

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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