and sex differences. Additional two-way analyses of data cross-classified by age and sex might have shed additional light on questions of roles and of maintenance responsibility. Of course, this is not to say that the analyses actually reported do not represent an advance over earlier attempts to quantify the social organization of primate play. For example, Symons's analyses of the age and sex composition of play dyads correctly control for differences in demographic frequencies and for degrees of playfulness that vary with age and sex. Many previous attempts to demonstrate play-partner selectivity in primates have failed to recognize these essential variables.

Symons views rhesus play-fighting as a biological adaptation for development of motor skills that can be used in escalated fights. He cites his own data and others' observations in support of this view as against the commonly held notion that human and nonhuman primate play functions to produce novel and variable behavior patterns. However, recent psychological analyses and computer models of skill development, experimental physiological psychological studies reporting enhanced brain growth and development in enriched environments (in rats, to be sure), and Bruner's and Sutton-Smith's own discussions of the psychology of play all suggest that both positions are in part incorrect, in part caricatures of a single truth as yet only vaguely glimpsed: that play (as distinct from rote practice) can specifically function to develop flexibility or generalization of skill, that the anatomical substrates of this flexibility are to be identified with those brain components that respond to environmental enrichment, and that play may be the chief behavioral mechanism responsible for producing brain growth in an enriched environment.

Symons's rhesus, unlike Jane Goodall's chimpanzees and Paul Leyhausen's cats, are not introduced to us as separate personalities. However, there are hints of a novelist's view in Symons's description of a small but domineering yearling female (identified only as 127—68) who "played very infrequently," whom "other monkeys seemed to avoid," and with whom "other females seemed reluctant to play" (pp. 64–65). An attempt to integrate these intuitively compelling dimensions of individual variation with broadly based biological analysis would represent a truly synthetic approach to primate play. A wealth of literary examinations of behavior succeed where to date biologists have failed in striking the twin chords of individual and group differences, reminding us that some human intuitions about the logic of behavioral and social development remain to be codified.

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Noncapitalist Economies

Peasant Livelihood. Studies in Economic Anthropology and Cultural Ecology. RHODA HALPERIN and JAMES DOW, Eds. St. Martin's, New York, 1977. xii, 332 pp. Cloth, $14.95; paper, $6.95.

Peasant Livelihood is a collection intended by its editors to rehabilitate and advance the work of the economic historian Karl Polanyi by showing how his conception of the economy as "instituted process," capable of manifesting itself within many different institutions (political, social, religious, and so on), can be elaborated and perfected.

Polanyi refused to consider capitalism all of a piece. He thought that money, trade, marketplaces, and factor markets (for example for labor or for capital) had different, often independent, histories and that many of the postulates or implicit premises of allegedly general economic theory were specific to capitalism and, accordingly, culture-bound. Modern capitalism, for Polanyi, meant the engrossment of all institutions by economic forces, epitomized in the self-regulating, price-making market—what his epigones now call the market principle. In precapitalist societies, however, the economic was embedded in social, religious, political forms, unliberated by the dissolution of ancient constraints that had kept land and labor, in particular, off any impersonal, price-making market.

If very few economists ever became interested in Polanyi's ideas, many anthropologists were quickly attracted to them. For one thing, anthropologists always like arguments suggesting that some particular way of looking at things is culture-bound, whether it be neoclassical economics, Freudian psychology, theories of ritual, totemism, or taboo, the use of concepts like "kinship," or the CIA's difficulty in distinguishing between Cuba and Guatemala. For another, Polanyi carefully read and cited such scholars as Malinowski, Thurnwald, and Firth, thus demonstrating not only that nonanthropologists sometimes read anthropological works but also that they can sometimes see possibilities in such materials that anthropologists cannot. These were heady discoveries, then; and Polanyi soon had prolific rooters, including some who have devoted their lives to the adumbration of his ideas.

The economistic ("formalistic") backlash was not long in coming, however. Since 1944, when *The Great Transformation* first appeared, and especially since 1957, when Polanyi's collaborators joined with him to publish *Trade and Market in the Early Empires*, antagonists both anthropological and economic have sprung up in substantial numbers. Although the debate has been ignored by many and deplored by a few, it continues to provide some with a steady psychic income, to take up several lectures in almost any economic anthropology course, and to stimulate publication. While the volume under review is not the result of such controversy, it aspires to figure in it.

Halperin and Dow, its editors, certainly have Polanyi's ideas on their minds, and both cite him and refer frequently to his work. But the contributors seem somewhat less concerned. Though Polanyi is referred to 18 times in the text, an even dozen of these citations occur in the sections by Halperin. She has written the introductory and concluding essays and the prefaces to the three major divisions of the book: on production, on distribution, and on integration. Other three-part schemata turn up here. All economies can be studied, we are told, and "become readily comparable as all can be understood within the categories of the universal matrix" (p. 270). The concept of a universal matrix has nothing to do with Mother Earth. It is, rather, a simple grid, consisting of three "processes" (production, distribution, consumption) and three "dimensions" (physical, cultural, social).

Production, for example, can be seen in all three dimensions in that it requires physical effort, a system of cultural roles to determine appropriate periods for work activity, and so-

cial organization to allocate work tasks to individuals. Productive resources such as land have a physical form and a cultural meaning, which are organized socially by institutions. A single dimension, such as the physical, includes all three processes: production can be analyzed as the expenditure of calories for work, distribution as the physical distance traveled by goods, and consumption as the intake of caloric energy [p. 270].

Though this rather simplistic schema may make economies readily comparable, it is at least probable that one will end up not knowing a good deal more for having compared them. But since the universal matrix and, for the most part, Polanyi himself, can be ignored for most of the 200-odd pages between the introduction and the conclusion, it may not matter. (Somewhat more distracting to this reader was yet another tripartite typology in the conclusion, this time of peasant political economies, one of which turns out to be what is called "the commercial plantation type." Some of the problems implicit in calling plantation wage-earners "peasants" should have become clearer by now, at least to readers of Polanyi.)

Fourteen selections (five of which, by Neale, Chayanov, Mitchell, Orlove, and Parsons and Price, are somewhat mysteriously reprinted or adapted from other publications) make up the rest of the book. They are held together by being about the economic life of rural people in various places (mostly in Mexico and the Andes), but by too little else. This reviewer found Brush's critique of the concept of rural underemployment, Léons's sketch of an Andean politicocommercial broker, Derman's overview of Fulbe serfdom, and Smith's classification of Guatemalan market systems instructive. But these contributions truly do not share data, theory, method, or even a revealed interest in Polanyi's work.

This collection, then, cannot add much to the reputation or understanding of Karl Polanyi. Most of the essays bypass the issues that concerned him or invoke him only in rather perfunctory fashion. Polanyi, after all, made some very penetrating observations about both economies and economics. Though not of the stature, perhaps, of either a Lévi-Strauss or a Chomsky, Polanyi, by bravely questioning the received wisdom, put many scholars in his debt, meanwhile provoking the same nervous envy and petulance as have these other, probably grander, thinkers. If the book makes any clear and concrete contribution, it is not to our appreciation of Polanyi so much as to our understanding of certain problems in the study of contemporary peasantries. In at least a few of the articles, good data and good ideas are combined in enlightening fashion for the benefit of students of peasant economies.

Yet such is hardly adequate grounds for so miscellaneous a collection these days. Most disturbing, perhaps, is the realization that there is relatively little here to make any economist think twice about his or her approach to understanding any of the situations analyzed by the writers. Polanyi, after all, tried very hard to make a difficult point clear; coming from economic history, he taught anthropologists why their subject matter could be more illuminating than they themselves had realized. Anthropologists (the reviewer, of course, included) ought to be trying harder now to reteach Polanyi's assertions to economists. Regrettably, this book shows we have a long way to go.

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Subsistence Activities

Human Activity System. Its Spatiotemporal Structure. HITOSHI WATANABE, Ed. University of Tokyo Press, Tokyo, 1977 (U.S. distributor, International Scholarly Book Services, Forest Grove, Ore.). xii, 260 pp., illus. $33.50.

In the realm of the physical sciences Japanese researchers freely interact with the international scientific community. This is because the points of analysis, the methods, and the vocabulary of the "hard" sciences are relatively well established, facilitating international communication. Japanese social scientists, on the other hand, have had little impact outside their own country. The barrier of the Japanese language has generally made the results of their research unavailable to their non-Japanese colleagues. Furthermore, they have been set apart by the distinctive methods and approaches created and in turn reenforced by their isolation. *Human Activity System* is an attempt by one group of Japanese anthropologists to make their thoughts on human behavior and the results of their work available to researchers in other countries. The book consists of 11 papers by seven anthropologists from the University of Tokyo. All the papers are available in other English-language sources, but they are presented again here in an attractive, readable form.

The papers describe a number of the activities of modern Japanese fishermen, coastal gatherers, and hunters. Separate papers also describe Ainu ecology and Papuan horticulture and hunting. Together they form a neat package because the authors have a similar theoretical orientation. In fact, the editor, Hitoshi Watanabe, says that describing this orientation and showing its relevance to the study of human behavior is one of the goals of the volume. A second stated goal is to illustrate the techniques Watanabe and his colleagues have developed for recording and describing human activities.

Watanabe opens the volume with a sweeping critique of all previous studies of human behavior. I doubt that American anthropologists will find his criticism compelling, for it rests on a view of culture that few are likely to accept. Watanabe sees culture not as humankind's extrasomatic means of adaptation but rather as "social heredity." By taking this narrow and now obsolete view he is able to argue that cultural analysis does not offer a means of understanding the relationships among various human activities. He proposes that the "scientific study of human life" requires that human activities be viewed as entities systemically related to one another and to the environment. Rather than using the term culture, he calls this the "human activity system." To Watanabe the most important part of this system is its "spatiotemporal aspect," or the way in which human activities are meshed with the distribution in time and space of environmental features. To him and his colleagues elucidation of this aspect of human activities is a necessary first step in any attempt to study human ecology or to understand the operation of culture.

Most of the papers are concerned with the scheduling of human activities to coincide with environmental stress or potential. Watanabe's groundbreaking study of Ainu ecology is the clear model for most of the studies. By describing in detail the behavior of people engaged in fishing, hunting, and gathering, these papers provide insights into the application of some basic subsistence techniques. Since the emphasis is on the application of the techniques, potentially important ethnographic information is omitted and the cultural milieu of the activities is not treated in detail. A more telling criticism may be that the studies are aimed at describing covariation between cultural and environmental phenomena. A cause-and-effect relationship seems to be assumed but is never demonstrated.

The nature and importance of individual differences in skill and physical po-