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DOUGLAS R. WHITE AND ULLA JOHANSEN, *Network Analysis and Ethnographic Problems: Process Models of a Turkish Nomad Clan* (Oxford, U.K.: Lexington Books, 2004). Pp. 497. \$120.00 cloth.

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This new book by Douglas White and Ulla Johansen goes well beyond what Bahram Tavakolian was thinking of when he spoke of “the multiple varieties of nomadism” and “the multiplicity of anthropological modes of thinking about nomadism” in a 2003 review for *Reviews in Anthropology* (vol. 32). *Network Analysis and Ethnographic Problems* represents an extreme in ethnographic method by using detailed professional observations over many decades (1956–95) and an extreme in analysis by using cutting-edge network modeling, graph theory, and computational expertise that is simply not available to the rest of us yet.

The association of three highly unusual factors—years of genealogical information, years of observing and recording a people’s marriages and migrations, and an interest in constructing scientific explanatory statements about the social structures that emerge as these natural and cultural processes unfold—results in a unique book. In theoretical interest, it has something in common with two foundational works that set off years of anthropological wrangling about kinship, George Peter Murdock’s *Social Structure* (1949) and Claude Levi-Strauss’ *Elementary Structures of Kinship* (1969, original French version in 1949). What seems to have prompted mathematical anthropologist and network analyst Douglas White to team up with more traditional ethnographer Ulla Johansen was the possibility of using her incredibly detailed knowledge of Turkish nomads’ social activities over several generations to try to resolve the most vexing problems of those two opposing theoretical systems. The result of the collaboration between White and Johansen is a book that, like those two earlier efforts, will undoubtedly serve as a take-off point for many other scholars to follow.

In addition to its contribution to our understanding of kinship theory in a quite new way, this book makes an outstanding contribution by reintroducing ethnographers to the network perspective. Fifty years ago, social anthropologists J. A. Barnes and Elizabeth Bott introduced network analysis into ethnography. Their initial steps made it possible for J. Clyde Mitchell to

cut an exciting path that was soon followed by other British social anthropologists, revealing how valuable network analysis could be, especially in the study of urbanization of African populations.

The end of the formal colonial era slowed social anthropological research in Africa in the decades following 1960. In addition, changes in the interests of anthropologists in the English-speaking world, such as the reduction of interest in comparative social structures and cultures, coupled with rising interest in qualitative interpretive ethnography, left the field of social network analysis to be developed by sociologists and organizational scientists. Douglas White, however, is one of a small number of anthropologists who developed the mathematical expertise necessary to make a genuine contribution to network analysis of complex systems through combining graph theory, long-term fieldwork, and the electronic computation required to deal with masses of quantitative data. These are the skills he brought to this work, putting this book at the cutting edge of network studies, regardless of discipline.

Thus, even those who are not interested in Turkish nomads *per se* may find this book of great value. Whether the reader is interested in kinship, in economics, in politics, or in history, this book might be considered must reading. However, it is not easy reading. Although the book is well-written, the subject matter is very complex and multidimensional. It contains many necessary tables and figures. It even gives URLs to color-coded figures that are available only on the Web, figures so complex that they cannot be understood without the color coding. Something that some readers may not understand is that, although most graphic illustrations appear in only two dimensions, graph theory is designed to explain multidimensional problems. Analyzing only a few dimensions of a multidimensional situation can be genuinely misleading, and it certainly will not yield much understanding of the whole.

The book begins with an introduction to network analysis in relation to ethnography, providing a succinct history of network thinking, including recent developments in various disciplines about network topology and dynamics. The authors point out that “taking a network path to coding and analysis” in ethnography leads to the ability to understand the emergence of social structural phenomena that would otherwise remain unobserved.

Another distinctive feature of this book is the formality with which the authors present their ideas and findings. In the introductory chapter, for example, they present four propositions, about network theory and emergence, with which are associated specific hypotheses that are supported or not by observation and analysis. The first of these propositions is “Networks have structural properties (local and global) that have important feedback on behavior and cognition” (p. 8). Clearly, that proposition is important not just to kinship, marriage, lineages, and clans but also to a much broader range of phenomena. Although the reader will learn much about the Aydınlı nomads in southeast Turkey—their lineages, clans, marriage preferences, and observed patterns—this book is pointedly not just about those things but, as its title states, about ethnographic problems. Chapter 2, “Problems of Analysis,” puts it clearly: “How shall we ask questions that might unfold a whole theory-net of interesting and useful findings, ones that articulate with other theory-nets and research programs, and what shall be the types of definitions that bring a subject into a clear perspective?” (p. 59). Fortunately, the authors provide a twenty-five-page glossary, organized in categories such as ethnography and sociology, networks and graph theory, kinship and social organization, complexity theory, and so on. This reviewer found the glossary indispensable and also appreciated the sections suggesting further readings found at the end of each chapter. These features certainly add to the value of the book as a teaching tool.

The authors provide much evidence for their overview statement that “long-term field research has changed the face of anthropology” (p. 407). In distinguishing between phenomena that are easily observable and those phenomena that are generated through processes of interaction over periods of time, they show the need for new concepts, such as “structural

cohesion,” that can help fill the gap “between social structure and social organization,” and more importantly, “provide a link to the theory of complex phenomena that emerge through interaction” (p. 407).

One quotation from their concluding chapter summarizes well the kinds of innovations this book makes: “It is this very multiplicity of interactive levels and variables that provides a conceptual foundation for the study of social cohesion through the formal definitions and analysis of marital relinking (chapters 2 and 5), structural endogamy (analyzed in chapter 6), and changes in bicomponent or exocohesive structure (chapters 9 and 10) over time. We show how to use the study of changing practices to investigate emergent or changing rules, groups, and norms” (p. 408). Unfortunately, some readers of this review will be put off by the many neologisms—“relinking,” “bicomponent,” and “exocohesive” among them. However, the careful reader of the entire book comes to see the necessity, to capture the meaning of phenomena generated by interactions that have not previously been included as theoretical concepts.

White and Johansen have produced what could be the most important book in anthropology in fifty years. There is nothing like it. Their use of these several methodological and theoretical innovations applied to a Turkish nomad clan should stimulate others to undertake similar analyses of whatever societies or social groups they study.