TEXTBOOK SUPPLEMENT

What makes a good textbook?

The most warmly welcomed textbooks are new editions of standard works. What lessons should publishers draw?

THAT there is unlikely to be an immediate shortage of new textbooks is well attested by the pages that follow. In spite of the way in which most university systems are at present short of funds, publishers are still prepared to launch new products on student bookshops, while teachers of all kinds appear to have the time to put them together. On the face of things, at least one part of the academic industry is in good shape. Moreover, on the showing of this year's crop of books, there is no reason to suppose that the creationists' complaints about the compilation of textbooks for high schools in the United States, or even the hidden threat engendered by the recent trial in Arkansas, have their counterpart in higher education. Textbooks remain what they have always been — honest attempts to put between two covers (or, sometimes, four) an account of some field of knowledge and, frequently, some means of helping students to be sure that they have come to grips with it. Moreover, some of the fashions of the past few years seem now to be on the decline. The programmed-learning book, for example, seems far less common than a decade ago, partly no doubt because of the high cost usually involved but chiefly because students have apparently voted with their pocket books, and have thus told publishers that they do not like to be so tightly constrained. It is good to have this demonstration that the market functions.

So does it follow that the present offering of textbooks is precisely what the community of students needs? Unfortunately not. Even when it is accepted (as it should be) that students' reading is not confined to the textbooks on their recommended reading lists, even a cursory reading of the reviews that follow will show that the textbooks now available are not uniformly satisfactory, even by the objectives stated by the authors in the introduction. Why should this be? And how does it come about that the three new books on which reviewers have lavished something akin to affection are in their different ways idiosyncratic books? J.Z. Young's *The Life of Vertebrates* is now a classic, read by people other than students, and has managed to survive more than a decade out of print. Dirac's *The Principles of Quantum Mechanics,* now put into paperback in its fourth edition, has exactly the same status in a very different field and is as much an historical document as a textbook. (Indeed, students should be warned not to trust their conclusions if their arguments are as economical as Dirac's.) Sir Arthur Holmes's *Principles of Physical Geology* (long out of print) was, in its time, in the same mould — it was a robust and almost personal statement of the structure of the Earth which did not, for example, shrink from remarks about the plausibility of continental drift. Textbook writers (and their publishers) should prudently consider why these three volumes, and others like them, have been such great successes, intellectual and no doubt commercial.

The common properties of such volumes are easily listed. First, their authors were practising and enthusiastic teachers. (Though when Dirac's book first appeared, more than half a century ago, he was by no means an experienced teacher.) Second, the enthusiasm has been transferred from the classroom to the page. Third, perhaps as a consequence, the selection of topics and the distribution of emphasis is not what would be recommended by a solemn academic committee brooding about the exact balance of some students' course. Fourth, the sweep of all these books is grand; the reader is left in no doubt that the essence of the field concerned has been fully described, even if a great many details have been omitted, which is most probably why they have all appeared in one edition after another. Finally, the language in which the text is written has an interest of its own. These three books are more than merely literate. Each also has a distinctive and even memorable style that somehow impresses on the reader's mind a sense that he is acquiring not merely information but an imaginative assessment of it.

For publishers, these reflections are no doubt discouraging. If textbooks of distinction require of their authors such a blend of uncommon qualities, the chances of outstanding success must be very small. Fortunately, the prospects are not so gloomy. Often, a group of people may be found collectively to show the qualities of a single talented author. One interesting example among this year's textbooks is *The Principles of Neural Science,* edited by E.R. Kandel and J.L. Schwartz but in reality an apparently accurate reflection of the interests and enthusiasms of the strong research group at Columbia University. As the reviewer remarks, readers may learn less about the chemistry of the central nervous system than (at this level) they need to know — and they may also learn more about the motor system than they want to know. But the book, bulky though it is, makes good reading and has a character of its own.

The consequences, for the textbook trade, are straightforward. The principles that apply elsewhere in book publishing are still applicable. The first test that should be satisfied by a textbook proposal is that it should be organized around a clear intellectual objective — and not too much encumbered by extraneous chapters whose function is chiefly to satisfy course requirements in this or that department. Self-conscious attempts to define the content of textbooks by means of curriculum development, which have been valuable and successful in the schools, have not so far been of great value in higher education. The chief but obvious difficulty is that even undergraduate courses are these days bound to be evolving rapidly, while the committees that superintend curriculum projects are bound to dilute the vision of their most imaginative members. By the same test, there are also limits to what can be done, in advance of publication, to ensure that textbooks for use in higher education can be tested by representative groups of the intended users. For the outstanding textbooks are those which, by being available, influence the pattern of what is taught. As elsewhere in the book trade, publishers cannot hope to know in advance whether they have published an outstanding book or a mere potboiler.

Thus the charitable view of the continuing spate of textbooks is that it represents the efforts of publishers and their authors to produce books that will endure, influencing the pattern of teaching in the process. There is, unfortunately, more to be said. The numbers of apparently similar titles, especially in fields in which the scale of teaching is quickly growing, are too great to be explained simply by people's earnest wish to put a potentially worthwhile book to the test of time and the student market. Too often, new textbooks uncannily resemble well-established works. Too often, they reflect the narrow idiosyncracies of individual teachers or departments. And, too often, they leave their student users with the false impression that science is, after all, a dull business.