An unusual postscript to the volume is provided by Dr. D. Owen (whose impending retirement will, we trust, set him free for still wider activities) in the form of an objective account of the teaching of physics in technical institutions. The whole subject of the training of physicists, and the proper relationship of the universities, the technical institutions and industry is one which demands urgent attention as soon as the times permit. The progress of physics and of industry in Great Britain depends largely on the wisdom which can be brought to its solution. At the moment, we

can but file Dr. Owen's report for future reference.

In a world up-side down, it is perhaps not surprising that a little of the type in this volume should be found to be suffering from the same complaint. A few of the diagrams might, with advantage, have been re-drawn. It is, however, such an achievement to have produced the volume at all under war conditions that one must not be critical. Let us hope that nothing will occur to prevent the appearance in due course of its successor. All physicists will await it with eager anticipation.

J. A. CROWTHER.

HOW WE THINK AND WHY

The Nature of Thought

By Prof. Brand Blanshard. (Library of Philosophy). Vol. 1. Pp. 654. Vol. 2. Pp. 532. (London: George Allen and Unwin, Ltd., 1939). 32s. net.

PROF. BLANSHARD is here exploring the debatable and largely unoccupied territory which lies on the borders of psychology, logic and metaphysics. His book might almost be described as a dissertation on the meaning of the prepositions 'of' and 'about' as they are used when we say we are aware of something or think about something. The author is a follower of Bradley and Bosanquet. As their point of view is not very popular at present, it is useful to listen to one who is a persuasive advocate of it and an acute critic of other views put forward recently by British and American philosophers and psychologists. He is clear and forcible in expression, as was Bradley, but more temperate. He is thorough in his treatment, as was Bosanquet, but not so difficult.

The first volume is concerned with perception, as the lowest stage of thought, and with ideas, thought freed from its primitive dependence on perception. The author reviews and criticizes the old image theory of ideas, the Behaviourist theory, those of the Pragmatists and various kinds of Realist, and then gives Bradley's view and his own very similar one. "Looked at from without," he says (p. 563), "the idea is seen to be approximating to its object; looked at from within, it is seen to be evolving toward definition and concreteness. And the two ends lie in line. To become more concretely defined is to approximate to the object, here and everywhere. The aim of thought is to fulfil itself in the reality." He then develops the intriguing but difficult doctrine of his school that

aims at obliterating the distinction between particulars and universals, and replacing the notion of the abstract universal by that of the concrete universal.

In the second volume there is first a very interesting discussion of the mental processes of reflection, observation and invention or creative thinking. Then follows one on the nature and tests of truth. The author maintains that coherence is the unique test of truth and is also descriptive of its character. Like other advocates of the coherence theory, he does not seem to meet quite fairly the objection that there might be many systems of truths, each internally coherent and yet incompatible with each other, like the non-Euclidean geometries. This leads him to undervalue what can be said in favour of self-evidence as the test of truth, in favour of the correspondence theory and even of the despised theory that truth depends on authority. That is to say, if thought is not simply to be chasing its own tail, there must be a starting-point in something immediately intuited. Again, thought appears to be of something which is not itself thought but rather an object for thought. The authority theory emphasizes, however mistakenly, the important point that truth is arrived at by a social process and that there exist experts who are less likely to be wrong than those who are inexpert.

The concluding discussion raises two most awkward problems; the problem of external and internal relations and the question whether the notion of cause implies that of logical necessity. The author argues that ultimately there are only internal relations, which implies, of course, that strictly speaking space and time are illusory. He makes, incidentally, some good criticisms of Logical Positivism.

A. D. RITCHIE.