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SOCIAL/CULTURAL ANTHROPOLOGY: Exchange in Oceania: A Graph Theoretic Analysis. Per Hage and Frank Harary

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she knows quantitatively, her richly detailed qualitative analysis has thoroughly convinced this reader, at least, of her arguments linking maternal behavior and child death.

Elders Living Alone: Frailty and the Perception of Choice. Robert L. Rubinstein, Janet C. Kilbride, and Sharon Nagy. *Modern Applications of Social Work*. New York: Aldine de Gruyter, 1992. 184 pp.

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Elders Living Alone is a study of elderly people, mainly debilitated, living alone in Philadelphia. The study explores the relationship between the "personal surround" of the elderly person and the "home environment." It contends that the ability to continue living on one's own fulfills key cultural values of independence as actualized in freedom of choice. "I can do what I want when I want," was a frequent rationale given by informants for living in substandard conditions. Through the use of case studies, the book illustrates in considerable detail how these elders adapt to and find daily satisfaction in living conditions and life choices that are radically circumscribed compared with those taken for granted by healthy middle-aged, middle-class adults. The study testifies to the adaptability of the human spirit.

In a concluding chapter, the authors raise questions about how the unequal distribution of resources in our society and the cultural belief in individual, as opposed to community, responsibility adversely affect these elderly people. This is an important point, especially if we are to use these data in developing a cross-cultural analysis of marginalized elderly; unfortunately, by relegating it to the closing chapter, the analytic power of the argument is less than an earlier integration would have provided. This is also a problem with the authors' otherwise perceptive critique of the use of narratives.

The book is an example of an emerging type of research in qualitative gerontology. In a rough analogy to women's studies, qualitative research in gerontology can be divided into three stages. In the first, ethnographers sought to correct the "geriatric blindness" of earlier studies, and examined the lives of the elderly in other cultures. In the next phase the focus was primarily comparative, as researchers examined other cultures to understand the sources and dynamics of the

supposedly "better" or "worse" situation of the elderly as compared with the United States. In American culture, researchers sought to understand the sources of satisfaction or dissatisfaction in old age—the point of comparison being the middle-aged and middle class, which was the social context of most of the researchers. In the emerging third phase, researchers are trying to better understand old age from the diverse perspectives of the heterogeneous elderly population.

This book can be seen as part of the third phase, in that it demonstrates the logic, complexity, and coherence of lives lived in "small social spaces." However, its frequent comparisons to the values and norms of the middle-aged and middle class sometimes detract from the goal.

In a strong and convincing way, *Elders Living Alone* provides a caveat against using one's own value screen to judge the personal satisfaction provided by apparently marginal living conditions. It vividly demonstrates the pathological intensification of the American value of independence in the case of the frail elderly. In so doing, the book serves as an indictment against key values in bourgeois culture.

Exchange in Oceania: A Graph Theoretic Analysis. Per Hage and Frank Harary. *Oxford Studies in Social and Cultural Anthropology*. New York: Clarendon Press (Oxford), 1991. 334 pp.

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Mathematics, like structuralism, deals with the variable content of culture by understanding the relations among cultural elements. Network and graph theory are ideally suited for this task. In a virtual handbook of formal concepts and techniques for analysis of structure and for conceptualizing the full variety of uses of the concept of structure, anthropologist Hage and graph-theorist Harary provide foundations for the comprehensive study of structure and dispel some conceptual confusions haunting ethnographic literature. They focus on analyzing the diversity of exchange relations (trade, marriage, and kinship; ceremonial and social relations; global social structures) in Oceania.

Chapter 2, "Paths, Cycles and Partitions," gives an exemplary definition of *dual organi-*

zation (as bipartite graphs having the common property of relations strictly between two distinct sets of points) that unifies radically different surface forms. Confusion over what constitutes generalized or restricted marriage exchange is clarified by graph-theoretic definitions: the first as an asymmetric Hamiltonian digraph containing a cycle spanning all of its points without passing through any point twice and without reciprocal links for any adjacent pair in the cycle (cycle length >2); *restricted exchange*, in contrast, corresponds to a symmetric graph with cycles of length 2. Chapter 6, "Combination and Enumeration," beginning with an appropriate elucidation of Lévi-Strauss's "atom of kinship," exemplifies the use of structural concepts referring, not to cultural content, but to relations among elements in culturally defined systems. It provides a language and techniques to express cultural oppositions (e.g., presence vs. absence of exchange, direction of relation, positive vs. negative value) and coherent combinations of relations (e.g., structural balance) and to classify and enumerate structural variants of a single theme as transformations. Chapter 7, "Binary Operations and Groups," adds operations on pairs of elements and provides tools for comparison of structures as graphs, subgraphs, and transformation groups of related structures. Ethnographic analyses clarify principles of balance and flow of goods in kin relations (e.g., Arapesh and Tonga), structural implications of cousin marriage, and structures such as marriage exchange, navigation charts, or pollution beliefs. The latter exemplifies the Klein group of two pairs of opposite-sign elements and four transformations (interchange signs, elements, both, neither) as a structural model much used by Piaget and Lévi Strauss, where elements are multiply but coherently related in a domain of contrast.

Original ethnographic contributions in chapters 3 through 5 ("Centres, Neighborhoods and Roots," "Matrix Analysis," "Markov Chains") begin with a reconstruction of the voyaging and exchange network of Micronesian sea-lanes and elucidation of the structural basis (centrality, betweenness, neighborhoods) of trading success and political stratification. Chapter 4 formalizes the approach to measuring adjacency, reachability, distance, and derived measures of centrality, such as betweenness. These measurement concepts are applied to archeological reconstructions of trade networks in the Mailu area, to the Micronesian sea-lanes, and to yam ex-

change in a Trobriand hamlet. Nearest-neighbor models of exchange partners are employed in reconstructing probable evolutionary sequences in the development of trade networks, such as the kula ring. Chapter 5 takes a numerical network approach to flows, distributions of wealth, and equilibrium in exchange systems. There is evidence for two distinct origins of chieftainship, one in a favorable location that enhances entrepreneurship (as argued by Uberoi), the other in certain marginal positions that allow monopolization of scarce and prestigious trade resources (as argued by Brunton for Kiriwina).

Graphs are analyzed by the application of theorems (p. 9). Theorems and reviews of mathematical sources are placed in this book where directly relevant to the solution of analytical problems. The authors demonstrate chapter by chapter their general thesis (p. 275): "For each area of study in anthropology that involves structure, there is a branch of graph theory that can serve as the appropriate mathematical model." Enlarging on their earlier book (*Structural Models in Anthropology*, Cambridge University Press, 1983), also organized in terms of the concepts and techniques of graph theory, they demonstrate what we can learn by an explicit formulation of concepts, directed toward robust substantive application.

From Marcos to Aquino: Local Perspectives on Political Transition in the Philippines. Benedict J. Kerkvliet and Resil B. Mojares, eds. Honolulu: University of Hawaii Press, 1991. 334 pp.

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The major purpose of this book, according to the editors, is to examine critically the "local perspectives" in the so-called people power revolution in the Philippines, an area neglected by scholars and lay writers on the subject. The editors write that "the focus in both scholarship and reportage has been on what happened in certain areas of Metro Manila, the participation of the middle and upper strata of society, 'key personalities,' and the perspectives of political partisans" (p. 1). They then raise the following questions:

What was happening elsewhere in the country? How did other sectors of society view the events or "participate" in them?