A necessary corrective to the corrosive impact of naive post-modernist thought on curriculum theory, this book provides secure foundations for both curriculum theory and curriculum design. It should be essential reading for both policy-makers and teachers.” — Tim Oates, CBE, Group Director of Assessment Research and Development, Cambridge Assessment

The blurring of the distinctions between pedagogy and curriculum, and experience and knowledge, has resulted in a generation of teachers who are confused about the part that each of these plays in the education of children. Schools may still teach through subjects, but there is little consensus about what constitutes a subject and what they are for. The aim of this book is to contribute to a more robust rationale for, and understanding of, what schools should teach – the curriculum. This is not to dismiss the significance of pedagogy, how children learn or the personal knowledge and experiences they bring to the classroom. Rather, to become a successful teacher depends upon understanding the respective roles of each. But the curriculum – what to teach – is logically prior to how to teach it. There is no more important question in education.

“What knowledge do our children need to know and why? How will they acquire the reason and imagination to ask: What is right, what is beauty, and what is truth? This book brings these profound questions back to the centre of educational enquiry where they belong. We all need to read it.” — Professor Elizabeth Rata, School of Critical Studies in Education, University of Auckland

“I fully endorse the editors’ impassioned plea to take the content of the school curriculum seriously. This book is a call to arms for all teachers and educators to refocus on the central job of schools: as Matthew Arnold put it, to pass on “the best which has been thought and said”,’ — David Perks, Principal, East London Science School

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_When the past no longer illuminates the future, the spirit walks in darkness._
(Alexis de Tocqueville (1840), Democracy in America, vol. 2, book 4, chapter 8)

The nature of disciplinary knowledge in the curriculum is important to address in 2017 because its content, value and purpose have waned in schools and even in some university departments. Many young people entering the teaching profession are unclear about the role of disciplines and knowledge in the school curriculum and the education of children, and some do not understand how academic knowledge is different from other types of knowledge, or what distinguishes knowledge from opinion. For those already working in the profession, including experienced teachers and representatives of examination boards, subjects have come to be viewed less in terms of epistemic principles and value, and more as a means to another end such as developing marketable skills, facilitating well-being, promoting diversity or addressing global issues. For the last two decades the curriculum has been treated as a vehicle or tool to address a whole host of economic, social and environmental problems in society rather than emphasizing its intrinsic value – _the development of knowledge and understanding_. While education has several worthy extrinsic aims, such as gainful employment, socialization, and learning about the responsibilities of citizenship, their success is contingent upon learning the ‘generative principles of disciplinary knowledge’ that enable young people to transcend their particular context (Wheelahan, 2010: 107). It is when extrinsic aims become dominant over educational aims and start to drive the content and shape of the curriculum that its intrinsic quality becomes corrupted or undermined, and education suffers (Furedi, 2009, 2017). In essence, there is a very weak theory of knowledge and the curriculum in British schools today.

This situation has arisen in part because of the growing _instrumentalism_ in the curriculum (using education for extrinsic ends) and the prominence of social constructivist theory in education and schools over the past two to three decades. Since the National Curriculum was introduced in 1991, what schools teach has become increasingly politicized and subject to external intervention by government, business and non-governmental organizations (NGOs), diminishing the professionalism of teachers and corrupting the
curriculum (Whelan, 2007). For a detailed explanation for how and why ‘knowledge was dethroned and displaced’ in schools, readers are referred to Wheelahan (2010). In short, the special place of knowledge in society has been undermined by a more general erosion of authority in society – its traditions and institutions including family, church, state, unions and political parties. Wheelahan notes how the blurring of the boundaries between school and society has facilitated the instrumental approach to curriculum – knowledge is not valued in its own terms but is treated as a means to achieve some other aim (employability, health and well-being, or environmental awareness). Particularly damaging is the way that education is treated in terms that belong in the world of work: developing competences rather than knowledge, and teaching learning objectives that are measurable and used to demonstrate pupil ‘progress’. School systems are being driven by accountability measures, but outside a framework of educational aims tied to the acquisition of worthwhile knowledge, the effect of which is that knowledge is given only instrumental worth (Biesta, 2005, 2007; Pring, 2013).

But the place of knowledge has also been undermined from within schools and universities. Wheelahan (2010) cites how post-modern theories have led to a focus on the context and the self-interest of individuals involved in knowledge production at the expense of its objectivity. For many working in the social sciences and humanities, knowledge is seen as inherently political and therefore largely a matter of personal perspective. If universities are treating knowledge as relative then it no longer holds special status in society. In education, the theory of social constructivism shares the post-modern emphasis on the knower (their personal knowledge) rather than seeing knowledge as a social practice for achieving insight, clarity of understanding, and truth. With the place of knowledge being downplayed in the curriculum, many teachers have been inducted into the profession through theories that focus on pedagogy and the child’s experience, therefore prioritizing ‘learning’ over the knowledge pupils need to learn (Biesta, 2005; Young, 2008). The displacement of knowledge in the curriculum is echoed in the work of Ecclestone and Hayes (2009) who identified how teachers and lecturers were focusing on therapeutic aims in the classroom at the expense of academic goals. Richard Smith (2002) shares a similar concern about an educational culture that exalts self-esteem as the chief educational aim, or presents all things educational from a therapeutic perspective. The blurring of the distinctions between pedagogy and curriculum, and experience and knowledge, has resulted in a generation of teachers who are confused about the part that each of these plays in the education of children.
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Schools may still teach through subjects, but there is little consensus about what constitutes a subject and what they are for. This is in spite of the recent reform of the National Curriculum for England and Wales, which aimed to refocus the curriculum on subject knowledge (DfE, 2010). While the new curriculum does include significant and valuable academic knowledge, it has been widely criticized by schools and educationalists, if not dismissed, as only reflecting the perspective of the coalition government (Conservative Party and Liberal Democrat Party) who led the reform. And, with the Department for Education announcing that the new curriculum does not apply to free schools and academies, it is no longer a national curriculum. What was missing from the reform was a clear rationale for why this knowledge is important for children to learn in the twenty-first century and what different forms knowledge takes. It is to these matters that we aim our attention in this book.

The objective of this book is to contribute to a more robust rationale for, and understanding of, what schools should teach – the curriculum. This is not to dismiss the significance of pedagogy, how children learn, and the personal knowledge and experiences they bring to the classroom. Rather, to become a successful teacher depends upon understanding the respective roles of each. And, the curriculum – what to teach – is logically prior to how to teach it. There is no more important question in education. So, rather than just following the National Curriculum or the latest examination specifications, we aim to encourage schools and teachers to engage in discussion, thought and debate about what a curriculum is for, how knowledge is selected, organized and structured, and why. While the best schools already do this, too many have become focused on teaching to the test, measuring ‘progress’, safeguarding, marking and pupil feedback, the three-part lesson, mindfulness, information technology, learning styles, or personal, social and health education, at the expense of the curriculum. Our primary audience is beginning teachers, although we hope to provoke a broader discussion in schools and with others engaged with education, including parents and governors of schools. The nature and role of disciplinary knowledge in the curriculum are important for both primary and secondary schools because a child’s educational journey is dependent upon comprehension of conceptual knowledge derived from disciplines. While the scope of this book is focused on the secondary curriculum, we recognize that there is further work needed in order to examine the role of disciplinary knowledge in the primary curriculum, and indeed what is meant by disciplinary knowledge in the context of primary education.
Alex Standish and Alka Sehgal Cuthbert

In particular, we think that all teachers and schools should know answers to the following questions: What does it mean to study a discipline and what is its value? Why is disciplinary knowledge important for the curriculum? What is a school subject and how are subjects related to disciplines? What different forms does knowledge take and what implications does this have for structuring the curriculum? How does disciplinary knowledge contribute to the education of children? Can and should all children learn disciplinary knowledge? What happens if children miss out on academic knowledge? We also explore the different forms that subject knowledge takes and what each adds to the education of the next generation of citizens.

As we enter into a discussion about the school curriculum it is useful to begin with R.S. Peters’s observation that education does not have its own values (Peters, 1965). Questions about what schools should teach are ‘philosophical and political questions about who we are and what we value’ (Young, 2008: xvi). Similarly, the philosopher John Searle (1995) notes that allocating a function to any phenomenon necessitates the identification of a prior set of values. This suggests that any theory of education and the curriculum must be related to a theory of society (Young and Muller, 2016). Our starting point, therefore, is the culture and social system (liberal democracy) of where we live – the United Kingdom. We do not mean this in an exclusive sense, nor do we wish to revert to a past view of culture. The United Kingdom today is very multicultural and all the better for it. Neither does this mean that we think education should focus solely on one culture – children should learn about many cultures. What it does mean is that the choices we make about what to include in a curriculum will reflect the beliefs and values upon which our society is based. While we recognize the plurality of beliefs in the United Kingdom today and that this presents a certain challenge for schools, the curriculum should at the very least reflect and maintain the foundations of liberal democracy. Liberal democracy is no accident of history but has been fought for and is built upon the notion of autonomous individuals who are equal before the law and allowed freedom of thought and speech. These ideals will inform curriculum selection and the individuals schools aim to nurture. Indeed, the very maintenance and sustenance of democracy is dependent upon a curriculum that provides the knowledge children need to assume the responsibilities of citizenship (Rata, 2012).

There is also one value upon which all disciplinary knowledge depends: truth. The pursuit of truth is what distinguishes disciplinary knowledge from everyday, social and cultural knowledge. And truth has an important role to
play in the successful functioning of liberal democracies. We must recognize that there are different sources of truth in society – religious and secular (again being a product of history and culture), and that both belief and reason have their place in education. In his essay *Truth and Truthfulness*, Bernard Williams speaks to the place of truth in education: ‘you do the best you can to acquire true beliefs, and what you say reveals what you believe’ (Williams, 2010). Williams asserts that truth is the basis for the authority of scholarship, at all levels of education. Nevertheless, scholars must also live with an understanding of the fallibility of our accounts of truth. Without going too far into our theory of knowledge, below we show that knowledge is social – it is a human construct and therefore susceptible to the limitations of our theories and ideas. It is precisely because knowledge is constructed that normative constraints within a discipline are needed. The conceptual and procedural criteria necessary for producing and validating knowledge mean it cannot be arbitrarily constructed. It is the job of the teacher to induct pupils into the disciplinary-specific procedures, methods and habits required for the pursuit of truth.

We will say more about truth in Chapter 1, drawing on the work of Michael Young and Johan Muller (2016) – exploring how objectivity takes different forms depending upon the type of disciplinary knowledge.

Already it should be evident that we are working towards a theory of education and a vision of the individual child we want to shape. Following the insights of Michael Oakeshott among others, we argue that education is about cultivating our humanity. Oakeshott reminds us that no child is born human, ‘man is what he learns to become: this is the human condition’ (Oakeshott cited in Fuller, 1989: 39). A starting principle then is that we want to induct children into disciplinary knowledge developed across societies over many generations. We want to show children the world, and to teach them different ways of thinking, expanding their horizons, and deepening their understanding of the human condition. But it is not just any knowledge and all knowledge that accomplish such a task. What is unique and special about schools as institutions is that they introduce children to specialized and valuable forms of knowledge. As Michael Young explains, ‘The primary purpose of education is for students to gain access to different specialist fields of knowledge’ with a view to their ‘intellectual development’ (Young, 2014: 149), including the faculties of reason, enquiry and imagination.

This approach contrasts with the child-centred approach to education, the theory of social constructivism, and more recent work of Ken Robinson (1999) and Michael Reiss and John White (2013). While
we concur with the aim of developing individual autonomy and capability, our departure from these perspectives is that we see the teacher as agentive in curriculum selection and teaching the knowledge that children need to learn to achieve these aims. While the intellectual, cultural, spiritual and moral development of the child are worthy ideals, some educationalists and schools have been reluctant to recognize that this can only be achieved through the study of a curriculum that draws from cultural traditions and specialized knowledge (Kennedy, 2014; Young, 2008). Broadly speaking, we can differentiate between knowledge that is moral (what is right), aesthetic (what is beauty) and epistemological (what is true). In schools, pupils should be introduced to the realms of human experience through the study of languages, mathematics, sciences, the arts and the humanities. This is important when considering a school curriculum, as different forms of knowledge will help the child to develop in different ways and to see connections between different forms of knowledge. Limiting children’s exposure to only one or two forms of knowledge would be restricting their insights and opportunities to grow in different ways.

A number of school subjects are focused on the development of disciplinary knowledge and are closely related to university disciplines, such as history, sciences and the arts. These subjects are often held in higher regard by society, for reasons we will explore. The Russell Group of UK universities identifies eight ‘facilitating’ subjects of which it encourages students to take at least two at A level. The list comprises English literature, modern and classical languages, chemistry, physics, biology, history and geography, but does not include other academic subjects like music, art or sociology and politics. For us it is the educational worth of the subject that matters – that it helps children to explore some aspect of truth about the world and humanity.

This book presents a series of chapters written by secondary school teachers and lecturers, each of whom describes their discipline, how it evolved in relation to an area of human enquiry and how it helps us to explore an aspect of truth. Each chapter also examines how the discipline is ‘re-contextualized’ in the context of school subjects (Bernstein, 1999). This means how the subject is related to, and prepares the pupil for, further study in the discipline, should they so choose, and so the idea of progression is important. While we apply the term ‘disciplinary knowledge’ to both schools and universities, we recognize that the concepts and methods being learnt in schools have been ‘re-packaged’ in a simplified form from universities. But the term ‘disciplinary knowledge’ is preferred over ‘subject knowledge’
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precisely because the relationship between subjects and disciplines has weakened and is in need of re-examination.

We are not claiming that these chapters present the only, or even the best, account of disciplinary knowledge in the curriculum. What we are asserting is that each chapter illustrates the kind of curriculum thinking that should be going on in schools and in relation to education policy-making. Involving both teachers and lecturers in the writing of this book was a conscious choice because of the necessity for schools and universities to be speaking a common language, sharing aims and practice. While there are some obvious differences between schools and universities, both have a role to play in introducing young people to society’s intellectual traditions and knowledge, and preparing future teachers. As such, they need to work together.

What is special about these academic subjects is that they introduce pupils to disciplinary knowledge by teaching them conceptual thought or know that (Winch, 2013). Conceptual or propositional knowledge is valuable because it enables the child to understand that which is not evident at the level of perception (for example, how a child’s perception and experience of fluids or space is transformed by the concept of volume). It is only by abstracting from the concrete world of objects that we can comprehend generalizations and manipulate ideas to identify patterns and relationships. As we will show, the boundaries of disciplines are not arbitrary but reflect their different object of study or a particular method of enquiry (Wheelahan, 2010). Whether young people decide to pursue higher education or not, we think that disciplines, as practices of intellectual exploration and wisdom, are of sufficient importance that all children should have the opportunity to study them and benefit from the insights they offer.

We do not wish to minimize the role of so-called ‘non-academic’ subjects. All subjects have their place and contribute to the education of the child. Schools do more than develop the mind – they also teach children practical skills, physical education and social skills, including how to live as part of a community. More practical subjects, like technology, teach skills and develop know how (Winch, 2013). Yet, with each of these broader aspects of education there is still an aspect of know that related to disciplinary knowledge. For one to be skilled in technology means drawing upon knowledge from science, mathematics, engineering and art. Similarly, with citizenship; while the subject clearly aims for social and political participation, the curriculum develops knowledge of democracy, law, government and social institutions, which itself is derived from the disciplines of history, politics and law. And, in physical education the
student must draw from knowledge of anatomy, physiology, psychology, and sometimes the arts.

Our aim in writing this book is to examine the special nature of academic subjects, their relationship to university disciplines, and why they are of particularly high value to young people and society in general. Therefore, before we address subjects we need to understand the meaning of disciplinary knowledge and from there it will be possible to consider the relationship between school subjects and university disciplines. This will be followed by a series of chapters that explore the meaning of disciplinary knowledge in the context of individual subjects from the curriculum. While including every subject from the curriculum would make the book very long, we have opted for a selection of subjects that cover the different realms of disciplinary knowledge (mathematics, languages, natural science, social sciences and the arts). The chapters are ordered according to the forms of knowledge and therefore do not indicate priority. Each chapter explores the nature of the discipline, the form knowledge takes in school, and how it contributes towards the education of children.

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