Chapter 2

Problems of Analysis

The “technique,” or treatment of a problem begins with its first expression as a question. The way a question is asked limits and disposes the ways in which any answer to it—right or wrong—may be given. . . . A question is really an ambiguous proposition: the answer is its determination. There can be only a certain number of alternatives that will complete its sense. In this way the intellectual treatment of any datum, any experience, any subject, is determined by the nature of our questions . . . . The formulation of . . . problems and not its solutions of them . . . make the frame in which its picture of facts is plotted. They make more than the frame; they give the angle of perspective, the palette, the style in which picture is drawn. . . . In our questions lie our principles of analysis, and our answers may express whatever those principles are able to yield.

—Susan Langer. *Philosophy in a New Key.*

The treatment of a network problem is not simply about method and it is not about answers: it is about theory in the most fundamental sense. 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? Knowing how to do network analysis is not merely about technique but about practices and shared discourse for grounding theory and contextual perspectives, and about asking questions that might be productive in an ongoing discourse in which there can be a common understanding of the potentially multiple orienting perspectives (Schweizer 1998).1

Network analysis is familiar to many social scientists only as part of a methodological toolkit, a misapprehension that often leads to the view of network models as graphs of relationships taken out of context and out of time, a mere dried skeleton of social life. Network models are often misunderstood as something merely concrete, divorced from the social context that lends a more proper interpretation, attributing explanatory relevance to structural patterns derived from mere particulars. This view stands in ironic contrast to one of the prime motivations for the study of
social networks, which is to aid in putting back some of the important dimensions of social context and avoid putting individuals and aggregates of individuals, taken out of context and without knowing their relationships, at the center of analysis.

More generally, and more consistent with the aim of network analysis, networks provide a way of thinking relationally, representing and restoring the relational contexts in which observations are embedded. Whether they do that successfully does not depend on an endless description or on modeling every relationship in the world as a network or network of networks. Rather, the question is whether relevant patterns of relationship can be abstracted, including the variable of time, so that something more general can be apprehended about how observations about individuals and behavioral choices are contextualized by their embedding in the dynamics of human interactions, which is what networks of relations begin to represent.

We need to ground our consideration of network ethnography, then, by awareness of different levels of abstraction, beginning with concrete observations of individuals, their relationships, and their communications, and moving up in level of abstraction to patterns of more general relationships between concrete elements as they are concretely related. We may reach a level where patterns have been correctly and reliably abstracted and the models that embody these abstractions provide us with sufficient theoretical purchase to understand our phenomena and our own constructions in clarifying and useful ways. If the modeling effort succeeds the gains may include new theories to be tested, illuminating new perspectives and possible new explanations.

Four types of network analysis are explored in the context of our study of Turkish nomads, moving from the more concrete to higher-order patterns. Level one is the study of local networks—egocentric networks and networks of specific groups—such as was carried out by anthropologists in the 1960s and 1970s (e.g., Mitchell 1965).

Out of these and the many sociological network studies of this type comes a second level, those theories born out of the investigation of more general properties of networks, such as emerged in the 1970s. The questions posed and analyses offered at this level operate at a higher level of abstraction. Granovetter (1973), for example, asked not just how people get jobs but how it is that information and significant resources can be transmitted not just through formal channels (as in making an application in response to an advertisement) but through chains of informal
ties that are often quite distant. His finding that people often get jobs through informal ties but not those of close friends or family, was framed by a general “strength of weak tie” hypothesis that while strong ties are often clustered and operate at short range, the bridges between these clusters are often the more numerous weak ties that do the work of transmitting useful information from distant parts of the network. ²

At a third level are mid-range models that implement network theories via models with parameters that apply in a still more general way across a whole range of empirical datasets. An example is Duncan Watts’s (1999) examination of the extent to which clustering and short average distances in networks co-occur in both abstract models and empirical cases to define what are called small worlds. His answer was: often enough to define an important class of networks because even the addition of a considerable fraction of random ties into graphs will shorten average distances without eroding the existence of clusters.³ One problem with this parameter-based “new science of networks” (Watts 2003, Barabási 2002) is that actual network processes are of less interest to these authors than formal models applied to out-of-context or simulated network data chosen for convenience without much attention to the embeddings of the networks or interactions with contextual variables.

A fourth level is a parameterized theory that deals with the full range of cases that are analytically modeled so as to abstract patterns in data to a level where what cases have in common across a whole range of diversity is well understood. The range of possibilities may vary according to a few simple parameters, and derivations from the model should correspond to empirical cases across the full range of possibilities. That is, the parameters of the model are properties or attributes that can be measured in each of the cases, and for each case there is a specific model that has those parameter values. The model then predicts variation in features found in both the models and the cases, and the logic of the model, connects back to a coherent theory that is consistent with other knowledge. When this is the case we have begun to establish a theory of the phenomena.⁴

A model should account for the relationships among the features selected, and features that impact on those relationships should be part of a correctly specified model. That models should account for all features of the cases represented is a common misunderstanding in anthropology and a logical impossibility because features are limitless. But even treating models as analogies that gain in value by how many features of the
exemplars they apply to would entail the scientific failure to distinguish those components that are related in the domain of actual cases from others that are not. Because models are selective they need not and indeed should not be held to account for all the features of every case.

This last type of analytic modeling is the form by which most scientific theories are established: They consist mostly of higher order analytic models. Whereas a descriptive model consists of analogies and mappings between model elements and relations and the objects and relations of study, an analytic model is very different. Descriptive models provide only hints as to the underlying processes that produced the observed data.5

Some types of network analysis are successful at the analytical level even where we do not have an entirely new network theory. Watts’s (1999) work on parameterized models of the network phenomena of small worlds, for example, gives us a greatly improved analytic framework for understanding complex interactions and formulating the relationships among their properties. His analytic modeling experiments and empirical analyses show the extent to which randomness of ties in a network which even in small doses makes for short average distances can coexist with high amounts of clustering. A great many actual networks have now been shown to fit the theoretical definition of small world which has further testable consequences and thus allow theoretical explanations of some of their many properties in terms of small-world effects of heterogeneous pockets with relatively rapid diffusion between them. Networks with heterogeneous clusters are also more complex, in terms of embedded interiors (networks of clusters), and complexity becomes an important characteristic in its own right, one that we will explore further. Scientific work theorizing and investigating networks and complexity also suggests, just as the small world parameters of clustering and average distance can characterize important properties of a broad range of substantively different networks, that surprising simplicity (sometimes summarized in a few relevant parameters) may underlie complexity and the diversity it entails, if not in detail, then in general outline.

This book seeks to move from the first, more descriptive, of our four levels several steps into each of the next three, theorizing how community and intercommunity networks might be analyzed and modeled generally, and then trying to develop the theoretical ideas and tools for new
and more general theoretical models of social organization that can help to make sense of individual ethnographic cases such as the Turkish nomads. We will develop such theory for what we call segmented lineage systems, of which the classical large-scale segmentary lineage is a subtype. We would hope that comparative study of segmented lineage organization across a wide range of cases, using our framework for analysis, would lead to a theory at the fourth, systematic, parameterized, substantively rich and predictive level.

Our purpose is also to show how empirical work is done at the first level, and how such work connects to the other levels of building valid and testable theory. To do so, however, even at this first level of analysis and description of networks at the local level—here the entire community of a nomad clan—we have to reconceptualize some of the foundational problems of representation and description in ethnography in order to bring comparability to the analytic concepts that we may use for different cases, given that the ethnographic specifics and contexts will differ. We will make ample use of the theoretical models now well established for studying small worlds, of which the networks of Turkish nomads are instances, although taking a distinctive form that bears resemblance to some of the forms of segmentary lineage social organizations in the Middle East. Recall that we use the term segmented lineages as a generic term that includes the classical segmentary lineage of Evans-Pritchard as a specific type. So we forewarn the reader that many aspects of the network approach that we employ are not those of the 1960s network anthropology. The field has moved on.

We invite the reader not only to think about networks but also to think networks, that is, relationally. Hence, in Chapter 3 we will think—like Granovetter did on a higher level of abstraction than the single case for the “strength of weak ties” hypothesis—about new evidence for segmented lineages of the Middle East. These were part of a successful and ongoing process of civilization, one that forms a single historical network, in creating systems of exchange that operate on a very large scale, such as the early maritime and camel trade in that region. While these networks span regions from China to Africa, they also operate on the basis of very small clusters of people engaged via kinship corporations to which they belong in production and long-range trade. In that chapter we consider a class of models that apply to a wide range of historical and ethnographic cases—societies with a preference for FBD marriage—that exemplify a phenomenon almost exclusively associated with the civiliza-
tion of that region. We will test this theory for our case, Turkish nomads whose social organization was strongly influenced by Seljuks and other groups who were Islamized before their entry into the Anatolian region. We are thinking, then, not simply about how our ethnographic case constitutes itself locally as a network but how it is a network embedded in an historical network of networks. Networks are open systems in which boundedness is a relative phenomenon, not a matter of self-contained local systems.

The Network Approach to Kinship and Marriage, or Genealogical Networks

Network analysis has an unusual capacity to show many of the fundamental structures and processes of the formation, adaptation, and potential dissolution or remaking of a society. It has the potential to be a mode of relational knowing that is to the social sciences what mathematics is to the physical sciences. With the help of the network approach, both very general and very specialized questions of social anthropology can be explored. In our case such questions are: How does a social group, here the nomadic clan, constitute and reconstitute itself through time as a unit of social survival? How do its members relate to wider social identities ranging from nomadic to sedentary and over a range of ethnicities and territorial groups? How does social memory operate in construction of the clan, its expressed social charter, and the encompassing or embedding relations of its flexible constituent units such as tribal groups, lineages, and extended families? What role do marriage and different types of marriage play in the constitution and interrelation of the various social entities that make up the society?

Tipping points in historical and institutional change, rapid emergent changes, can often be understood in terms of the way that multiple networks may embody contending social positions and competing perspectives on social actions: both the actions and the roles and perspectives held by actors can reweight heterogeneous relationships in crucial or telling ways that spark new configurations. Networks often embody not a single pattern of relationships but contending principles of social organization that can tip network morphologies in ways that have very different implications for future social activities and actions. A network approach may allow us to view the co-evolving dynamics of feedback between
cultural models, changing network structures and goal-directed actors in a changing environmental configuration.

Normally these questions are addressed at the societal level by examining the ethnographic data so as to abstract out of observed behavior and recorded dialogue a set of general norms and special rules and strategies. Together with anecdotal examples and exceptions, these may come to constitute a model of social structure and societal operation. Because of the level of abstraction, it is difficult to see, especially over time, the emergence of social patterns out of social interaction. The network approach is both more general in subsuming and incorporating description at the normative level and more specific in that it assembles the data on social interaction into a time-dependent structure on the basis of who specifically interacts with whom.

We consider here networks of genealogical relationships. This is a special case of networks. There are also, for Turkish nomads as for others, networks of business, friendship, teachers and students, and many others. Genealogical links among members of a society, once we know who has migrated and who has stayed, are fairly indicative of interactive relationships between parent/child and close kin, those between spouses or intermarrying families, and within extended families, residential groups, lineages, or other kinship groups. These memberships and relations can usually be demarcated with the genealogical network. Marriage networks may be especially reliable as they are typically more long term, more ceremonially visible, more publicly enacted, for example, than friendships. For our study, kinship and marriage provide an initial framework for the ethnographic network analyses.

In demarcating their own social groups, the nomads are like many other ethnic groups who use terms for social groups in ways that imply flexible rather than rigid social boundaries. The Turkish word aile, for example, means wife but is also used for family, including those with a father and children by several wives as well as the simple nuclear family. This type of polysemy can result in great confusion in interpreting ethnographic accounts, as when Eberhard (1953a: 46) uses kabile to denote tribes but the meaning of the word ostensibly changes in Bates’s ethnography of nomads in the same area (1973:39):

First, Yörük employ generic designators for recognized levels of segmentation—terms which like aşiret, kabile, sülâle, and aile are usually best glossed as “tribe,” “maximal lineage,” “lineages,” and “family,” according to the context. . . . Secondly, . . . the proper names of segments are used for segments and to describe one’s membership or the lack of it . . .
although they can also indicate segments or different levels of inclusion within a patrilineal descent system.

Herein lies one of the problems for the analysis of nomad social organization in Turkey. The word *kabile*, usually reserved for “clan,” for example, is also used for lineages or the larger political units such as tribes (officially *aşiret*), which are political confederations. The nomads are not so formal about their social organization as are the anthropologists looking for unambiguous social categories.

Such terms offer a good example of how network analysis can bridge the gap between emic discourse, which does not need unique denotations, and the discourse of anthropologists, who rely within their circles on a medium to express more formally what their language denotes as a basis for scientific comparison. Network analysis dispenses with the necessity for the ethnographer to label forms of social organization that people themselves do not feel the necessity to label. The ethnography can remain more emic in giving an impression nearer to the facts by focusing on variant usages expressed relative to variant types of groupings in the genealogical network itself. It is not necessary to reduce social organization to a set of norms and rules and associated denotative concepts alone.

Ours is the first study of Turkish nomads to examine marital re-linkings as the network basis for the formation of shifting *aile* and *kabile* groupings on the basis of flexible principles for asserting group membership, principles that might apply from the extended family up to the tribal level. We now turn to defining some key analytic terms to expand on what we mean by such flexible principles.
Key Analytic Terms for Social Network Groupings:
Emergent Patterns from Behavioral Choices

The development of analytic and computerized tools specific to ethnographic research opens the possibility of a relatively complete social network analysis of a community and its histories. In doing so, however, we have to resist the intellectual shortcuts of simplifications taken in earlier generations. We need some new vocabulary to repackage old ideas in order to put some of those ideas to different use analytically.

The anthropological network analysis of the 1950s through the 1970s—noting especially the works by Bott (1971), Barnes (1954), Mitchell (1969), Kapferer (1972), and Boissevain (1974) and often emphasizing personal or egocentric networks (Mitchell 1965a)—was oriented toward problems of a smaller scale and lesser theoretical scope than those that can be tackled today. The general consensus of that period of anthropological research was that network analysis was a methodology that in use should produce theory or theories (but see Granovetter 1990). Theories generated out of network research until very recently have had relatively little general impact in anthropology. We begin here with some elementary concepts that are quite different from those used in the network methodologies of the 1960s, and in Chapters 4 and 7 we build on these elementary ideas to reach some concepts that have greater theoretical purchase.

One of the characteristics of anthropological kinship studies of earlier periods was the attempt to take genealogy from the perspective of ego, and the normative kinship terms used by ego in referring to and addressing different types of relatives, as the template for kinship structure. The assumptions here were that there was a normative kinship terminology and that the relationships designated were accompanied by expected role behaviors for each type of relative, including prohibitions and preferences governing sexuality and marriage. Generalizations stemming from this base of observation and abstraction followed a functionalist logic that also tended to assume that extended relationships in the larger networks of kinship and marriage were extensions in some way from the primary egocentric relationships, or even from nuclear family relations. This accorded with Radcliffe-Brown’s idea that a kinship system is an abstraction of rules that could be observed in concrete social networks, from the viewpoint of different egos. Thus Firth (as reported by Gulliver) could insist that “network” could only be a metaphor and therefore its
use would only get in the way dealing with reality, objectively. Lévi-Strauss (1969[1949]:125), following Goldenweiser (1913), took the observation that networks were too complex to deal with as a justification for an approach to kinship based on norms and strategies as abstracted systems of rules. His models of how kinship networks might be constructed are based on highly reduced distillations of elementary sets of role relationships, and while these were not those of the nuclear family, they were considered to be elementary exchange relationships.

The social groupings that we examine are not always normative constructions and named groups but are often social units whose emergence is discernible in the social networks that result from actual behavior. One can think of residential patterns among the nomads as one example, since these groupings vary from season to season: normative groups are named but shifting. Aile family groups, with one wife or several co-wives, might correspond to the household group of a tent (ev) but its members may depart for a new camp at different times. The obu or neighborhood tent-group is usually a minimal lineage, often with co-resident allies who may soon intermarry. One set of an obu may leave early to take the lambs to the summer camp, another may leave later with the sheep, and another with the camels and most of the tents. The patterned groupings that are emergent at different times are relatively simple in this case because there was little or no postmarital choice of residence for nomadic couples at least until 1982. Residential patterns were strictly patrilocal up until then. But although the patrilocal extended family is the basic structural unit of residence, it lends itself to understanding the social dynamics of nomad society through the recurrence of rather stable patterns in the life cycle. The bride entered the joint family of the groom, usually for the first fifteen years after marriage or longer. After marriage, sons most often lived together with their father, forming the joint extended family, lasting until the death or mental disability of the head of the family. Yet there was considerable variation in further extensions of the family around the core of a localized shallow patrilineage, and in terms of when such shallow lineages segmented, or when deeper memories of patrilineages were sometimes merged.

Beyond household groupings, however, we need a vocabulary of emergent forms of social groupings. Although there are names for different kinds of groups (aşiret, kabile, sülâle, and oba) that may be normatively treated as tribe, maximal lineage, lineages, and neighborhood, none of these are reliable as groups since there are so many conflicts that
Problems of Analysis

involve such groups shifting and reforming, and the use of these terms is ambiguous in such a way that, when asked directly, people will often hedge as to who is a member of which one of these units, most of which also have proper names. Hence, we need to recognize that there are other forms of groupings that make perfect sense in local practice but may be grasped only through patterns of relations (i.e., through study of the network).

A marriage, for example, is one step in the developmental cycle of a domestic unit, one usually followed by the birth of children, their growth and eventual marriage, and the displacement of the parents to grandparental status. While we typically think of bride and groom as coming from different families, in an endogamous community spouses will often be related in a variety of ways before marriage. When this is the case, we call a marriage a marital relinking or relinking marriage. Such marriages constitute an enactment of endogamy whose type or form is defined by the structure of preexisting relationships between the spouses. Hence, we call the bundle of preexisting relationships between spouses, if any, structural endogamy. We expand on this set of concepts as follows.

A relinking marriage implies multiple ties among relatives linked by circular pathways. We enlarge the lexicon of marital relinking to distinguish various types, starting with consanguineal versus affinal relinking.

There are many subtypes of consanguineal and affinal relinking, some of which we will define later. Consanguineal relinkings are common in societies that lack prohibitions against marriage between blood relatives. Is there some threshold at which the quantity and overlap of relinking marriages defined sufficiently broadly so as to include European societies and endogamy in complex systems of stratification defined by relatively endogamous social classes) provide criteria of cohesion of a self-reproducing group? Can the existence of such thresholds be taken as a sort of anthropological axiom for the existence of a

Marital relinking

Affinal relinking

Consanguineal relinking

Marital relinking is the term used by European ethnographers (Brudner and White 1997) to refer to marriages where the families of bride and groom are already linked by kinship or marriage.

Affinal relinking refers to the case, common in European villages, where the bride and groom are not blood relatives but are linked by prior marriage between their families.

Consanguineal relinking refers to marriage between consanguineal relatives, and calls attention to the fact that their respective nuclear families are already linked by blood ties.
self-reproducing social group? If so, would not this axiom also apply to the ethnogenesis or formation of groups by marital relinking and also to the dissolution of groups by the process of disentanglement of marriage with previously related families? Assimilative marriages with members of other groups, for example, might be characterized by the scarceness of relinking.

Relinkings as multiple and overlapping pathways and hence circularity of relatedness among families thus might have an effect, discernable in communities that are highly endogamous over considerable periods of time, of reconstituting the relative saliency of certain groupings of relatives as opposed to others. It is these emergent groups whose boundaries are continually shifting that in the present context create multiple networks whose intersections and contending principles define multiplex and heterogeneous relationships among individuals (Padgett 1998). We intimated earlier that it is shifting patterns such as these that are “the network basis for the formation of shifting aile and kabile groupings on the basis of flexible principles for asserting group membership, principles that might apply from the extended family up to the tribal level.”

We can clarify what we mean by intuitive statements such as multiple and overlapping pathways or circularity of relatedness by using formal concepts from graph theory (White and Harary 2001), some of which we now introduce to provide the conceptual foundations of our study of social cohesion. Moody and White (2003) showed the substantive relevance of the concept to a wide variety of problems in sociology.

Endogamy is usually understood as intermarriage among persons of similar social category. This sort of endogamy entails categorical endogamy, such as marriage within an occupational group, or social class, or territorial area. This does not necessarily entail marital relinking. It is easy to imagine a society with very low fertility where siblings are very rare over several generations and hence there is a shortage of collateral relatives. While marriage might be largely endogamous to such a territorial group, because of the lack of collaterals, few couples have recognizable prior
Problems of Analysis 71

kinship links either through blood or marriage. The same result might occur with a large and highly mobile population. Hence, a population might have high rates of endogamy in a purely formal sense but social cohesion via multiple kinship and marriage links, which constitute structural endogamy, is lacking. In such cases, the same lack of cohesion or positive evidence for endogamy will also characterize arbitrary bounded units in a population, its subgroups, or larger groupings that contain it. Hence, it is hard to determine the boundaries of endogamy in such cases without reliance on normative statements about what kinds of persons tend to be chosen as spouses.

Relinking marriages, whether affinal or consanguineal, constitute positive evidence for structural endogamy. When marriages not only link different families but also begin to form multiple and overlapping relinkings, inclusion in a structurally endogamous group is defined by families tied together by relinking marriages. Kinship may be an important factor in group cohesion in cases of dense structural endogamy. The cohesion of social groups, of course, is also provided by factors other than kinship, for example, economic interests. Having multiple accounts of sources of cohesion, however, enables tests of multiple hypotheses.

In Chapter 3 we will expand on these concepts and find appropriate ways to use graphs not only to represent kinship networks but also to measure some of the properties that are important to kinship theory.

A Representation for Kinship Networks

In a group with extensive relinking, relatives on one side of a given ego’s family (e.g., ego’s father) will typically be connected to the other side (e.g., ego’s mother) prior to the parents’ marriage (i.e., independently of the marriages in ego’s sibling group). When this type of situation prevails, it is easier and more efficient to represent kinship and marriage relations in a graphic form where it is not individuals but the marriages themselves that are the nodes of the graph (along with unmarried individuals). This type of structure is known as a p-graph, with the mne-
monic “p” for parental graph or graph de parenté (White and Jorion 1992).11

P-graph

A p-graph is a way of representing the relational patterns of kinship and marriage relations. Rather than focus on individuals and their relations (blood, marriage), it focuses on the relinkings among families created by marriage or sexual unions. To bring out these patterns the p-graph analysis shifts from relations among individuals to relations between marriages (i.e., relations among marriage as a relinking relation). Thus it consists of a set of nodes that represent marriages or potential marriages (unmarried individuals) together with two types of directed lines between nodes. The lines or directed edges (arcs) show how each distinct individual links (as either the sole occupant of a node or co-occupant along with a spouse) to the node representing his or her parents. The parental links of males constitute one type of link, and the parental links of females constitute the other.

Figure 2.1 represents a conventional genealogy12 that has been recoded as a p-graph. On the left the p-graph is superimposed on the conventional diagram, while on the right the p-graph is shown on its own. Small circles in these p-graphs represent single individuals while large circles represent marriages. Of the five marriages shown, only marriages numbered 1-4 form a set that is structurally endogamous. If any one of these four nodes is removed, the other three remain connected. In this particular instance, the structurally endogamous unit among couples 1-4 is created by a FBD marriage (marriage 4). Structural endogamy creates multiple independent pathways or 2-connectedness between pairs of people in the set of people whose genealogical links are involved in the unit of endogamy.

The p-graph thus highlights the relationships in a kinship and marriage network, shifting focus to patterns of relationships and away from looking at individuals and how they are related toward looking at the relations between individuals (marriage, parentage) and how these relations are related.
The shift is from mundane relations among individuals to the higher order abstraction of relations among relations, or patterns in the graph, that is, to second-order analysis but without loss of information. The only loss of specific individual-level information in a p-graph is that a person with multiple marriages, like the man in marriages 4 and 5 in the figure, will have two marriage nodes, as if there were two brothers. But if the lines in the diagram carry the individual’s identification number (ID) then a labeled p-graph is simply another isomorphic representation of genealogical network relationships. The identity and attributes of individuals in the p-graph attach to the lines that represent individuals (connecting the nodes) and the attributes of marriages to the nodes.

P-graphs are a conceptual and analytic advance, not simply a formal method that provides another way to graph genealogies. The first-order relations in kinship systems are the genealogical trees created by the fact that every person has two biological parents. The second-order relations lie in the fact that some sexual unions are between people who are already connected by traceable genealogical ties, either of blood, or marriage. One result is that instead of each individual having two parents and distinct ancestors doubling in number each generation, fewer and fewer of these ancestors will be distinct the further back we go. Thus, there are convergences within the ancestral trees of individuals as well as overlaps among the trees of different people. It is the patterns of convergences and overlaps that the p-graph is intended to bring into analytic focus. Anthropologists often do this kind of differential analysis in looking for patterns in kinship networks but they have no name for it. They are typically limited to showing patterns using examples of actual genealogical relationships, or using an idealized genealogical model. The presenta-
tion and analysis of an entire genealogical grid for a population is extremely cumbersome both descriptively and analytically. The p-graph format allows a direct analysis of patterns in the entire genealogical graph without use of a genealogical grid.

**From Genealogies to Genealogical Networks**

P-graphs are designed to show, compactly, the genealogical networks of entire societies. In Figures 2.2 to 2.5 are shown the core of the p-graph of the nomad clan, consisting of all those couples who have two or more parent/child links with other couples in the core. Early generations start to the left and follow to the right. The first two numbers associated with each node are the ID numbers of husband and wife, followed by the lineage number (L1-L9) of the husband, and then the ID numbers of the wife’s father and mother, who either are shown as linked by a dotted line, or are located in another figure. Given marriages of women from different lineages that connect the four figures, the four graphs form a single core.

**Method: Preparation of the Data**

Johansen’s nomad genealogy of 685 males and 597 females occupies a scroll some 12 meters long. Small amounts of data on the early ancestors, collected from younger informants in 1989 and 1995 (by which time many of the old patriarchs had died), were omitted from the scroll because of problems of unreliability. To prepare the data for network analysis, Johansen gave the individuals unique numbers, which are quoted in the following text in brackets behind personal names of the nomads. White entered these numbers into a text file along with those of the spouse(s), father, and mother of each person and their name, sex, generation, and nicknames. He also entered the lineage and tribal affiliations, place of origin or premarital residence and postmarital residence in terms of locale and nomad versus villager affiliations, and other attributes of each individual as designated in the genealogy or in narrative field notes. A detailed analysis and systematic transcription of narratives from the field notes might have further enriched the coded data, especially if it transcribed further attributes of individuals and coded network but this was not attempted. The data that we did prepare for this analysis dealt with genealogical links, migration histories, and political office
have the advantage of being fully systematic, complete, and of comparable reliability across individuals. Our current coding of the data will be shown after the genealogies are presented in the form of p-graphs.

**The P-graph Genealogies**

The p-graphs in Figure 2.2 to 2.5 show all the relinking marriages in Johansen’s genealogies plus many marriages relink. The numbers assigned to individuals may be used to locate particular individuals discussed throughout the book. The numbers shown on these figures are used to identify individuals. Each node is labeled in a column with the number of the husband, then the wife, if known (x if not), followed by the lineage number (L1-L19) of the wife, and the numbers of her parents. If the wife has a lineage number but that lineage is not on the same page, one may look for her parents according to the lineage numbers given on other pages. The locations in the genealogy of political leaders are shown by the larger open circles.
Figure 2.2: Core Genealogy, Lineages 1, 4, and 6
In Figure 2.3, the large circles indicate sons miscoded under the father’s brother.
Figure 2.4: Core Genealogy, Lineages 5, 7, 9, and 10
Figure 2.5: Another Segment of Lineage 1 and Lineage 8
The Merger and Splitting of Lineages in the Genealogies

Genealogies are not static entities but dynamic. Not only do they grow with new children but people change them over time, and add or correct their ancestries. In 2003 Johansen returned from Turkey with new data on the early genealogies from Koçali, an avid genealogist of his lineage (#2), which is called Ecevitli (not “Donsuz”) by its members. Figure 2.6 shows the important changes. The old configuration is given in the lower graph and the new configuration is shown in the upper graph, where new links are shown by the darker and larger arrows. These are important changes because they affect the early patrilineal roots of lineages or sublineages, which we will now call Ecevitli A, B, and C.14

Figure 2.6: Changes in the Genealogy, 2004

The new link in the upper left of the top genealogy is inferential but it is one that gives lineages #2 and #3 as shown in Figure 2.3 a common patrilineal root. Ecevitli C lineage #3 is unchanged and begins with a man nicknamed “Ecevitli” but lineage #2 that began with Abbas and
which we called “Donsuz” up to 2003 (following a usage of the lineage in which Johansen was hosted) we now classify as Ecevitli A and B, with “Donsuz” associated with B. The research of Ecevitli B lineage member Koçali (826) led us to recognize lineage #2 as Ecevitli. We had independently suspected that lineages #2 and #3 were originally a single lineage and had said so in our text of 2003. There are actually two possibilities here. One is that these were different patrilines but they have came to be thought of as one because they intermarried heavily, which is often the case with segments of the same ancestral lineage. The fact that various “Donsuz” members were designated “Ecevitli” speaks against that. The other possibility is that these two patrilines had patrilineal relatives as their respective founders (e.g., brothers, patri-parallel cousins, uncle/nephew) but, as the specific names of ancestors have been forgotten, the patrilineal link had been forgotten. New research showed additional evidence for that being the case.

Data supporting the Ecevitli identity of lineage #2 is shown in the lower genealogy. Johansen noted in her interviews that Mustafa (1036) of lineage #2, for example, was thought to be Ecevitli but she was unsure at that time about that attribution. Koçali (826), patrilineal grandnephew of Mustafa (#2B), gave independent confirmation of this. He also provided the history of the individual to whom the original “Donsuz” nickname was first attached, which was not previously known to Johansen. Reporting on her interview with Koçali:

The real “Donsuz” were the offspring of Deli Habib (our 1929, son of Kara Osman 232, fourth generation of Koca bey lineage, #5 in Figure 2.4). This man, after the battles of 1865 that led to the settling of the Afşar, occupied much land illegally. He was a temerarious man and popular for his bravery. He fled into the mountains (like so many others) but met the sultan’s soldiers unexpectedly. He had not time enough to dress his trousers and did not own underwear, as was usual at this time in many parts of the European countryside (e.g., Scottish men) but ran away quickly. The soldiers cried: Dur, Donsuz, dur! (“Stand still, pantless, stand still!”). He escaped but was soon caught and was publicly shot in Ceyhan. His family was called "Pantless" thereafter and his son “Donsuz” Osman (1376?) married 341 (not 408?) in lineage #5 (our original interpretation had been that 341 had been given after his death to a Deli Habib (882), fifth generation in Figure 2.3 of lineage #2, which some members of other lineages called "Pantless" during Johansen’s stay). I feel there must have been more relations between “Donsuz” Deli Habib’s family and the other nomad lineages so long as he was successful in occupying
new land. But after his sad end everybody denied having cooperated with him.

This text makes sense taking the recodings in Figure 2.6 into account if there is only one Deli Habib (1929=822), a member of lineage #2B who acquired the “Donsuz” designation and whom we miscoded as two separate people. His son “Donsuz” Osman might have inherited his father’s wife (341). Deli Habib, then, would not have been a son of Kara Osman (Koca bey lineage #5) but of #2B (Figure 2.3). Given the 2003 data from Koçali (826), our evaluation was that 882=1929 (Deli Habib) was from Ecevitli sublineage #2B that Johansen had called “Donsuz.” This fits the common Middle Eastern pattern for segmenting and rearranging of lineages with the passage of five or more generations. What seems to have happened is that brothers descending from “Donsuz” in sublineage #2B, had been reassigned to #2A by some of those whom Johansen interviewed. The “Donsuz” designation for these people, however, seems to have carried over to sublineage #2A, obliterating the name Ecevitli.

This resolution would explain the pattern of recoded ancestral ties in Figure 2.6 that resulted from failure—until Koçali’s intervention—to recognize that three of the sons attributed to Mustan (716) by some of Johansen’s informants were the same persons as sons of Haci Ketir Mehmet (661). Koçali’s (826) genealogical research also helped us to identify and clear this up this discrepancy. This doubling, listing three brothers twice, once under their father and once under their uncle, did not diminish the importance of the Ecevitli A lineage but gave Mustan and his brother Haci Ketir Mehmet salience (not just Mustan alone) as crucial figures in the early intermarriages within the clan. When we discuss the clan “root” this will push the importance of Mustan back to his father Abbas or Abbas’ unnamed father who was possibly the common ancestor of the two Ecevitli lineages. With these corrections, however, there will only be slight reinterpretations of our findings from the pre-2003 data. Where we list Mustan as a major “clan root” in subsequent discussions, his father Abbas would serve as well, although we have not recoded the network data and redone the analysis and graphs, as there would be little substantive difference in the analysis.

Conventional Genealogical Diagrams
For Figure 2.6 we used a conventional genealogical diagram using triangles for males and circles for females but we limited ourselves to patrilineal linkages in the three Ecevitli sublineages (A-B-C). A conventional genealogical diagram encompassing the data in Figures 2.2 through 2.5, for relinked members of the clan, can be viewed at our genealogy web site at http://eclectic.ss.uci.edu/~drwhite/turks/90a.htm but for readability it shows only the links to fathers and between husbands and wives. It does have readable names, color-coded lineages, and generation numbers. A black-and-white image in a reduced size is shown in Figure 2.7 but the reduction destroys the readability of labels found in the web image.

Figure 2.7: A More Conventional Genealogical Graph  
(legibility of names is not important)
ware. It can be seen from Figure 2.7 how difficult it is to render the kinship network of an entire society in conventional diagrams, and why the compact format of p-graphs is useful for this purpose.

From Figure 2.7, Figure 2.8 extracts only and all the FBD marriages in a single graph. They are necessarily disconnected, as they are within separate lineages, and only lineages #1-#5 have such marriages. The generational levels are historically accurate. Only lineage #2 has two disconnected segments of FBD marriages. FBD marriages will be treated in many of the subsequent chapters as they are an important feature of nomadic social organization.

Figure 2.8: A Conventional Genealogy Showing FBD Marriages
Coding of Data

The coding of data for the genealogy and the attributes of individuals is shown in Table 2.1. The table is divided into two parts: one for the minimum data needed to construct the genealogy (columns 2-21) and another for attributes and computed data on individuals and couples (columns 8 and 23-35).

Table 2.1: Format for Nomad Genealogical Data in Table 2.2

<table>
<thead>
<tr>
<th>Col.</th>
<th>Symbol</th>
<th>Legend for Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-5</td>
<td>Number of ego</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>M/F</td>
<td>male/female</td>
</tr>
<tr>
<td>9-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>Spouse (Ego number)</td>
<td></td>
</tr>
<tr>
<td>14-17</td>
<td>Father (Ego number)</td>
<td></td>
</tr>
<tr>
<td>19-21</td>
<td>Mother (Ego number)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>d</td>
<td>Died before ethnographer knew them</td>
</tr>
<tr>
<td>23</td>
<td>a-h</td>
<td>Generation of individual as estimated by ethnographer</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>born after 1785—up to 1815</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>born after 1815—up to 1845</td>
</tr>
<tr>
<td></td>
<td>c</td>
<td>born after 1845—up to 1875</td>
</tr>
<tr>
<td></td>
<td>d</td>
<td>born after 1875—up to 1905</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>born after 1905—up to 1935</td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>born after 1935—up to 1965</td>
</tr>
<tr>
<td></td>
<td>g</td>
<td>born after 1965—</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>Sibling Order (of brothers for male, sisters for female)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(e.g., 2b4 means 2nd brother, unmarried, out of four)</td>
</tr>
<tr>
<td></td>
<td>1-</td>
<td>1st, 2nd (in set of brothers, sisters); unknown is blank</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>Type of Sibling</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>married brother</td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td>married sister</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>unmarried brother</td>
</tr>
<tr>
<td></td>
<td>z</td>
<td>unmarried sister</td>
</tr>
<tr>
<td>26</td>
<td></td>
<td>Out of how many Siblings of that type</td>
</tr>
<tr>
<td></td>
<td>1-</td>
<td>(calculating from father only)</td>
</tr>
<tr>
<td>27-28</td>
<td></td>
<td>Number of Sons</td>
</tr>
<tr>
<td>29-30</td>
<td></td>
<td>Number of Daughters</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>Premarital residence (place of origin)</td>
</tr>
</tbody>
</table>
Assignments of unique numbers to individuals and the numbers of ego, spouse, father, and mother, plus the coding of sex of ego, are the only data essential for the genealogy. The basic analytic programs for genealogical and network analysis depend on these codes but other elements can be used as labels for the nodes in the network or loaded into attribute files to accompany the genealogical network data files. Sporadic data stored in the “name” field (column 35+), such as the identity of political leaders, can be transferred to the labels of genealogical graphs by various means. Data on sibling order, deaths, and pre- and postmarital residence (or migration) were provided by Johansen. The relative birth order of sons was usually indicated by the physical location and numerical order of the ID numbers as assigned in Johansen’s genealogical scroll. Place or tribal origin and residence, before and after marriage, were taken from notes on the genealogical scroll. Further data on individuals are extensible according to the requirements and interests of the ethnographer.

Data on number of siblings, sons, and daughters were computed from the genealogical codes. Generation can be calculated from the genealogical data but the generation codes in the coded data were provided by Johansen. Dates could be approximated only by generational birth-ranges. Only in a few cases were actual birth dates, marriage dates, or death dates available. Lineage memberships were checked or computed from the assumption of agnatic descent as against ethnographic notes.

Table 2.2, using the coding conventions of Table 2.1, shows a sample
of the individual records for the genealogical dataset. Transcribed in this manner into the computer dataset, the data here show how Johansen’s genealogy was coded in a conventional form for two sets of relatives, one a FBD marriage between 154 and 4 involving ancestors 28, 29, 1 to 4, and the common ancestor 1381. In columns 2-5 is the number of the individual. Column 7 codes for sex. A “d” in column 8 indicates someone who died before Johansen’s fieldwork. A number for each of ego’s spouses is given in columns 9-12 (with extra lines for multiple spouses, as is the case for 1 M, who has two wives). Father’s and mother’s numbers are given in 14-17 and 19-22. Column 23 gives ego’s generation, and columns 24-30 give the computed variables (sibling order, type of sibling, how many siblings, number of sons, and number of daughters). Columns 31 and 32 give ego’s premarital and postmarital residence (S=settled village and N=nomad clan are among the codes). Numbers 1-19 in columns 33-34 give lineage origin whereas letters A to I code origin in another tribe. Starting in column 35 are name and additional ethnographic notes (e.g., name of place of origin, occupation).

Table 2.2: Sample Individual Records for the Genealogical Data

<table>
<thead>
<tr>
<th>Ego Sex</th>
<th>mate</th>
<th>Fa</th>
<th>Mo</th>
<th>Gen</th>
<th>Calcu</th>
<th>Resid</th>
<th>Lin</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num</td>
<td>Num</td>
<td>Num</td>
<td>Num</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>154 Md</td>
<td>4</td>
<td>28</td>
<td>29c4B4</td>
<td>4</td>
<td>1</td>
<td>1NN</td>
<td>1Halil m.FBD</td>
<td></td>
</tr>
<tr>
<td>4 Md</td>
<td>154</td>
<td>4</td>
<td>28</td>
<td>29c4B4</td>
<td>4</td>
<td>1NN</td>
<td>1Halil m.FBD</td>
<td></td>
</tr>
<tr>
<td>28 Md</td>
<td>29</td>
<td>1381</td>
<td>0b2B3</td>
<td>4</td>
<td>2</td>
<td>1NN</td>
<td>1Haci Dolasikli</td>
<td></td>
</tr>
<tr>
<td>29 Fd</td>
<td>28</td>
<td>0</td>
<td>0b2B3</td>
<td>4</td>
<td>2</td>
<td>1NN</td>
<td>1Haci Dolasikli</td>
<td></td>
</tr>
<tr>
<td>1 Md</td>
<td>2</td>
<td>1381</td>
<td>0b1B3</td>
<td>3</td>
<td>4</td>
<td>2SN</td>
<td>1Ecevit Mehmet</td>
<td></td>
</tr>
<tr>
<td>1 Md</td>
<td>3</td>
<td>1381</td>
<td>0b1B3</td>
<td>3</td>
<td>4</td>
<td>2SN</td>
<td>1Ecevit Mehmet</td>
<td></td>
</tr>
<tr>
<td>3 Fd</td>
<td>1</td>
<td>0</td>
<td>0b</td>
<td>0</td>
<td>0</td>
<td>1SN</td>
<td>1Salile</td>
<td></td>
</tr>
<tr>
<td>2 Fd</td>
<td>1</td>
<td>0</td>
<td>0b</td>
<td>0</td>
<td>0</td>
<td>1SN</td>
<td>1Salile</td>
<td></td>
</tr>
<tr>
<td>1381 M</td>
<td>0</td>
<td>1927</td>
<td>0alb2</td>
<td>3</td>
<td>0</td>
<td>1NN</td>
<td>1Ismail eB (g.1780–1810)</td>
<td></td>
</tr>
<tr>
<td>100 Md</td>
<td>1335</td>
<td>1401</td>
<td>0e1b1</td>
<td>9</td>
<td>2</td>
<td>2HN10Kel Ahmet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 Md</td>
<td>1412</td>
<td>1401</td>
<td>0e1b1</td>
<td>9</td>
<td>2</td>
<td>2HN10Kel Ahmet (was shepherd)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1335 F</td>
<td>100</td>
<td>0</td>
<td>0e</td>
<td>0</td>
<td>0</td>
<td>1nN(G:Horzum) Gullu</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

... (continues for 1722 records)

Spreadsheeting and Transforming the Network Data

Columnar data (as in Table 2.2) can be treated as variables for statistical
analysis and can also be combined with network analysis by transforming the network data (in this case, genealogical) into a graphical form for nodes and relationships. The Ego2All.exe program (which runs in DOS) converts from a text-file format that includes the minimal data needed to construct a genealogical network (Table 2.2, section I) to formats for the major types of kinship analysis software. This converts the genealogical data into kinship and marriage networks that, when combined with the temporal and attribute data, provide a dataset for network analysis in a format that is also useful for comparisons across different cases. For comparative purposes, datasets on genealogical networks for nearly 100 societies are available that can be analyzed by methods comparable to those used here (url: eclectic.ss.uci.edu/~drwhite/PDATASET.htm). We end this chapter with a general discussion of the computer assisted analytic techniques currently available.

**Computer-Assisted Analysis**

Wherever investigators have systematically collected genealogical as well as other types of data, computer-assisted analysis has advantages that cannot be obtained by manual computation from large genealogies. The following types of computation used in the p-graph or network analysis paradigms, for example, are not feasible for large datasets without the aid of computers:

1. The analysis of consanguineal and affinal relinking marriages of all conceivable types and combinations, their frequencies, the frequencies of their various structural forms, and the distributions of their various overlaps.

2. The transformation of these frequencies into percentages of marriages where the denominator is not the total number of marriages but the total number of relatives of a given type available for marriage. An example for consanguineal relinking is the number of mother’s brother’s daughter marriages over the number of persons who have such relatives available for marriage. For a simple example applied to affinal relinking, we might take the number of sister exchanges over the number of men who have a sister’s husband’s sister or reciprocally, women who have a brother, a brother’s wife, and whose brother’s wife has a brother who is available for marriage.

3. The analysis of how these distributions appear at the level of the individual, either in the aggregate, or over the course of generations.
4. The analysis of how these distributions appear at the level of the group or network, in terms of emergent groupings or clusters of relatives, and in terms of the structural position of individuals in such groupings, as they change over time.

Substantively, in the course of this study, we will derive a number of benefits from our methods of analysis. The analysis of preferences for different types of marriage will differ from analyses based on inferences from the raw frequencies or percentaged on the basis of the total number of marriages. There are major differences—leading to different conclusions—between the method of analysis used here and those in conventional use. The source of the discrepancy is that demographic constraints or changes are confounded with the expression of preferences in the raw frequencies of different types of marriages. In the case of the present study, an increasing proportion of siblings shifts over time to sedentary life as the size of the nomad group increases. Among those who stay, there is a greater diversity of types of relatives, and fewer absolute or selective rates of certain types, such as the FBD, are available to marry.

These analytic and substantive benefits are obtained at a cost of several weeks of data entry to convert a genealogy on paper to a data file for computer analysis. An added benefit of doing so is the ability to systematize the ethnographer’s data, such as those on lineage and tribal memberships, occupations, pre- and postmarital residence, and tribal, village, or urban geographic locales.

A second cost of such analyses is that of learning to use the newer analytic and graphic programs. The analytic benefits of using available methods for graphic and for network analysis include the ability, once the ethnographic data set is computerized so as to include genealogical links, to do the following:

1. Regardless of size, the complete genealogy can be drawn on a series of pages that reference all the genealogical links. This method is used in the present book, in Figures 2.2 to 2.5, although only for the relinked marriages.

2. The interchangeability of data formats among several dozen available software packages makes it possible to use a variety of these packages for genealogical analysis, genealogical drawings, network analysis, or network drawings. There is ready convertibility to standard formats for genealogical data, such as GEDCOM (White, Batagelj, and Mrvar 1999), and to formats for network analysis as in
the UCINET (Borgatti, Everett, and Freeman 1995) or Pajek packages (Batagelj and Mrvar 1998).

To reduce the learning cost of using the Pajek, Pgraph, and UCINET programs, our footnotes include abbreviated descriptions of menu options for each program when reporting results using these options. Program menu options are described by a series of commands separated by arrowheads (>). The Pajek option to read a data file, for example, is File> Network> Read, which corresponds to the labeled choices in a series of pull-down menu options.

**Providing Data and Analytic Tools for Analysis**

One of the requirements of scientific endeavor is that our accounts can be tested against an evidentiary base using a replicable form of analysis. Providing the data used in our studies means that others can apply the same methods to replicate our analysis. They can also use slightly different methods to see if our results are robust and not an artifact of the method. They can also use entirely different methods to reach new results that were not in the purview of the original investigation.

We provide on our web site all of the materials that we consider essential and informative both for aspects of the ethnography presented here and for employment of our data and analytic methods to replicate or challenge our results or to seek new kinds of results using our data. Such materials are found at http://eclectic.ss.uci.edu/~drwhite/turks. They include the file p-tur.txt, the text in which our genealogical and individual attribute data were first compiled; p-tur.sav, the Spss spreadsheet version of that file, in which individual attributes can be analyzed in relation to network properties added from the analysis; the Ego2cpl.exe file that converts p-tur.txt or similar files into files for network analysis; a photo essay on the nomads; colored diagrams that could not be printed in the book, and a genealogical web file in which individuals can be located by name and their ancestries can be browsed. Our site also contains links to Pajek and genealogical software sites that we use in our analysis and to alternative choices for software as well.

**Summary**

Kinship networks are not adequately defined as an object of study in
their own right until their key features are incorporated into a representation that captures generations of parental relations and their family histories. Once this is accomplished we can study the key phenomena that represent the continually emergent new structures in kinship networks. Kinship structures do not simply represent nuclear families that result from procreation, which vary in demographically important ways such as number and gender of children, birth spacing, mortality, fertility, fecundity, residence patterns; nor do they simply represent cognitive and linguistic systems of terminologies and rules for descent and marriage along with descriptions of higher order groups such as lineages or clans.

For every human community, the formation of new couples and new marriages transform the egocentric experience of family and the tree of genealogical relations—ancestors, collaterals, descendants—into a cohesive social topology because it is a world, in network terms, of cycles of intermarrying families, and cycles of multiple linkages among relations—blood relatives and affines in the broadest sense. These multiple linkages create social embeddings in the familiar spaces of community, clan, class, ethnicity, alliance groups, support groups, or political factions that may shift and change from generation to generation. These processes of social group formation may all be studied outside the framework of kinship networks but they may be studied in that framework as well, and the results cross-correlated or theorized in terms of how kinship networks link to, or produce, or alter other social forms.

The goal of this chapter has been to consider kinship networks as they reflect the dynamic effects of how people take into account the potentially changing situations of opportunities in their social worlds and, by virtue of their behavior, add to a record of changing behavioral practices. This starting point, focusing on actual choices and behavior, contrasts with the view that a social network is produced by people operating on a recurrent set of rules or the view that the study of social structure consists merely of abstracting a presumed unchanging pattern of how people are related and embedded in social networks. Social networks need to be studied in terms of their own properties. The closer we look at social behavior, the more clearly we see differences as well as similarities. If pattern is taken a priori as fixed rather than dynamic we miss the real opportunity of studying kinship as it is produced at the level of networks. Even recurrent processes as simple as marriage, raising families, getting divorced, remarrying, having multiple spouses, marrying a relative, marrying someone to whom they are already related although not by com-
mon descent are complex and ever-changing phenomena. Nonetheless, we can miss the undulations of the forest for paying too much attention to our preconceptions of the trees.

A representational system for studying kinship networks is needed that is precise enough to do justice to the dynamics and not just the fixed or static elements of kinship. In this light, each of the terms introduced—relinking, structural endogamy, network cohesion, and p-graph as a means of tying together the dynamical as well as the egocentrically rooted aspects of kinship networks—are part of a system of representation and explanation that tie together the egocentrically and sociocentrically rooted aspects of kinship networks, those that are dynamically changing as well as regularly recurring. Each concept and level of analysis deserves study in its own right before turning to the analytic chapters that make use of these concepts. The matter of coding a dataset for this or other forms of network analysis, however, is exquisitely simple: unique identification of individuals and assignment of a series of numbers that related ego to parents and to one or more spouses is what is needed, at minimum, and this level of procedure is also explained in the discussion that follows, along with key aspects of the history behind it.

It must be noted that kinship networks, although they can be an object of study in their own right, are embedded in various types of multidimensional overlays produced by other types of social ties, other non-kinship practices, belief systems, economies, and culturally distinct and constructed phenomena that impinge upon them. If we look at kinship networks as one of several different surfaces or scaffoldings of social life, we need to be especially attuned to how they embed other phenomena and how kinship ties are themselves embedded and culturally constructed. That is the challenge of the ethnographic or anthropological study of kinship networks, and in recognizing that we must pay attention to these other embeddings, we can learn much about a society as it changes over time.

Further Reading

The precursors of p-graphs for the study of social practice begin with structuralist conceptions of marriage rules in the appendix to Lévi-Strauss’s (1949) Les Structures Elémentaires de la Parenté. Bourbaki mathematician André Weil conceived of prescriptive marriage systems as
Problems of Analysis

In 1962, in order to depict marriage rule systems that were otherwise difficult to visualize, French mathematician Guilbaud put Weil’s marriage classes into a graph wherein marriages classes were the nodes, and male or female offspring were the edges that connected the marriage classes. His colleague, cartographer Jacques Bertin, generalized the graphic method of representing kinship to draw genealogies. One of the first complex examples was the ethnographic use of the p-graph method for accurate rendering of the genealogy of an entire Arabic nomad tribe (Cuisenier 1962). The p-graph was attached to a formal computing device (a Fortran program for identifying blood marriages in a network of marriages) by Paul Jorion in 1980, working with Edmund Leach at Cambridge after a fruitful collaboration (1977-1980) with Belgian mathematician Gisèle De Meur, who dubbed Jorion’s Guilbaud-graphs “p-graphs” for “Paul’s graphs” but which proved a good mnemonic for parental-graphs or graphes de parenté as well. The study of genealogical networks of marital relinking, for European villages and towns, was undertaken using the computer by Richard (1993), following a long history of studies of relinking by European ethnographers—Pierre Bourdieu; Pierre LaMaison; Tina Jola, Yvonne Verdier, and François Zonabend; and Martine Segalen—stimulated by Lévi-Strauss’s ideas about endogamy and marriage strategies in complex kinship systems. François Héran’s (1995) graphical tour de force is a valuable theoretical contribution to structuralist conceptions of kinship rules as they play out in terms of idealized networks.

Our approach differs radically from the structuralist or functionalist conceptions of idealized networks. A second set of readings gives a guide to methodology and software for the network analysis of kinship, which is a necessary step in the analysis of actual kinship and marriages practices. Pajek and Pgraph are downloadable software that is freely available on the web. Software authors White et al. provide a guide to the operational methodology of network analysis using Pajek software in the context of kinship and genealogical databases. Batagelj and Mrvar provide the software and their book with de Nooy gives an introduction to Pajek. Hughes provides numerous hypotheses and case studies for the quantitative analysis of kinship networks. White and Jorion provide an introduction to p-graphs countersmands the view that the study of kinship has been rendered moot by post modern critiques. Brudner and White (1997) develop the first community-level analysis of structural endog-
amy and its consequences for large-scale cohesion, in this case, social class formation.

Notes

1. Leaf (1979) notes a good deal of talking past one another among the diverse camps of practitioners of anthropological kinship studies. The idea that theory can stand alone independent of a perspectival method (or that a method does not already embody theoretical elements) is based on a false dichotomy.

2. See also Granovetter (1985) for development of hypotheses about the embedding of economic and other relations.

3. The two relevant parameters of a small world network in Watts’ models are its clusterability (how dense is the network around each ego, for example) and the average network distance between its nodes. Within the enormous range of possible networks, a network is a small world when it is relatively large, with a high degree of clustering of its links yet relatively short distances on average between its nodes. We may not have laws of networks at present, and deterministic laws may not even be the form that explanatory theory will take in this area of research but the topological parameters for distributions of network distance and clustering are extremely useful as a framework for advancing network research, as witnessed in the new research stimulated by Watts’ publications.

4. An example is Harrison White’s (2002a, b) development of a network theory and an appropriate range for models of the modern firm and its self-embedding in the social construction of the modern production economy. His focus is on the study of actual firms and markets, theorizing the actual types of interactions and embeddings, given the full complexity of empirical investigation of the relevant parameters.

5. Imagine, for example, trying to create a model of consumer behavior using the parameters in multiple linear regression, or trying to fit a complex curve with a patchwork of lines each having a different equation. Newton’s invention of a calculus allowed the study of complex curves in terms of infinitesimal changes in slope or direction. This in turn allowed the formulation of explanatory models with fewer parameters, and the distinction between velocity as a first-order parameter for change, acceleration as a second-order parameter, and so forth. The resulting physical law of force as a product of mass times acceleration (F=MA) is a result of a higher order of analytical modeling.

6. Forerunners of a multirelation approach to social networks include Harrison White (1994) and John Padgett (2001; Padgett and Ansell 1993).

7. This is not always the case, of course; for example, Indigenous Amerindian marriages were, in some of the technologically simpler societies, very informal and easily broken.

8. Given limitations of space, we have omitted a review of the important con-
tributions of anthropological network literature of the 1960s and 1970s. They were mostly carried out on a small scale and for very special problems somewhat to the side of the more central theoretical issues in anthropology. The kinds of problems that can be addressed today, involving large-scale networks, conceptualized not as closed but open at their frontiers through links that span to larger worlds, have changed as the capabilities of network methodology have expanded and the problems drawing attention to network approaches and theories have changed as well.

9. The agnatic lineage principle and patrilocal residence are not reflected, however, in kinship terminology, which is strictly descriptive.

10. In many societies, discerning the rules of residential groups is severely problematic, as seen in the Fischer-Goodenough debate over Chuukese residence rules (Goodenough 1956, 1968; Fischer 1958).

11. Also named for Paul Jorion (1980), who was instrumental in its development.

12. In the conventional anthropological genealogy, triangles and circles represent men and women, and lines from parents to children are bundled to show sets of siblings from the same parents.

13. The shift from ordinary genealogies to p-graphs might be likened by some to the shift from the attempt to use linear algebra as a descriptive system to a differential algebra or calculus that looks at second-order differences focusing on differential relationships or changes in first-order relations.

14. There were, of course, other changes that are merely small corrections, and many children where added in lower generations but we will use only the data up to 1982 in our analyses.

15. When we reopened the question of attributing “Donsuz” as the name for lineage #2 in 2003, we found only four persons who were attributed names or “Donsuz” lineage affiliation in interviews: Isman (1174 “Donsuz Kabile”), Donsuz Osman (1376), Iyivaz (1464 “Donsuzlu Kabile”), and Huseyin (1127, “Donsuz oglu” and Karahacili tribe), the latter the son of Mustan (716). No parents or children are known for the first three, who were spouses, respectively, of lineages #7, #5, and #2. There was thus no evidence of a “Donsuz” lineage independent of Ecevitli except for one son of Mustan who was attributed this identity, which we think was a mistake.

16. Conventional graphics are inadequate to find the structurally endogamous core of a network because if links to both fathers and mothers are included in the graph, then every family with two or more children becomes a multiconnected unit, and multiconnectivity ceases to be an index of structural endogamy. Figure 1.6 represents a compromise, where H/W and father/child relations are included in the graph, so that multiconnectivity indexes an approximation to structural endogamy but when there are multiple wives it cannot be determined which is the mother of the husband’s children, so the boundaries of structural
endogamy are not precise but are only roughly estimated.
Chapter 3
Ethnographic Setting

Ours is not an ethnography in the traditional sense—as is indicated by our formal statement and testing of hypotheses—nor a study of social networks abstracted from an ethnographic context but a network study embedded in the richness of an ethnography. In this chapter we provide some of the ethnographic data that are relevant to the questions we will address in later chapters in the network study. If we want an adjective to describe this type of ethnography, concerned with formal statement and testing of hypotheses about social processes, we might call it protean because of its link to finding simple principles in complex phenomena.

Historical Background

Islamized Turkoman groups from Persia who were mostly cattle breeders living under the Seljuk dynasty invaded Anatolia after the battle of Malazgirt in 1071. Their main stock were sheep and horses but they also kept camels and donkeys for transportation and some cows to get milk over a longer period. In addition, the cows were needed among the Turkomans to break the thin but solid ice on the soil with their small hooves and ponderous weight. Otherwise the sheep may have died of hunger when, after a period of rain, sudden hard frosts would appear in areas north of Persia where they practiced nomadism.

The invading Turks became sedentary by degree between 1071 and the nineteenth century, with the exception of the population of the Taurus and Antitaurus ranges. The natural background of a vertical nomadism is especially evident in these mountains, rising eastward from the South Anatolian coastal lowlands (the so-called Çukurova) of the Mediterranean Sea to a height of nearly 4000m. Yet, even in the nineteenth century in Anatolia—the neglected part of the Turkish Empire, which was then politically more oriented to the south and west—almost a third of the Anatolian population were nomadic still (Yalgin I:4) and the chiefs of the tribes—Turkish and Kurdish—still held sway in vast parts
of the country (Eberhard 1953a).

Turkish nomadism preserved itself, then, in those parts of Anatolia where nature subserves this socioeconomic form of life, that is, in its mountainous areas. The steepness of the slopes makes agriculture possible only in the valley bottoms. Because of the dry vegetation their usage is largely confined to animal husbandry: the breeding of sheep, goats, dromedaries, donkeys, and some cows and horses in the better grazing grounds. In winter the mountains are covered with deep snow and the atmospheric temperature drops to under –20 centigrade (about –5\(^\circ\) F). It is hard to survive in the mountains during these months. One has to move down to the Mediterranean lowlands into the zone of winter rains where the temperature is mild, 8 to 16 centigrade, to keep larger herds alive. But in summer the temperature rises to an average of 36 centigrade (about 100\(^\circ\) F), which means at noontime 45 centigrade (about 115\(^\circ\) F) in the shade (Harita Genel Müdürlügü 1977). Out of the shade it may be even 20 degrees centigrade hotter and the atmospheric humidity is very high. Malarial mosquitoes were also widely spread in the lowlands until the 1970s. Sheep and goats especially have to be driven out of the heat to the pastures of the mountainous area. Thus everybody who is able to do so goes upward to the mountains in that season. The yearly rhythm of movement up and down the mountains has been a basis of small-cattle breeding since long before the Turks invaded the country.

The cultures of Arabic, Kurdish, and Turkish nomads have many common Mediterranean characteristics. They are found not only with regard to material culture, as for instance the black tent of goats’ wool but also with regard to social features such as the right to marry FBD, and the preference to do so as an official declaration by young men even today.\(^1\) Even linguistically, the words for tribe (\(a\)ş\(i\)ret) and clan (\(k\)abile), used by the nomads, are loan words widely spread from Arabic into other regional languages. Further, there has always been some intermarriage between Turkish and Kurdish and even Arabic nomads and sedentary people (Eberhard 1953a and 1954, Bates 1973:21ff). It will be shown how this has been growing today.

**Fieldwork Conditions**

After a thirty-month study of Turkish language and dialectology Johansen visited in the autumn of 1956 a number of nomadic joint families to get a first impression of their culture and to choose the lineage to
which she got access. In 1957 from April to October she spent half a year with them, mainly observing their daily routine: economy, material culture, the patterns of interpersonal relations, and Islamic folk religion. As a young woman she was obliged to live in the same tent with the nomads and was together with them twenty four hours a day, including sleeping side by side with the elder and young unmarried people on a felt mat over the soil. Thus she witnessed nearly all discussions and signs of affection in an extended family and with members of other families. Her hosts watched her every minute of the day as well. As it were, close feelings arose from this togetherness and she was told very intimate things about the problems within the clan and about the increasing reduction of living space for the nomads. A disadvantage of her integration into one lineage was that, in the first month, she, as a young woman, needed the agreement of the patriarchs of “her” lineage if she wanted to visit other places of the summer pasture. But soon they understood that she needed more freedom than did a nomad girl.

She revisited the nomads for about one month each in 1964, 1970, 1982, 1989, and 1995, and, she studied their social organization. Over this period she had developed from a young foreign woman to an elder and auntie of the members of the clan with whom she stayed so many times. Young people increasingly looked to her as a witness of their tribal life in the “good old time” because enormous changes had taken place since her early visits. Those of her age and their children, for example, had no school training but now all children—girls and boys—go to school for at least five years. Many of the nomads, who have obtained permanent houses in the lowlands, can now watch TV even for some months of the year, and they are increasingly connected to elements of the global system.

**Population**

In the autumn of 1956, when Johansen first met them, the number of Turkish nomads of the Taurus and Antitaurus Mountains was estimated at about 150,000 individuals. However, this estimation was quite uncertain and the number of full nomads must have decreased considerably in the meantime (see Andrews 1989:59). At the beginning of Johansen’s fieldwork in 1956 and 1957 the members of the clan lived all year in a black tent but in the following decades most of them procured themselves houses in the region of the winter or summer pastures but they nevertheless kept their herds and adhered to their migrations. In 1995, nomads whom Johansen met in the lowlands told her that now they had become
sedentary. When she came to the summer pasture, however, she counted barely fewer tents than in 1957. To her astonished remark they answered that of every family only one son now kept the herds and continued nomadism. Nonetheless, this was enough to maintain the nomadic way of life. The Turkish government censuses never had counted “nomads” separately, and it is not clear who was to be considered as such.

Full nomads are those who live all year in a black tent but nomads are also those who own a house either in the lowlands or in the mountains, where they dwell three to four months of the year. Nomads, moreover, may change to sedentary life and then back to nomadism again. Such changes may result from epidemics in the herds or if better business can be made for some time as cattle dealers or transportation entrepreneurs or in other professions in which they may use their nomadic experiences. Even today only a rough estimate exists of the number of nomads.

**Group Names and Multiple Levels of Membership**

At the highest level of identification, the nomads in the west wing of the Taurus Mountains, the Taurus proper, running along the Mediterranean Sea from the Gulf of Antalya to north of Adana, are called and call themselves Yörük or Yürük (=nomad). The nomads of the east wing, the Anti-Taurus, are also officially named Yörük but they call themselves “Aydınlı,” or people from Aydın, a town near the Aegean Sea in Southwest-Anatolia. In former times many Yörük lived in this province but in the mid-nineteenth century they were pressured in various ways to leave. Now very few are left in the region of Aydın. The Aydınlı clan studied by Johansen migrated annually between winter camps in the Çukurova and summer camps in the high ranges of the Antitaurus. The Aydınlı and Yörük were organized in tribes, large political units of some 1,000 people, some of them, for instance the Karakoyunlu (=People with Black Sheep), known already since the thirteenth century (Sümer 1967a). They have a well-known history. Their names appear in historical documents and local histories. After the foundation of the Turkish republic the tribes increasingly lost their significance and after World War II no tribal organization remained. A man’s knowledge of tribal membership alone remained, which had hardly any significance in 1995.

When Johansen asked at the beginning of her fieldwork what was the tribal name for members of the clan, they first told her that they (i.e., the clan as a whole) were members of the Honamlı, one of the well-known
nomadic tribes. But soon she discovered that they spoke of others as “the Honamlı,” not as “we” or “our people.” After she had lived with them for about two months and they were aware that she did not let government institutions know about their tricks but, on the contrary, served as a good witness in legal proceedings against sedentary people, they admitted that they had only recently become associated with a lineage of the Honamlı. This happened at the end of the 1920s and the beginning of the 1930s, when land in the former Armenian territories in the Antitaurus was given to those nomads who agreed to settle down in villages. In declaring their name as Honamlı in the government settlement, their official declaration was one of willingness as a group to become sedentary. In fact, however, they intended to remain nomadic and to use the land in the settlement that involved the Honamlı merely as a summer pasture. In 1934, they secured a valley between two mountain ridges, the bottom of which lay at an altitude of about 1500m, about 12km in length and 3km wide. They soon confirmed this agreement with the Honamlı by marriage ties, paying bride payment for a Honamlı girl with a good reputation and giving one of their young women as a bride to the family of a young Honamlı equal in wealth. These links were renewed and extended in the next generation. They told Johansen that, in fact, they had no traditional name but they were called “Karaevli” (=people with black houses). This name refers to the black goat-wool tents they were living in and that is given sometimes by sedentary people to full nomads. Yalgın discovered in 1928 that some groups who had a mixed tribal descent adopted this expression for their own group to obtain a common name. This name as well as “Karakeçili” (=people with black goats) are to be found already in older documents in which it was used as a means to extricate one’s group from difficulty in cases when tribal identity was at issue (Süm er 1980:661, 1967a:237; Öhrig 1998:352ff).

**Economic Basis and Inheritance Rules**

The raising of sheep or goats is the economic mainstay of the nomads of the Antitaurus. The Anatolia fat tail sheep are sensitive to heat and have to be brought in summer to a height of about 2,000m over sea level or even more, where nights are cold even in the hottest months. Goats could bear more heat and graze on summer pastures from about 1,200 to 2,000m, where a bushy vegetation grows. Both animals have to be pastured in the nights between mid-June and October—the sheep some weeks longer than the goats.

Sheep breeding is more profitable because prices for wool, meat, and
even yogurt—although not cheese—are higher than those for comparable products from goats. Thus sheep breeders are usually richer than goat breeders, and it is said that about 100 sheep or not less than 150 goats are the least an extended family needs to make a living. On the other hand, sheep need much more financial investment and effort. Two or even three shepherds are necessary to pasture the main herd of 100-500 animals and watch it carefully. Contrary to this, goats find their fodder unaided. One shepherd with two dogs is sufficient to attend a herd of about 500 animals and keep them within the borders of their pasture ground. The amount of personnel for pasturing grows considerably during the lactation period and the first rutting season, when the herds of lambs or bucks, respectively, have to be separated from the main herd. This often becomes a problem for sheep breeders. Their families have to be larger to raise sufficient younger men for this task—younger women without male escort never move far from their tents—or they have to engage shepherds. This and the fact that the fodder for the fastidious sheep often has to be bought in winter reduce the profits of sheep breeders considerably.

The valley that the clan had obtained was fit for goat breeding, so that most extended families kept goats only in addition to the usual transportation animals. The latter included at least half a dozen camels and their colts, some donkeys, and, if possible, a fine horse for each of the grownup men of the family for reason of representation. One lineage, however, the Dazkurlı, changed to sheep breeding in 1957 and therefore went to a higher pasture about 2,000m above sea level and about 50km farther southeast. There they spent the summer together with lineages of other tribes. Thus they became more and more isolated from the social life of the other lineages of the clan. Other families, who owned smaller herds of sheep in addition to their goats, combined them into larger units and sent them together with the necessary number of shepherds to higher regions in June, July, and August. Because all animals wore the special ear cuttings of their owners there were no difficulties in dividing the herds thereafter.

In 1957 the nomads no longer had fields but in 1964 they already had begun to till the soil of the bottom of the valley. They did so not only to spare the high expenses of flour—thin bread is their staple food—but also to prevent the young farmers from the next villages from coming to till the soil and thereby securing a right to it because clan members had not themselves settled and become farmers as they had promised to the government. Clan members stayed in the summer pasture four to five
months, from May until the end of October. Their winter camps were about 150 km away in the vicinity of Kadirli but, after 1964, near Kozan, at a distance of about 100 km.

The herds were mainly the property of the patriarchs until the latter's death or until they became senile and lost the capability of leading the economy of the household. In some cases property was divided before an old man set out for pilgrimage to Mecca and wished to retire from everyday earthly business thereafter. If sons wanted to part from their fathers earlier they obtained a preliminary share, smaller than the one they could claim after the definite sharing of the father's property on the occasion of his death or retirement. To part from one's father before one had sons old enough to help one pasture the animals was practically impossible, and it was badly looked upon even for the sons who did not practice nomadism any longer and had settled down in the 1980s, if they parted too early from their parents' households (compare Bates 1973:88ff).

In the division of property, a neutral elderly and respectable man from the same lineage or at least the same clan was always invited. This task entailed a great honor, though Johansen experienced a case in which a patriarch, hearing about his prospective election as a sharer by the family members, fled to the next small town before they could definitely ask him and did not return before they had chosen another man. Quarrels within this family, which everybody expected because its tough elderly patriarch still owned all property and was not willing to give his sons an adequate share, lay behind this behavior.

Inheritance followed Islamic law in principle but practically this was disregarded in that daughters did not inherit half as much property as their brothers after the death of the father, which the Qur'an demands. Their dowries were looked at as their shares, which they had already been given at the time of their marriages, though the value of a dowry was often surpassed by the value of the bride payment. Nevertheless, women were not without property. They owned the animals which they had secured during the wedding—the buck driven across their way, which they had to lift on their saddle, the “alighting”-presents indirme (goats or sheep which the father-, mother- and brothers-in-law had to present her before she was willing to alight from the horse or, since the 1980s from the jeep), other wedding presents, and the söylemelik (=speaking presents) that her husband and her in-laws had to give her (see Chapter 7 “Marriage Choice and the Extended Family”). The offspring of these animals was hers too, of course. Their milk and milk products could not be parted, however, and were used in everyday consumption. But the wool, the hides, or the money for animals sold to the
cattle traders were the property of the women. The women left their property—their jewelry inclusive—usually to their daughters. Thus female inheritance-lines existed alongside the main male inheritance-lines. The main reason for her in-laws to keep a widow in their family were the children, of course, but property may have played a certain role, too.\footnote{4}

Property was not without obligation, the more so as everybody knew the size of the herds of all other patriarchs. The nomads could evaluate exactly the number of animals in a herd—a skill that Johansen was far from proficient at even after about a year of experience. Thus it was expected of Clumsy Halil (721) in 1957, for example, that he would loan some sheep of his herd of more than 500 to Lonely Mehmet (1014), his FFBS. This man needed them to pay the bride payment to have his youngest son married—a matter which is looked at as of vital importance. Not giving the loan to his uncle lowered Clumsy Halil’s reputation for some years. Other relatives helped Lonely Mehmet thereafter—as usual without demanding interest as the Qur’an (sura 2, 276f.) prescribes. In the same way people lose their reputation and the good will of the other nomads if they do not help their next neighbors—usually their relatives—during periods of intensive work, as for instance castrating bucks, or shearing sheep or goats, and a first working up the wool.

\section*{Lineages, Islam, and FBD Marriage}

The Aydınlı, as opposed to their Central Asian forebears, lack lineage exogamy. Throughout the regions of the Middle East that came under Arabic influence in the seventh and eighth centuries along with Islamization, marriage with FBD became a right. Berrenberg (2003), in her survey of Middle Eastern marriage practice, notes that the widespread existence of this right is differentially exercised, often but not always as a preference, and depending on its usefulness in a particular context. For the Aydınlı, like many other of these groups, the grafting of Islam, with its principles of female seclusion and de-emphasis on lineage exogamy, created the conditions that favored the FBD as a preferred cousin in the agnatic extended family.\footnote{5} Female seclusion for single young Aydınlı women consisted in the requirement that they not move far from their tent and the prohibition on men watching women’s laundry groups at the river. Older women were free to move from tent to tent and took the role of matchmakers.

The structure of the terms that Aydınlı use to refer to relatives is of the
descriptive (Sudanese) type that is common in the Middle East. There are
distinct terms for each of the parents and parents’ siblings, and for each
type of cousin.⁶

Leadership

When Johansen first met the nomads she already knew that the organiza-
tion of the traditional tribes no longer functioned and that no chiefs of
tribes such as Karahacılı or Sarıkeçili existed. The offspring of some of
this former tribal nobility lived as rich and influential families in Turkish
towns (Eberhard 1953a and b, 1954). But she expected to meet at least
officially accepted clan leaders. In the first weeks this expectation was
dashed as well. To her questions the nomad men told her that they had no
“chiefs” but tanıdık kişiler (=known-persons) and they left it open as to
whether there used to be only one or more of them. Bazin (1987:24) ob-
tained the same information from the Sarıkeçili.

The role of a clan’s known-person was to assemble as many of the pa-
tricians as lineage or family heads or councilors as often as possible in
his tent to discuss with them the political and social affairs and to settle
them—usually after long discussions during which every patriarch got
the opportunity to show his eloquence. He as the host of the tent was the
one who spoke finally, after he had heard the opinion of most of the as-
sembled elders and how far he could carry his own point. A tanıdık kişi
usually tried to reach the summer pasture as early as possible together
with his joint family with the intention to get a place in the center and
near a road. Every patriarch who passes through was expected to pay him
a visit or at least to stop for a chat on his way to the next small town.

Without formally recognizing the position of tanıdık kişi, the Turkish
republic established, after World War I, positions of village mayor (muh-
tar) throughout Turkey. Up to 1981, although the muhtar of nomad
“village” was an officially elective position, he was invariably a younger
man and a dependent of the current tanıdık kişi, who was the actual deci-
sion maker as to who would be nominated for office. Not until the recent
period in which “Dede” (597) became tanıdık kişi and also muhtar by
standing for election were both positions held by the same man over an
extended period.

The tanıdık kişi was an informal or tacitly accepted position and con-
tinues to be so. Long before a tanıdık kişi would become infirm or retire,
people would discuss who good replacements were and, if the present in-
cumbent would be infirm, whether the present tanıdık kişi should con-
tinue. The men who would finally occupy the position were usually
practical, realistic, ambitious, and knew how to show themselves as faithful to friends. Some lineage leaders, such as Hasan (1392) from Dazkırı lineage #6 (whose genealogy was not collected) departed from the behavioral pattern considered essential for a *tandık kişi* and were considered very authoritarian but clan leaders also governed for the most part by example and consensus and not by fiat.

**Summary**

For the last millennium, the vast Taurus and Antitaurus mountain ranges of southern Turkey have provided a home to some of the Islamicized Turkoman groups from Persia that invaded Byzantine and mostly Christian Anatolia in the eleventh century. The great climatic variations in these ranges have also preserved older nomadic lifeways with herds of goats or sheep and additional camels and donkeys for transportation. The exact number of Turks who practice nomadism today is not known; there may be 100,000 or more. The tribes that were known historically, however, have lost their significance at the national political level, and tribal memberships continues to be known only among the nomads and some of the settled groups.

The nomads are called Yörük (=nomads) in the Taurus proper. In the Antitaurus they call themselves Aydınlı, derived from their early pasture-lands in the province of Aydın in western Anatolia, from which they migrated eastward in the nineteenth century. The men introduced themselves to Johansen as Karaveśli (=people with black houses or tents). Groups of mixed tribal descent adopted this expressions for their own group to obtain a common name or to extricate one’s group from difficulty where tribal identity was at issue.

While many of the Aydınlı continue their nomadism, other nomads today often settle in villages or small towns because epidemics or loss of herds occur or their experience in nomadism can be turned to an opportunity, such as doing better in business as cattle dealers, or entrepreneurs in transport. For ex-nomads, however, changes may also occur from sedentary life back to nomadism.

The Arabic linguistic terms used for family and lineage organization are among the elements that diffused widely throughout the Middle East along with Islam, including many elements of social organization. Among these elements are that young men’s parents still prefer his marriage with the FBD. Islamic inheritance, which entails equal division
among sons with half-shares of property reserved for daughters, occurs widely in a modified form in which dowries were looked upon as a daughter’s shares. Dowries rarely surpassed the bride payment, and property acquired by women, including animals, was passed to daughters.

The ethnographic data presented in this and the following chapters is not intended to give a complete description; but rather a selective presentation of those factors that will be useful in the context of an analysis of social organization and dynamics. Other sources are available for a fuller ethnography of the complex lifeways of the Yörük and their extensive arrays of skills, and their knowledge systems.

**Further Reading**

Johansen and White provide a dialogue on combining the results of long-term field research with a longitudinal framework for data analysis. They address fieldwork conditions and issues (impact and benefits of long-term research), data issues (minimum core and genealogical data), analysis of networks, leadership and conflict, and the study of social change. Johansen (1994) contains an ethnographic photo-essay on the Aydınılı. Other references provide the basic sources in German and on neighboring groups.

**Notes**

1. Bates (1973:65) study of a neighboring Yörük clan also refers to the right to marry the FBD, termed emmi (-FB) hakkı (hak=right), in line with Berreberg’s (2003) comparative study of FBD marriage in the Middle East. Barth (1954:164-71), for example, notes the right to a FBD marriage for the Kurds of Northern Iraq.

2. If so, as we shall see in the analyses that follow, this represents a huge change since the larger siblings groups were those that tended to remain solidly nomadic.

3. Ev in Turkish means “house,” and thence “family, household” or even “house” in the sense of a dynasty. Kara is “black,” so Karaevli is “those of the black houses” or, presumably, “those of the black tents,” as Yörük and Aydınlı tents are made of black goat hair.

4. Concepts of inheritance also apply to bodily substances but not symmetrically to males and females. “Bone” (kemik), inherited through the male, for example, is contrasted to female nurturance or “flesh”. In the theory of inherited substances proposed by Barry (2000), the Aydınlı fit neither his type case 2 of agnatic exogamy nor his explanation for FBD marriage (case 3). His case 2 ap-
plies to the agnatic exogamy of Central Asian nomads such as the Mongol Turks (Krader 1963:343ff), for whom marriages were a form of alliance used for politics (Johansen 1999: 156ff). The fact that women were not secluded meant that they could be viewed and compared for strategic qualities such as being intelligent or energetic. Lineage exogamy among these groups lasted through the nineteenth century.

5. The Qur’an does not prohibit marriage with MZD: “Forbidden are your mother and your daughter and your sister, your FZ and MZ, your BD and ZD, your milk-mother, who suckled you, and your milk-sisters [those having the same wet nurse]. . . . (Sura, 4.24, our translation). Barry (2000:75) lists some interpretations of Mohammed’s sayings, however, that cite the practice of the sororate to assert that a MZ is a mother, and thus to provide, in these minority traditions, a justification to regard MZD marriage as impure. Unlike Barry’s case 3, which he uses to explain FBD marriage, the Aydniňl lack a uterine identity principle of inherited properties. In contrast to the male “bone” (kemik) contribution, the conception of the “flesh” and nurturance that the mother contributes to the child is not a hereditary quality. The Aydniňl concepts of “flesh” and “bone” carried over from Central Asian nomad stock to the Turkish nomad groups that derived from them. We find no support for Barry’s explanation of FBD marriage.

6. See the Glossary for kinship terms used in reference or address for relatives. The Aydniňl terms accord with those used in the neighboring Yörük tribe studied by Bates (1973), although he reports that ağa, a title of respect, was also used for “father.”