corticosterone (Kendall's compound F), which are biologically active with respect to liver glycogen deposition in adrenalectomized animals (*1*).

Incubation of 11-desoxy-17-hydroxycorticosterone (Reichstein's compound S) with certain microorganisms leads to the introduction of a hydroxyl group in the C-11 position, but in the unnatural alpha configuration (*2*). It is also possible to synthesize this unnatural isomer by chemical means (*3*). This differs from Kendall's compound F only by the stereoisomerism at the 11 position and the compound is commonly designated as epi-F.

The antagonistic action of structural analogs to naturally occurring compounds is now so well known as to constitute one of the basic areas of biochemistry (*4*). It has been demonstrated that the presence of oxygen on the 11 carbon of the active adrenal corticosteroids is important in the influence of these compounds on carbohydrate metabolism. It seemed attractive to conceive of the compound with the unnatural configuration at C-11 as a possible antagonist to the carbohydrate activity of the natural compound.

Accordingly, an experiment was designed to test this possibility. Compound F, epi-F, and mixtures were administered to adrenalectomized mice and the glycogenic activity was determined according to the method of Venning, Kazmin, and Bell (*5*). Young adult male mice, CBA × C57 BLK, F_1 hybrids, were used. Seventy milligrams of glucose were administered to each animal. The results are presented in Table 1.

The expected substantial deposition of glycogen was obtained with compound F. Limited glycogen deposition was seen with epi-F. Neither of the levels of epi-F employed had any apparent effect on the glycogen deposition obtained with compound F.

From these experiments it seems apparent that in the ratios employed, epi-F has no effect on the glycogenic property of compound F.

TABLE 1

LIVER GLYCOGEN DEPOSITION IN ADRENALECTOMIZED MICE

Steroid administered	Mg glycogen / 10 g mouse (range)	No. of animals
Control	0.2 (0.1–0.8)	10
20 γ compound F	6.4 (3.1–9.5)	10
500 γ epi-F	0.5 (0.1–2.1)	10
100 γ epi-F	1.3 (0.0–3.4)	9
20 γ compound F + 500 γ epi-F	5.7 (3.1–8.4)	10
20 γ compound F + 100 γ epi-F	7.2 (4.6–9.2)	10

References

1. THAYER, S. A. *Vitamins and Hormones*, **4**, 311 (1946).
2. PETERSON, D., *et al. J. Am. Chem. Soc.*, **74**, 5933 (1952).
3. ROSENKRANTZ, G., *et al. Recent Progress in Hormone Research*, **8**, (1953).
4. MARTIN, G. S. *Biological Antagonism.* New York: Blakiston (1951); WOOLLEY, D. W. *A Study of Antimetabolites.* New York: Wiley (1952).
5. VENNING, E. H., KAZMIN, V. E., and BELL, J. C. *Endocrinology*, **38**, 79 (1946).

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Book Reviews

An Appraisal of Anthropology Today. International Symposium on Anthropology of the Wenner-Gren Foundation. Sol Tax, Loren C. Eiseley, Irving Rouse, and Carl F. Voegelin, Eds. Chicago: Univ. Chicago Press; London: Cambridge Univ. Press, 1953. 395 pp. $6.00.

In 1952 the Wenner-Gren Foundation sponsored a conference of anthropologists for the purpose of writing and talking about the contemporary state of the science. A committee headed by A. L. Kroeber selected the participants. The written papers have been published as *Anthropology Today* (edited by Kroeber); the verbatim, tape-recorded discussions are available in the volume reviewed here.

The *Appraisal* consists of discussions centering upon the papers; consequently it cannot be read profitably without first reading the other volume. The discussions are organized on an analytical plan which makes sense for an integrated work but which in a transcript of discussions makes for confusion. Conversations on physical anthropology, for example, are found in six different chapters. The book has an index, but this does not help the reader to find his way through pages of talk to reach unexpected and important gems.

What can be learned about anthropology from this book? First of all, empirical richness and variety of data. Second, frank statements of varying schools of thought. Third, important deficiencies: a lack of conceptual integration, poor communication, and a tendency to harp on problems which anthropologists have delayed solving for years because of their failure to devise or learn appropriate concepts and methods.

Although most of the accurate critical strictures possible to make of modern anthropology have been voiced in this book, too many of them show that the speaker (and his listeners) do not comprehend the fact that such deficiencies have been apparent for years to outsiders. Thus one anthropologist notes, with an air of discovery, that the study of larger societies

requires analytical tools different from those used in studying small societies. And another perceives that "lip service" has been given to the so-called "integration" of anthropology which has in fact been absent—but hardly a single voice speaks up for the obvious solution: explorations toward an analytical conceptual scheme along multidimensional or "interdisciplinary" lines. Thus, although this volume and its companion book show that much empirical progress has been made, they also show that anthropology remains pretty much where Dr. Straus places it on page 153: "I do not think that anthropology exists as a distinct entity. . . . It exists merely as a meeting ground of people interested in man." Dr. Linton acknowledges this on the following page, but also wants anthropology to be a "real focal point of research." This goal can be realized only in part, as long as anthropology ignores its needs for conceptual precision, and fails to capitalize on its dependence on the often more sophisticated outlook of neighboring disciplines.

In the midst of applause for the Wenner-Gren conference, the reviewer offers a few dissenting observations. Science is made by men—particularly the social sciences where the operational character of the problem is often not as influential as the sheer productivity and persuasiveness of the scientists. Consequently one cannot hope to produce a genuine *summa anthropologica* on the basis of a selection of individuals. These individuals represent points of view, not slices of knowledge; the selection must inevitably be biased, and important voices must be left out. There is a slightly false note about a conference which proposes to examine the total condition of a field as diffuse and conceptually unintegrated as anthropology, and one must have certain reservations about its possible authoritarian influence and use. I do not believe that this is "anthropology today" and that the volume under review is a complete "appraisal."

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International Tables for X-ray Crystallography: Symmetry Groups, Vol. I. Norman F. M. Henry and Kathleen Lonsdale, Eds. Birmingham, Eng.: Kynoch Press, 1952. (For the International Union of Crystallography.) 558 pp. Illus. 105s.

This volume, together with two more that are to follow, will constitute a thoroughly revised and expanded edition of the *Internationale Tabellen zur Bestimmung von Kristallstrukturen* of 1935 (Borntraeger, Berlin), which were reprinted with corrections and notes in 1944 (Edwards Bros., Ann Arbor, Mich.). Many changes have been made, mostly for the better, so that the new tables indeed deserve a new name. The one chosen is unfortunately somewhat misleading, as most of the results compiled in this volume antedate x-ray diffraction. The new title is also unduly restrictive, for this work should prove of interest to *all* crystallographers, be they engaged in "electron crystallography," in "neutron crystallography," or even in "visible light crystallography." Many mathematicians, physicists, chemists, ceramicists, mineralogists, and metallurgists will find it useful.

After an unexpected historical introduction by M. von Laue—a pleasant surprise—this volume presents symmetry data for various kinds of groups (in 1, 2, and 3 dimensions); translation groups (1 row, 5 nets, 14 lattices); point groups (2, 10, 32); space groups (2, 17, 230). Subgroups and supergroups are tabulated for all point groups, for the 17 plane groups, and, as an example, for the space groups of one point group ($422\text{-}D_4$). The point-group symmetries of various physical properties of crystals are listed. Aspects symbols are tabulated and directions given for transforming them into diffraction symbols. The geometrical structure factors are listed not only for the general case but also for indices that obey certain criteria; they are collected in a separate section, in which the expression of the electron density is also given for each space group. Some, but not all, $|F(hkl)|$ and $\alpha(hkl)$ relationships are stated. The Delaunay reduction of any primitive cell to the conventional Bravais cell is included. Patterson-Harker functions, some statistical methods, and inequalities are also mentioned. In tables of concordance for space group symbols in alternate settings, interleaving symmetry planes are explicitly labeled; e.g., $I\,\overset{c}{b}\,a\,\overset{n}{m}$.

The editors have succeeded in limiting their selection to data of proved value. Half the book is devoted to space groups: symmetry diagrams, lists of positions of various multiplicities, coordinates of all sites in each position, reflection criteria. Each group begins a new page. Although the Hermann Mauguin notation is now given priority, the groups are still listed in the disorder of the Schoenflies superscripts. Some welcome simplifications: the tetragonal C and F settings have been dropped, and so has the hexagonal H setting. The primitive hexagonal lattice is no longer designated C but P. Rhombohedral diagrams are considerably improved. A defeatist decision to do away with all cubic diagrams undisputably results in compactness and economy. Alternative monoclinic descriptions, of dubious usefulness, require the consecration of the symbols that C. Hermann had relegated to a footnote in the 1935 *Tabellen*; e.g., *Pm* becomes *P*11*m* in the so-called "1st setting" and *P*1*m*1 in the standard (or "2nd") setting. The 1's used as fill-in do *not* refer to symmetry directions of the lattice, as they do in such symbols as *P*3*m*1 and *P*31*m*, so that this extension of the symbolism is rather infelicitous. Friedel's nomenclature of crystal classes is misquoted, as the alternate names provided for the trigonal classes when the lattice is hexagonal are left out. In places the text reads like a textbook, a mildly annoying feature in a book whose purpose is less to educate crystallographers than to make mathematical results accessible to them. The 1935 *Tabellen* were