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**An Introduction to the Meaning and Structure of Physics.** *Leon N. Cooper.* Harper and Row, New York, xiv+747 pp. 1968. \$13.95.

Faced with declining enrollments in physics, physicists have sought to combat the trend by making school and college undergraduate courses more "meaningful." Usually this implies the introduction of more "open-ended" experiments, and the emphasis, in lecture sections, on more of the historical developments of the discipline. Cooper's text is especially suitable for courses such as these, and would appear to have the advantage of also providing the student with enough background to proceed to advanced courses, as well.

The eleven sections of this book discuss the classical Newtonian world and then proceed to provide lucid discussions of relativities, of atomic structure, of quantum theory, and of the physics of elementary particles. Each section has a full quota of challenging questions and problems, for which answers are provided only in some cases. While so brief a catalog might imply that this is an ordinary text, nothing could be further from the truth. The historical emphasis employed throughout gives the student an idea of how science has worked in the past and, especially, of what is meant by the phrase "scientific revolution."

The true criterion for the value of any text, of course, is its teachability, and only actual trial can reveal that. On reading, Cooper's text appears more teachable than many another. Students who protest that physics and physicists are dull, inhumane, or remote should feel differently after exposure to this book. It helps to make clear, as this book does, what physics really is and always has been, one of the highest adventures of the human mind.

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