be wished away by the expropriation of corporate capitalism, by international understanding, by political manipulation, by a strike of scientists, or by dodging the draft. If the academic community (does it exist?) is to exert any leverage for this vital reform of human society, then it must discuss and discuss, argue deeper and deeper, and arrive at a sufficient consensus to discover the crack into which to insert the crowbar. More little books like this, more position papers and cries from the heart, are not enough: we need long sustained thought; we need a sociology, a psychology, an economics—a whole science—of war. The appeal of direct action is that one knows the enemy; the simple emotions of loyalty to a cause, the very virtue of which “patriotism” is the norm, absolve us from scepticism, doubt and difficulties of thought. Nevertheless, the pen is the mightier weapon.

Writing as an Englishman, without personal involvement in the tragedy of modern America, I must sound altogether too detached. Perhaps we too are on the way to the same hell of technocracy, technolatriy and technoclasm. But here again, careful analysis is needed; human behaviour is so extraordinarily non-linear that small differences of history and social structure may have entirely different consequences. We can learn some lessons about what not to do—for example, we must keep secret research off the campus—but will eventually commit our own brand of folly in our own immutable way.

In the end, I think Gar Alperovitz struck deep when he mentioned the insecurity that makes scientists frightened or competitive, rather than courageous against infamy. The moral trauma and social psychosis of which this book is a witness may perhaps toughen a new generation to stand beside the few—Bohr, Szilard, Franck, Rabinowitch—who neither turned aside nor gave way to despair, nor threw away their intellectual weapons in mad sorties, but fought on when they knew they could not win. The military metaphor, alas, comes all too easily to mind!

JOHN ZIMAN

INTERDISCIPLINARY CULTURE?

Science: The Center of Culture

By I. I. Rabi. (Perspectives in Humanism, Vol. 6.) Pp. xx + 155. (New American Library in association with World Publishing: New York and Cleveland, 1970.) \$5.50.

PROFESSOR RABI has been aptly characterized as the *eminent grise* of the American scientific community. As an elder statesman of science, Rabi can look back on a distinguished and varied career. He was rewarded for his accomplishments as a physicist with a Nobel Prize in 1944. At the same time, he was emerging as an important military scientist through his work both at the MIT Radiation Laboratory and in the Manhattan Project. Rabi's political and professional stature continued to rise after the war. Not only was he the key figure in the development of the Brookhaven National Laboratory, but he held important posts in the government as well: for example, he was at different times chairman of both the Executive Office's Science Advisory Committee and the General Advisory Commission for the Atomic Energy Commission. Given such credentials, his book, *Science: the Center of Culture*, will undoubtedly attract a wide audience.

It is a slender volume, one in a series edited by Ruth Nanda Anshen under the rubric of “Perspectives in Humanism”. The purpose of these works, according to the editor, is to proclaim the constancy of human values and the validity of metaphysical thinking. Only by operating on this level, we are told, will it be possible to transcend the “failures” of scientific humanism and socialism (which seek merely human ends) and to find the basis for a truly unified culture.

Within this framework, Rabi's book seems rather out of place. It is not really a book at all, but a collection of essays written either in the 1940s or during the past decade. Thus, not surprisingly, *Science: the Center of Culture* suffers from a sense of repetitiveness. It also can sound dated, as when Rabi hopes that students will one day get involved with political issues; the article which contains that statement first appeared in 1962. The author's reminiscences of his own career are, by contrast, fresh, engaging and, alas, all too infrequent. Yet in spite of these limitations, the reader is able to perceive how Professor Rabi's themes converge into a coherent thesis.

His principal concern is that modern society is bereft of “wisdom” largely because it has isolated science (and scientists) from the wider context of culture and politics. By cultural isolation, Rabi has in mind the divide which exists between natural science and the humanities. Although this is by now a well-worn theme, he is able to introduce some new illustrations of the phenomenon. (He likens, for instance, Bertrand de Jouvenel's attempt to speak about physics to that “of a Bronxville matron visiting an avant-garde Greenwich Village café—she is well meaning but not with it”. But Rabi's most caustic remarks are reserved for American politicians, whom he describes time and time again as “scientifically ignorant” men.

For Rabi, scientific illiteracy is a tragic fact of modern life. He sees science as “the first of the liberating arts”, one which can provide man with new knowledge, sound methods and a sense of freedom. His point about intellectual satisfaction is self-evident. As for methodology, Rabi seems to be saying that important social and economic problems might be solved, if only we could view them with objective detachment. That the practice of science might give rise to a feeling of liberation is an argument related to the rate of technological change rather than to the attainment of personal fulfilment. Even at this moment, the author tells us, “we . . . have overcome the fear of innovation and experiment which seems to be innate in so many people”. And, clearly, he believes that this attitudinal change represents an advance in human affairs.

The central problem thus becomes: how can science be integrated into essentially traditional patterns of culture and politics? On the cultural side, Rabi's proposals are too modest. He calls for greater interaction between specialists in humanities and the natural sciences, without indicating the motive forces or modes of communication necessary for the achievement of this programme. (He neglects the social scientists altogether.) His political reforms, on the other hand, are too ambitious and utopian. Here the elder statesman dreams of a Congress consisting of, in the main, freely elected (and scientifically literate) intellectuals.

The mention of politics in the United States is not wholly inappropriate here. Rabi's book bears the stamp of its national origins, not simply because it is addressed to an American audience, but because it reflects in two ways an ethos common to many American liberals educated in the interwar period. First, Rabi believes that all social and cultural problems, no matter how intractable, can be solved through sheer determination and hard work. (“We have the means; if only we had the will”, and so on.) The second aspect—and it is closely related to the first—concerns Rabi's unquestioning faith in the durability and universality of social values. In the 1960s, however, the assumption of a politico-ethical consensus within America simply became untenable. One of the values most called into question, particularly by young radicals, was the very doctrine of *laissez innover* which Rabi himself has so ardently defended. Unlike the elder statesman, they (and I) are not prepared to accept the description of atomic and hydrogen bombs as the “natural consequences of the scientific knowledge at our disposal, and as such . . . inevitable”.

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