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THE PHILOSOPHY OF PHYSICS¹

By DR. W. V. HOUSTON

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IN appearing here to speak on the philosophy of physics I am in a rather dangerous position. Those of you who are philosophers will want to know by what right I speak on such a subject without having mastered the classical philosophies and without knowing the various traditional answers which have been given to the problems I shall discuss. On the other hand, physicists will accuse me of having left the austere and narrow path of physics to wander aimlessly, or at least uselessly, among the byways of philosophical verbiage. For most physicists have a traditional mistrust of philosophy. A definition of philosophy which usually provokes much self-satisfied mirth among physicists is as follows: Philosophy is the systematic misuse of a terminology especially invented for the purpose.

Yet in spite of this state of mind, the rapid changes

¹ An address delivered in a series on "Outlooks in Philosophy" at the California Institute of Technology.

in the concepts with which physics deals have almost forced some consideration by physicists of problems which were formerly regarded as belonging to the exclusive domain of philosophers. This consideration has been in the light of experimental results and because of this fact may be of value to the philosophers themselves. As a variation on the proverb that "Truth is stranger than fiction," may I suggest that experiment reveals stranger things than man's imagination has ever invented. Possibly some of the new results of experimental physics may reveal new aspects of old philosophical problems. Hence I propose to describe not so much any one unified philosophy of physics as a series of results of physics which I believe may have some bearing on philosophical problems.

One of the problems which has occupied the minds of philosophers is concerned with the nature of existence. Does there exist a material world, and can any-

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Edited by W. E. FORSYTHE, Incandescent Lamp Department, General Electric Company.
436 pages, \$5.00

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