

the arts and sciences into healthful interaction."

It is clear that healthful interaction is desirable, not only between art and science but between all intellectual disciplines. The question arises, however, whether precise semantic distinctions and new syntheses of old terminologies constitute a significant movement in this direction. If, as Cassidy asserts, there is a natural continuum unifying all intellectual activity, it is doubtful that C. P. Snow's case for the "two cultures" has any validity. One may not feel confident that, if science lacks a soul, it will find one in the humanities; nor may humanists find new efficacy in scientific tools. The alleged chasm may merely be an abstraction based on the real differences of values between men in an age of scientific weaponry and Cold War. Many humanists would challenge the contention that "ends" would arise from a union of art and science and that such ends would appear "morally and ethically just" to all; many would doubt that even men of good will could direct cultural change toward such ends.

This caveat does not detract from Cassidy's refreshing effort to build a philosophic system, encompassing art and science, for a complex world to which science may hold many keys.

H. L. NIEBURG

*Department of Humanities,
Case Institute of Technology*

Changing Cultures

Traditional Cultures and the Impact of Technological Change. George M. Foster. Harper, New York, 1962. xiii + 292 pp. \$6.50.

Every technical assistance expert who goes to one of the newly developing countries to help introduce better methods in health work, agriculture, industry, public administration, science teaching, or some other specialty, should read this book.

The major contribution of cultural anthropology to the equipment of technical assistance workers has been the "culture concept" itself. This concept engenders a point of view and an attitude which help to counter the natural ethnocentric tendency to assume that what is good, efficient, and "the right way to do it" in our society is also best for other societies. Beyond this,

however, the writings of cultural anthropologists have not been as directly useful to those of us engaged in technical assistance as we might legitimately have hoped. Anthropological writings have run to case studies, mostly of rather primitive communities, and only occasionally have they come directly to grips with the problems that arise in development work.

George Foster's book changes this situation. It brings the kind of help that technical assistance workers need from the anthropologist and sociologist. Although it "is not intended as a handy pocket guide to successful technical aid work, and it contains no formal lists of do's and don'ts," it does present in a well-organized, clearly written way, with abundant illustrations from case histories and with numerous practical hints, those aspects of the knowledge of the social scientist, and especially of the anthropologist, which are most relevant to technological development in a traditional society.

In the less developed countries, 20th-century scientific culture is impinging upon traditional, prescientific cultures—"Clinical medicine struggles with folk remedies; the results of experimental agriculture are carried to custom-bound farmers; and literacy is brought to non-readers." Foster analyzes the way traditional cultures change, the barriers to change, the stimulants to change, and the role and problems of the technical expert. The responsible technician is the one who is able to adapt scientific technology and methods to the ecological, social, and economic environment of the developing country. Such technicians must learn to be "problem-oriented and not program-oriented," despite their training as engineers, doctors, or other professionals, which predisposes them toward programs of the types considered best in their home environment. There are several interesting pages on that "occupational disease of people who have been suddenly transplanted abroad," which Kalervo Oberg named "culture shock."

Foster devotes three chapters to the way the anthropologist works and to problems of teamwork in relating technical aid and social science. I think his generally excellent discussion would be improved if he recognized more clearly a distinction between the role of the anthropologist as *social scientist* and as *social technologist*. In the social field, as in the fields of the physical and

biological sciences, we need both the scientist who is primarily interested in the advancement of knowledge and the technologist who, though scientifically grounded, concerns himself with inventing and applying methods of dealing with practical problems.

EUGENE STALEY

*Stanford Research Institute,
Menlo Park, California*

Low Temperature Physics

Experimental Cryophysics. F. E. Hoare, L. C. Jackson, and N. Kurti, Eds. Butterworth, Washington, D.C., 1961. 396 pp. Illus. \$14.

This book, which is described as a collection of review articles, consists of a collection of ten chapters; each of the first nine is by one of the editors or by a contributor, and their average length is 30 pages. The tenth chapter consists of a series of 12 very brief articles (average length, four pages); each of these articles is by a different contributor.

The first nine chapters cover such a variety of aspects of cryophysics (history, commercial production of liquefied air, storage of liquefied gases, mathematics of liquefaction, magnetic cooling, and four other topics) that there is little continuity and the overall impression is one of rather haphazard arrangement, with some probably unavoidable duplication of subject matter. In these chapters the presentation of the subject ranges from an adequate to an excellent treatment, and most chapters include extensive literature references to assist readers who wish to explore the subject more comprehensively.

The tenth chapter, on cryogenic techniques and miscellaneous applications, is crowded with so many short articles on unrelated (though important) subjects that its value lies primarily in providing what amounts to a series of abstracts with related bibliographies. A 25-page appendix includes 20 tables of thermal and physical data needed by workers in the field of cryophysics.

In summary, this book affords relatively brief treatment of many branches of cryophysics; the treatment varies from descriptive, to empirical, to mathematical investigation of selected problems. Although its contents are un-