

Book Reviews

No More War! Linus Pauling. Dodd, Mead, New York, 1958. ix + 254 pp. \$3.50.

This is a tract for the times. The "message of this book," to quote from Pauling's preface, is that "the future of the human race depends upon our willingness to cooperate, to work together in a worldwide attack on the great world problems." This is a message with which it is not easy to disagree, but one should note that "our" refers to the whole human race and not just to the American or free-world subspecies of that race.

After sounding the clarion call of "No more war!" in his opening chapter, Pauling, in the body of his book, sets forth "the facts" regarding fallout and the effects of radiation on heredity and disease. I shall not, as a person untrained in the physical sciences, attempt to pass judgment on the accuracy or balance of Pauling's summary for a lay reader of "the facts," or on the fairness of his presentation of the scientific views of those, particularly those connected with the Atomic Energy Commission, with whom he disagrees. "On these basic facts," Pauling quotes J. Laurence Kulp, on the views of Pauling and Libby on radiation, "all are agreed" (page 113). Amen. It is when one asks what the facts mean and to what extent one can read public policy directly from the contemplation of these facts, and these facts alone, that basic agreement ceases.

To Pauling, the facts mean that the testing of nuclear weapons must stop and can stop now on the basis of a readily negotiated agreement between the Soviet Union and the United States. They mean, further, that a great World Peace Research Organization should be set up within the framework of the United Nations. Given the all-round "willingness to cooperate" mentioned in the preface, the findings of this organization would presumably be accepted by acclamation.

As for the international "first-step" disarmament agreement, Pauling twice suggests (pages 184 and 190) that the Soviet Union has already accepted the plan for cessation of bomb tests with enforcement to be based on internal inspection stations. He suggests (page 185) that progress toward disarmament broke down in

1957 because Secretary Dulles intervened in the negotiations then being conducted in London by Harold Stassen. It was Dulles' "failure to reach a compromise" that "was an important factor in causing the conference to end."

Another important factor may possibly have been the Soviet delegation's failure to reach a compromise. The "we" who must be willing to cooperate includes both "us Americans" and "them Russians." The Soviet Union's peremptory rejection of the "keyhole" area-of-inspection proposal in April 1958 is only one of the more recent examples of Soviet behavior which remind us that it takes two to fail to reach a compromise—unless one is counseling his own side to surrender.

Pauling's other proposal—to bring an end to war by creating a great research organization—is not new. I do not know whether official sponsorship by the United Nations would make objective research harder or easier. It would be interesting to have testimony from the staffs of our great American foundations as to how much their programs for research on peace are now hampered by lack of funds on a scale which only governments or international organizations can provide.

There are some broad fundamental questions which Pauling's book raises but which it does not really answer; for instance:

1) Ought or ought not the United States, in the name of morality, simply cease bomb testing forthwith, whether or not there is Soviet agreement to accept international inspection, and even if indications were that such voluntary cessation would reduce the chance that the Soviet Union would later agree to effective internal inspection?

2) How does one equate the long-run biological risk of continued bomb testing and the short-run biological (and political) risk of two-way atomic war that would be involved in either a one-sided relaxation of the present effort to deter attack or an international agreement so loosely drawn as to permit unilateral violation?

3) How does one equate the gains from delayed international agreement, based on a more carefully negotiated in-

spection scheme covering a wider range of prohibited actions, and an immediate agreement calling for less stringent or narrower inspection? [For some recently published evidence as to the feasibility of a wider system of inspection, see *Inspection for Disarmament*, Seymour Melman, Ed. (Columbia University Press, New York, 1958)].

4) More broadly, what combination of firmness and conciliation in dealing with the Soviet Union will produce optimum relief from the threat of two-way thermonuclear war?

Between the Scylla of intransigence and the Charybdis of surrender, the passage is not clearly marked. The way may be narrow, tortuous, and hard to find. Faith in the brotherhood of man and a burning sense of urgency based on a knowledge of the evil effects of nuclear explosions may indicate the ultimate goal, but they are no guarantee against shipwrecks along the way. Patient analysis, as well as reliance on other kinds of skills and other kinds of facts, is needed if short-run and middle-run policies are to achieve long-run goals.

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Obok. A study of social structure in Eurasia. Elizabeth E. Bacon. Viking Fund Publications in Anthropology, No. 25. Wenner-Gren Foundation, New York, 1958. xv + 235 pp. Maps and tables. \$4.00.

In 1938–39 Elizabeth E. Bacon, presently professor of anthropology at Washington University, St. Louis, did field work among the Hazara "Mongols" in Iran and Afghanistan. When she began to write the present monograph in 1947, she ran into a now familiar problem. The language of anthropology, notoriously unsatisfactory, is particularly deficient when it comes to such terms as *clan*, and Dr. Bacon joined those who wished to distinguish the varieties of unilinear organizations under discrete headings, thereby separating functionally dissimilar institutions which had previously been confused because of certain superficial resemblances. Dr. Bacon employs the word *obok*, which is Mongol and means "tribal genealogical [unit]." By comparative analysis, she seeks to establish *obok* as the basic extended social group throughout Eurasia, from Britain (Scots and Welsh) to the Pacific (China).

Dr. Bacon has done an enormous amount of work in assembling data on the social organization and kin terminologies of 15 cultures in Europe and Asia, and she is to be complimented upon

making her data available in concise form. There is not space here, nor do I feel competent, to assess her treatment of the Mongol data, yet certain lacunae are strangely apparent. For example, the general tone of *Obok* makes it appear that the first florescence of political sophistication in Central Asia is that associated with Chinggis Khan, for there is no mention whatsoever of the Hsiungnu, or even the Khitan. Another gap concerns Dr. Bacon's working bibliography; this, unfortunately, is only one of many bibliographical lapses. It concerns the absence of any treatment on Dr. Bacon's part of certain significant analyses of Central Asian societies. This is particularly evident in her neglect of Krader's work on the ecology of Central Asian pastoralism and on the principal institutions of steppe society.

Just as conspicuous is Dr. Bacon's general failure to treat her major theoretical problem in the context it deserves. One gets the impression that she worked in a kind of vacuum, isolating herself from the advances that were being made in the same problem area by her colleagues in the United States and abroad. She seems unaware that the Kirchhoff work to which she refers was done, not after her field work, but in 1935, several years before! She also seems not to know that Raymond Firth struggled with the same general question at about the same time that Kirchhoff picked it up, and that Firth continues to give it considerable attention. The result of this approach is a somewhat anachronistic treatment. One simply cannot adopt Robert Lowie's position on *clan* as it was expressed in *Primitive Society* (1920) without encountering serious difficulty. As an illustration, consider Dr. Bacon's frequent assertion that in clan organization descent is traced through one parent to the total neglect of the other, a view that has been moribund for more than two decades since its exposure by Rivers and Radcliffe-Brown.

It is also strange that the obviously "Omaha" features of many Central Asian kin terminologies are never identified as such but are called "step-stair" instead. While the term introduced by Dr. Bacon is nicely descriptive, it fails to associate these Asian kin terminological features with their American counterparts. It is interesting that, despite Dr. Bacon's acceptance of the relation between *obok* and Omaha kin terminology, the Omaha terminologies in the New World correlate with classic clan organization.

Were more space available, I should like to take up Dr. Bacon's treatment of Chinese society, which seems to represent a microcosm of the defects of her whole work. To define the *chia* as a

joint family is clearly an error; and to analyze the basic Chinese familial pattern as a joint one is to compound that error. To make the *tsu* so central an institution misses the point of a large volume of recent contributions to the subject. One looks in vain in Dr. Bacon's sources for such names as Fei, Hsu, and Lang. She would have profited by consulting them.

Dr. Bacon has joined the lists in tilting with a problem of great theoretical significance and broad interest. Her treatment, though a welcome contribution, is marred with faults.

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Physics of Fission. *Soviet Journal of Atomic Energy, Suppl. No. 1.* S. M. Popova, Technical Ed. Consultants Bureau, New York, 1957. 140 pp. \$30.

In the present days of international rivalry in science, one of the interesting aspects of a book such as this is the opportunity it affords for comparing the present state of research in nuclear physics in the Soviet Union with that of the Western world. Only an incomplete comparison can be made on the evidence of this volume, both because the field is restricted and because at least seven of the 12 papers are more in the nature of surveys than presentations of original work. The survey papers accomplish their purpose excellently; B. T. Geilikman's leading paper on the "Theory of nuclear fission," A. N. Murin's paper on the "Fission products," V. N. Mekhedov's comprehensive treatment of "Spontaneous fission," and the summary of "Photofission" by L. E. Lazaerva and N. V. Nikitina all show easy scholarship and an encompassing knowledge of the literature. These essays are valuable today despite the lapse of time between the date of writing (January 1956) and that of their publication in English, and they will retain their value as stimulants for further experimentation and theoretical probing.

When one turns attention to the original research reported in this collection, a sharper comparison between East and West becomes possible. There are two documents of the Western world which are comparable in many respects, for, like the Soviet collection, they are derived from conferences related to the physics of fission, and they are not very different in date. One is the *Proceedings of the Symposium on the Physics of Fission held at Chalk River, Ontario, May 14-18, 1956* and the other is the *Proceedings of the Tripartite Conference on Cross Sections of Fissile Nuclei*,

which took place at Harwell, England, in July 1956. These documents show a great richness and variety in the Western research on fission, which one would judge to be largely missing in the U.S.S.R. if the present sample is at all comprehensive. The Russian articles on "Fission at low and high excitation energies," by N. A. Perfilov, and on "Fission by high-energy protons," by N. S. Ivanova, represent capable work and show that the Russians are making effective use of their 660-Mev synchrocyclotron. Both reports are founded upon work with photographic emulsions, and the third major original paper, on the "Determination of the threshold for emissive fission," by V. P. Shamov (which, incidentally, shows that unclear writing is no respecter of iron curtains) is likewise founded upon emulsion work. These, with some shorter notes on theoretical aspects, complete the present volume and present a contrast to the American-Canadian-United-Kingdom reports, which are founded upon all kinds of time-of-flight devices, nuclear reactors, electrostatic generators, cyclotrons, and synchrocyclotrons, together with a host of sophisticated electronic gear. The evidence seems to say that, although the Soviet research is done by expert and able men, the Western research is done by a much larger number of expert and able men. One wonders whether this will still be true 10 or 20 years from now.

The translation of the present volume is more literal than literary; it is adequate for its purpose, and the English is sufficiently clear, although it is often graceless and blunt. A few mistakes in translation are evident, the most glaring of which is in the title "Neutron fission," heading an excellent article by B. G. Erozolinskii; obviously "Fission neutrons" was the author's intent. Another occurs in A. N. Murin's survey paper entitled "The mass and charge of fission fragments," where the term *slow neutrons* is given in place of *delayed neutrons*—a considerably different concept. The most severe indictment of the present volume, however, is its price; not a few recipients will be disillusioned to find that they have bought a paper-bound volume much like a rather tawdry version of many government and laboratory reports, with an unjustified right-hand margin and a singularly tasteless treatment of the tables and figures. Prospective purchasers should be informed that the same material is available in better translation and in attractive, hard-cover book form from Pergamon Press, under the title *Physics of Nuclear Fission*, at one-third the price.

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