facts and problems within the limits available. For myself, I'd like to call out from the mountain top the unequalled educational value of the *Fossil Cycad National Monument* as often and clearly told in SCIENCE. Surely the biographic approach by the law of averages has validity and convenience too. The "International Who's Who" is in its brevity of form in no wise an exception.

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QUOTATIONS

MOBILIZING SCIENCE

THOUGH the public has paid little attention to Senator Kilgore's bill which would set up an Office of Scientific and Technological Mobilization, few recent proposals have been the subject of more controversy. Senator Kilgore wants his proposed office not only to draft all research scientists but to develop science and technology, encourage inventors and guide the President and Congress in scientific matters. The Army, the engineering societies, the trade associations and the directors of industrial research laboratories oppose him almost unanimously. On the other hand, many university professors, some of the higher officials of the War Production Board and a few corporation executives, among them Henry J. Kaiser, see merit in his bill.

Despite assertions to the contrary, scientists and technologists are not fully mobilized. So far as private research is concerned, industry has been left alone, so that we have much competition in the development of plastics, substitutes, processes for making alcohol, synthetic rubber and high-octane gasoline, and ten thousand other items. Except for the Office of Scientific Research and Development under Dr. Vannevar Bush, we have done virtually nothing to unify government, university and industrial laboratories to meet new war needs. Fundamentals are usually avoided. Yet it is out of fundamentals that new procedures emerge, as we have learned from the uses to which the vacuum tube, photoelectric cells, radio, x-rays have been put. The basis for all these was laid by independent scientists and inventors, who too often were rebuffed.

The proposal that Senator Kilgore has made deserves a fair hearing of Congress. Possibly stronger safeguards against the regimentation of industrial research are called for, and possibly Dr. Bush's method of contracting with university and industrial research laboratories for the solution of specific military problems may be just as effective as mobilizing the key research men in the country. Certainly corporations which are engaged in strikingly original and promising work or which are attacking fundamentals should be left alone. Establish Senator Kilgore's office with proper safeguards and it will have its uses as an independent organization which, like the Bureau of Standards or the United States Public Health Service, will conduct research on its account in fields now ignored, with industry pursuing its own way.—*The New York Times.*

SCIENTIFIC BOOKS

OBJECTIVE MEASUREMENT

Objective Measurement of Instrumental Performance. By JOHN GOODRICH WATKINS. 88 pp. Appendix. New York: Bureau of Publications, Teachers College, Columbia University. 1942. $1.60.

DR. WATKINS painstakingly seeks for a measuring stick to be used for the evaluation of playing ability on a musical instrument. He calls attention to the general acceptance of the consideration of musical ability as an innate capacity and deplores the lack of criteria for achievement other than teacher's marks which are known to be quite unreliable. The few sporadic attempts in the construction of achievement tests were found to be limited to sight-singing and vocal performance, and the evidence indicates that no group test of musical achievement has as yet been constructed with the degree of reliability necessary for individual differentiation.

It would have been desirable to indicate in the title of the book the fact that this test is limited to the playing on the cornet, particularly in view of the author's expressed desire for real scientific objectivity.

The study has two major objectives: (1) To determine the possibility of measuring objectivity achievement on a musical instrument. (2) To find out, in a group of performers on such an instrument, the relation between sight-reading ability and technical skill after various periods of study.

The author admits that traits other than sight-reading and technical skill—such traits as involve interpretation, for example— are a vital part of successful performance, but he does not regard such matters as susceptible of objective study. The test is, therefore, limited to what is termed "sight performance and practiced performance on a musical instrument."

To provide a basis for the tests, the cornet was chosen as the instrument to be used for the rather