

Potlach, Power, and Social Structure

To me this book is exciting. First, it confirms my pet conviction that the age of a true unification of the social sciences is here, or is imminent, and that the various separate disciplines among the social sciences have already evolved most of the necessary analytical tools. Second, it provides some important approaches to the theory of social structures that I have not encountered elsewhere.

According to the author, Peter M. Blau, the purpose of *Exchange and Power in Social Life* (Wiley, New York, 1964. 376 pp., Illus. \$7.75) is "not to present a systematic theory of social structure," but rather "a prolegomenon of a theory of social structure."

The problem is to derive complex from simpler processes without the reductionist fallacy of ignoring emergent properties. Social exchange is a central principle of social life, which is derived from primitive terms, and from which complex social forces are derived.

"Emergent properties," Blau notes, "are essentially relationships between elements in a structure," a view of which I am inordinately fond.

To a significant extent, each major social science discipline now suffers a split personality. Grand but untestable theories lie on one hand, and miniscule hypotheses with their empirical testings on the other, with a vast absence of connective tissue between. Sorely needed are successful attempts to build downward from grand theory to reality, and to assemble components upward into more comprehensive analytical structures. In this book Blau makes a significant and successful (subject to some reservations discussed below) attempt to identify some components, to state their general properties, and then to indicate how more complex social structures can be built from them.

For perspective, we might note that

in recent decades economists have moved from their exclusive domain of the perfect economic market, through imperfect competition and oligopoly, to pure bilateral monopoly. The analysis at each step has become less narrowly economic and more broadly social and political. Bilateral monopoly is explicitly used by Blau as an initial model with "a minimum of complexity" for the analysis of the work groups, and I have used it as the "unique transaction." Also, in recent decades, some sociologists have been giving increased attention to the basically transactional aspect of much human interaction—for example, the work by Homans, Thibaut and Kelley, Goffman, and Emerson.

Much of game theory has a similar orientation, whether done by psychologists, decision theorists, or political strategists, as, of course, Siegel and Fouraker's work on bargaining and group decision making does. And I yearn to try separating some of the findings about small groups and group dynamics into transactional and communicational elements. The transaction, or exchange, seems the central focus toward which various social scientists have been gravitating. I could hardly agree more with Blau's position that exchange is both the most obvious point of common reference for all social science and the most likely building block with which (by adding the cement of communications) we can put together the analysis of more complex social relationships and structures. I am convinced that in recent years sociologists, economists, and political scientists have been saying some important things that differ only in the language used, and some others which, while they slice up reality somewhat differently, still deal with substantially similar chunks of the same presumed reality. For example, numerous propositions in Blau, ex-

pressed in the language of sociology, can be translated directly into propositions stated in jargon that I have pulled out of a basically economic vocabulary, while many others can be carried over with only a modest change in the angle of the slice. This I find a tremendously exciting development.

Blau's first seven chapters deal with the component elements of social relationships; the next four, with more complex structures that can be built from these elements; and the concluding chapter, with the dynamics of social change at the complex level. In the first section, Blau, who builds all around the notion of exchange, develops such component elements as social attraction, integration, support, power differentiation, expectations, and change; he attaches particular significance to the power differentiation that is associated with overtly unequal exchanges. Through most of this section I find myself either a strongly supportive fellow traveler or a willing follower.

In the second part, elements developed in the first are used to analyze more complex structures. To illustrate, "indirect exchange" strongly influences the structural relation between professionals and their clients, in that the professional receives important rewards for services to his client not from the client but from the profession. Similarly, ultimate rewards to the contributor to charity come not from the recipients but from the status received from the donor's peers. The particularistic and universalistic values formulated by Parsons and Shils are skillfully used in conjunction with the elements from the early chapters as a basis for group cohesion, group differentiation, and power stratification. Common values are seen as performing the same kind of integrative function for larger social structures that social attraction performs for pairs or small groups. Formal opposition may be legitimized as part of the social structure in conjunction with the legitimation of normal authority.

As a tentative theory of social change, the final section rests squarely on the preceding materials. To oversimplify, many of Blau's "elements" contain inescapable dilemmas: for example, a person's great competence attracts others and is feared by others as status competition. Both aspects must be expressed. But the opposing

aspects must appear alternately, not as compromise. Since they do not lead circularly back to where they started, they provide an inescapable basis for dynamic change. Institutionalized opposition can also provide the analytical base to account for social change.

I have reservations about some of Blau's analytical tools. First, the central focus is on *social* exchange, which involves things given without explicit return obligation. Although some highly important aspects of social structure are competently developed from this base, which is essential to them, I strongly suspect that a more complete explanation will have to rest simply on *exchange*, whether social or economic (Blau's terms are roughly equivalent to what I would call *generous* or *selfish* transactions). Second, much emphasis is put on the power differentiating effects of giving larger favors than others can reciprocate, in which process "the ability to distribute valuable possessions becomes a socially defined mark of superiority." With awareness of the many sociological toes to be trampled, and without in the least deprecating the importance of the symbols involved, I would suggest that nothing really important about power differentiation has been explained until we have found out why one man is able to dispense more favors in the first place. This reservation ties to the first, since the answer may lie heavily in selfish transactions, whether of a sort that economists deal with or not. Third, after some long tussles of my own with related problems, I think that a meaningful analysis of power *must* distinguish sharply between bargaining power (whether A can get B to do what A wants, on relatively good terms) and "just plain" power (whether A can get B to do what A wants, whether on relatively good or bad terms in the particular case). Blau does not make the distinction, and, in consequence, his analysis of power often seems fuzzy.

I am convinced that Blau is working squarely in the area, and with the general kind of technique, that will produce the most significant social analysis at this stage of the science. Further, despite my reservations about particulars, I feel that this contribution is itself highly significant.

ALFRED KUHN

Department of Economics,
University of Cincinnati

Refractory Materials

The Science and Technology of Tungsten, Tantalum, Molybdenum, Niobium, and Their Alloys. Based on an AGARD conference. N. E. Promisel, Ed. Published for the North Atlantic Treaty Organization by Pergamon, London; Macmillan, New York, 1964. xiv + 588 pp. Illus. \$20.

Since the end of World War II, the development of materials suitable for structural uses at ever higher temperatures has been one of the principal aims of materials research conducted on behalf of military and space programs. Among the metals with high melting points which suggest that they are potentially useful, tungsten, tantalum, molybdenum, and niobium, and their alloys, are currently considered most promising. This judgment is based on a number of considerations including not only the melting points of the metals, but also the temperature dependence of their mechanical properties, as well as their fabricative properties, rate of oxidation, and availability. In June 1963 (at Oslo, Norway) NATO's Advisory Group for Aeronautical Research and Development, AGARD, sponsored a Conference on Refractory Metals which was held to discuss the present state of the science and technology of these four metals and their alloys. The papers that were submitted to the conference constitute the major portion of the bulk and substance of the volume under review.

The papers are organized in seven sections: Introductory Papers (three papers that provide the rationale for the conference); Alloys and Alloying Behavior; Properties and Engineering Applications; Deterioration and Protection; Analysis and Testing; Primary Fabrication; and Secondary Fabrication. With the exception of the first section, each section consists of four or five contributed papers (which were distributed as preprints and therefore not presented in full at the conference), an interpretive paper in which one or more rapporteurs comment on the contributed papers, and a summary of the discussion that was stimulated at the conference by the rapporteurs' remarks and the preprinted papers.

The field of refractory materials, doubly blessed by the urgency of military and space requirements and by

generous funding, is moving rapidly. This collection of approximately 30 papers provides the most up-to-date, comprehensive discussion of the state of the art and the science that is available. However, as one would expect, the papers are not of uniform quality. This is, unfortunately, equally true of the interpretive statements and the summary and conclusion provided in each section.

It is stated in the preface to the book, that one of the objectives of the conference was ". . . to force a 'marriage,' a more intimate intellectual relationship, between the . . . 'scientist' and 'engineer.'" To this end, both are well represented among the authors, and it is evident that theoretical concepts are being used, with some success, to explain the behavior of engineering materials and to suggest approaches to the development of more desirable properties.

I was most pleased with and reassured by Frederick Seitz's remarks in his introductory paper, "Trends and stimulation in solid state science," to the effect that solid state science ". . . is still a very rich field for future work and will continue to be exciting as long as man has any direct interest in condensed matter." It is difficult to conceive of a time when this might not be so.

L. M. KUSHNER

Institute for Materials Research,
National Bureau of Standards

On Teaching Mathematics

Some Lessons in Mathematics. Members of the Association of Teachers of Mathematics. T. J. Fletcher, Ed. Cambridge University Press, New York, 1964. xiv + 367 pp. Illus. Paper, \$2.95.

Some 20 members of the Association of Teachers of Mathematics (of Great Britain), who had been giving careful consideration for a substantial period of time to problems of the mathematical curriculum, met in Leicester in the summer of 1962, and from that meeting the volume under review emerged. Its aim is to indicate, through the presentation of model lessons, the sort of mathematics and the sort of classroom treatment that the authors deem appropriate for the training of users of mathematics in the