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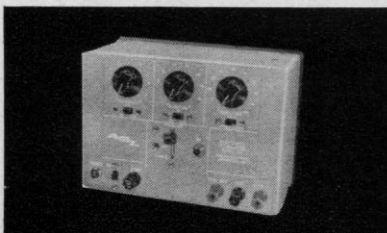
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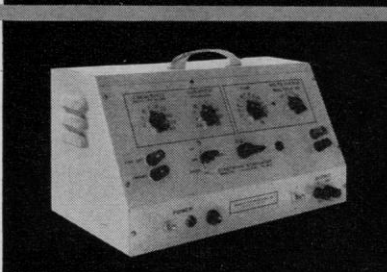
A many-purpose . . . yet inexpensive unit, designed for both classroom and research laboratory use. Undergraduate students find it particularly desirable because of its simple-to-operate controls. However, the ranges of variable stimulus, output and duration also make the "198" attractive for research laboratory use. Produces recurrent or single stimuli. Versatility provided through continuously variable controls. Offers sync-pulse of 10 volts amplitude for use with cathode ray oscilloscopes.



model 751 . . . \$145.

CLASSROOM AND RESEARCH LABORATORY USE

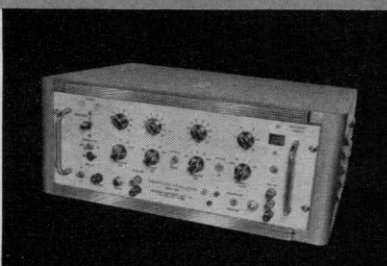
Performance-proven over years of service, the "751" offers stepped controls of frequency and duration that permit exact resetting in conducting consistent, repeatable experiments. Straightforward control operation and a wide range of variables make this unit ideal for both student and research laboratory use. Pulse pairs are obtained by combining two Model 751's with a Model 951 Dual-pulse Synchronizer, making it possible to study the refractory cycle of such tissue as nerve, striated muscle and cardiac muscle. A signal magnet output is also provided.



model 404 . . . \$400.

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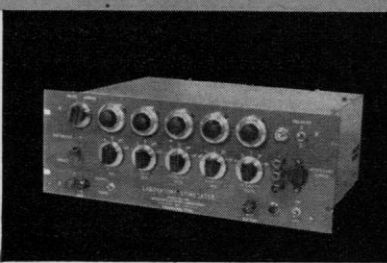
Designed for the physiology laboratory, the "404" provides a wide variety of stimuli. The five modes of operation include . . . SINGLE SHOCKS . . . REPETITIVE STIMULATION . . . SINGLE PAIR OF STIMULI . . . REPETITIVE PAIRS OF STIMULI . . . DIRECT CURRENT STIMULATION. Trains of pulses are produced by coupling two Model 404's. Output: 60 ma at 150V or 9 watts. Stimulus Intensity: 1 millivolt to 150 volts. Stimulus Duration: 10 microseconds to 1 second. Delay: Adjustable from 10 microseconds to 1 second. Stimulus Frequency: 1 every second to 10,000/second.



model 104-A . . . \$590.00

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result in spectacular advances in medical science, which could have a definite effect on individual health and longevity; it might pave the way for the discovery and development of whole new technologies based on intimate knowledge of biological processes."

ROBERT S. LEDLEY

National Biomedical Research
Foundation, Silver Spring, Maryland

LEE B. LUSTED

University of Rochester School of
Medicine, Rochester, New York

A Concerted Attempt To Improve Relations with the Communists

Recent commentary concerning what scientists can do to help resolve the arms race seem to me to overlook one unique contribution that scientists as a group can make. This is to focus attention on treatment of the fundamental disease—the almost total ignorance of the problems and intentions of the "other side" evident on each side—as well as the symptoms and their treatment.

This is not to say that the symptoms can be or should be ignored. But it does seem preposterous to budget over \$50 billion on military defense and a pittance, if that, on long-range defense measures aimed at resolving the underlying tensions by improving the reciprocal understanding and appreciation of strengths, as well as weaknesses, of the American and Russian societies. To attempt any such program openly will be attacked as treasonable by many citizens who have closed their minds to the problem and see issues only in clear-cut blacks and whites. Scientific objectivity certainly needs to be applied here, and in generous dosage.

The risks of such a procedure may seem enormous to those among us who are strongly and often vehemently *against* communism (and perhaps also democracy, or some particular religion, and the like) but who more and more fail to emphasize the values that they feel we should be *for*—except in what appear to be vacuous, emotion-laden shibboleths. The corresponding erosion of those freedoms for which our country has long stood is especially disturbing and is aggravated most dangerously, if not initiated, by many of these people. Surely it is time for scientists to take a more forthright and uncompromising position in support of our freedoms, and to emphasize the strengths

of our own political system which permit us to explore the path to more open communications and interchange, even of ideas, with the Iron Curtain countries. Are scientists to be frightened into political apathy by vociferous men with a frenzied fear of ideas and little faith in our political strengths?

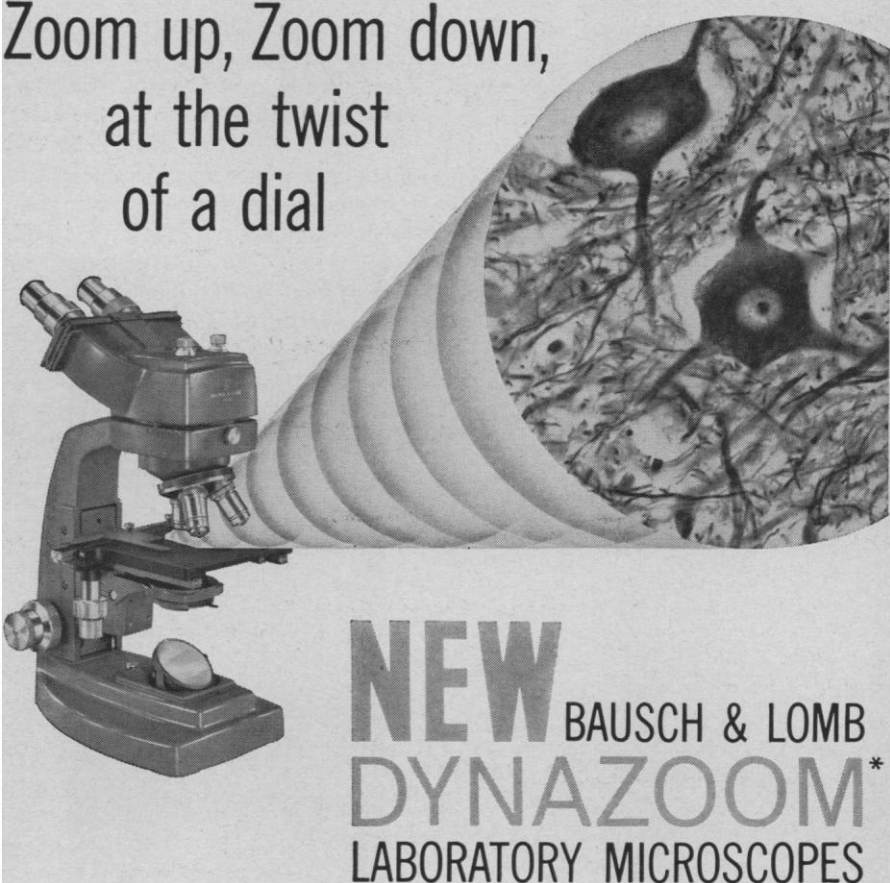
Once we have achieved a breakthrough on the present reluctance to recognize some degree of mutual culpability in the nuclear armament impasse, regardless of the extent to which either side is more or less culpable, then the really difficult task of implementing improved understanding can be attacked. Scientific ingenuity, now so largely mobilized in the interests of short-range, symptomatic efforts, can be turned at least partly to the fundamentally more important long-range objectives. Even if we were completely innocent and the Soviets were 100 percent responsible for the present impasse, nevertheless it would still be in our own best interest to make a serious and concerted attempt to improve relations and thus get at the fundamental difficulty.

The overwhelming political need of our time is an opening of the channels of communication between the Western countries and the Communist countries—China even more than Russia, if present portents are reliable. Let the scientists use up some of their recently accumulated prestige, if need be, by taking the lead here. Who else is in a position to do so?

Critics of this point of view will of course point with great alarm to the past difficulties encountered in dealing with Communist personnel. That there have been difficulties cannot be denied. But surely the situation is not hopeless. Past rebuffs, even if they are seen as all on one side, cannot be allowed to dissuade us. The most important social role of the scientist in our time, in my opinion, is to seize upon this opportunity to utilize the spirit of free inquiry in science as a base from which we can develop an increasing amount of social and cultural interaction. A good example of the kinds of mutual benefit, in the form of enhanced cultural understanding, that can be achieved is given in the article by Konrad B. Krauskopf [*Science* 134, 539 (1961)], in which he recounts his experiences on a scientific trip to the Soviet Union. It should be clear that I am not proposing merely an increase in the kind of "understanding" that seeks to assay Soviet motives, political or military, but rather a broad

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attack on the general problem of getting to know the Russians, people and officials, in an atmosphere of genuine interest and tolerance rather than one of chronic suspicion and competition.

The objective outlined in this letter will require a redoubling of our efforts to open up lines of scientific communication, especially in regard to meetings and exchange visits, and such a move can be effectively spearheaded only by organizations like the AAAS. Advantage should be taken of the apparent readiness of the present Administration to act in a conciliatory manner from a position of military strength. Expression of support for AAAS officials in such

endeavors can be offered by individual members, both in general and on specific issues that arise, and should be communicated to congressmen and other public officials.

If scientific opinion in this country can concentrate on this one major objective I feel that there will be some promise of our making at least a small crack in the Iron Curtain. And the social and political voice of the scientist will certainly become more potent when some such common objective is widely accepted and promoted within the scientific community.

MELVIN H. MARX

Department of Psychology,
University of Missouri, Columbia

Science, Linguistics, Lexicography

The editorial "Say it *ain't* so" [*Science* **134**, 1493 (1961)] is a fair and reasonable commentary. Whether or not one agrees with the editor's views, no exception can be taken to the manner in which they are presented. It is to be regretted that the same cannot be said of the comments of Max S. Marshall [*ibid.* **135**, 739 (1962)] on this editorial. One scarcely expects to meet in the pages of *Science* techniques more commonly reserved to propaganda and the polemical diatribe.

It is unfortunate that a scientist of some professional stature sees fit to employ, in discussing a matter outside his specialty, an intemperance of language and inaccuracy of reporting that he assuredly neither would nor could employ in professional communication in his own field. The use of such pejorative terms as *ringleaders*, *proselytizing*, *self-styled*, and *make a mess of* seems as misplaced in scholarly comment as does the quoting of fragments out of context in such a manner as to completely obscure the intent of the original author; for example, "the advocates of 'observing precisely what happens when native speakers speak.'" These are the self-styled structural linguists. . . ." (Marshall), versus Gove's actual statement, "The fundamental step in setting down postulates for *descriptive* linguistics is observing precisely what happens when native speakers speak. This is the essential *first step* required by scientific method" (*italics mine*). Does Marshall deny linguists alone the right to accumulate data, or does he hold the familiar, the accepted, the authoritarian to be the proper bases for all scholarly activity? No, this seems hardly likely in an adherent of one of the newer biological disciplines and one whose founder answered the criticisms of academicians of his day with clear-cut data.

To turn to the content as distinct from the manner, there are a few points in Marshall's letter that require special notice, if only because they appear as misconceptions in several reviews. The idea that the Merriam-Webster editorial process was in any fundamental way a clerical or mechanical tabulation is wholly false. On the contrary; this process involved the accumulation of data (citations) on a carefully planned basis designed to assemble from varied sources and levels of usage word samples adequate for analysis. The resultant material was then sub-



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