turbances in the minds of the youngsters." No suggestion whatever is made as to what the supervisor should do if he discovers homosexual practices, and the reader is left with the implication that a person should not be disturbed concerning a practice which may cause great distress in later life.

As has been suggested above, there are many errors of fact when the writing touches directly the field of psychology. The statement that "two-year-olds are able to distinguish black from white but do not distinguish between colors" indicates a clear lack of information of researches in child psychology. Similarly, the statement in more than one place in the book that abstract thinking does not begin to develop before the age of 12 is clearly out of line with the evidence. Indeed, Beverly misquotes the Stanford revision of the Binet scale in supporting his statement. It is true that on the tests definitions of abstract words are called for at age 12, but the doctor did not look back to see that on Form M there is also such a test at age 10 and on Form L at age 11. Of course, there is all sorts of evidence to show that abstract thinking begins to develop very much earlier than these ages. On the subject of intelligence and intelligence tests there are also many errors. An outstanding example is the statement that the 1908 Binet-Simon tests "consisted of six tests for each year from three to eighteen." This instrument consisted of 5 tests for each year from 3 to 10, a 12-year test, a 15-year test, and a very imperfectly standardized adult test. Still again, very few psychologists working in the field of school subjects will be happy at the statement that "spelling, reading, and writing difficulties are usually innate." There is evidence that this is not the case. Neither does the best evidence agree that "because of their rapid growth adolescents fatigue easily and have poor motor coordination."

Indeed, there are so many inaccurate or misleading statements that it would seem distinctly unwise to recommend this book, despite its many good features, as one which could be used in any class in psychology.

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Human factors in air transport design. Ross A. McFarland. New York: McGraw-Hill, 1946. Pp. xix + 670. (Illustrated.) $6.00.

The main thesis of this book, according to the author, is to demonstrate the importance and need for studying human factors which should be considered in the design and operation of air transports. With remarkable attention to detail and with the aid of numerous tables, graphs, charts, diagrams, and pictures, Dr. McFarland has presented a large portion of the work which has already been done in this field. The presentation is not confined to a discussion of the medical, physiological, and psychological studies which have been made, but also includes detailed discussions of design and engineering features relevant to the human factors involved.

The subject matter has been divided into 10 parts, each with its own chapter, as follows: (1) "High-Altitude Operation and Pressurized Cabins," (2) "The Control of Ventilation, Temperature, and Humidity," (3) "The Control of Insects and Air-borne Diseases," (4) "Carbon Monoxide and Other Noxious Gases," (5) "The Control of Noise in the Cabins of Aircraft," (6) "The Control of Vibration in Air Transport Planes," (7) "Acceleration, Motion, and Flight Performance," (8) "The Cockpit and Control Cabin of Air Transports," (9) "Passenger Accommodations," and (10) "The Prevention of Aircraft Accidents."

This is a book written by an expert in one field (aviation psychology and physiology) for the use of experts in related fields (aeronautical engineering and airline operation). It has an extremely broad scope, and it would be difficult to name many relevant problems which are not included. Yet, because he was writing for engineers, the author evidently felt obliged to present the material in as concrete and specific form as possible. As a result, many research findings assume a more definitive and authoritative form than would be granted them, perhaps, by other biological scientists. Dr. McFarland is careful to point out where inadequacies of this sort exist. Even where generalizations are not wise, the data have been presented in minute detail—a form of presentation which overemphasizes the significance of the findings.

In spite of this practice there is no doubt concerning the value of the book for anyone, including the biological scientist, who is working in this new field. For aeronautical designers and airline operators it should become required reading. As the author points out, "until aircraft can be flown completely automatically, the human element should be considered as an integral component. A truly functional design will be achieved only after it is thoroughly realized that the crewman (and passenger) is as much a part of the plane as any structural or mechanical feature." Too often the problems arising from human factors in design and operation have been settled by "a majority vote of those sitting in judgment" without recourse to experimentation or even systematic observation. Dr. McFarland has offered ample evidence that when research by competent investigators replaces solutions based on opinion, the reward in terms of human safety, efficiency, and comfort is great.

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Indians before Columbus: twenty thousand years of North American history revealed by archaeology. Paul S. Martin, George I. Quimby, and Donald Collier. Chicago: Univ. Chicago Press, 1947. Pp. xxiii + 582. (Illustrated.) $6.00.

Modern archaeology in the United States may be said to have begun about 1912 with Nelson's percentage stratigraphy in the Galisteo Basin, New Mexico. Since that date the authors of *Indians before Columbus* are the first to tackle the job of systematizing the net gains of North American research archaeology over this 35-year period.

At the outset let the reviewer go on record as being in favor of this book. It totals up as a good one. It has no competitors, and in this circumstance it has all the advantages and hazards of being a "first." The book is a sound stocktaking of what professional archaeology has to offer as basic data for America north of Mexico. On the whole, the material presented is as up to date as it was possible to make it.

Indians before Columbus is written, say the authors, for the interested layman and the beginning student and is not intended for a general professional reference. In spite of this, it is a useful book for every archaeologist to own. The three short introductory chapters, which are eminently successful,

explain to the uninitiated what archaeology is, what is known concerning the origins of the American Indian, and the truth behind a number of common popular fallacies concerning the American Indian. Chapters 4 through 9 take up, in order, the arts and industries by which the Indians are chiefly known to the archaeologist: stone, copper, bone and shell, pottery, basketry and cloth, and trade and commerce. A clear picture of the technologies involved, the degree of mastery of each, and integration and significance to a preindustrial economy is presented to the reader. The actual archaeology deals first with the earliest Indian inhabitants of North America as represented by the Folsom, Yuma, Sandia, and Cochise finds. An attempt is made to demonstrate possible intermediate horizons between these early lithic cultures and pottery-agricultural periods. A treatment of the later periods follows a fourfold areal division into (1) Southwest, (2) eastern North America, (3) Pacific slope, and (4) Far North, or Eskimo. Each of these major areas is again divided into several regions.

Criticisms are of two kinds: (1) of specific points of fact in sequential-distributional information or interpretation, and (2) of presentation and broader interpretation. Specifically, in the discussion of the Hohokam culture of the Southwest the chronology used follows Gladwin's earlier, rather than his more recent, estimates, but there is no reference to this point. In discussing the southeastern "Death Cult," Krieger's recent but radically different interpretation is not taken into consideration. In Georgia there is no substantial evidence for burial mounds in the Deptford period. The chronological position given for the Florida Crystal River culture is highly debatable. In southern Louisiana the Troyville period is put in the Burial Mound rather than the Temple Mound stage. This tends to obscure the important fact that the temple mound-plaza arrangement complex had its first appearance in the Southeast at this relatively early date, notwithstanding its association in the Troyville period with Marksville-Hopewell style pottery.

On a more general level, the book loses a great deal of its force as an introductory popular book by its failure to follow through on interpretations of cultural process. If the book is for the general reader, and if the book is to hew to the line of one set of historical interpretations—both avowed purposes of the authors—then certainly it should go further beyond the time-space cataloguing of cultural data than it has. For example, at several places in the discussion of the eastern United States we are taken right up to the point of what should be the pay-off reward for all this archaeological grubbing, only to be anticlimactically dropped. In speaking of the decline in craft arts in the late prehistoric periods in the Northeast, the authors make this interesting statement but go no further: "Thus there is a decline in terms of material remains, but this decline probably is not real. Certainly the improvements in the economy (agriculture), the possible social changes, and the probable lack of the need for tools and industries of the past mark a type of climax or florescence that cannot be grasped by archaeological techniques" (p. 258). But what does this technical and aesthetic decline, just preceding the historic horizon and also remarked upon again and again in several other subareas of the East, imply in social terms? With a minimum of inference from ethnography the lacunae of archaeology can be filled to show the late prehistoric period as the time of rising political confederacies and war alliances in the Northeast. These must, inevitably, have been the result of mounting population pressures correlated with the improved agricultural production so characteristic of the late prehistoric era all through the East. With the necessitated shift to organized war patterns the old religious emphasis of the East, much of it centering around the burial cult and its associated craft goods, disappeared. At least, this is one explanation, for which there is considerable supporting evidence, that the average reader might hopefully expect in a general book on the rise and growth of American Indian cultures.

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Trinidad village. Melville J. and Frances S. Herskovits. New York: Alfred A. Knopf, 1947. Pp. viii + 351. (Illustrated.) $4.75.

This book is a worthy contribution to two phases, among others, of the study of human culture: It represents a workmanlike addition to the slowly accumulating literature of "modern," as opposed to "primitive," ethnology; and it demonstrates the intricate interweaving of African and European traits which is the result of the acculturation process in so many Negro groups of the New World.

The Trinidad village in question is Toco, at the extreme northeastern end of the island, and the population is almost entirely negroid. The community is rather isolated in terms of effective contacts with outside centers of cultural diffusion, and as a separate entity it is relatively new, having been settled for the most part within the past 50 years by people coming from other parts of Trinidad and Tobago. In these respects Toco offers a situation in which the immediate historical factors, if not "controlled," are at least known and assessable, which is an advantage in analyzing the dynamics of custom integration and social organization, while it also exhibits to a degree the cultural homogeneity of custom and physical type which is characteristic of peasant and folk cultures generally.

The field work was undertaken in 1939 as part of a long-term project with which the Herskovits name has been associated for some 20 years, namely, the study of the various adaptions in the New World of Negroes whose ancestors were transplanted from Africa in slavery. The differential stripping, retention, and reinterpretations of African cultural elements in the American setting is the center of interest in this book. As the reworking of native African culture is better understood, contributions to the general theory of cultural change are offered.

Using the concept of "cultural focus," the authors demonstrate that most of the formal aspects of African culture, including the institutional structure of social organization and religion, have disappeared in Toco. Yet, many of the basic orientations, particularly in family arrangements, religious groups such as the Shouters, witchcraft, the persistent power of ancestral spirits, etc., come directly from the African systems. In Toco they are in many cases so embedded in a matrix containing elements from other sources as to be unidentifiable to the casual observer. Nevertheless, such identification and understanding is a prerequisite to scientific analysis and prediction of the actual behavior of the people. The problem of Toco has its parallels not only in numerous other Negro communities of the Western Hemisphere, but also among the