chapter eight

Ethnographic Research Methods for Applied Medical Anthropology

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Ethnographic research methodology allows medical anthropologists to explore key issues and concepts of health and illness across cultural boundaries and to advance anthropological theory and practice. The ethnographic methods used in medical anthropology include formal techniques for direct observation, participation in life experiences, and informant interviewing. These methods produce data which can be used to construct holistic descriptions of human cultures and to provide detailed information about subsistence, technology, social relationships, health, language, beliefs, family, cultural networks, and the life rhythms of human beings from birth to death and beyond.

A new ethnographic methodological tool kit has improved our ability to understand and predict human behavior within health-related environments. These methods are enhancing the potential for our research to accomplish a dual set of outcomes. They can be directly applied to produce practical changes to health care systems and health beliefs in various communities, and simultaneously can advance the theoretical propositions that the social sciences use to interpret this critical area of human cultures. The practical results accrue as we discover better ways to deliver health education messages, remove barriers to public health projects, change the way people use medical services, or improve the ability of health professionals to deal with patients from a different culture. The theoretical advances result from the opportunities that applied medical anthropology provides for tests of both methods and theories in a real world environment.

Background Information

Ethnographic research methods comprise all of the processes, procedures, and techniques that allow an anthropologist to select, collect, record, manage, and analyze ethnographic data within the framework of anthropological theory. The most common label given to this complex set of research methods and techniques is "participant observation." In fact, the term is so frequently used by anthropologists as a shorthand description of the ethnographic endeavor, it has erroneously come to be considered "the" method of sociocultural anthropology, rather than the general term for all of the processes of ethnographic research. This

is an unfortunate situation which makes the ethnographic process appear to be far easier to accomplish than is actually the case.

The classic ethnographic research project involves staying in the field 24 hours a day for a minimum of 12 to 24 months. This provides opportunities for the ethnographer to observe, record, and ask questions about ordinary events, from the time people get up to when they turn in for the night. It allows the researcher to capture cycles of daily, monthly, and annual life. And special events can be recorded in detail as they occur. The 12–24-month research cycle is long enough to insure that most key cultural beliefs and behaviors will be identified, and that no major regularly occurring community events will be missed. Shorter field sessions are possible for groups whose major cultural parameters are already known, or where the object of the fieldwork is an investigation of some special or focused area of behavior.

Ethnographic research necessitates a broader conceptualization of research methodology than is typically found in the experimental or survey-based social sciences where methodological considerations have often been restricted to experimental control, sampling processes, instrument design, and appropriate statistical procedures. In contrast, ethnographic methods encompass all of the critical issues surrounding the direct observation of, interaction with, and interviewing of informants in a field setting. The highly qualitative and socially intimate nature of ethnography demands formal processes. These processes help resolve the difficulties generated by the conditions required for ethnographic research: the opportunity to enter a cultural setting, establish long-term social relationships, be allowed to participate in important community activities, and exit from the setting with data that is defensible, comprehensive, and intact.

The following sections summarize some of the critical methodological elements of classic ethnographic research and introduce advanced ethnographic research methods that are enhancing our ability to investigate and analyze medical anthropology issues.

Review of Selected Methodological Literature

There is a growing literature which describes ethnographic research design, site entry, informant relationships, computer field note management, advanced research techniques, and the personal effects of field studies on the researcher. Older references emphasize practical advice. Newer works assume knowledge of the classics, and expend their efforts refining theory, providing ethnographic training models, describing advanced methods, or defending the descriptive nature of ethnographic techniques in an increasingly quantified world.

Two of the early works describing ethnographic field methods are Kroeber's seminal text, *Anthropology Today* (Kroeber 1953) and the book of recommended fieldwork questions published by the Royal Anthropological Institute, *Notes and Queries on Anthropology* (Royal Anthropological Institute, 1951). However, the benchmark era for the formalization of ethnographic methods is the time period circa 1970. The classic text published during this period which links ethnographic research with larger theoretical concerns is Pelto's (1970) *Anthropological Re-*

search; The Structure of Inquiry. Other period works describe the ethnographic research process, its effects on the researcher, and the practical conditions one could expect to encounter in the field. Examples are Epstein's *The Craft of Social Anthropology* (Epstein 1967), and Spradley and McCurdy's *The Cultural Experience: Ethnography in Complex Society* (Spradley and McCurdy 1972). These publications mark the initial formalization of ethnographic methodological training.

One important edited volume, *Marginal Natives: Anthropologists at Work* (Freilich 1970), links theory, method, and field considerations. Chapters describe how ethnographic knowledge is acquired in the field, the types of approaches ethnographers commonly adopt (passive, adaptive, interactive, and intrusive, to name a few), and comparative descriptions of ethnographic research by some of the most successful fieldworkers of that time period. Each author presents a problem statement (theoretical approach, and research design), describes how they initiated passive or active research processes (fieldwork entry), discusses their methods (the progress of the field research), and describes bowing out (how the ethnographer successfully, or unsuccessfully left their research site behind).

Other books circa 1970 provide behind-the-scenes details about field research; a necessary complement to theory and methodology. The pragmatic classics of this period are filled with practical advice for fieldwork survival: *Doing Fieldwork: Warnings and Advice* (Wax 1971); *Encounter and Experience, Personal Accounts of Fieldwork* (Beteille and Maden, eds. 1975); *Being an Anthropologist: Fieldwork in Eleven Cultures* (Spindler 1970); and *Crossing Cultural Boundaries* (Kimball and Watson 1972). Each contains excellent advice to overcome the problems of doing research in foreign countries. In addition, Frantz's (1972) *Handbook for Student Anthropologists* contains a summary of more than 100 guides for ethnographic research: technical aides; both general and area specific guides to ethnographic questions; manuals for crosscultural research on children, adults, health care, art, food habits; as well as bibliographic references for world areas, such as India, Oceania, and Africa. Another handbook on basic field research is Naroll and Cohen's (1970) *A Handbook of Method in Cultural Anthropology*. While some of the entries in these books have become outdated, each contains a great deal of timelessly useful information.

A subsequent round of ethnographic research texts began appearing circa 1980. These works expand on the earlier texts and bring the field more up to date in terms of methods and procedures. Spradley's two "how-to" ethnographic training manuals, *Participant Observation* (Spradley 1980) and *The Ethnographic Interview* (Spradley 1979) became standard texts for fieldwork training for most of a 10-year cycle. Other works include *The Craft of Community Study: Fieldwork Dialogues* (Kimball and Partridge 1979), and Mike Agar's *The Professional Stranger* (Agar 1980). Agar's book has been frequently cited in the substance abuse literature, due in part to Agar's early drug research, especially his street ethnography of drug use, *Ripping and Running* (Agar 1974). A second edition of *Anthropological Research: The Structure of Inquiry* (Pelto and Pelto 1978) was published in this cycle. A more recent book, *Fieldwork: The Human Experience*

(Lawless, Sutlive, Zamora 1983) is also valuable. These books contain firsthand accounts of the processes of field research and the lessons to be learned.

Revisions in formal approaches to ethnographic research methods seem to appear on about a ten-year cycle. Recent additions to the literature are the two-volume series by Werner and Schoepfle (1987) titled *Systematic Fieldwork*, Bernard's (1988) *Research Methods in Cultural Anthropology*, Fetterman's *Ethnography: Step by Step* (Fetterman 1989), and the advanced methods text, *Systematic Data Collection* (Weller and Romney 1988). These works contain state-of-the-art descriptions of research design and methods for both classic participant observation and the advanced ethnographic data collection necessary in modern medical anthropology.

General Methodological Considerations for Ethnographic Research

The primary purpose of this chapter is to introduce some specific methodologies that are of value to applied medical anthropology. However, since ethnographic research training is less standardized than quantitative research training at the present, this section reviews basic information that should be included in preparation for ethnographic field research; areas of training that medical anthropologists should receive before embarking on ethnographic field endeavors.

Ethnographic research has ten basic stages: (1) Problem definition; (2) field preparation; (3) entry into the community; (4) initial observations and interviews (social mapping); (5) informant selection; (6) intensive and focused interviews on selected topics; (7) general information review and confirmation; (8) exit from individual relationships and, eventually, the community; (9) data analysis; and (10) public dissemination of results. These stages are cyclical, not linear. At any given time an ethnographer is meeting new informants, working with long-standing relationships, and moving out of existing relationships. The ethnographer not only collects new information but also reviews fieldnotes and reinterviews key informations to confirm, modify, or deny previous data. Analysis begins early in the process and continues in conjunction with field data collection, and beyond. Thus, ethnographic field research has a number of predictable activities and types of interactions that are briefly summarized in the following sections.

Planning Field Logistics

The primary concerns for field research planning include survival considerations, field entry permission, research design, and preparations for data management. The latter two involve background research, theoretical considerations, and appropriate methodological design for the initial stages of a project. The other pre-field planning issues are logistics and official field entry permission.

The most important general logistic condition is survival. Survival questions include: What equipment do you need? What supplies are necessary (from toilet paper and computer disks to food in remote or foreign areas, plus clothing and shelter)? Where will you live? What kind of health precautions do you need to take? Have you learned the language sufficiently to allow for entry and survival

needs? Fieldwork involves the researcher living in a field setting (from foreign rural areas to U.S. urban ghettos) for a prolonged period. Issues of comfort and basic safety are as important to the completion of ethnographic research as good research design and data management. It is difficult to collect usable data if you are sick, injured, or dead.

Another critical element of ethnographic research involves acquiring the appropriate permissions necessary for moving to a field site and beginning the research. The types of permission needed can be divided into official permission (from governments, agencies, community leaders, and institutions) and informal permission (from local individuals who control access to information and to others). Expanded discussions of these issues can be found in the literature summarized above.

Field Entry

Once the initial planning has been completed, a number of conditions affect the entry process. Field researchers are deviants in an ongoing cultural system and their reasons for being there do not normally match the rules of behavior in the community. Therefore, ethnographers seek ways to make their presence more congruent with their surroundings. Research entry involves learning to dress appropriately, to be able to talk, walk, and stand in ways that are compatible with the cultural environment, to learn how to "fit in," or at least not stand out in a crowd.

Social Mapping and Successful Roles. One way that has proven successful in a wide variety of cultures, both foreign and domestic, is to do a gentle entry. Most ethnographers follow a multimethod process of entry called "mapping social contexts." It includes observing behavior, following nonintrusive research leads, and recording copious amounts of observational data. This is often a prerequisite to interviewing, and is certainly a prerequisite to any in-depth (key informant) interviewing or to sustained field research in public environments. Mapping social environments consequently leads to contact with and initial interviews with local cultural experts.

Informant Selection. Anthropologists select ethnographic informants on the basis of expertise in a cultural subject area and the ability of an informant to eloquently describe the culture, or to provide "typical" or representative responses about the culture. Therefore, part of the methodological tool kit of an ethnographer includes techniques for sustaining relationships to keep social alliances open for future research contacts.

> [T]he ethnographic fieldworker must locate helpful people, win their cooperation, and establish a close, personal relationship with them. This task is not simple, because it involves a basic conflict. On the one hand, the ethnographer establishes a relationship of trust with his informants. It is desirable that this be productive and beneficial to both parties. Often it is marked by friendship. On the other hand, the ethnographer seeks to know things that informants may be reluctant to reveal. Indeed, they may perceive that the researcher is asking them to tell secrets about other people to whom they are loyal. At the very least, they will be asked to talk about what they know in a manner that is new to them. Some of the ethnographer's questions may be embarrassing; others are outright stupid. [Spradley and McCurdy 1972:41–42]

Anthropologists also use quantitatively based sampling frames and "power analysis" techniques to randomly select informants when the purpose of their interviewing is to examine dimensions of intracultural variation on subjects that they have already explored through in-depth ethnographic interviews. Several recent articles have explored both the selection of informants and the problems with informant accuracy under various circumstances. Informant selection is always a critical issue, and even more so in the special case of a project that has both ethnographic and quantitative research components and where there is a need to compare and combine data derived from nonrandom ethnographic sampling with randomized quantitative sampling. The dilemmas produced by these often-conflicting sampling conditions is currently being solved in two ways. One is called "targeted sampling," and is being used to deal with the need to study "hidden" populations, such as street studies of drug addicts or the health needs of prostitutes (Watters and Biernacki 1989). The other is to use simulation models to estimate relations and biases that occur due to what is called "snowball" or convenience sampling (Johnson, Boster, and Holbert 1989). A snowball sample is one that begins with an individual who provides the names of other individuals in his or her social networks; those people provide the names of others who can be interviewed, and so on until a sample that is large enough for statistical purposes has been collected. The latter type of sample violates certain statistical assumptions about appropriate sampling, and must be accommodated in some way that reduces the bias created by the lack of randomness in the sample frame.

The sampling articles noted above deal with the problem that a sample not drawn randomly may bias any results derived from it, because it may leave out individuals whose views and beliefs are an important part of the overall intracultural variation in a society. However, anthropologists must also be concerned about bias or misinformation that creeps into their data sets either because of inaccurate memory about events, because of differences or deficiencies in cultural knowledge between informants, or because of differential participation in cultural scenes by particular informants. A series of articles (Bernard et al. 1984; D'Andrade 1974; Freeman, Romney, and Freeman 1987; and Romney and Weller 1984) explore the conditions that affect the precision of informants. Taken together, these articles provide strong support for the accuracy of ethnographic informants, with cautions about the types of data that various types of informants will present either accurately or inaccurately. This allows the ethnographer to select informants with much greater precision and defensibility than was previously possible in medical anthropological research.

The Sustained Research Process

Sustained field research is basically an extension of the entry process. Ethnographers work intensively with relatively small communities or through local social networks where communication tends to be frequent and tight. The researcher

develops a reputation which has to be guarded and reinforced, since it will often be deliberately tested. Whether or not the ethnographer is able to overcome these tests normally depends on the types and quality of relationships they develop with the people they interact with in the field. These relationships, in turn, are dependent on the ethnographer learning the tacit knowledge systems of the culture. There are three tacit knowledge areas that are often the key "operating" systems in any culture. These are the culturally defined roles, the reciprocity system, and the taboo knowledge of the culture. Controlling these types of information is a key to sustained research.

Creating Dyads. Creating dyadic relationships is vital for maintaining a sustained presence in any cultural system. Trust is initially offered through dyads. It is also transferred directly from initial dyads into social networks. An informant who trusts you can introduce you to a member of his or her network, or to a known member of another network and open contacts to further research opportunities.

Once contact has been established, it is important to maintain interactions in the community. Familiarity may breed contempt, but more often it breeds trust. This helps overcome the problem of trying to establish yourself in a social setting where you have no intrinsic membership.

Sustainable Roles. The next step in sustained entry is to adopt a sustainable role; preferably a role that is already defined by the culture and the community. One circumstance that must be taken into account in developing a sustainable role is that some cultures and subcultures maintain gender roles that are distinctly different from the ones the researcher is accustomed to playing. This can cause discomfort, confusion, and even anger. In some cases the research must be divided among investigators assuming appropriate gender roles for the culture being studied. Any other approach could fail to gain access to key elements within the cultural system and might produce partial, incorrect, or misinformed analyses of the culture under study.

Reciprocity in Fieldwork. In addition to adopting appropriate roles, all human groups work on culturally constructed systems of reciprocity which must be managed if sustained entry is to be possible. Ethnographers inevitably incur social "debts" that carry return obligations. The more contact you have with an individual, the more complex the obligations are likely to become. Friends owe more social debts than strangers or acquaintances. Family membership compels participation in the most multifaceted set of reciprocal obligations that exist in a culture. If you become the equivalent of "one of the family," you can expect to have tremendous access to intimate information about your informants; you can also expect to have to fulfil all sorts of obligations to them. The strength of reciprocity is that it works. The danger of reciprocity is that it works both ways. The easiest way to destroy a social relationship is to allow reciprocity to become imbalanced. For the ethnographer, the primary danger with reciprocity is that it is almost always based in tacit rather than explicit knowledge systems. It is hard for outsiders to understand and control.

Handling Taboo Knowledge. The other tacit system that is very important to sustained research is taboo knowledge. All cultural systems contain information that is in some way dangerous for outsiders to have, or knowledge that is considered improper for other insiders to know. There are two basic ways that ethnographers protect themselves and their informants from the dangers of taboo knowledge. The first is to avoid learning it. The second protection is to appear to know nothing, even if you have learned the taboo knowledge. Many "secrets" are only secrets because there is a social convention not to divulge them in public. In some of these cases, pretending not to know the information is as socially "appropriate" as not knowing it. As long as there is no need for public acknowledgement that taboo knowledge restrictions have been violated, members of the social group tend to ignore a breach of "cultural security," since these breaches occur within the society itself, through the same process, and are ignored as long as the "violation" is not made public. However, if the knowledge becomes public, the group may be required to move against the offender in order to protect "the secrets" of the group.

In some cases ethnographers deliberately seek out and record taboo knowledge because the taboo knowledge is at the very core of the research problem being explored. This is certainly the case in the ethnographic research being done on street drug use, where taboo information is a such an integral part of the system that learning it cannot be avoided. This creates a number of ethical and individual dilemmas for the researcher, not the least of which is personal safety. Even if this knowledge is not at the core of the study, it becomes dangerous. The ethnographer must be prepared to protect informants and themselves in these types of disclosure conditions.

Once these conditions for sustained research are met, then the ethnographer can proceed to increasingly focused research techniques. Several of these are described in the following sections.

Intensified Research, Advanced Methods, and Rapid Assessment Techniques

An explosion has recently occurred in advanced anthropological research techniques. These new methods do not replace the need for classic ethnographic data collection, but they enhance our ability to confirm basic ethnographic findings from multiple directions and they allow us to produce greater analytical depth and breadth of detail in a number of cultural dimensions. These new methods make rapid assessment ethnography feasible in ways that have not been possible before this time.

The new methods are predominantly focused on three areas of data collection and analysis. These areas are the analysis of culturally defined cognitive systems, the exploration of social relationships and social structure, and the development of decision models based on cultural values and decision processes.

Cognitive Systems

Anthropologists exploring the cognitive dimensions of medical domains have been extremely prolific in creating new methods. Since many of the key issues in

medical anthropology require a documentation of cultural domains surrounding peoples' beliefs about health and illnesses, these new research techniques are likely to have a strong impact on theory and practice in medical anthropology well into the foreseeable future. The new techniques can be divided into those that (1) assist in determining the content and limits of health care domains (e.g., free listings), (2) those analyzing the structural elements of cultural domains (e.g., triads, pile sorts, scales), and (3) those that portray a domain from a consensual framework (e.g., consensus theory approach).

Free Listing. Free listing is a simple technique that is done by virtually every ethnographer who discovers an important cultural domain and wants to do a preliminary exploration of the limits of that area of knowledge, belief, or behavior. Folk remedies are a common example. Since all cultures begin the diagnosis and intervention of illnesses in the home, it is a normal question to ask, "what kinds of remedies and medicines do you use?" This produces a listing for a single informant, which can be rechecked and expanded for that individual, duplicated for other members of the household, then broadened and rechecked with members of the community until virtually all remedies in use in a culture have been identified.

The more sophisticated uses of free listing data treat these qualitative data as variables that can be counted and used in several statistical procedures (Weller and Romney 1988). The free listings generated by individuals, or groups, or even communities can be compared with one another, either in terms of internal variation or variation from one group to the other. For example, questions about the saliency of treatments for an illness can be tested by asking informants for a free listing and then either aggregating the data for the group, or comparing answers within or between groups. One such type of free listing exercise was used by the author to generate a model of the home treatment of illnesses in a Mexican American community (Trotter 1981, 1983). Another use of the free listing exercise is presented in Table 1, below.

The data in Table 1 were generated as part of an applied project to create a culturally appropriate in-school prevention program to reduce risks from alcohol and drug abuse, and AIDS for Navajo youth on the Navajo reservation. The project used several free listing exercises as a rapid assessment technique to establish baseline data on alcohol and drug terminology that could be incorporated into the classroom exercises developed as a part of the project. The Table 1 data were collected by giving a five-by-seven card to informants and asking them to "please list all of the things you can think of, except alcohol, that people use to get high." This rapid scanning technique is useful in groups, such as high school and college classrooms. It works equally well with single individuals and can be done as an interview exercise, one-on-one, where that is necessary. The list in Table 1 was generated by Native American students at Northern Arizona University, as a comparative data set for the free listings generated by high school students on the reservation. We also did a separate free listing of all of the alcoholic beverages

TABLE 1

Native American College Students Free Listing of All the Things People Use to Get High Except Alcohol

Rank	Item	Frequency	Resp Pct
1	Peyote	10	59
2	Crack	10	59
3	Cocaine	10	59
4	Marijuana	9	53
5	Glue	9	53
6	Acid	8	47
7	Gasoline	8	47
8	Coke	7	41
9	Paint	7	41
10	Heroin	6	35
11	LSD	5	29
12	Cigarettes	5	29
13	Speed	5	29
14	Pot	5	29
15	Mushrooms	4	24
16	Weed	4	24
17	Sex	4	24
18	Hair spray	3	18
19	PCP	3	18
20	Paint thinner	3	18
21	White Out	3	18
22	Caffeine	3	18
23	Downers	3	18
24	Uppers	3	18
25	Over the counter drugs	2	12
26	Spray paint	2	12
27	Paint and socks	2	12
28	Angel Dust	2	12
29	Hash	2	12
30	Listerine	2	12
31	Crystal	1	6
32	Stimulants	1	6
33	Oral medication	1	6
34	Prescription drugs	1	6
35	Hallucinogens	1	6
36	Joint	1	6
37	Finger nail polish remover	1	6
38	Xerox correction fluid	1	6
39	Natural high	1	6
40	Dope	1	6
41	Tobacco	1	6
42	Money	1	6
43	Sprays	1	6
44	Elevator	1	6

45	Flying	6
46	Birth of baby	6
47	Sky diving	6
48	Anything thrilling	6
49	Anything daring	6
50	Cleaning products	6
51	AA meetings	6
52	Combinations	6
53	Ice	6
54	Joy riding	6
55	Car racing	6
56	Aspirin	6
57	Indulging in food	6
58	IV drugs	6
59	Shaving lotion	6
60	Sherm smoked with PCP	6
61	Depressants	6
62	Cool breeze	6
63	Hang upside down	6
64	Self-satisfaction	6
65	Drugs	6
66	Nail polish	6
67	Exercise	6
68	Quaaludes	6
69	Freebase	6
70	Music	6
71	Jog	6
72	Opium	6
73	Kerosene	6
74	Tobacco juice	6
75	Rubber cement	6
76	Self-righteousness	6
77	Pills	6
78	Ecstacy	6
79	Aerosol spray can	6
80	Pure vanilla	6
81	Sobriety	6
82	Anything toxic	6
83	Inhalants	6

Total mentions 202; mentions per respondent 11.882 $N = 19$

that people could think of, for comparison with the drug lists and for base line alcohol data for the prevention project. A computer program called *ANTHROPAC*, written by Steve Borgatti, was used to generate this summary table of the free listings from the college students. We also created separate and combined alcohol and drug listings for Anglo college students and Navajo youth on the reservation.

There is a large number of ways that this data can be used. In the case of our prevention project, we found it useful to be able to incorporate terminology that was already familiar to the students into classroom exercises. It was also informative to compare the basic lists generated by Anglo and Native American students, and to compare college students with high school students. This gave us a rapid look at intracultural and intercultural variation in the same geographical region. The results demonstrated significant cultural differences in the knowledge of both alcohol and drugs, between Anglo and Navajo students, and between all college and high school students. This has allowed us to more sensitively target the lessons in the in-school prevention program, rather than wasting time talking about drugs that are uncommon or unused in our region.

We collected information on the sex, age, and ethnicity of the informants doing the free listings, to create the opportunity to use the data to analyze relationships between elements in the alcohol and drug cultural domains and other variables such as cultural orientation, intracultural variation, gender differences in knowledge, economic and educational differences, etc. It would be expected that the answers to free listing questions might differ based on the sex, age, income, educational level, and other culturally significant factors that help define current medical anthropology theories.

We have also used the free listings to generate ethnographic questions about alcohol and drug behavior and beliefs, since we noticed some unexpected responses in both the Native American and Anglo groups. These unexpected responses included behaviors that we needed to have described in greater detail in relation to getting high (e.g., joy riding, having babies, thrill seeking, religious experiences), as well as needing better descriptions of substances that were not common to our experience (e.g., whipping cream cans, White Out). Some of the answers had to be explored because they were simply incomprehensible to us. For example, how do you get high from "paint and socks"? It turns out that you spray the paint into the socks and inhale it from them, to hide the paint. The free listings also included jokes, like putting down the word "elevator" as something besides alcohol that gets you high. Following up on these types of answers has been valuable to the overall project.

Free listing techniques, like the ones described, take normal ethnographic questions and responses and open them up to descriptive statistical analysis. These analyses include not only comparing nominal responses, but comparing rank orderings of those responses based on some of the key social and cultural variables listed above. A number of techniques for analyzing free listings, along with their strengths and weaknesses, are described by Weller and Romney (1988:9–16).

Techniques to Define and Analyze Cultural Domains and Their Structures

Several cognitive anthropology research methods were at one time so tedious that they were not much more than clever curiosities or dissertation topics. Recently, they have been transformed into extremely valuable advanced methods and rapid assessment tools through the advent of the microcomputer as a fieldwork tool. These rou-

tines include pile sorts (Boster 1986; Weller and Romney 1988:31–37), and sentence frame techniques (Steffire 1972; Weller and Romney 1988:55–61).

These procedures allow a researcher to take some or all of the known elements of a cultural domain and to explore the ways that those elements are related to one another, or to the individuals who use them. In each case, informants are asked to make judgments about the similarities and differences of the elements to one another, or are asked the most appropriate response to a particular cultural frame. This information can then by typed into a computer file, which uses an algorithm to create a numerical comparison of the variables. This numerical comparison is called a distance matrix. Distance matrices can be analyzed using statistical techniques which transform the numbers into a visual representation of the relationships of informants to other informants, or of variables to other variables. The two most common statistical techniques associated with the use of these methods in medical anthropology are cluster analysis (Aldenderfer and Blashfield 1984) and multidimensional scaling (Kruskal and Wish 1978).

Cluster analysis is often used in medical anthropology to explore cultural typologies. All human cultures have classification systems. In medical anthropology these range from folk taxonomies of illnesses ad treatments to any other cultural dimension that involves the classification and comparison of people, objects, behaviors, and beliefs. This data is often complex, and the relationships within the data are often difficult to discover. Cluster analysis is one technique that allows this type of data to be thoroughly explored. It can be described as follows:

> "Cluster analysis" is the generic name for a wide variety of procedures that can be used to create a classification. These procedures empirically form "clusters" or groups of highly similar entities. More specifically, a clustering method is a multivariate statistical procedure that starts with a data set containing information about a sample of entities and attempts to reorganize these entities into relatively homogeneous groups. [Aldenderfer and Blashfield 1984:7]

Cluster analysis allows a researcher to explore potentially important hierarchical structural relationships. One technique for taking advantage of the strengths of cluster analysis is to perform a pile sort. A pile sort is a rapid assessment technique that uses visual aides to allow informants to create classifications of elements within an important cultural domain. The most common method is to place pictures, real objects, written labels, or combinations of the three, on cards. Each card represents one element in the domain being studied. The informant is asked to cluster a set of cards or objects (all of the elements of the domain) by stacking them into piles. They are allowed to form as many, or as few, piles as they want. The final groupings represent their classification of elements in the domain. Computer programs, such as ANTHROPAC or SIMPAK, written by James Boster, are available to transform the recorded pile sort data into a distance matrix.

As an example of an applied use of cluster analysis, one of our students (Wong 1990) administered a pile sort to the residents in a shelter for battered women. One purpose of the project was to discover ways to improve the social relationships in the shelter and to reduce friction between staff (who were predominantly Anglo) and clients (who were Native American and Anglo). The cards used in the sorting task each contained a label or phrase that represented one of the important cultural elements that defined life in the shelter. These elements included the most important people and "things" in their lives, and the "things" that were their greatest concerns. Running the data through a cluster analysis program allowed Wong to both visually represent and to better analyze how the residents were related to one another, in terms of the similarity or differences in their responses to this sorting technique.

The resulting analysis produced a dendrogram (a tree shaped visual summary of the data) which graphically identifies relationships in the data. Items (in this case women in the shelter) that are most similar are hooked together, like a kinship chart, by direct lines.

In analyzing this information, Wong stated:

> At an intermediary level there are essentially two clusters present in this dendrogram. One cluster is composed of women one, two, eight, and six. A second cluster is composed of women three, seven, five and four. The main difference between the women of these clusters has nothing to do with age, ethnicity, income, or any other demographic characteristic. These women are separated by severity of abuse they suffered from their batterers. [Wong 1990:79]

This was an important finding for their applied project. Some of the attempts at conflict resolution in the system had been directed at cultural differences, both on the part of the staff and the clients. Finding that people tended to interact differently on the basis of their battering experience, not on cultural orientation, provided information that will allow the organization to redirect some of their efforts into more effective interactions with clients. Thus, cluster analysis summarized and helped confirm conditions that were important in the culture of the shelter.

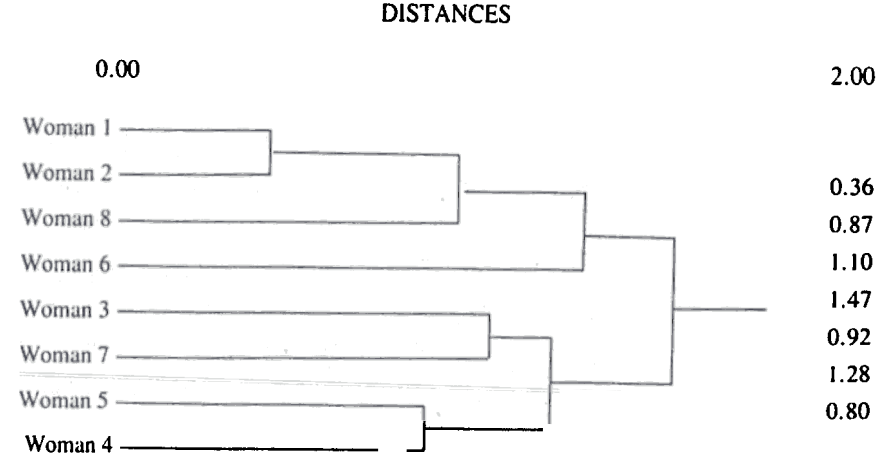


FIGURE 1
Dendrogram of Eight Informants' Responses to a Pile Sort on Elements of a Women's Shelter

This type of technique, like free listing and the other rapid assessment tools, also has the potential to allow the ethnographer to go back to their informants and ask for additional clarifications of the findings. We have found it to be a very useful research exercise to show dendograms or other graphic representations of the data to our informants, and ask for their explanation of the data groupings from their point of view. This use of the technique is very likely to identify new issues about how our informants interact with a health care system.

Multidimensional scaling (MDS) is a related analytical technique that has shown significant potential in medical anthropological research. It has been described as a method for uncovering the "hidden structure" of data bases (Kruskal and Wish 1978). MDS allows a researcher to take an extremely complex set of data and analysis it for underlying conditions or principles. For example, Weller (1983) investigated urban and rural Guatemalan concepts of disease classification and causality models. After using ethnographic interviews to determine the conditions that informants used to distinguish between diseases, she created a profile for each illness and compared the illnesses through the use of a multidimensional scaling program. This allowed her to test the relative importance of the hot-cold concept, contagion, and severity of an illness in the Guatemalan disease model. The results are graphically presented in Figure 2.

In discussing this representation of her data, Weller states:

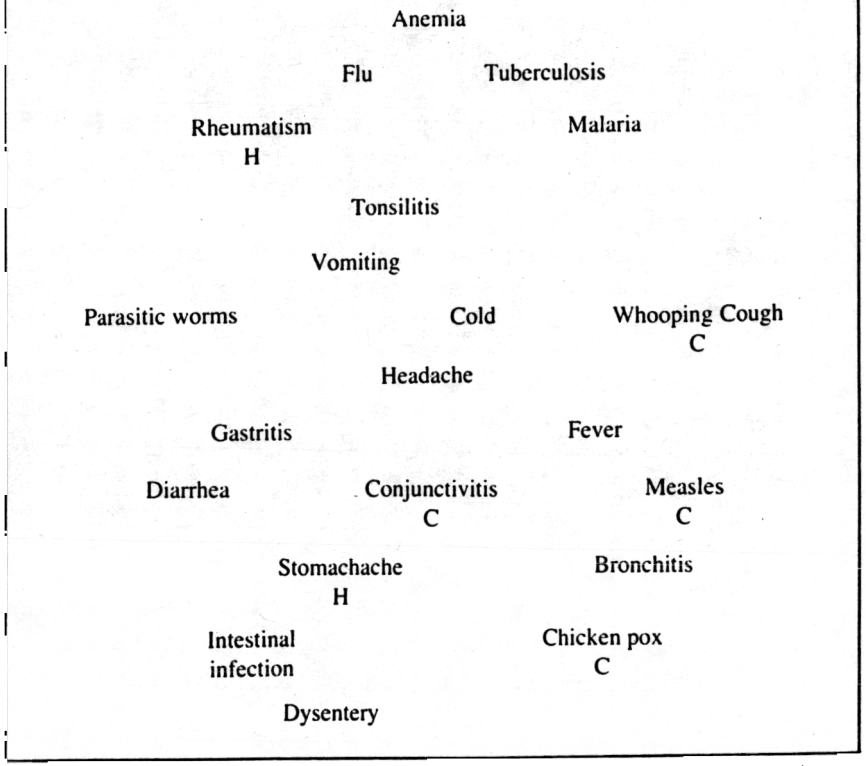
> In the spatial representation, illnesses perceived as similar by the informants appear close together and those perceived as dissimilar are further apart. For example, the gastrointestinal diseases "diarrhea," "intestinal infection," and "dysentery" appear together in the lower-left quadrant of [the figure]. [Weller 1983:252–253]

Multidimensional scaling not only represents the data visually, it provides an estimate of the number of underlying conditions (dimensions) that are organizing informants' classification of the data. The statistic for the analysis of Weller's MDS plot indicated that the most likely solution was two underlying dimensions which explained the information. Weller was testing to determine whether or not the hot-cold concept was one of these. In her analysis of both an urban sample (not shown) and the rural data presented in Figure 2, she states:

> The results of the urban Guatemalan study indicated that the hot-cold concept was probably not as important as the concepts of contagion and severity in the system of disease classification. There was little agreement among urban women on the hot-cold concept, and few of the women's responses correlated significantly with the conceptual structure of illness terms. . . .
>
> The hot-cold system was explored further with a sample of rural Guatemalan women. A rural sample was chosen for comparison with a previously collected urban sample to see if rural-urban or socioeconomic differences might account for a differential salience of the hot-cold concept. However, the rural results were even less impressive than those in the urban study. [Weller 1983:255]

Thus, she found that the hold-cold disease classification was not a critical underlying element in the classification of common illnesses, or in the model for treatment of those illnesses in Guatemala. The idea of illnesses being spready by contagion and the perceived severity of those illnesses were much more important in understanding how Guatemalan women reacted to the illnesses in the home.

FIGURE 2
Multidimensional Scaling Representation of 21 Diseases for Rural Guatemala



From: Weller (1983:254): Multidimensional Scaling Representation of 21 Diseases for Rural Guatemala.

In addition to MDS and cluster analysis, there are a large number of other multivariate (and univariate) analytical techniques that can be useful in analyzing traditional ethnographic data sets. Two of the works reviewed above (Bernard 1988; Weller and Romney 1988), provide detailed descriptions on how these techniques can be integrated into ethnographic research.

Consensus Theory. Consensus theory is an interesting new method that allows an ethnographer to explore a consensual description of a cultural domain, while simultaneously assessing individual informants' competence or expertise in that domain. The technique is based on the following theoretical position.

> The assumption in fieldwork has been that the investigator is a valid and reliable instrument and that the informant provides valid and reliable information. We suggest that informants' statements should be treated as probabilistic in character. When, for example, an informant states that the name of an object is "X," we should assume that there is some probability (that we can estimate) that the statement is correct. This probability may be close to 1 in the case of a very knowledgeable informant and close to 0 in the case of an uninformed informant. The more informants there are who agree (when questioned independently) on an answer the more likely it is to be the correct cultural response. [Romney, Weller, and Batchelder 1986:314]

Given this proposition, consensus theory models of culture are developed through a formalized set of questions about a cultural domain, based on the idea that those questions appropriately explore similarities and differences in shared experience and knowledge on the part of informants. Consensus theory melds ethnographic survey questions with a formal mathematical model based on approaches used by psychometricians in test construction, and influenced by signal detection theory and latent structural analysis procedures (Romney, Weller, and Batchelder 1986:316). This method provides a model for deriving cultural "truths" from informants' statements about their beliefs and knowledge. Romney et al. state:

> The central idea in our theory is the use of the pattern of agreement or consensus among informants to make inferences about their differential competence in knowledge of the shared information pool constituting culture. We assume that the correspondence between the answers of any two informants is a function of the extent to which each is correlated with the truth. . . Suppose, for example, that we had a "perfect set" of interview questions (cultural information test) concerning the game of tennis. Suppose further that we had two sets of informants: tennis players and non-tennis players. We would expect that the tennis players would agree more among themselves as to the answers to questions than would the non-tennis players. Players with complete knowledge about the game would answer questions correctly with identical answers or maximal consensus, while players with little knowledge of the game would not. [Romney, Weller, Batchelder 1986:316]

These suppositions suggest that it is possible to develop a model of a cultural domain by taking the most commonly agreed upon answers to questions as having the highest probability of fitting cultural "truth." We are assuming in this case that culturally correct answers are the ones that are most representative of what most people believe to be true; a normative or consensual framework for their world view. The other conclusion from these assumptions is that the people who agree most often with each other are the cultural "experts" for that domain.

One of the important attributes of consensus theory is that it is designed to work with a common condition in ethnography. That is, the situation in which we know the correct questions to ask, but do not know which are the correct, or the most nearly correct, cultural answers to those questions. At the present time, consensus modeling can be accomplished through the use of true-false, fill-in-the-blank, and multiple choice question formats, and is being tested for use with rank order formats. Cultural knowledge that cannot be assessed through these formats (such as open-ended questions) cannot be tested using this process at this time.

Some uses of consensus theory in medical anthropology include measu intracultural variation in diseases judged on concepts of contagion, severity, cold treatments (Weller 1983, 1984), consensus about the existence of a sub ture of corporal punishment (Weller, Romney, and Orr 1986), and a study of pertension among Ojibwa Indians in Canada (Garro 1987). This model for tural analysis appears to have a great deal of potential for rapid assessment p ects, where the basic elements of specific cultural domains are known, and researcher needs to confirm cultural models about those domains for policy a ysis, intervention, or other forms of applied anthropology.

Focus Groups: Another Rapid Ethnographic Method

Once baseline data on a culture have been established through standard and vanced ethnographic research, it is possible to initiate additional rapid et graphic assessment techniques at various stages of a project. These techni allow medical anthropologists to explore some narrowly focused problem health care delivery, models of belief, and medical problem solving (see Be et al 1988, Scrimshaw and Hurtado 1988; Bentley 1986). The actual rapid nographic techniques chosen at each stage of a project depend on the goals o project, combined with what works best in a particular cultural setting. All o techniques discussed in these sections are excellent for use in collaborativ search programs which combine ethnographic and survey approaches with s form of applied intervention or program development strategy.

The preliminary or exploratory stages of an applied project constitute the area of use of rapid ethnographic methods. The purpose of rapid methods d this time period are to identify key issues, cultural domains, health beliefs sociocultural conditions that might act as either barriers to the success of the posed health project, or to act as supporting mechanisms that would allo project to succeed. For example, Bentley et al. (1988:110–111) note that the of rapid assessment in Peru and Nigeria served three purposes. It provided i mation on people's beliefs about diarrhea, provided facts that improved th guage and scope of a multisite survey, and provided data to facilitate the vention stage of the project.

An example of preliminary stage rapid assessment can be drawn from t school alcohol, drugs, and AIDS risk prevention project, described above are using focus group interviews as one type of rapid ethnographic technic help create an AIDS prevention curriculum for junior high and high schoo dents in public and boarding schools on the Navajo reservation and in n towns. Focus groups are a social science technique that has been used for time in marketing research, and is gaining popularity as a rapid assessment nique for applied projects. It is a formal group interview method that allo searchers to simultaneously discover baseline data on targeted issues, as w providing important information about cultural interactions between infor during the course of the focus group session. Two concise texts provide a cellent introduction to the use of focus groups in applied qualitative res

hese are *Focus Groups: A Practical Guide for Applied Research* (Krueger 1988) nd *Focus Groups as Qualitative Research* (Morgan 1989).

Our focus groups bring from 6 to 10 individuals together to investigate knowl-dge, attitudes, and beliefs about four main issues (AIDS, alcohol use, drug use, nd advice about media and other prevention efforts that would be effective with Navajo youth). Within each focus issue, we have between 5 and 8 subsidiary is-ues that are explored, as well as probes to get greater details, stories, and other orms of natural discourse on the main topics. We are conducting separate male dolescent focus groups, female adolescent groups, and mixed-sex groups of both outh and adults. The adult groups consist of community leaders, teachers, and ealth professionals working on the reservation (including traditional healers). The focus interviews last about 2 hours each and are recorded verbatim, then tran-cribed into computer files for coding and analysis.

One type of analysis we are accomplishing with the verbatim focus group data s a combined processual and thematic analysis at a midrange level that allows us o create or modify in-class presentations to fit the cultural conditions identified n our preliminary interviews. The following list includes examples of the process nd thematic data collected from the focus groups which are currently being used n the project's design and execution:

1. Girls talk more than boys in the classroom.
2. Older friends, brothers, and sisters commonly buy alcohol for underage youth.
3. There is a high level of exposure to alcohol and drugs from family members and friends.
4. The most common locations where drinking and drug use occur are in cars, at home and in isolated places near town.
5. It is easier for Navajo youth to talk about drugs and alcohol than sex.
6. The individuals that Navajo youth find it easiest to discuss alcohol, drugs, and sex with are older siblings (especially sisters) and aunts. They find it hardest to discuss these issues with parents of either sex.
7. The most common reasons for using drugs and alcohol are: people have probelms they want to forget: wanting to get high; wanting to have fun; wanting to be cool; wanting to keep a friendship; depression or frustration with life; and liking the smell and taste of alcohol.
8. Navajo youth do not like to read, so prevention programs should emphasize other approaches, in addition to reading materials.
9. There is strong respect expressed for elders and authority figures (such as doctors) by Navajo truth.

These focus group findings, as well as many others, are being used in several ways. First, they are helping us identify topics that are easy or hard to discuss, and therefore helping us design the training that is received by the curriculum instructors for this program. In this case, it is easy for both the adolescents and adults to discuss alcohol and drug use, and very difficult for them to discuss anything to do with sexual behavior. Therefore, we have recommended that several

different approaches (some visual, some verbal, some passive, some activity based) be used in conveying sexual information to the students, to see which best reduce the existing reluctance to deal with these issues in the classroom. Second, the data is being used to discover how to word questions on the difficult subjects so they can be responded to with reduced embarrassment. This will assist us in developing both the survey evaluation instruments needed by the project (pre- and posttests), and will directly assist in the development of the wording and structure of the curriculum. Third, the information is being used to provide data on typical cultural domains that are germane to alcohol, drug, and high risk sexual behavior (e.g., where, when, and what do people drink, what drugs do they use, does alcohol and drug use increase risky sexual behavior, etc.). This information will be built into the lessons on each of these areas, using natural discourse information from the focus groups to customize the lessons that will be given in the prevention efforts created by the project. We are also getting very useful data on how to structure focus-group based data collection as a type of rapid assessment technique for the Navajo culture.

The entry stage of a health program is not the only valuable time for rapid ethnographic assessment. It can also be used during the middle stages of a project to explore critical topics in greater depth, to maintain good data for process evaluation of the project, and for problem solving in narrow instances. Finally, rapid ethnographic techniques can also be used evaluating the success of the project to determine what worked well and what did not work at the end of the program cycle. In the Navajo youth project described just above, we will be using focus groups in virtually all stages of the research, and will supplement them with other rapid techniques, such as network analysis and decision modeling. We will also use rapid ethnographic techniques to discuss and develop prevention products for the project, such as videos, posters, and demonstrations.

Surveys

Household and community surveys are another type of rapid assessment tool that is becoming popular in medical anthropology. These surveys take advantage of previous ethnographic research, which allows appropriate research instruments to be developed to test the degree and importance of intracultural variability on key medical research issues. For example, when it was discovered that two lead compounds were being used to treat a Mexican American culture-bound syndrome called *empacho*, the author constructed a questionnaire for the Public Health Service that was administered in 36 migrant and public health clinics in the United States (Trotter 1985). The results allowed us to discover how common the use of these substances (called *greta* and *azarcon*) was in several border states, and to help devise an appropriate public education program that reduced the use of the substances without attacking important cultural beliefs about the home treatment of illnesses.

There is a large literature on sampling, survey instrument construction, and the analysis of survey results available in the social science literature that should be consulted prior to the development and analysis of ethnographic surveys. Two

works provide an excellent preliminary exploration of the key issues for this subject, as well as bibliographic references to more extensive works in the area. These are *Introduction to Survey Sampling* (Kalton 1983) and *Survey Questions: Handcrafting the Standardized Questionnaire* (Converse and Presser 1986).

Network Analysis

Anthropologists have always been interested in the effects of social relationships on human behavior and survival. One of the first formal research methods for modeling human relationships is Conklin's ethnogeneological method (Conklin 1964), which produces a kinship based model of social networks in a culture. Following these preliminary explorations, anthropological "network" research has involved increasingly sophisticated examinations of kinship systems, small groups, associations, and social systems. Modern network analysis can be seen as an outgrowth of this trend; a mechanism for expanding our knowledge of the effects and dynamics of kinship and non-kin networks into all parts of cultural systems.

Network analysis has been underutilized as a research method in medical anthropology, but shows strong potential for analyzing both formal and informal health care spheres, as well as healer patient networks. Two primary orientations to network analysis are available for exploration. One is based on a clique theory of network formation (Burt and Minor 1983). The other theory approaches networks from a "structural equivalency" model (Killworth and Bernard 1974).

The clique approach to network analysis investigates direct and indirect interaction among network actors. The basis for the analysis is a questionnaire that allows each individual to identify the rank order of their relationship with each other individual in their group. This data is then analyzed by computer programs (e.g., Burt 1987), which identify critical elements about the structure of the social system. One important characteristic of this type of network analysis is its ability to locate subgroups in the population. These are called cliques, and designate individuals who have more in common or more interaction with one another than with other individuals or subgroups in the system.

Network analysis can distinguish between what are called "strong component" and "weak component" cliques. The first are basically tightly knit groups where everyone can reach one another, the latter are "loose" groups in which everyone has at least one primary connection with someone in the group, but not everyone in the group is in direct contact with everyone else. Once subgroups have been detected, the quality of the relationships within groups and between them can be explored. One such operation is to look at the "density" of the system, to discover if hierarchies exist in the system and to explore the structural elements of cliques. This can provide a spatial map of network distances: individuals mapped close together have strong ties to one another, while those further apart have weaker ties. Another procedure is to determine the ways in which the structure of a group creates social pressures towards conformity (social contagion analysis). It is also feasible to study the limits of autonomy of individuals in a system. This allows an analysis of the "extent to which an individual's relations

provide entrepreneurial oppportunities to pursue his own interests and the extent to which each person with whom he has a relation constrains those opportunities" (Burt 1987:43). Finally, it is also possible to study the stability of a network (equilibrium network structure), and the different levels of exchange between parts of the system. All of these models of human interaction provide significant opportunities for the analysis of the parts of human cultures that are most concerned with health and healing.

As an alternative to clique analysis, Killworth and Bernard (1974) have promoted network analysis from a structural equivalency model. Structural equivalency analysis identifies individuals who perceive their relationships with others in a fashion that is similar to others' perceptions of them and of each other. The analysis identifies structurally equivalent groups, and the linkage points between those groups and others. As an example, Killworth and Bernard analyzed the subgroups of a minimum security prison. They were able to identify eleven groups within one of the prison "cottages" and to show linkages both within and between those groups, providing an in-depth analysis of the relationships that form in a bounded social system. The figure below provides a visual presentation of social groupings identified by this type of network analysis.

The circles with numbers 18, 21, 26, 34 in Figure 3 are the individuals that form one of the eleven small social groups uncovered by the computer program Killworth and Bernard have created for this process, called "CATIJ." The squares associated with each circle indicate individuals who have contact with that individual, but are not a part of this social subsystem. Arrows show either one way, or reciprocal relationships between individuals. Killworth and Bernard state:

> Group five contains white inmates of urban background. The dichotomy between White and Black is shown most tellingly by the fact that only one Black inmate had any member of group five on her first row. [Killworth and Bernard 1974:343]

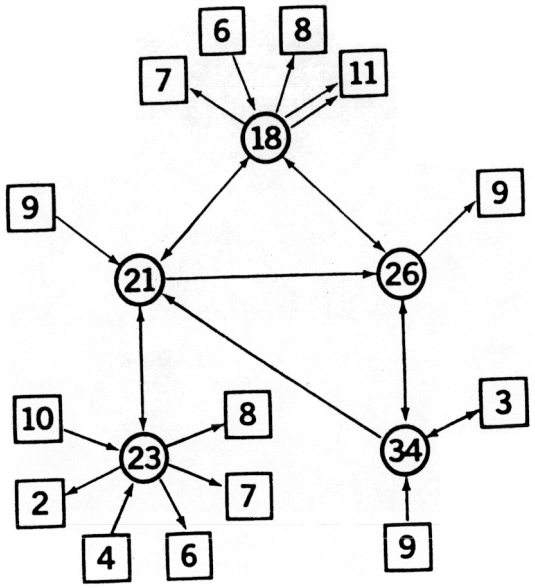
It is possible for an individual to be part of one or more subsystems, to be outside of all subsystems but to have a strong role in connecting groups together, or to be an isolate. The authors state:

> These eleven groups do not exhaust C-cottage, accounting as they do for only 38 people. Seven other people, serving as between-group intermediaries, are also important to the description of the group, leaving seven people who fall into neither category. [Killworth and Bernard 1974:341]

This type of analysis allows the ethnographer to ask critical questions about an individual's involvement and noninvolvement in both smaller and larger social groups. These questions can include the differential influence of individuals who act as intermediaries, the reasons for the existence of social isolates, the organizing principles for the smaller groups, etc. As with the clique approach, the structural equivalency approach has a great deal to offer in the analysis of group dynamics relating to health care systems.

As an example of innovation in a medical anthropological use of network analysis, one ethnographer used observational data rather than interview data, combined with a network analysis program, to demonstrate power relationships

FIGURE 3
Group 5 from Cottage C

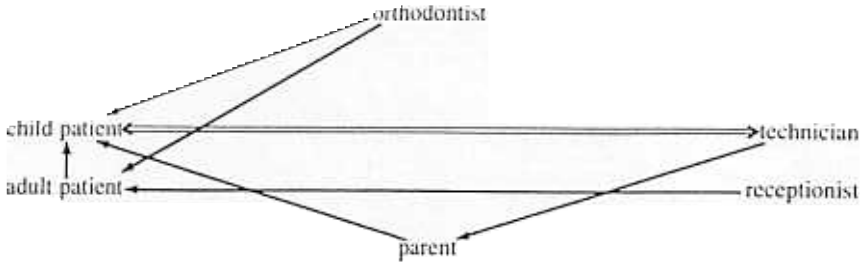


Adapted from Killworth and Bernard (1974)

in an orthodontist's office (Roberts 1990). The office she observed used "joking" to indicate a need for the target of the humor to undertake some kind of behavioral change. Roberts explored the meaning of the relationships defined by this joking social control system, by recording each time a joking interaction occurred between staff (the orthodontist, technician, and receptionist), patients (child patients, adult patients), and parents of child patients. She recorded both the type (content) and direction of all interactions, noting who initiated the action, whether or not it was reciprocated, and the content of the interchange. She was able to vividly portray both symmetrical and the very symmetrical relationships that occur within a medical setting through the use of this form of network analysis.

Figure 4 visually portrays power differentials in the office, as well as role differentiation among the actors. In this case, the content of the "joking" interaction is that someone has not complied with a therapeutic regimen and is being chided for lack of compliance. Single arrows indicate a one-way interchange, from initiator to subject. Double arrows indicate that the joking was initiated from either direction, and was reciprocated in the other direction. A lack of connection

FIGURE 4
Joking Interactions about Compliance



From: Roberts (1990:Appendix): Initiators of Public Humerus Interactions-"Compliance."

between individuals, such as the orthodontist and the technician or the receptionist, indicates a total lack of social interaction on this issue, a condition which helps define some of the role relationships in the office. On other social control issues, such as problems encountered because of "foul-ups" that interfere with scheduling, the network graphic would indicate connections in other directions, because "time problems" can be created by both patients and any staff member who creates a road block in the daily routine. These findings both confirmed Robert's ethnographic data on social relationships in the office, and allowed her to focus questions and other observations in creative and effective directions during a short ethnographic project.

Decision Modeling

The cultural elements that are necessary to make a decision and the choices among competing elements in the decision process are at the heart of a large number of theoretical and practical issues in medical anthropology. All cultures require humans to make decisions. Most of these decisions have measurable consequences for the individual. And in most cases where health and illnesses are concerned, the decision models of one culture will differ from and even conflict with those of another based on the agreed upon values, beliefs, technology, and the symbolic system of that culture.

Decision modeling is more highly developed in market analysis (Plattner 1982), and agricultural decision making (Gladwin 1980, 1989) than in medical anthropology. However, decision modeling has been part of the methodology of

medical anthropology for some time. For example, Young (1980) developed a decision model for treatment alternatives in Pichataro, a rural Tarascan community in west central Mexico. He used field records of 323 illnesses and their treatments to construct the primary elements in a decision model. He used these components to create hypothetical cases, then interviewed informants about the choices they would make in those cases. He measured the amount of agreement for each of the answers on the hypothetical cases, and used this information to develop patterns of alternatives. Finally, he constructed the model presented in Table 2, based on the key variables uncovered, including the gravity or seriousness of the illness, knowledge of a home remedy, and accessibility of professional help measured by cost and availability of transportation.

After testing, Young found that this model accounted for 91% of the choices included in the test, which makes the process and the actual model very valuable for understanding this health care system.

The work of Christina Gladwin (1989), *Ethnographic Decision Modeling*, is particularly valuable for this methodological area. It provides an excellent, step by step discussion of the ways anthropologists can create testable decision models in any anthropological area.

Exit From Fieldwork

When a project is over, it is necessary to depart from the community and to attenuate relationships in a way that is ethically correct. Leaving-taking is commonly

TABLE 2

Decision Table for the Initial Choice of Treatment

Rules	1	2	3	4	5	6	7	8	9
Conditions									
1 Gravity	1	1	1	2	2	2	3	3	3
2 Known home remedy	Y	N	N	Y	N				
3 "Faith"		F	M	(F)	F	M	F	M	(M)
4 Accessibility								N	Y
Choices									
a Self treatment	X			X					
b Curer		X			X		X		
c Practicante			X			X		X	
d Physician									X

Key	1 Gravity	3 "Faith"	4 Accessibility
Y = yes	1 = nonserious	F = favors folk treatment	Y = money & transportation available
N = no	2 = moderately serious	M = favors medical treatment	N = either money or transportation not available
	3 = grave		

Source: Young (1980:116)

the most difficult transition ethnographers make during the research process. The friendships and interactions that form a crucial part of ethnography are intense, and it is always hard to change close personal relationships. Consequently, ethnographers normally maintain at least some contact with people they worked with long after they leave. They keep in touch by visits and correspondence, and they attempt to control their leave-taking to the extent that they will be welcome to return and that it will be possible for other researchers to come in and not have to deal with any "garbage" left behind.

Strangely, there is very little formal literature on field exit methods. Even the anecdotal information more often revolves around reentry into one's own society, rather than identifying the problems of leaving the research setting. Return shock is certainly a severe form of culture shock, and anthropologists experience serious stress when they have to "decompress" from a culturally different set of interactions by rearranging as many patterns of speech, dress, styles of interaction, and thinking back home as was necessary when they entered their field situation. However, the manner in which a researcher clears his or her research site and leaves it with positive relationships is a crucial issue that has been seriously neglected.

One of the only books to discuss field research exit as a formal issue is *Fieldwork Experience*, by Shaffir, Stebbins, and Turowetz (1980). Three chapters provide a preliminary definition of the problem and demonstrate that at the present time there is significant variation in how leave-taking is accomplished by different researchers. The following quote summarizes the conflicting advice received by one of the book's authors:

> Some said that to distance oneself totally was mandatory. Others warned that a total disengagement might prohibit the collection of critical data during the analysis and "write-up" phases of the research project. Still others stated that one never has to leave entirely; social relationships can be maintained after the project has been completed. [1980:260]

The confusion produced by this advice is further compounded by the fact that the ethnographer does not leave one social setting. He or she leaves many, based on a multitude of role relationships that have developed during fieldwork. For some relationships, fading off into the night is both acceptable and appropriate. Those relationships were always defined in both directions as one of stranger or acquaintance. For other relationships, very complex interpersonal roles produce equally complex differences in how leaving will effect the ethnographers and their informants. Exit problems increase with the intimacy of the relationships, with the density of unmet reciprocal obligations (especially those the culture views as permanent), with the probability of hurt feelings, and the need for continuing contacts or future research endeavors. Field exit problems can also be compounded by the type of information the ethnographer has learned. If that information is threatening to the community (taboo in some aspect) field exit can be problematic in direct relation to the threat posed by the knowledge. All of these issues need further systematic exploration by anthropologists.

Dissemination of Results

Applied medical anthropological research is conducted with a view to some pratical end, such as improved program conception, system evaluation, public policy development, or the reduction of risks in specific target populations. All of these outcomes demand some form of dissemination of results to specific target audiences. Burns identifies one of the major considerations that must be accommodated in applied projects.

> The world of policy action demands that research be tailored to the political realities of public decisions and competing interest groups. Public policy anthropology is done in the "real time" of everyday life where research information is needed at critical times to help inform policy decisions. If the information is not ready or fieldwork is not complete when budget hearings come up or elections arise, then these political events take place without social science input. [Burns 1983:129]

This places a condition on applied medical anthropology that projects must be brought to conclusion on time and on budget. Applied fieldwork also includes the predicament of having research information potentially "heard" differently by competing or conflicting social interest groups. Successful applied research involves a need for clear, nonpedantic communication; making science available and understandable within emotionally charged social contexts. Applied research can put both the researcher and the research results at risk of attacks that do not depend on scholarly rigor or truthfulness; attacks that derive solely from emotional appeals to a particular interest group. It is not an arena for research by either the foolish or the faint hearted. At the same time, it is an effective use of the quantities of data that ethnographers collect on the lives of the most unnoticed members of our society.

Applied medical anthropology research normally produces three types of documents for public consumption. These are policy statements (recommendations), scholarly articles (both theoretical and applied), and ethnographies. Each one must be carefully stylistically crafted to communicate a specific message to a targeted audience. Some researchers also produce "popular" articles for mass consumption, which serve a useful purpose of making anthropology accessible to a very broad public. All four of these products differ in style, intent, and audience, but each has a role in the documentation of a particular group and their cultural practices.

Policy Statements

Field research projects collect large amounts of policy-relevant data which can be available as early as the middle to late field sessions, due to the cyclical nature of ethnographic research and analysis. Policy statements created from this data tend to focus on distinctive beavior that relates to an existing program or to national policy. To be effective, these policy reports must propose precise suggestions for alternative approaches to the issues being studied. They must be written in a straightforward style, presenting the data and the recommendations in a jargon-free document.

The common form for documents intended to affect policy is to begin with a short (one to three page) executive summary that contains the most important findings of the project and all of the relevant recommendations. This is followed by the methods, data, and expanded findings and conclusions of the project, often emphasized by bullet statements summarizing key points scattered throughout the text. This is a reversal of the ordering of scientific reports, where the summary and conclusions are placed at the end rather than the beginning of an article, and where theory and methods often receive more attention and space than findings and conclusions. This inversion of emphasis is difficult for some individuals to accomplish, but necessary if the key points of the research are to be "heard." The bulk of a policy report, following the executive summary, presents a concise summary of the methods, the actual data, and expanded recommendations tied back into the data. All of these sections must take into account existing policy for the target organization or issue, and either support that existing policy, or recommend data-based modifications in the existing mission and policies of that institution. These documents must also take into consideration the immutable condition that most policymakers are very busy and are neither familiar with, nor interested in becoming conversant with the more pedantic aspects of medical anthropological research. Most of them are only interested in the potential that the research results have for providing them with recommendations and other tools for improving existing health care systems.

Scholarly Articles and Ethnographies

Medical anthropology projects tend to produce scholarly articles in direct relation to the amount of data collected and to the academic orientation of the researchers. The academic success of a project can normally be judged in terms of the prestige of the journals that accept the articles, and the impact the articles have on the theory and practice of that discipline. Academic articles can be directed at several different audiences, but most commonly they are targeted at a distinctive academic field or subfield, are full of current theory and jargon, and follow a specific academic style, such as that found in the *American Anthropologist* or other anthropological journals. The general purpose of these articles is to inform colleagues about the research conducted, to advance both the theory and the practices of the discipline, and to enhance the credibility and prestige of the researchers.

Any extended medical anthropology field research should also produce holistic studies of the life-styles of the people being studied. This normally appears in the form of a book-length work, called an ethnography, which provides detailed information about the beliefs, behaviors, and the social relationships of individuals and the group. Ethnographic reports describe the group and identify the major social subunits of the population. They typically include chapters devoted to the daily (seasonal, yearly) cycles of the group; typical life histories of people from birth (or from entry into the subculture) to death and into various forms of afterlife, depending on the beliefs of the group; the major belief systems in the culture; and descriptions of group social networks (families, friends, organizations). Ethnographies also commonly provide information on the language, religious beliefs,

kinship organization, and subsistence patterns of the group, or any other area that is critical to understanding that cultural system. Any other information provided by the ethnography depends on the cultural parameters of the group studied and the research questions being asked by the study.

Mass Media and Medical Anthropology

Medical anthropologists rarely engage in writing popular articles for mass consumption, although their research is consistently of interest to journalists writing for newspapers, magazines, public radio, television news, and the popular book market. Every year there are dozens of articles in local and national newspapers about traditional healing, AIDS research, domestic violence, new health trends, etc. Many of these contain interviews with anthropologists who have been working either domestically or in foreign countries on these conditions. Our research is also consistently the target of public radio interviews, television special reports, and other forms of public dissemination. This suggests two things. First, a great deal of the research we do is of interest to the general public. Second, we are not well trained to get that information to the public and must normally depend on others to disseminate it through those channels. This suggests two simultaneous courses of action. The first is to cultivate positive relationships with professionals who are well situated and capable of making our research results available to mass communication channels. This means learning to spot when a research finding is likely to be of interest, a judgment call, and then developing the social networks to be able contact someone who can make appropriate use of the information, transforming it into a form that can be disseminated. The second course of action would be to find the means to train more anthropologists in the skills necessary to communicate directly to the public through popular books, articles, TV shows, and other popular media. The former is relatively easily accomplished through minimal training and good personal skills, the latter will necessitate the development of specialists with competence in two professions, anthropology and public communication. Both goals are worth pursuing in the future.

Final Considerations

Ethnographic research cannot be conducted without having highly personal effects on the researchers. Applied medical anthropology appears to take a heavier toll on ethnographers than purely academic research, due to the urgency of the problems studied and their immediate impact on the lives of people the ethnographer has worked with on a daily basis. There is pressure to produce at a rapid pace, and to always be right, since our recommendations can have direct effects on so many peoples' lives. When all things are weighed, the benefits of field research on health issues are enormous. The personal transformations of fieldwork are primarily positive, and the research results are normally both directly and indirectly useful in practical arenas, and in the generation of theories to improve our understanding of the variables underlying health, illness, and treatment. Given the advent of the new methods discussed above, our impact is likely to be even

greater in the future. Consequently, most of us feel the personal costs are balanced by the end results.

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