

EDITORIAL

There is sectionalism in physics as in any field of human endeavor. The research worker, teacher, theoretical or experimental physicist, investigator in pure or applied science—they have their group loyalties and skepticisms.

Another compartmentation is appearing. Slowly, as fields of research become more and more specialized, the knowledge shared by research workers in their technical journals is becoming a secret understood only within the specialized field.

So the time has come to give a brief glimpse of what goes on in the various fields of physics in terms of fundamental concepts rather than as an assortment of unevaluated facts.

By itself, this is an inadequate aspiration. There is a vast body of educated citizenry walled off from an understanding of physics by its terminology and its disciplines. They are aware of its impact and would like to peer into its depths, be it for curiosity, a feeling that it might have an 'answer' of some sort, or simply because it makes them uncomfortable to have something important go rumbling on outside their ken. The time has also come to give the non-physicist a glimpse of what is happening in physics.

Physics Today is for the physicist, to inform him in comfortable, everyday language, of what goes on and why and who goes where. But it is also for the chemist, the biologist, and the engineer, to tell them of the science towards which they are driven by so many of their investigations; it is for the student, the teacher, the lawyer, the doctor, and all who are curious about physics; it is for administrative officials who deal with research; it is for editors and writers whose profession puts them midway between what is done and how it should be reported; it is for you, whatever reason brought you to this page.

There's the rub! Can a science so dependent on precise terminology be reported to the satisfaction of both physicists and non-physicists? We believe it can and must be, though it means developing a new approach in nontechnical writing for the physicists who will do most of it. Haphazard inaccuracy will be avoided, but terminology will have to be reduced

to a minimum, even if it means going the long way around.

Eliminating terminology is a remarkably heavy concession to ask of the physicist, whose professional compulsion drives him to higher and higher accuracy in his work. But it is a valid demand because only in this way can he communicate the ideas of physics beyond professional borders. In a physicist's language, it is necessary to expand the percentage of error tolerated here to lie within experimental error, where experimental error is defined as the difference between the meaning of a phrase as written, and the conception in the mind of an intelligent person, unversed in the terminology of physics, who reads the phrase.

The non-physicist's concession is less basic, in fact it is a minimum for a scientist. The reader is expected to understand that research is most often a groping in the dark, that brilliant syntheses are built on the years of work and the errors of men who have worked before, and that results are more often the products of a line of thought common to a group of investigators than the product of a single brilliant mind. He will not find physics-made-easy, nor abstract ideas sugar-coated as personalized drama or marvelous accident. Nor will he be given sensational possibilities as a gaudy substitute for more sober probabilities.

Another matter of policy the physicist may find strange is wrapped up in the making of a non-archival monthly magazine: basic concepts will be redefined time after time. The physicist is never faced with the necessity of repeating things from the ground up. We must do so because we cannot depend upon a varied store of technical knowledge among our readers.

These assumptions do not limit us—they simply form the pattern of our usefulness to a shape different from that of learned journals. All who are connected with this project have approached it with humility. There are no set problems and no set rules to meet the problems that occur. This, our initial effort, is subject to the modifications required by experience and the needs of our readers as they are expressed and as they develop.

—D.A.K.