Book Reviews

Learning across Cultures. A study of Germans visiting America. Jeanne Watson and Ronald Lippitt. Institute for Social Research, Univ. of Michigan, Ann Arbor, 1955. x + 205 pp. $3.

A concomitant of the rapid expansion of international exchange programs in the decade since World War II—more than 40,000 foreign nationals now annually visit the United States for broadly educational purposes—has been an upsurge of interest on the part of both administrators and social scientists in assessing the effects of cross-cultural educational experience. Understandably, administrators of exchange programs (and the donors of the funds that support them) have been concerned with evaluating their success. Social scientists, in addressing themselves to this practical question, have, for their part, tapped a challenging area of inquiry that lies at the grassroots level of research on international relations. That this can be a happy marriage of interests is abundantly demonstrated in the volume under review.

The present study reports the results of intensive research on the experiences of 29 young German men and women brought to this country in three separate groups during the period 1949 to 1951 under the auspices of the U.S. State Department. Their visits, which lasted either 6 or 12 months, were based at the University of Michigan and provided a combination of academic training, internship experience, and field trips. Although their sample is thus restricted, the author's aim is to go beyond the limitations of the particular population studied to a more general understanding of cross-cultural education. They are notably successful in fulfilling their intent.

The research focuses on the study of stability and change in the attitudes and general point of view of the visitors and on the analysis of the process whereby learning occurs across cultures. The primary data relevant to these two major topics were derived from a series of three lengthy structured interviews with each subject, the first shortly after his arrival, the second just prior to his departure, and the third six months after his return to Germany. Supplementary information was obtained from sentence completion tests and from the observations of the American participants in the training and research program. As a check, comparable data were also obtained from two matched American control groups.

As distinguished from many similar studies, the approach is analytic and interpretive rather than simply descriptive. Herein lies the book's greatest value for social scientist and practitioner alike. The insights gained from the research are applicable to a broad range of exchange programs and will be welcomed by all who are responsible for the administration of cross-cultural education. Nor do the authors display the social scientist's usual coyness about making practical suggestions; recommendations are liberally scattered throughout the text, and a separate section is devoted to "Directions of program improvement." Moreover, in examining the psychological dynamics underlying the reactions of the sojourner in a strange and sometimes hostile environment, the book contributes as well to the main stream of social-science research. The authors both draw from and add significantly to such areas as the psychology of the self and learning and reference group theory.

Finally, one notes that the book is well designed for its intended dual audience. The technical apparatus, including examples of instruments used in the research and an array of statistical tables, is included in an appendix, and the unencumbered text is written in a fluent and eminently readable style. Thus, with respect to both form and substance, here is a book that deserves to be widely read.

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The Meaning of Relativity. Albert Einstein. Princeton University Press, Princeton, ed. 5, 1955. 166 pp. + index. $3.75.

Five years after the appearance of his comprehensive paper on general relativity, in May 1921, Albert Einstein delivered a set of four lectures at Princeton University, which were subsequently published under the title *The Meaning of Relativity*. Except for a few reprintings, no new edition came forth until 1945, when Einstein added an appendix concerned with the cosmological problem. For the third edition, 1950, he added an "Appendix II," "Generalization of gravitation theory," which was brought up to date for the fourth edition, dated 1953, through the addition of the concept of the "lambda transformation" and by the discussion of what Einstein called the "strength" of equation systems. The present, fifth edition carries Appendix II in a completely revised form, under the title "Relativistic theory of the non-symmetric field"; a very brief prefatory note by Einstein is dated December 1954.

Except for a paper that also appeared posthumously, together with Bruria Kaufman, the fifth edition of *The Meaning of Relativity* is Einstein's last work. Aside from Appendix II, it appears to to be an unchanged reproduction of the earlier editions, including the discussion concerning the embarrassing youth of the universe (which, at the time of the writing of the second edition, appeared to be less than the age of the oldest known rock formations on Earth). This discussion has now become unnecessary because of the upward revision of the age of the universe in recent years made by the astronomers.

It is not necessary to praise at length Einstein's mastery of clear exposition, which is known to anyone who has read some of his scientific writings. Inevitably, some of the brilliance of his style is lost in translation, in spite of the excellent work of Adams (for the original lectures), Straus (for the first appendix), and S. Bargmann (for the second appendix). I should like to comment briefly on some technical points.

To deprive the symmetric character of an affine connection of its invariant character and thereby meet one of the most persistent criticisms of the nonsymmetric theory, Einstein had devised a new invariant transformation group, the so-called λ-transformation, which was already described in the fourth edition. Originally, this additional transformation of the affine connection depended on an arbitrary vector field. Later, Einstein modified the group by restricting this vector field to be a gradient field, and that is how the λ-transformation appears in the fifth edition. The new transformation group is isomorphic with the gage group of electrodynamics. As a result, the identification of charge-current density and electromagnetic field strength in the nonsymmetric theory is unique.

For choosing the variational principle from which the field equations of the nonsymmetric theory are to be derived, Einstein establishes three requirements,