Science and Freedom

In the 325 years since the ordeal of Galileo the physical sciences have been emancipated from political and ecclesiastical domination and, as the globe-encircling sputniks testify, can thrive even in the shadow of the State's adoption of dialectical materialism as its official philosophy. The life sciences, a century since Darwin, still stand embroiled, still struggle for the necessary freedom to grow untrammeled by common prejudice and official disfavor. Yet in the end all science must stand free or become the slave of the State, the prostitute of material desires. For scientists there can, therefore, be no greater dedication than to the defense of their freedom of thought and of choice of investigation.

The Congress for Cultural Freedom in a conference in Hamburg in 1953 undertook to arouse men to the defense of scientific freedom. That effort has been continued since 1953 through the untiring work of the International Committee on Science and Freedom, of which Michael Polanyi is chairman. This committee has published to date nine bulletins, of which the last three deal respectively with "Self-government in Modern British Universities," "Hungary, October, 1956," and "Apartheid, The Threat to South Africa's Universities." Each of these is engrossing reading.

The academic freedom of the universities of the Western World and the freedom of science are inextricably interwoven. In fact, the latter may be considered a very branch of the former. No scientist can really afford to be unconcerned with threats to the academic freedom of any university, whether in his own land or abroad.

The Nazi doctrines of racial superiority are not dead. In one semblance or another they rear themselves wherever men of one dominant social group fear themselves threatened by the numbers and growing enlightenment of a racially different element. Apartheid preaches very plausibly the theory of the equal but separate development of white and nonwhite people in residence, in labor, in education. Yet it is plain to see that actually it is a bare-faced effort of the whites to keep the black and colored people of South Africa in servitude and educational inequality. Education will not be entrusted to the natives themselves to develop in independence, but will be gently governed for them by a (white) Minister of Native Affairs, whose viewpoint is sufficiently expressed in his own words: "What is the use of teaching the Bantu child mathematics when it cannot use it in practice? That is quite absurd. . . Education must train and teach people in accordance with their opportunities in life, according to the sphere in which they live. . . Good racial relations cannot exist when the education is given under the control of people who create wrong expectations on the part of the Native himself, expectations which clash with the possibilities in this country."

The immediate threat is the exclusion, from the five "open universities" which now admit them, of all nonwhite students, under a Separate University Education Bill which will probably be passed early in 1958. Can there be any question that in the long run the freedom of mankind—and the freedom of science along with it—is more imperiled by the defeats of Little Rock and Pretoria than by the success of sputnik?—BENTLEY GLASS.
ATOMIC ENERGY AND AGRICULTURE

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structures. Among the examples mentioned were the graded base transistor, a specially designed transmission line, a high temperature inductor, and a sensitive loop antenna. The high temperature inductor (Fig. 8) features a ferrite core blended in such a way that the ferrite with maximum Curie temperature is located in the hottest region, within the coil, and the coolest region, remote from the coil, employs a ferrite with low Curie temperature but high permeability. Thus, the temperature and effective permeability are optimized. The sensitive antenna (Fig. 9) is wound around a composite ferrite rod. The central section, which is closely coupled to the coil, is composed principally of low loss ferrite, whereas the composition at the ends of the rod gives way to a ferrite with high permeability. Thus, the over-all sensitivity is maximized.

The conference closed with a lively discussion on the future course of solid-state electronics by a panel of experts.

B. R. Gossick
Motorola, Inc., Phoenix, Arizona

Forthcoming Events

January


28-30. American Mathematical Soc., 64th annual, Cincinnati, Ohio. (J. H. Curtiss, AMS, 190 Hope St., Providence 6, R.I.)


30-31. Mathematical Assoc. of America, annual, Cincinnati, Ohio. (H. M. Gehman, Univ. of Buffalo, Buffalo 14, N.Y.)

30-1. American Assoc. of Physics Teachers, New York. (F. Verbrugge, Univ. of Minnesota, Minneapolis.)

30-1. Western Soc. for Clinical Research, 11th annual, Carmel-by-the-Sea, Calif. (A. J. Seaman, Univ. of Oregon Medical School, Portland 1.)

31-1. Problems of Geriatrics. symp. (by invitation only), New York. (B. F. Chow, Johns Hopkins Univ., School of Hygiene and Public Health, 615 N. Wolfe St., Baltimore 5, Md.)

February


3-4. Progress and Trends in Chemical and Petroleum Instrumentation, Wilmington, Del. (H. S. Kindler, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)


22-25. American Educational Research Assoc., St. Louis, Mo. (F. W. Hubbard, AERA, 1201 16th St., NW, Washington 6.)


March


1-3. National Wildlife Federation, St. Louis, Mo. (E. F. Swift, NWF, 232 Carroll St., NW, Washington 12.)


6-13. American Assoc. of Petroleum Geologists, annual, Los Angeles, Calif. (R. H. Dott, AAPG, Box 979, Tulsa 1, Okla.)

10-13. Society of Economic Paleontologists and Mineralogists, annual, Los Angeles, Calif. (R. H. Dott, Box 979, Tulsa 1, Okla.)

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