New Books

An Examination of Logical Positivism. By Julius Rudolph Weinberg, Ph.D., Cornell University. (London: Kegan Paul, Trench, Trübner and Co., Ltd. 1936. Pp. vii + 311. Price 12s. 6d.)

The main doctrines of Logical Positivism (Logistical Positivism would be a better name) are already familiar, at least in outline, to students of Philosophy in this country. We all realize now—some of us with pain, some with relief—that a new brand of Empiricism has arisen, a brand far more formidable than its predecessors, because it has absorbed the super-subtle technique of modern symbolic Logic. By comparison with it, the old Empiricism of Mill looks amateurish, and even Hume himself is seen to have some residues of Dogmatism in him. This new Empiricism has two main aims, a negative aim and a positive one. The negative aim is the elimination of all metaphysical doctrines, which it asserts to be not false, as some of its predecessors said, nor indemonstrable, as others of them said, but meaningless—and so not even false. Hence the answer to any metaphysical questions is simply that there is no such question. Its positive aim is to exhibit as clearly as possible the structure of the Natural Sciences, for in these alone (it holds) the answers to all questions can be found. Pure Mathematics and Pure Logic, consisting: they do of nothing but analytic propositions (as both Hume and Leibniz held), tell us nothing one way or the other about the world; their function, roughly speaking, is to provide a mechanism for transforming one empirical, i.e. question-answering, proposition into another. That indeed is why they are valid, as Leibniz said, for all possible worlds. Such is the startling programme of Logical Positivism; but in the working out of it perplexing problems have been encountered, splits have developed between Right Wing and Left Wing, and a number of alternative theories, as queer as they are ingenious, have been put forward. Logical Positivism is a movement, not a set of dogmas. It has been developed by continuous discussion, much of it conducted in the pages of the periodical Erkenntnis, and it is still being developed. For some time past we have been badly in need of a guide to its main currents and cross-currents. This is what Dr. Weinberg has now provided. It was a difficult task, and on the whole he has performed it admirably. He has the necessary logical and mathematical equipment, and he is in sympathy with the main aims of the School without being an adherent of any one party within it, though perhaps he inclines slightly to the Right Wing (led by the late Professor Moritz Schlick).

The book begins with a good historical introduction, where it is shown how the movement arose through a fusion of traditional Empiricism, culminating in the work of Ernst Mach, and Mathematical Logic culminating in the Principia Mathematica of Russell and Whitehead. The rest of the book is divided into five parts. Part I, "Logical Foundations," is chiefly devoted to an exposition of Dr. Wittgenstein's Logic, the basic doctrine of which is that all synthetic propositions are "truth-functions" of elementary propositions, which in turn either accord or discord with the atomic facts of which the world consists. Part II, "Theory of Scientific Method," expounds the Logical Positivist theories of Probability, Induction, and Natural Law. 228
NEW BOOKS

Here the most characteristic Positivist doctrine (known to English readers from Mr. F. P. Ramsey’s essay on “General Propositions and Causality” in his posthumous book The Foundations of Mathematics) is that the laws of Nature are not propositions but prescriptions. They are not themselves true or false, but are recipes or rules for constructing singular propositions—especially predictions—which are true or false. If the laws are not themselves propositions, the classical problem of Induction—viz. how laws are to be made probable by the examination of a limited number of instances—of course no longer arises.

Here Dr. Weinberg has several objections to make. I will mention three of them. First, he complains that on such a view the sentences which formulate laws of Nature are meaningless, since they do not state anything which is either true or false. This objection does not seem to be very serious, and could be met by a change of terminology. Surely there is a good sense of the word “meaning” in which prescriptions or commands can be said to have meaning, and in which moreover those commands which have meaning can be distinguished from others which have not. Thus “Shut the door” has meaning, while “shut the square on the hypotenuse” has none. The second criticism is that some laws are deducible from other laws, which seems to show that they are propositions after all. This could perhaps be met by the consideration that laws, even though not themselves propositions, would have to include propositional functions, such as “$x$ is heated” or “$x$ expands” (where $x$ is a variable). Thirdly, Dr. Weinberg objects that it is not explained why a law which has led to many true predictions is trusted—and reasonably trusted—more than a law which has led to few. This seems the most serious objection, and Dr. Weinberg plausibly contends that the Problem of Induction, which was alleged to have been got rid of, here returns upon us in another form.

In Part III, “The Elimination of Metaphysics,” the most interesting topic is the so-called Solipsism which seems to be the necessary consequence of Dr. Wittgenstein’s Verification Principle: since on the face of it there is no conceivable way in which I could verify the sentences which purport to describe the experiences of other people. It appears to follow that either these sentences are meaningless, or if they do mean something they must be descriptions of processes in other human bodies (which I could conceivably verify). This extremely paradoxical consequence has vexed the School a good deal, and no wonder. Various more or less heroic remedies have been suggested, notably the somewhat homoeopathic one called “Physicalism,” developed by Prof. Rudolf Carnap, one of the leaders of the School. To this Dr. Weinberg turns in the next part.

Part IV, “Radical Physicalism,” is accordingly devoted chiefly to Prof. Carnap’s theory. The main aim of the Physicalist is to show by a detailed examination of the structure of language that all statements whatever—including those purporting to describe the experiences of other people—can theoretically be translated into the “inter-subjective” language of Physics. In order to do this, Prof. Carnap has to give up, or at least greatly modify the old Verification Principle, which said that sentences were to be verified or falsified by direct reference to the empirical data of sensation or introspection. He seems to hold that sentences can only be verified by reference to other sentences, and even then never conclusively. For the other sentences in turn will need verification too. Thus we seem to have a closed world of sentences, much like the closed world of “judgments” in the Coherence Theory of Truth, and the indispensable empirical element which distinguishes Science from mere games like chess is in danger of being thrown out altogether. (It is
noteworthy that another Physicalist, Prof. Otto Neurath, explicitly defends an extreme form of the Coherence Theory of Truth.)

I am not sure that Dr. Weinberg really succeeds in making clear the complicated details of Prof. Carnap’s theory of language, which involves a good deal of difficult and (to one reader at least) unfamiliar symbolism. But I think he is right in saying that the proposed remedy is worse than the disease, and moreover in contending that it isn’t really a remedy at all. For there still remains an irreducible difference between my statements and other people’s: e.g. between “I am tired” and “Smith says, ‘I feel tired.’”

Part V, “Conclusion,” consists of two chapters. The first, “An estimate of the Viennese Circle,” is in effect a summary of the preceding parts of the book. The other, “The Possibility of an Alternative Theory of Language,” is only a brief sketch, and I am not sure that I fully understand it. Dr. Weinberg seems to hold (1) that the doctrine that general propositions are finite conjunctions must be abandoned; (2) that, pace Prof. Carnap and others, there are ostensive propositions which refer directly to empirical data; (3) that Solipsism can be avoided if refutability (as opposed to verifiability) be taken as the criterion of the meaningfulness of sentences. It seems desirable that these suggestions should be more fully developed. On the face of it, the relations between (2) and (3) seem likely to cause trouble.

I will conclude with a few criticisms.

1. It must be admitted that some parts of the book are very difficult. Dr. Weinberg, like other experts, sometimes assumes that his readers are as completely at home in the handling of the Russell-Whitehead-Shaeffer symbolism as he is himself. And I doubt whether his exposition of Wittgenstein and Carnap could be followed by anyone who was entirely unfamiliar with the doctrines of those writers; though a reader who (like many of us) has a half-familiarity with them will certainly learn a good deal.

2. The book contains a number of typographical singularities. Some are outright misprints: e.g. “it is clear that ~(∃x)~ϕx and ~(∃x) ~ϕx can both be true on this theory” (p. 131.) Some are unfortunate conventions. Thus not-ϕ is frequently written not—ϕ, where the unguarded reader might suppose that the long dash was a technical symbol, and might be tempted to read “not not ϕ.” (This is all the more likely to happen where the “not” occurs at the end of one line and the long dash at the beginning of the next.)

And what are we to say of the statement that “ϕ implies Φ = df p|ϕ|ϕ” (p. 180)? (I suppose we should substitute P|ϕ|ϕ.)

3. Dr. Weinberg’s English is sometimes difficult. The German abbreviation “resp.” (respektive) occurs more than once; e.g. “objective (resp. intersubjective)” (p. 278), and one is occasionally puzzled by curious turns of expression, e.g. “if Wittgenstein’s theory of number is contrasted with Russell’s in order to see significance” (p. 96).

H. H. Price.

Collected Papers of Charles Sanders Peirce. Edited by Charles Hartshorne and Paul Weiss. Volume VI, Scientific Metaphysics. (U.S.A. Cambridge: Harvard University Press. London: Oxford University Press, Humphrey Milford. 1935. Pp. x + 462. Price 5 dollars; 21s.)

With the publication of this volume the presentation of Peirce’s views on metaphysics is completed. Some metaphysical papers were included in Volume I, whilst Volume V (Pragmatism and Pragmaticism) contains what is virtually Peirce’s prolegomena to metaphysics. It must be admitted that ¹ This was reviewed in the Journal for January 1936.