Two kinds of writing are particularly difficult to do well. The first is the succinct scholarly overview of topics that characterises the entries found in a reputable encyclopaedia. The second, and even more demanding, are books that survey a complex, contested and specialised field with the intention of introducing the key concepts that characterise that field to those working outside it. Both of these genres are difficult for much the same reason: they demand, as a minimum, wide knowledge, a sharp critical and discriminating faculty, and an ability to express subtle and sometimes far from obvious ideas in lucid and engaging prose. It is no surprise, therefore, that the Preface to this book begins with the author’s honest admission that ‘Writing this book has been quite a challenge’.

The author’s response to the challenge is set out in 11 chapters, each concluding with a brief section addressing the pedagogical implications of the main part of the text. The first chapter is entitled ‘Philosophy of Technology: What and Why?’ After distinguishing the analytical and critical traditions within general philosophy as a discipline, the chapter indicates the scope of such fields as ontology, epistemology, methodology, metaphysics, ethics and aesthetics, and comments on the differences between the analytical and continental philosophical traditions. This brief survey leads the author to particularise by asking ‘What is Philosophy of Technology?’ His answer to this is brief (three paragraphs) and draws upon the ideas of Carl Mitcham. It offers the conclusion that, as a young field of scholarly study, the philosophy of technology has no equivalent of the ‘Popperians, Kuhnians, Lakatosians or Feyerabendians’ that have so invigorated debates in the philosophy of science. Rather, the philosophy of technology is to be regarded as ‘more like a mosaic of many different ideas and suggestions’. In the direct style that characterizes the entire book, the reader is then invited to consider why those engaged in technology education might want to know anything of the philosophy of technology. A variety of reasons is offered and, since these touch upon the raison d’être of the book, it is appropriate to quote verbatim the section of the paragraph in which they appear.

There are at least four reasons for technology educators to get acquainted with this discipline. The philosophy of technology can be a source of inspiration for determining the content of a curriculum, it can yield insights into how to construct teaching and learning
situations, it can provide a conceptual basis and proper understanding of technology which can help technology educators to respond to unforeseen situations while teaching about technology, it can help to position the teaching of technology among other subjects and it can help identify the research agenda for educational research in technology education. (p. 8)

The reasons offered here amount to a beguiling, if defensible, rationale and the rapprochement between the philosophy of technology and technology education represented by this book is to be welcomed, particularly if it can be extended by others to embrace elements of the history and sociology of technology. However, it is necessary to be cautious about the role that philosophy may play in influencing the practice of technology education. Comparisons with science education, where a corresponding rapprochement is already much in evidence (e.g., in the journal Science and Education), may be instructive. More particularly, Layton, writing about the teaching of practical science in schools, has commented that philosophy has been ‘a resource, drawn upon selectively, raided even, to underwrite purposes and practices that have their origins in considerations remote from philosophy’ (Layton 1990, p. 37).

Chapters 2, 3 and 4 introduce the reader to recent writing about the nature of technological artifacts, technological knowledge and technological processes respectively. The discussion in chapter 2 of technological artifacts, including artifacts as systems, examines how they differ from other kinds of objects and describes how they may be differentiated by function. The discussion of function draws upon the writings of Herman Dooyeweerd, a Dutch philosopher hitherto unknown to this reviewer. Dooyeweerd has shown that a given artifact may serve several qualifying functions that may be, for example, economic, social, aesthetic, physical or kinematic. Technological artifacts may also have subject and object functions and, in a useful Table, the author illustrates how objects as diverse as a microphone, screwdriver and electric motor may be analysed in terms of the categories advanced by Dooyeweerd. Chapter 3 focuses attention on some distinguishing characteristics of technological knowledge, namely its inter-disciplinarity and intrinsic normative quality, and the fact that, in some cases, such knowledge can be acquired only by learning how to do something under the guidance of someone more expert. The implications of these characteristics for ‘teaching technological knowledge’ are dealt with briefly in one and a half pages at the end of the chapter. Given the residual controversy about whether technology is a ‘subject’ and how best it can be accommodated and taught within school curricula, teachers and policy makers reading this volume may wish for a more extended discussion, even though pedagogical issues are not a principal concern of the book. In chapter 4, the focus is on design processes, with some attention also given to the processes associated with the making, use and assessment of technological artefacts. The balance within this chapter reflects the much greater