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LETTERS

Testing

In a previous letter (*Physics Today*, February 1962, p. 62) my main intention was to point out the evidence that the Educational Testing Service (ETS) personnel constructing, and later explaining, the test item on the photoelectric effect had a poor understanding of the physics underlying the question. Since the first and probably most easily enforced requisite of a test-maker is a firm grasp of the subject, lack of which will affect every test item to a greater or lesser degree, this struck me as a broader and more fundamental criticism of ETS than a defect in any specific item; the possible discourtesy of not taking Dr. Hoffmann's criticism seriously struck me similarly. Thus I regret that Dr. Fornoff (*Physics Today*, April 1962, p. 36) apparently saw my criticism as applying specifically to the question on the photoelectric effect. Perhaps I stated my intentions imperfectly, or perhaps Dr. Fornoff's primary concern with Dr. Hoffmann's specific criticisms of specific questions caused him to see my letter in the same light.

In regard to another of the test items criticized by Dr. Hoffmann (*Harper's Magazine*, March 1961; *Physics Today*, October 1961, p. 38), perhaps it is worth mentioning that Dr. Fornoff's co-worker at ETS who wrote the question would apparently disagree with Dr. Fornoff's defense of this item. In the Spring 1962 *School Review*, Dr. Frederick L. Ferris, Jr., of ETS identifies himself as having written the question on a prism forming a spectrum, and writes regarding Dr. Hoffmann's criticism: "The criticism of this test item focused on concern about ambiguity between choices B and D. In this instance the criticism would seem fully justified. Undoubtedly the empirical difficulty of this question is due to the fact that choices B and D together constitute a more satisfactory explanation of the phenomenon of dispersion than choice D (the intended correct response) alone. I would therefore concur in the belief that a good student might be disturbed in this ambiguity." To avoid quoting Dr. Ferris out of context, it must be mentioned that he does not in general agree with Dr. Hoffmann. I note that in the College Board booklet *Achievement Tests* (replacing *Science* from which Dr. Hoffmann took the questions he criticized), this question has been altered to reflect the opinion of Drs. Hoffmann and Ferris.

Robert Hart
Chicago, Ill.

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