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PHYSICS FOR LIBERAL ARTS STUDENTS

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It has become apparent during recent years that there is a growing tendency to include physics in the curriculum of the liberal arts. But, although a general agreement seems to exist upon the necessity of teaching physics, two main questions still remain unsettled. First, what is the reason for introducing this science subject into the field of the humanities? Second, how should the subject be approached?

The purpose of this paper is to search for answers to these two concomitant questions in connection with the preparation of a physics textbook. Actually, the number of textbooks in physics is, according to the publishers, larger than in any other branch of science, yet apparently too few of these books are suitable for liberal arts students. Why is this? Can it be because the approach to physics, and the reason for teaching it at all, are not clear?

The teaching of physics within a curriculum of a definite scientific training for a definite purpose follows a definite pattern. This pattern reflects two requirements: transference of definite data to the mind of the student, and development in the student of a scientific method of approach to the subject. By scientific method one means the ability to form a logical development of thought within given limits.

Premedical or engineering preparation stresses the first of these requirements — that of transferring data to the student's mind; for science students going into graduate work, and particularly on the graduate level, the second prevails — that of developing a scientific method of approach.

This pattern disappears when physics enters other curricula. If physics is not to be taught for the sake of physics one has to define the reason for the sake of which it is to be taught. The many possible answers to this question can be divided into three main categories according to whether the answer stems from the technical, the philosophical, or the psychological point of view.

From the technical point of view, one may assume that physics should be taught to everyone in order to enable him to learn the functioning