



General Prologue

A Study in the History of Knowledge

1 The Kingdom of Darkness

This is a study in the history of knowledge. Specifically, it is an exploration of changing conceptions of what kinds of knowledge were considered worthwhile – and what kinds came to be deemed as worthless or even pernicious – roughly in the two and a half centuries between 1500 and 1750, with a specific focus on the period around 1700.

That being premised, I could not blame anyone if, on seeing the title of this book, they expressed not only surprise but even consternation. Moreover, they might well do so not once, but twice over. First of all, the two names of my subtitle do not sit naturally together. To be sure, Pierre Bayle (1647–1706) and Isaac Newton (1642–1727) were two of the great – perhaps even the greatest – names of European life at the turn of the eighteenth century. Their vast influence on European thought over the next hundred years (and beyond) is unquestionable. But what do they have in common? One was a Huguenot man of letters, journalist, and polemicist who spent most of his life in Rotterdam, and who is famous for his defence of religious toleration, his suggestion that a society of atheists might be able to function, his articulation of the problem of evil, and – above all – his vast, sprawling *Dictionnaire historique et critique* (1697). The other was an English natural philosopher who spent most of his life in Cambridge and London, and who is most famous for achievements in a field in which Bayle had no discernible talent or even interest: mathematics. They seem to make an odd couple indeed; to my knowledge, no historian has previously sought to construct an interpretation that aligns them in any meaningful way.

But perhaps even more surprising will be the final words of my subtitle: ‘the emancipation of the European mind from philosophy’.¹ Surely, it will be said, it was philosophy that did the emancipating? Such a heroic story was already

¹ Readers familiar with the literature on this period will spot the allusion to Hazard, *Crise* (1935), trans. as *European mind*

(1953). Beyond our titles, we adopt very different visions of the period: see further the **Conclusion** to this book.

immortalised in the ‘Discours préliminaire’ to the *Encyclopédie* (1751–72), written by that master propagandist, Jean-Baptiste le Rond d’Alembert (1717–83). D’Alembert told his story in unambiguously political terms, and he knew exactly who its hero should be:

Descartes at least dared to show intelligent minds how to throw off the yoke of scholasticism, of opinion, of authority – in a word, of prejudices and barbarism. And by that revolt, the fruits of which we are reaping today, philosophy received from him a service perhaps more difficult to render than all those rendered afterwards by his illustrious successors. He can be thought of as a leader of conspirators who had the courage to arise, first, against a despotic and arbitrary power and who, in preparing a brilliant revolution, laid the foundations of a more just and happier government, which he himself was not able to see established.²

This story has in time become so powerful that it reaches well beyond the academy, and, in some parts of Europe in particular, remains a central component of national identity.

However, d’Alembert and his collaborators were men with a political agenda (intellectually, d’Alembert had no time for Descartes or speculative philosophy of any sort). In fact, nothing has done more to obscure the reality of sixteenth- and seventeenth-century intellectual life than to see it through the eyes of the eighteenth and nineteenth, and to tell its history as that of a process of philosophical liberation. That is not to say that the (long) seventeenth century was not a transformative intellectual period. But the transformation, I contend, was the opposite of that claimed by d’Alembert: it was not the triumph of philosophy, but European thinkers’ self-conscious emancipation from its lures.

What exactly do I mean by this? It is particularly important to be precise on this score, because the inexact and anachronistic use of terms such as ‘philosophy’ and ‘science’ has done much to confuse our understanding of early modern intellectual change. I am not concerned, for example, with ethics or political philosophy, which in any case were minor (and usually quite trivial) parts of philosophical pedagogy and writing at this period. Nor am I speaking

² Jean-Baptiste le Rond d’Alembert, ‘Discours préliminaire’, in *Encyclopédie, ou Dictionnaire raisonné* (Paris, 1751–72), i.xxvi: ‘Descartes a osé du moins montrer aux bons esprits à secouer le joug de la scholastique, de l’opinion, de l’autorité, en un mot des préjugés & de la barbarie; & par cette révolte dont nous recueillons aujourd’hui les fruits, la Philosophie a reçu de lui un service, plus difficile peut-être à rendre que tous ceux

qu’elle doit à ses illustres successeurs. On peut le regarder comme un chef de conjurés, qui a eu le courage de s’élever le premier contre une puissance despotique & arbitraire, & qui en préparant une révolution éclatante, a jeté les fondemens d’un gouvernement plus juste & plus heureux qu’il n’a pû voir établi.’ For the history of the conception of Descartes as father-liberator of philosophy, see further Schütt, *Vaters* (1998).

of ‘philosophy’ as a near synonym for ‘thought’ or even ‘intellectual activity’, as it came to be used by the *philosophes* of eighteenth-century France, or by Kant when he wrote that ‘in all men, as soon as their reason has developed for speculation, there has always been and will always continue to be some kind of metaphysics’.³ Rather, I am concerned with ‘philosophy’ in the technical sense in which it was mostly conceived before 1700: a speculative discipline primarily composed of metaphysics and natural philosophy, to which logic was an essential propaedeutic.⁴ What I shall argue is that between 1500 and 1700, Europeans thinking, teaching, and writing across national and confessional borders came to conceive of that enterprise as profoundly unfruitful and even damaging, and in need of quite fundamental reform. Moreover, this was a concerted intellectual movement – indeed, I shall argue, it was perhaps the most important intellectual movement of the time. Of course, there had always been those who, inspired by Paul’s words to the Colossians, had questioned the place of ‘vain philosophy’ (Col. 2:8) in a Christian society; in fact, in almost any philosophy commentary or textbook from the period 1200–1700 one can find warnings about the dangers that the discipline brings with it, at least if treated without caution. However, I am concerned not with any individual statements to that effect, but with the large-scale structural changes that saw such critique become more and more mainstream, and then triumph. In turn, I shall argue, this trend provides the essential long-term context for full reinterpretations of the thought and writings of Bayle and Newton.

My main title is taken from Book IV of Thomas Hobbes’s *Leviathan* (1651), in which Hobbes railed against ‘that painted and garrulous whore who has for a long time now been taken for philosophy’ (these words are from the Latin version of 1668).⁵ What is interesting about Hobbes is not such individual complaints, but rather the fact that they were part of a vast, complex, historico-philosophical vision about the nature of knowledge and its social role, one that has been well summarised by the last editor of *Leviathan*:

When the early nineteenth-century radical writer William Cobbett thought about the many forms of economic and political injustice and manipulation that surrounded him, he became convinced that they were all somehow connected as parts of a great, shadowy system of oppression, which he called ‘the Thing’. It may be said that one of the reasons for writing *Leviathan* was the fact that during the late 1640s Thomas Hobbes also became obsessed with a ‘Thing’ of his own – a complex mass of errors and

³ First Critique, *Gesammelte Schriften* (Berlin, 1900–), iii.21: ‘in allen Menschen, so bald Vernunft sich in ihnen bis zur Speculation erweitert, irgend eine Metaphysik zu aller Zeit gewesen und wird auch immer darin bleiben’. This conveniently allowed Kant (and his followers) to present him as the

man who ‘resolved’ all the tensions in previous philosophies. See further **Conclusion**, p. 851.

⁴ For the demarcation of philosophical disciplines in medieval and early modern Europe, see further **I.1**, *passim*.

⁵ *Leviathan*, iv.46, iii.1053.

absurdities, embracing false metaphysics, primitive delusions, popular superstitions, bogus clerical pretensions, and seditious political theories – all in some way connected, and all tending directly or indirectly towards the destruction of civil government.⁶

Neither Bayle nor Newton was as concerned with ‘the destruction of civil government’ as was Hobbes. (Although, as we shall see, neither was *unconcerned* with the effects that philosophising had had on civil life.) However, they (and a great number of their counterparts) were also driven by the spectre of a ‘Thing’ of their own: a genealogical conception of a Kingdom of Darkness in which ‘philosophy’ as it had been practised since ancient times explained almost all the errors and vices – intellectual, theological, and even social – into which mankind had fallen. Moreover, for all the very real differences between the two men’s visions and the purposes to which they deployed them, there were also some remarkable similarities. Above all, both Bayle and Newton came, by the end of their lives, to conceive of the history of the human mind from Europe to the Far East as one in which a central, driving force was metaphysical animism and emanationism; in turn, both saw their own philosophies as, partially, responses to this threat. In an earlier monograph, I insisted on the importance of historical thinking to the philosophical projects of the seventeenth century.⁷ Where I previously made that case synoptically, I shall here put my money where my mouth is, and demonstrate that neither Bayle nor Newton can be understood without grasping what they took to be the Kingdom of Darkness which they were opposing. Although I shall explore the historical and scholarly moves that they made, my first priority will not be the history of scholarship; rather, it will to be reconstruct their thought as a whole.

This will involve going into great textual detail, for which I make no apologies. If we are to understand the intellectual transformation of early modernity, it is no good resorting to grand, anachronistic generalities (‘rationalism’, ‘empiricism’, ‘enlightenment’, ‘modernity’, etc.); nor will we get very far if we confine ourselves solely to the social history of knowledge (although that will be part of our story). Rather, we must try to capture as fully as possible what mattered to our actors themselves, whether in their philology, their mathematics, their teaching, or anything else. Just as importantly, we must not only investigate the totality of what they wrote, but also – as much as humanly possible – the totality of what they *read*. This is particularly important in the case of Bayle and Newton. Too often, they are interpreted via conceptual analysis of snippets of their writing: a famous article from the *Dictionnaire* here; a quotation from the General Scholium there. Yet more reified ‘-isms’ are then applied to the results – ‘scepticism’, ‘fideism’,

⁶ Malcolm, ‘Introduction’ (2012), 48.

⁷ Levitin, *Ancient wisdom* (2015).

‘voluntarism’, etc. – which leave us very far from what our thinkers themselves were thinking and doing. Needless to say, that is not always the case: this book has been written in dialogue with some of the most remarkable historical scholarship ever produced. I shall not at this point belabour the reader with historiographical surveys;⁸ this book is long enough as it is. Rather, the best way to introduce my case is simply to summarise it.

2 This Book

(i) *Method and Approach*

First, a word on method and the wider conversation in which I am engaged. I began by saying that this book offers a study in the history of knowledge. This tag is the latest of many that has been applied to the kind of history that I am writing (history of ideas, intellectual history, etc.).⁹ Good history is driven not by methods or approaches but by questions, so what we call our enterprise is not so important. That being said, there are a few approaches or *epistemes* with which I am particularly engaged. First of all, it just so happens that as I write it is almost exactly fifty years since Quentin Skinner published a famous article on ‘Meaning and understanding in the history of ideas’, in which he called for a contextual approach to the subject.¹⁰ Without entering into the much-debated methodological implications of Skinner’s ideas, I can say that, in the broadest sense, I am writing contextual intellectual history. However, I should like to offer two qualifications. The first is that I am not sure it needs to be particularly associated with any so-called ‘Cambridge school’. In fact, I should particularly like to emphasise that in this book I shall be entering into dialogue with historians who were doing quite brilliant contextual intellectual history before 1969, whether they knew it or not. Here I mean not only the well-known Alexandre Koyré, but also the great Anneliese Meier and Elisabeth Labrousse, who have perhaps not received the recognition they deserve (at least in the anglophone world) for sad reasons that are still all too prevalent.

Second, it is worth saying that ‘context’ can mean many things. It can mean *short-term* context: the local, often polemical aims that a writer has when composing a text. Several of the revisionist interpretations I shall be offering in this book fall into that category. They depend, above all, on chronological precision. I shall show, for example, that the ideas expressed by Newton in the General Scholium and the Rules of Philosophising added to the second edition of the *Principia* (1713) were not articulations of some timeless Newtonian ‘method’, but rather interventions in very specific, local, disputes. In Bayle’s

⁸ For Bayle, see **II.Proleg.1**; for Newton, **III.Proleg.1**.

⁹ For attempts to define this approach, see Vogel, ‘Wissensgeschichte’ (2004); the

discussion between Mulsow and Daston in Tamm and Burke, *Debating* (2018); and the works cited there.

¹⁰ Skinner, ‘Meaning’ (1969).

case, I shall demonstrate that some of his most famous ideas, not least concerning atheism, changed significantly over time, almost always as a response to polemical circumstances and to the reading he had undertaken.

However, to confine context to such local matters is surely mistaken: it is effectively to turn every text into a pamphlet. For all of world history, at least some educated men and women have aspired to be something more than hired pens, hacks, or propagandists, and have held beliefs that can only be explained as the product of much more long-term intellectual developments, developments which in turn manifest themselves at a deeper, structural level, not least in formal education (if such has been present). This is why this book opens with a section comprising three chapters devoted to such structural changes. The narratives in these chapters, while they are inevitably more synoptic and dependent on the secondary literature than my analyses of Bayle and Newton, are original, and – I hope – offer important diachronic analyses of early modern intellectual life. In turn, I shall suggest that they provide the long-term contexts without which we simply cannot understand either Bayle or Newton, who will be interpreted both as *products* of these structural factors, and as *contributors* to their development. These factors are those which explain the dwindling cultural capital of speculative philosophy in early modern Europe. In this regard, this is a study in the history of forgetting, or more precisely, of sidelining: a history of how certain questions that had for centuries been central to knowledge were deemed fruitless or irrelevant. What is particularly interesting is that in the case of Bayle, Newton, and many others, this was a conscious process which required the postulation of what one might call ‘philosophies of anti-philosophy’; that process was in turn internalised and incorporated into the structures of knowledge production.

In this first part, but also in the parts on Bayle and Newton, I shall engage with several branches of intellectual history. Perhaps the most obvious is the history of philosophy. Although sadly in abeyance in Britain (with some notable exceptions), this field, particularly its early modern variant, is flourishing across Europe, North America, and Australasia. To testify to this, I need only offer the names of Roger Ariew, Delphine Bellis, Katherine Brading, Antonella Del Prete, Mihnea Dobre, Mary Domski, Daniel Garber, Dana Jalobeanu, Andrew Janiak, Christoph Lüthy, Sophie Roux, Tad Schmaltz, and the very many others whose works are cited in the following pages. It is in this field that one finds the most acute textual and conceptual precision, inevitably grounded on close reading of the primary literature. Moreover, the field has in recent years seen great leaps forward in terms of historical awareness, to the extent that it now often leads the way in debunking anachronistic or proleptic myths accrued over the centuries. My own approach, with its strong focus on institutional history, disciplinary identity, and local context, is probably more historicist than that of most historians of philosophy. However, I certainly do not want this to obscure my great debts to the practitioners in

that field, and my desire to engage with them. Indeed, I dare to hope that this book goes at least a little way towards increasing the level of conversation between early modern intellectual historians and historians of philosophy (often based in Philosophy departments).

One of the most fruitful avenues of research in recent years has been the integration of the history of philosophy and the history of science so as to explore what was, after all, the early modern discipline of natural philosophy (to the names listed above, one may add that of Peter Anstey, and those of the small army of scholars working on Cartesian natural philosophy).¹¹ One of the great virtues of this scholarship is that it has served to dampen the excesses of the ‘hard’ social history of science that threatened to take over the field in the 1980s and 1990s, and which confused complex, multifaceted contextualism with simplistic political reductionism. Accordingly, this is another body of literature with which I am in dialogue, even if I shall argue that philosophers have significantly overplayed the extent to which Newton was a metaphysician or a ‘philosopher’ in the modern sense of the word. Indeed, one of my central aims is to chart the disciplinary self-conception of early modern natural philosophers themselves, and to explore where they drew the boundaries between legitimate and illegitimate approaches to nature – as we shall see, the latter were increasingly aligned with overly ‘philosophical’ methods. Where I shall depart from some of this literature is in my heavy emphasis on the importance of the history of medicine and mixed mathematics to this story, both of which (especially the former) tend not to be incorporated into the more intellectualist approaches to the history of science. Their influence, I shall argue, was central to the de-philosophisation of the investigation of nature.

Another field with which I shall be in dialogue, but which tends to be rather neglected by both intellectual historians and historians of philosophy, is the history of theology. By this I mean theology considered not in some grand, neo-Weberian manner (in that regard, many unconvincing variations on the Merton thesis continue to appear), but rather the technical discipline as it actually existed in early modern Europe: conducted primarily in Latin, taught in scores of universities and academies, and published in hundreds of books that remain virtually unknown to secular scholarship. Many of these books (at least those produced in the Reformed world) have been studied expertly by American and Dutch historians of Reformed theology, most prominently Richard Muller. Their approaches tend to be very textual, and show limited interest in placing the texts they so thoroughly explore in institutional or broader social context. Nonetheless, they have offered some of the most important revisionist scholarship concerning early modern European thought,

¹¹ My interpretation of early modern natural-philosophical change, as offered in I.1, was partially developed

in dialogue with Anstey’s work on the history of experimental philosophy: see Levitin, ‘Experimental’ (2019).

and it is a shame that more historians and philosophers have not engaged with their findings. As I hope to show, neither Bayle, nor Newton, nor the wider framework of early modern intellectual history can be understood without a thorough grounding in the technicalities of the history of theology, however secular we ourselves may be.

Perhaps the only area of intellectual history that *has* started to form a conversation with the historians of theology is the history of scholarship. This field has exploded in visibility in recent decades (above all due to the impact of the works of Anthony Grafton, and then Jean-Louis Quantin, Kristine Haugen, and others) and, as in my previous work, I shall continue to insist on the necessity of understanding the philological-historical components of the philosophical texts with which we are concerned. These were not humanist ornamentation: these texts are incomprehensible without a thorough grounding in the history of early modern scholarship. The early modern 'Aristotle' was certainly not the modern one; indeed, Greek philosophy was not even considered as a unique phenomenon. Particularly important to my overall thesis will be a reading of early modern oriental scholarship and its relationship to European philosophical debate. As we shall see, Bayle, Newton, and a host of other Europeans often conceptualised what philosophy should (and shouldn't) be, and what the human mind could (and couldn't) achieve, on the basis of their reading of the latest oriental scholarship and travel literature.

Inevitably, I shall also be brought into contact with other forms of historical enquiry. For example, when I come to Bayle, it will be very important to place him precisely in the context of Franco-Dutch politics, and especially debates concerning toleration that were conducted not just in texts but also at the highest political levels. It will also be important to think about the social history of intellectual activity, and the nature of the so-called 'republic of letters'. This brings me nicely to the final major body of literature with which I shall be in contact: that concerning the intellectual history of the period around c.1700 more broadly conceived. As I have previously argued, and as others have since also come to argue,¹² I believe this important period has been misunderstood because of a conflation of intellectual and sociopolitical change, a conflation that has generated the misleading category of 'enlightenment'. Now, I am not particularly concerned with nomenclature.¹³ Rather, my main concern is with doing justice to early modern intellectual history on its own terms, and not reading the seventeenth century as a mere propaedeutic to the (supposedly) enlightened glories of the eighteenth. One of the great myths of enlightenment is the one propagated by d'Alembert with which I began: that philosophy precipitated some kind of intellectual liberation in the seventeenth century. As

¹² See e.g. Bevilacqua, *Republic* (2018).

¹³ On this score, see the devastating account in Schmidt, 'Inventing' (2003).

we shall see, contemporaries perceived the case to be exactly the opposite: they were emancipating themselves from the pointless or actively damaging pursuit of abstract, hubristic, philosophical speculation in favour of forms of knowledge that – they had decided – were preferable. They were not ushering in a proto-Kantian ‘Age of Reason’, but had a peculiar agenda of their own. Nor, conversely, was the critique of systematic philosophising the child of the eighteenth century, as so many eminent historians of the ‘enlightenment’ – from Ernst Cassirer to J. G. A. Pocock – have claimed.¹⁴ In rescuing the sixteenth and seventeenth centuries from the dogmatic preoccupations of the eighteenth and nineteenth, my broadest aim (if I may for one moment overreach myself) is to do for early modern intellectual history what Peter Brown did for late antiquity: to demarcate it as a rich, fascinating, brilliantly alien subject of study that does not need to be – and suffers from being – incorporated into sweeping narratives of ‘modernity’ or ‘enlightenment’.

Before I summarise my argument, I should say that this conclusion is not in the slightest designed as a commentary on modern academic philosophy, which, as far as I can tell, is a brilliant and flourishing discipline. The issues addressed in this book can sometimes bring out rather emotive and ideological responses: from positivists who insist that ‘real’ science is by definition anti-philosophical; secularists who inevitably associate ‘metaphysics’ with ecclesiastical oppression; other types of secularists who insist that ‘philosophy’ has always been the great liberator of the human mind; anti-secularists who see the erosion of the Thomist synthesis as the one of the great disasters of Western civilisation, and so on. I share none of these perspectives, and am inevitably shocked when various, mutually contradictory presentist intentions are ascribed to me on the basis of my academic work (to my very real astonishment, one reviewer of a previous monograph even attempted to connect my ideas to my ethnic origin). I am a mere historian, and I write solely out of curiosity and a desire to understand what seems to me to have been a very important moment in the history of knowledge. There is no further moral to my story. Philosophy conceived in its most speculative-systematic form survived – if barely – in the eighteenth century (primarily in Germany (see **I.1.9**; **I.2.4**; **IV.2**)), and then made a triumphant return via its incorporation into the Humboldtian research university. This allowed its practitioners – especially neo-Kantians – to rewrite its history as a mythology in which such philosophy had always flourished, to be

¹⁴ Cassirer, *Enlightenment* (1951), 6–7: ‘The seventeenth century had seen the real task of philosophy in the construction of the philosophical “system” . . . The eighteenth century abandons this kind of deduction and proof. It no longer vies with Descartes and Malebranche, with Leibniz and

Spinoza for the prize of systematic rigor and completeness.’ Pocock, *Barbarism* (1999–2015), i.156: ‘so much of what we know as Enlightenment consisted in the substitution of the probable for the metaphysical’. See further **IV.2**.

brought to its apogee by Kant himself.¹⁵ My aim is only to get past such mythology to the reality of early modern intellectual life. The question of what the role of philosophy should be in the modern university – or modern society – I leave entirely to others.

(ii) Summary

In the **Prolegomena** to Part I, I shall provide a brief demonstration of the low status of philosophy (at least as traditionally conceived) in the years around 1700, even among those who were supposed to be teaching it. I shall ask how this remarkable situation came about.

In I.1, I shall examine the long-term emancipation of natural philosophy from metaphysics. By this I do not mean some abstract process that I am reading into the historical record, but rather a process that the historical actors themselves recognised, and which many of them sought to promote. Three developments were particularly important, all of which had their origin in fifteenth- and sixteenth-century Italy: the humanist critique of scholastic Aristotelianism; the adoption of that critique by secular natural philosophers and – above all – by physicians and other medical practitioners; and the development of a parallel critique of philosophy by mixed mathematicians. By the middle of the seventeenth century, natural philosophy had been colonised by the physicians on the one hand and the mixed mathematicians on the other (often collaborating with each other), almost all of whom defined their activity against metaphysics and ‘philosophy’ as they believed it to have been practised for much of the previous two millennia. Crucially, this had major intellectual consequences. Contrary to a prevailing historiographical and philosophical assumption, the vast majority of practising natural philosophers in the second half of the seventeenth century were *not* ontological mechanists. The synthetic, system-building labours of Descartes (and even those perceived to be less dogmatic than him, such as Pierre Gassendi) did not prove successful, at least outside of pedagogy, and most natural philosophers simply disdained explanation at the level of fundamental principles, confining themselves to what I call ‘operational’ mechanism. Likewise, they abandoned many of the explanatory ambitions of traditional metaphysics and natural philosophy.

In I.2, I provide another structural explanation for the fading of philosophy: a shift in theological method. In both Catholic and Protestant Europe, theologians came to identify the triumph of overly philosophical approaches to theology as one of the great catastrophes of their civilisation. Instead, they

¹⁵ For the hugely influential neo-Kantian rewriting of the history of philosophy, above all by W. G. Tennemann, see, *inter alia*, Hochstrasser, *Theories* (2000),

206–12; Hunter, *Rival* (2001), 15–21, *passim*; Di Bella, *La storia* (2008); Catana, *System* (2008), 193–281; Bondeli, ‘Progress’ (2015).