

Technology Review, November 1961

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and out of this Corot-like landscape God advances again to the foreground, so that, as the author remarks, "if the baffled physicist . . . cannot tell whether a given motion is relative or absolute, he can at least reply 'God knows." What the contemporary physicist would reply is such a dilemma can only be conjectured.

Through what the contemporary scientific and pseudoscientific age would doubtless call the "arid wastes of philosophy and metaphysics;" past the overthrown, buried, or partly buried collossi, sphinxes, statues, and temples of old discarded gods; the Lockes, Berkeleys, Leibnitzes, Kants, Hegels, and their schools, the reader seeking knowledge is led past such figures as Michelson and Morley, Lorenz, Fitzgerald, Minkowski, already weather worn, past other figures still standing erect, on to the oases where dwell the living: Eddington, Whitehead, Einstein. But even this passage of the desert is made interesting by lucid and informed résumés, expositions, and criticisms of the various philosophers and schools in their relation to the subject of Time. Moreover, the author's literary style is unusually entertaining and unusually clear, so that the reader has a sense of understanding not often felt by the layman.

TO LOCKE belongs the honor of clearly distinguishing between time as a percept and time as a concept and to him also, perhaps more than to any other, the honor of a clear distinction between subjective time and objective time, the former arising from our sense of "succession in duration" as contrasted with the idea of our "enduring awareness of the (permanent) self"; the latter arising from "the movements of the heavenly bodies which offer us an . . . objective system of reference and appear to give us units of duration which are approximately uniform." He did not, however, attempt to reconcile these two ideas, so that even today (or yesterday) each of the two has its champion; the one in Bergson, the other in Éinstein.

The problems still remained unsolved, though restated, by Kant and his successors, and even today are matters of controversy. They were not caused by Relativity, which as purely mathematico-physical theory is concerned only with the objective aspect of time; they are problems of metaphysics and as such may be insoluble. None the less are they important and their discussion of transcendent interest to one, scientist or not, whose horizon is not limited by his own myopia. In two chapters on "The Physicists and the Problems of Time-Measurement," and "Time in Contemporary Metaphysics." the author discusses fully the treatment of the problem in contemporary thought, and the efforts at reconciliation or coalescence being made by both physicists and metaphysicians. Unlike Galileo, the present day physicist admits the existence of other than his measurable time, while the philosopher accepts, with cheerful faith, if not with complete understanding, the theories of Relativistic measurement. Together they direct their efforts to the formulation of a metaphysical theory that will satisfy both.

IT CANNOT be too strongly urged that measurement cannot determine the nature of time; not does calling time a "fourth dimension" determine (Continued on page 456)

[[Image on next page]] RIGHT PANEL OF BLASHFIELD MURALS WHICH PRESENT ALLEGORICALLY THE USE AND ABUSES OF SCIENCE (OPPOSITE PAGE) AND THE PROGRESS OF HUMANITY LED BY EDUCATION (ABOVÉ)

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IT CANNOT be too strangly argid that maximum consists definition the native of time, nor disc calling time a "fourth dimension" described (Continued or page 49)



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