Research. The grant was unbelievably large compared with the "slim pickings" of earlier years.

Since the book deals to a large extent with the development of anthropology, wherein Dr. Mead sees Ruth Benedict as playing a transitional role between Franz Boas and the kind of national character studies being carried on by Dr. Mead, a few comments are in order. Ruth Benedict can properly be considered transitional to the approach which seeks to understand national character by paying attention to infant care and child training. It should be noted, however, that just before World War II, Ruth Benedict, Ralph Linton, Abraham Kardiner, a psychoanalyst, and others held a series of important symposia at Columbia University. This was the turning point in the development of what was called the "culture and personality" approach. It is surprising that Dr. Mead does not mention this.

It should be made clear that the transition to the culture and personality and national character approaches was but one of many transitions from the broad range of interests involved in Boas' work. Dr. Mead's statement (page 429) that when Ruth Benedict returned to Columbia University after the war she had to work "in isolation in a department which had been sedulously swept bare . . . of any signs of the Boas tradition" is both unkind and inaccurate. The appointment of Ralph Linton and W. D. Strong to the department just before the war and my appointment just after meant a diversification of the tradition, not a break with it. Dr. Mead herself says (page 345) of the so-called "Boas school" that "there was actually no such thing." Boas was the intellectual grandfather of most American anthropologists, and few advocates of any contemporary approach would presume exclusive rights to his mantle.

As a scientific exposition, Dr. Mead's book must be taken with the qualifications just suggested. As a fascinating source of insights into a remarkable woman presented by another remarkable woman, it will well reward any reader.

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Solving the Scientist Shortage. David C. Greenwood. Public Affairs Press, Washington, D.C., 1958. 69 pp. $2.

Many speeches and reports that have been made over the past few years about the apparent shortage of scientists are summarized in this publication. After a sketch of the nature of the problem and the educational outlook, Greenwood turns to efforts (mostly proposals) from governmental groups, private (mainly industrial) groups, and professional scientific and engineering groups. From an extensive bibliography he then selects a large number of recommendations for action. Probably his most significant suggestion is that for a single major organization to carry through various inquiries and to develop major and consistent lines of action.

Almost everyone has "gotten into the act" on manpower needs. A wide range of viewpoints and vested interests is represented by the proposals Greenwood reviews. To bring any order out of this mixture of special pleading, confusion, and contradiction would require many more than the 68 pages he has used. His eclectic approach, with brief descriptions of some industrial activities but without analysis of their significance, leads to citation of isolated authors and to contradictory proposals.

On the role of women in science and engineering, on page 13, he notes that in the U.S.S.R. women currently constitute 50 percent of all professionals. Then, on page 59, he cites a survey made in 1957 reporting that "only thirteen per cent of the nation's college women are there primarily to receive an intellectual training" (one wonders what percentage is reported for the men!) and then proposes that all the 87 percent with "other primary purposes" be dropped out of college. Just how this is to be done, when, and by whom, and whether this would not cut even further into the potential womanpower pool, is not mentioned.

Greenwood's proposals range widely in diversity and difficulty of accomplishment. On page 52 (number 26 under "Industry") he states, "canteen meals in industrial plants should be scientifically planned to provide the maximum amount of energy-building nutrients." On page 57 (15 under "Government") he states, "The Defense Department would be reduced in size to a small policy-making and coordinating agency, as has been proposed independently by Donald Douglas, Sr., chairman of the board of Douglas Aircraft." Does he want to try to do this?

Just how all these "shoulds" are to be accomplished, by whom, and with what finances is never mentioned. Consider, for example, page 62 (3 under "Colleges and Universities"): "The number of engineering places available in the nation's colleges should be doubled immediately"—*immediately* no less!

In his comments on grade school and high school Greenwood cannot avoid poking at the so-called "progressive educationists," whatever that may mean. However, note the contradictions here: on page 60 (item 10) he says, "All steps should be taken to make the teaching of the technical subjects as inspiring as possible" (what does "inspiring" mean?), while on page 61 (item 10) he states, "Any steps which teachers can take to raise the academic tension in schools, and remove the 'Let's learn for fun attitude,' would be deeply appreciated by the majority of business and industrial leaders." Is he proposing that in school, in business, and in industry learning and creative work be made distasteful? Why do people do creative work anyway?

In short, Greenwood's approach is eclectic and uncritical; his book lacks synthesis, is contradictory, and is filled with impossible "shoulds."

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The Black Fens. A. K. Astbury. Golden Head Press, Cambridge, England, 1958 (distributed by W. Heffer, Cambridge, England). xi + 217 pp. Illus. 42 s.

Of all regional divisions on the palimpest of Britain's cultural and physical geography, the Fens are the most distinctive. Formed from the lower flood plains of rivers draining to the Wash, on the east coast of England, the Fens are low, dead flat, and highly fertile and are kept free of water only by means of a complex artificial drainage system. The region has two distinct parts: silt Fens in the north, with essentially mineral soils, and black Fens in the south, with peat soils. A. K. Astbury's book *The Black Fens* represents yet another addition to a vast literature of British regional studies. Most have an almost purely local interest. Astbury's work, however, deserves wider attention, because of the unusual interest and agricultural importance of the black Fens.

The Black Fens is written in the didactic, slightly chaotic, British style typical of many such regional studies. Astbury addresses himself mainly to the reader with nonprofessional interests. Lack of bibliography or documentation reduces the volume's usefulness for American readers.

The Black Fens covers the formation, physical characteristics, hydrography, farming, settlement, transportation, and reclamation of the English peat Fens. Expressed thus, the coverage sounds fairly complete. However, the principal emphasis is on past and present waterways (perhaps not too surprising in a discussion of an area that would be largely submerged without artificial drainage). Much of this is rather tediously detailed for the casual reader; much of it also seemed rather speculative to me. Because of the author's focus of attention, little space is left for matters that do not have to do with running water. This is a pity,

for such important considerations as land use and settlement get relatively meager treatment.

However, the book has much charm and interest, even practical value for those interested in our own peat lands, such as the Everglades of Florida or the Sacramento-San Joaquin delta of California. Astbury has a fascinating theme —man's mighty struggle against water and the conversion of a marshy waste into the major tract of first-class arable land in the British Isles. Agriculturalists, reclaimers, geographers, and others with like interests will derive much instruction and diversion from this book.

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Soviet Research in Crystallography. *Chemistry Collection No. 5,* vols. 1 and 2. English translation. Consultants Bureau, New York, 1958. 618 pp. vol. 1, $30; vol. 2, $100; set, $115.

These two volumes contain selected papers from Russian journals translated into English, reproduced by photo-offset, and bound in paper. In spite of the title and supposed aim of this publication, it contains little of interest to the crystallographer. Volume 1 contains 60 papers in the general field of inorganic chemistry; volume 2, 33 papers dealing with a miscellaneous collection of topics, including x-ray spectrography, structure of glasses, and crystal growth.

It is of great interest to those of us who have no way to penetrate the language barrier to be able to read through these Russian papers in the way that we read through the Western journals in the library. It is a pleasure to discover papers such as that by D. A. Petrov and N. D. Nagoskaya on the phase diagram of the Al-Cu-Mg-Si system—a strikingly comprehensive and beautiful study of an exceedingly complex system. It is noticeable, however, that many techniques which are regarded as routine in this country are not made use of, apparently, in Russian laboratories: for example, x-ray methods are only rarely used in phase-diagram studies, and counter methods are not used at all in x-ray spectrography. One paper on heteropolymolybdate complexes displays a great confusion about the structural chemistry of these compounds—a confusion which is shared by most American chemists.

The main points of criticism of these volumes must be directed toward the editorial work, which leaves a great deal to be desired. The editors apparently have no concept at all of the meaning of the term *crystallography* to scientists, especially crystallographers. The bulk of volume 1 is devoted to phase-diagram studies of such systems as $CuSO_4$—$FeSO_4$—H_2SO_4—H_2O; LiCl—$BeCl_2$—H_2O; H_3BO_3—KNO_3—H_2O; KNO_3—KCl—KBr; and K_2SO_4—K_2CrO_4—KNO_3, most of which depend on classical thermal methods. None of these papers can in any sense be classified under crystallography. Volume 2 does contain some articles of crystallographic interest, such as papers on the structure of polyamides of dipheic acid (by S. S. Spassky and M. A. Mikhailova), optical properties and structure of polyiodides (by D. A. Godina and G. P. Faerman), crystalline modifications of plumbic fluoride (by Ya. Sauka), and oxonium ion in crystal lattices of inorganic compounds (by N. V. Shishkin) and a series of papers by V. Kurbatov on "The nature of crystals," which discuss binding energies in various types of crystals. This volume also contains a series of papers of particular (although not crystallographic) interest on the techniques of x-ray spectrography, by E. E. Vainshtein and his colleagues. There are no papers at all on crystal structure analysis in the modern sense.

Obviously, the editors intended to present in these books merely a sampling of papers from the Russian journals in the period 1949–1955. The merit of such a project might well be discussed, but even if it is assumed to be worth while, the result is spoiled by a complete lack of judgment in the selection of papers. During the period covered, scores of papers of great crystallographic interest appeared in the Russian journals. Why were the works of such eminent crystallographers as G. S. Zhdanov, N. V. Belov, and A. I. Kitaigorodskii completely ignored? Crystallographers would have welcomed complete translations of their works on such important crystal structures as heavy metal thiocyanate complexes, dioptase, and epidote; on contributions to the theory of structure determination; and on many other topics well known to Western scientists through abstracts. Such glaring negligence could only be a result of failure to seek the advice of anyone connected with the field of crystallography.

The quality of the translations cannot be properly judged by one who is not familiar with the Russian language, but the general intelligibility of the texts appears to be fairly good, although occasional awkward passages and phrases are evident. The origin of the papers is identified only by a system of code numbers, which indicate the journal and year but not the page numbers. The code numbers refer to some master translation file which presumably is available to the reader through services supplied by the publishers. References given in the papers themselves are, of course, translated in the normal manner. The quality of reproduction is fair, but in the copy examined there are several missing or blank pages. One paper is reproduced twice. The standards of quality do not seriously impair the usefulness of the material presented (except where a page is missing), but they fall somewhat short of those set by a similar project sponsored by the American Institute of Physics.

Strangely, there is no explanatory information anywhere in the two volumes concerning this ambitious translation project. No mention is made of any of the editors responsible for the work. It can only be said that the volumes are valuable in that they will make available in useful form in the libraries some parts of the Russian scientific literature, but such an investment for the personal library will generally be out of the question.

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Discussions on Child Development. A consideration of the biological, psychological, and cultural approaches to the understanding of human development and behavior. *Proceedings of the World Health Organization Study Group on the Psychobiological Development of the Child*: vol. III, third meeting, Geneva, 1955. J. M. Tanner and Bärbel Inhelder, Eds. International Universities Press, New York, 1958. 223 pp. $5.

This volume continues the *Discussions on Child Development* series, of which the earlier two volumes were reviewed in the *Scientific Monthly* [84, 323 (1957)]. The sessions focused on the development of sex differences and of individuality or ego identity. As a basis for discussion of the first topic there were presentations by Margaret Mead on the "Childhood genesis of sex differences in behavior" and by Erik Erikson on "Sex differences in the play construction of twelve-year-old children." To introduce the second topic, presentations were made by Erik Erikson on "The syndrome of identity diffusion in adolescents and young adults" and on "The psychosocial development of children." In addition to the members of the study group, D. Buckle, Julian S. Huxley, and Raymond de Saussure participated in the discussions. The volume is a well-edited condensation of a week's discussion that moves forward at a lively pace.

But because the discussion moves freely without close contact with data, the reader who seeks quantified and verified statements will be disappointed. Even in the presentation of the mate-