary knowledge are in terms of geo-capabilities including:

- discover new ways of thinking
- better explain and understand the natural and social worlds
- think about alternative futures and what they could do to influence them
- have some power over their own knowledge
- be able to engage in current debates of significance, and
- go beyond the limits of their personal experience.

(Maude, 2017, p. 30)

In short, Lambert goes beyond the social realist school in the sense that he holds disciplinary knowledge as a means for a broader educational aim – the development of human capabilities – rather than as merely something to be taught for its own sake. Yet his work is informed by the school in the sense that Young and Muller's theory of powerful knowledge is employed as a tool to tackle the question of what contribution geography can make to the development of capabilities. There are three important issues that require attention. As already indicated in Chapter 1, Young and Muller's theory of powerful knowledge is largely epistemological, *not* formulated for the purpose of developing general human powers or capabilities. The theory only posits that the acquisition of disciplinary knowledge entails the possession of certain intellectual powers or capabilities that are largely disciplines-based. How would an acquisition of powerful disciplinary knowledge lead to the development of human capabilities which are not only subject-specific but also general?

Another issue has to do with the image of teachers as curriculum makers who, as indicated in Chapter 7, bypass the purpose and related theory of content (if any) underpinning a school subject embedded in the institutional curriculum. And the institutional curriculum is seen as if it has nothing to contribute to the development of students' capabilities. How would the school subject – the operational unit of the institutional curriculum (see Chapter 3) – be developed in a way that supports curriculum making in classroom for the cultivation of human powers? How would teachers interpret and enact the content of a school subject in ways that allow content to open up manifold opportunities for students to cultivate (general) human powers?

The questions raised here find solutions in the cultivation-via-knowledge platform represented by *Bildung*-centred *Didaktik* and the Schwabian model of a

liberal education. The platform, as already indicated, goes beyond the social realist school regarding the role of knowledge in relation to curriculum policy, curriculum planning and classroom teaching (see Chapters 4 and 5). It calls for, as will be shown in the next section, curriculum and/or *Didaktik* thinking across curriculum policy, curriculum planning and classroom teaching.

Beyond the social realist school – the cultivation-via-knowledge platform

A better vision of a Future 3 curriculum can be articulated based on the cultivation-via-knowledge platform – in terms of (1) a vision of education, (2) an attendant theory of knowledge and (3) a theory of content which serves to inform curriculum planning and classroom teaching. The platform, as will be argued here, can yield a viable alternative to the current global discourse on 21st-century competences.

In the platform, school education is directed towards the cultivation of human powers or capabilities broadly construed. This cultivation is vital for the formation of an educated person – an active individual, an intellectual and moral agent who is free, autonomous and socially responsible. It is achieved through interactions and engagements with the world (natural, social, cultural) that is articulated by means of various forms of knowledge, human experience and wisdom – constituting the world of human knowledge. From this perspective, knowledge, broadly conceived, is an indispensable resource/vehicle for cultivating human powers – rather than something for passing on for its own sake.

This vision of education provides the essential perspective/departure point for curriculum thinking concerned with the contribution of knowledge to the education of mankind. It calls for a theory of knowledge that, as exemplified in *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education, conceives the significance of knowledge in ways that are productive of the cultivation of human powers (see Chapter 4). This is not a theory of knowledge dealing with epistemological questions about the nature, forms, characteristics, norms and methods of knowledge – a theory that can be derived from 'The Disciplines of Education' like philosophy and sociology (Furlong & Whitty, 2017). It is an *educational* or *curricular* theory of knowledge concerning what significance or value knowledge has in education and curriculum, what kinds of knowledge have the potential for the cultivation of human powers, and how the potential is conceived of.

This vision of education calls for the formation of school subjects that, while related to, are fundamentally different from academic disciplines (see Chapter 3). School subjects are 'uniquely purpose-built educational enterprises, designed with and through an educational imagination toward educative ends' (Deng & Luke, 2008, p. 83). The construction of a school subject, as noted in Chapter 5, posits a link between students' encounter with the content (in the institutional curriculum) and the educational purpose – i.e., the development of human powers. It requires curriculum and/or *Didaktik* thinking that *theorises* or

interprets content within the institutional context of schooling, in view of the educational aim. A theory of content is needed that concerns what content is, what educational potential or value content has, and how the potential can be analysed or ascertained in service of curriculum planning and classroom teaching (see Chapter 5).

In this vision of a Future 3 curriculum, curriculum planning at the institutional level entails an interpretative, deliberative process within a particular social context, with specific groups of learners in mind. Through this process, various types of knowledge are selected and organised into content in the light of their potentials for the cultivation of human powers (see Chapter 5). In classroom a teacher interprets and enacts the content of a school subject – embedded in the institutional curriculum – to create 'fruitful meetings' between students and content that give rise to the cultivation of human powers. The interpretation and enactment call for *Didaktik* and/or curriculum thinking directed towards identifying the elemental elements of content and ascertaining the educational potential in view of who students are, their backgrounds, experience and future aspirations. It is informed by a theory of content which is, ideally, consistent with the one at the institutional level.[1]

Towards an alternative to the discourse on twenty-first century competences

I now discuss the significance and implication of the cultivation-via-knowledge platform for the development of 21st-century competences. As indicated in Chapter 1, over the last two decades there has been a shift in curriculum policy from a concern with knowledge taught in school to a preoccupation with competences or skills needed for the 21st century. Accordingly, there is a move to bypass knowledge-based curriculum planning – centring on content selection and organisation – in favour of developing competency frameworks and models. Behind these developments is a competency discourse fundamentally shaped by the European framework of key competencies for lifelong learning and the OECD's Competencies (DeSeCo) Project.

However, the notion of competence and related competency frameworks are not *educational*, *curricular* concepts – but *managerial* concepts that originate from the field of human resource management. Furthermore, the discourse on 21st-century competences is essentially economic, fundamentally shaped by human capital theory. By means of a set of prescribed competences, students are positioned as 'the [intended] outcomes of education' rather than 'a subject in educational process' (Biesta & Priestley, 2013). What is missing in the discourse are broader, more important questions of what it means to be an individual and what powers or capabilities he or she needs to develop in a democratic society (see Biesta, 2017). There are, as well, serious problems of implementation because within the framework of the 21st-century competency discourse, competences are translated into bodies of skills and performances to be taught, independent of the content of the school curriculum (for a detailed discussion, see

Willbergh, 2015). Content is treated as if it has nothing to contribute to the development of competences.

The cultivation-via-knowledge platform, together with *Bildung*-centred *Didaktik* and the Schwabian model of a liberal education which exemplify the platform, provides a viable alternative to the competency discourse. *Bildung* and the idea of liberal education can be extended to include many of those 21st-century competences such as communication, problem solving, critical thinking, innovation and creativity (Carlgren, 2005; Willbergh, 2015). Knowledge, broadly construed, constitutes an indispensable resource/vehicle for the development of human powers – including those 21st-century competences. Within the institutional context of schooling, the development of human powers can be achieved through the contents of the school curriculum. This calls for an innovative, creative way of reconceiving knowledge and of theorising content as exemplified in *Bildung*-centred *Didaktik* and the Schwabian model.

First and foremost, there is a need to articulate a vision of an educated person in the 21st century as an agent rather than a knower (Mulcahy, 2009; White, 2004). What does it mean to be an active individual – an intellectual and moral agent – who is actively participating in and interacting with the current social, cultural and physical world characterised by globalisation, rapid technological advancement, an ever-increasing rate of information exchange, and mobility? What are the intellectual, moral, social, civic, aesthetic, technological and (even) physical powers such an educated person needs to possess?

To ask such questions is to reinterpret *Bildung* and the idea of liberal education within the current changing social and cultural milieus. A broader, more inclusive concept of *Bildung* or liberal education, in the words of Reid (1980), can 'animate us at a fundamental level' and help to set 'the framework of assumptions and ambitions within which practical or theoretic problems in education should be confronted' (p. 249).

Second, there is a need for a theory (or theories) of knowledge directed towards the formation of an educated person – in particular, towards the cultivation of the broad range of human powers deemed desirable for life and work in the 21st century. The development of such a theory entails more than differentiating various forms of 'worthwhile' knowledge and identifying their conceptual and methodological features – a task that has been the preoccupation of the social realist school. In addition to academic, disciplinary knowledge, what are the other forms of knowledge that could contribute to the cultivation of human powers for all students (see Jensen, 2004)? How would all these knowledge forms be conceived or reconceived in ways that are productive of the cultivation?

Such questions are not questions of epistemology or sociology; they are fundamentally normative, educational and curricular questions that call for serious studies of various forms of knowledge to discover their relationship to education. Inspired by Schwab, we need to get hold of knowledge for 'some larger purpose: the education of fellow human beings' (Fenstermacher, 1980, p. 193). Furthermore, we need to search for various kinds of knowledge that have potential to develop human powers. And we need to interpret and conceptualise the essence

of knowledge in various forms for cultivating human powers in a creative, innovative manner.

Third, there is a need for a theory (or theories) of content that serves to inform curriculum planning and classroom teaching directed towards the cultivation of human powers in the 21st century. Such a theory is concerned not so much with the matter of selecting, sequencing and pacing academic knowledge for knowledge transmission, as seen by Young and his colleagues (see Young, 2013; Young & Muller, 2013), as with the process of selecting, organising and translating knowledge for developing human powers. How would various kinds of knowledge be selected, translated and organised into the content of the curriculum geared towards cultivating human powers for all students? How would a selected piece of knowledge be ascertained in terms of educational potential? How would content be analysed and unpacked in ways that open up manifold opportunities for self-formation and the cultivation of human powers? How would students 'open up themselves' for such opportunities?

Such questions are not merely philosophical; they are educational and curricular questions which call for a creative, innovative approach to content selection and organisation and to analysing and disclosing the educational potential of content. They call for interpreting and theorising content in ways that link students' encounters with a piece of content with the development of human powers. The Schwabian conception of three faces (purport, originating discipline and access disciplines) and the *Didaktik* concepts of educational substance (*Bildungsgehalt*), the elemental (*das Elementare)* and the fundamental (*das Fundamentale*) (see Chapter 5), I believe, remain powerful heuristics for tackling such questions in the current context. They both lend support to issues-based, cross-disciplinary approaches to curriculum planning and classroom teaching that are more pertinent to the cultivation of human powers (see Klafki, 2000; Levine, 2006; Westbury & Wilkof, 1978). School subjects can be traditional disciplines-based subjects; they can also be interdisciplinary subjects formulated according to a set of problems and themes (see Deng, 2015).

Three such kinds of questions are at the heart of *Bildung*-centred *Didaktik* and the Schwabian model – both of which, as indicated in Chapter 4, result from an endeavour of reinventing (liberal) education in response to the challenges confronting education in a particular social and historical context. To explore these two models, then, is to invite readers to participate in the search for ways of reformulating education in view of the current challenges of preparing students for life and work in the 21st century. We need to endeavour to reinvent school education directed towards the cultivation of a wide range of human powers for all, with a curriculum and pedagogy suited to our times. Both *Bildung*-centred *Didaktik* and the Schwabian model are sources of inspirational and creative ideas for such an endeavour.

With content or subject matter as the essential point of departure, I have tackled knowledge questions through invoking *Bildung*-centred *Didaktik* and Schwabian curriculum thinking, together with bodies of literature from curriculum theory, philosophy of education and teacher education. Let it be clear that

knowledge questions need to be explored from the vantage points of milieus and learners as well. We need to ask fundamental questions about the kind of world we now inhabit, the changing character of the economic and social life, and the consequent needs and rights of children. We also need to ask basic questions about cultural, linguistic and social class characteristics, variable backgrounds and the life-world knowledge of students. These are social, economic, political, cultural and educational questions which are vital for developing a broader, more balanced, more responsible and ethical understanding of the content of the school curriculum. They call for sociological, economic, historical, ethnographic and critical forms of inquiry – together with related bodies of scholarship – that are beyond the focus and scope of this book. I hope to broaden my inquiry into knowledge questions on other occasions.

Note

1 Teachers also have their own 'theories of content' developed over the years of classroom practice and professional development.

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