actions, heavy-ion reactions, photonuclear reactions, nuclear models, weak interactions, polarization, etc. It is impossible to comment on the excellence of the physics presented here—suffice it to say that after the first reading, the reviewer has felt the need to go back to this book literally dozens of times in the last few months. It has become an almost indispensable companion and after a while one no longer minds the few misprints and misplaced figure captions.

New Pathways in Science (Reprint of 1934 Ed.). By Sir Arthur Eddington. 333 pp. Ann Arbor Paperbacks # 29. The U. of Michigan Press, Ann Arbor, Mich., 1959. Paperbound $1.95. *Reviewed by J. C. Polkinghorne, Trinity College, University of Cambridge.*

ALMOST any book published in the last hundred years and attaining some original measure of success is to be found reprinted somewhere in an inexpensive paperbacked edition. No doubt a great service is being performed in making such classical treatises as Rayleigh's *Theory of Sound* available to all for about the price of a meal, but can we say the same about popular scientific expositions? Their purpose is to explain the discoveries of a decade in the idiom of that decade. Is not their proper place thirty years later in the waste paper basket?

Four reasons can be given why this is not so for *New Pathways in Science*. Firstly, Eddington's style is always witty and pleasant to read. Secondly, his philosophical remarks, which with their insistence that the physical world is nothing but a set of symbols giving a structure to our mental percepts and not a "real world out there", are provocative and interesting. Thirdly, it gives a realization of the enormous advances in physical knowledge that have taken place in the past thirty years. The neutron is spoken of as a bound state of electron and proton with the observation that some experimenters rather surprisingly think it is heavier than its constituents. Fourthly, it conveys in its final chapters the flavor of Eddington's reasonings that led him later to write *Fundamental Theory*. In most popular expositions the speciousness and the nonsequiturs which the acute mind detects are due to the effort to express in imprecise everyday language what can only be expressed in precise technical language. However, in this book they accurately reproduce the character of their technical counterpart.

On Understanding Physics (Reprint of 1938 Ed.). By W. H. Watson. 146 pp. Harper & Brothers, New York, 1959. Paperbound $1.25. *Reviewed by M. W. Friedlander, Washington University.*

UNDERSTANDING of physics rests not only upon the ability to follow the mathematical description of phenomena and the deduction of detailed results, but also upon the assumptions underlying the formalism and the recognition of the regions of validity of these assumptions. This book is con-