



Part IV

TECHNICAL ISSUES

Interviewing in the 21st century employs an immense variety of technical innovations designed to improve research procedures and findings. This part of the *Handbook* discusses several technical advances that add new dimensions to the collection and management of interview data.

At one time, face-to-face interviewing was the only practical means available to researchers who wanted to “learn from strangers.” Many respondents simply did not have telephones by which questions could be asked and answered. The rapid deployment of telephones to individual households following World War II gradually turned the matter of asking and answering questions, especially research interview questions, to the issue of whether face-to-face interviewing is necessary to obtain useful responses or whether this can be accomplished using cheaper telephone technology. Researchers have investigated the relative adequacy of face-to-face and telephone interviewing and continue to explore the nuances of the differences between the two methods (see in this volume Platt, Chapter 2; Singleton and Straits, Chapter 3; Shuy, Chapter 26; Couper and Hansen, Chapter 27). Although, by and large, telephone interviewing is cheaper, findings on the informational utility of the two techniques are mixed; the differences depend on, among other things, the nature of the questions asked and how cut-and-dried the answers are expected to be, as well as on the sensitivity of the issues being explored. For interviewing in which questions are likely to elicit brief and fairly straightforward responses, the telephone can be adequate, usually suiting the purposes of large-scale surveys. In fact, the greater expense of in-person as opposed to telephone interviewing, regardless of the research findings in this area, has made the real difference in the long run, so that telephone interviewing is now commonplace in the survey industry.

The use of the telephone was the first major technological leap forward for survey interviewing, and it was accompanied,

at the data management and analysis stages, by the rapid expansion of electronic information processing. The now seemingly primitive punch card and card sorter were replaced by the computer and data management software, which are capable of handling masses of short and straightforward bits of data quickly and with the analytic sophistication researchers desire. The industry standard has become the telephone survey tied to computerized data monitoring and data management technology (see Schaeffer and Maynard, Chapter 28, this volume).

A second major technological leap forward in this area is currently upon us; this advancement centers on the Internet and its potential to allow researchers to learn from strangers. Although this change is also computer driven, curiously enough, in some ways it offers the possibility of returning the survey interview to some of the openness, if not also the charms, of the face-to-face interview (see Mann and Stewart, Chapter 29, this volume). The richly textured exchanges that are more likely to be accepted in the in-person interview are now the stock-in-trade of many Internet sites, where chat-room proceedings and virtual on-line individual and group interviews can be very detailed. And these exchanges can also be immediately turned into codable transcripts at fairly low cost. This eliminates the expense and complication of actually doing on-site interviews, which can sometimes be prohibitive (see Ryen, Chapter 17, this volume). This, of course, is balanced by the expense entailed in providing computers and Internet access to all interview participants. Although little actual research has yet been conducted on the comparative informational utility of the Internet over other vehicles for interviewing (see in this volume Mann and Stewart, Chapter 29; Couper and Hansen, Chapter 27), it seems safe to say that cost again will be a critical factor in decision making at this technological forefront.

If some of the issues considered in this section of the *Handbook* would seem to

suggest that technological innovations respond mainly to cost and efficiency, three cautions are in order. One relates to the growing popularity of qualitative interviewing. For qualitative researchers, the vehicle for conducting interviews has always been less important than the provision to the respondent of the opportunity to tell his or her own story. The informational utility of lengthy and complex narratives is paramount, overshadowing the cost-effectiveness and efficiency of the questioning-and-answering process, although these are undoubtedly also of some concern. All studies, after all, have budgets of some kind, and there always are time constraints. There seems to be no substitute for in-person interviewing for many qualitative researchers, who seek the sort of information from respondents that would allow researchers, among other things, to trace narrative themes and tie these to biographical particulars; to represent in the respondent's own words the narrative contours of attitudes, sentiments, and conduct; or to relate accounts to the broader going concerns surrounding individual narrative presentations (see the contributions to Parts V and VI of this volume).

A second caution relates to nonresearch interview settings. The pertinent question here is whether the interviewing that is undertaken in sites such as medical clinics, schools, and employment settings can be evaluated solely in terms of the efficiency of data gathering technologies. Cost-containment concerns in many nonresearch sites for interviewing work against the institutional and professional ideologies that would lengthen and complicate the interview encounter, even while costs cannot be ignored. The narrative thrust of "patient-centered medicine," for example, would seem to operate counter to quick-and-efficient data gathering technologies (see Zoppi and Epstein, Chapter 18, this volume). It would be difficult to imagine

how telephone and Internet interviewing could replace the in-person encounters typical of forensic investigation and therapy interviewing, where bodily and emotional presence is crucial (see in this volume McKenzie, Chapter 21; Miller, de Shazer, and De Jong, Chapter 19). In nonresearch sites there is always something else at stake aside from informational utility, including what needs to be accomplished immediately with the information—whether that is healing, counseling, hiring, or interrogating.

A third and final caution relates to the central theme of this *Handbook*, which is that methodology in general, and interview methods in particular, is not just a means of gathering information but a part of society. Michel Foucault figures significantly here, as he points us to the constructive character, not just the efficiencies, of technology. Foucault combines the two to argue that the "technologies" in question—whether face-to-face or telephonic, paper and pencil or computer assisted, in-person or Internet mediated—construct and rationalize with various degrees of sophistication what technology otherwise seems merely to access differentially. It is important to consider that what takes place in the telephone interview, for example, is not only the efficient gathering of facts of experience and the containment of costs, but simultaneously the construction of a subject who formulates the experiences needed by an information-hungry, but time-conscious, interview society. Experience is thus produced and comes to us in bits and bytes, because the technologies in place serve it up in ways their sponsoring environments readily accept and can use (see in this volume Gubrium and Holstein, Chapter 1; Denzin, Chapter 40). This, of course, is not to denigrate technical matters and their immense successes and advances; rather, the argument is that technology always does more than technicians can properly admit.

24

ELICITATION TECHNIQUES FOR INTERVIEWING

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How does an interviewer get informants to reveal what they know, feel, think, or believe? There are a variety of impediments to tapping into an informant's knowledge. Aside from the more obvious issues of rapport and personal style, the manner in which questions are framed and the use of supportive materials in the interview process are equally important in getting informants to provide reliable, comparable, and valid responses. But individuals vary in their ability to recall and report what they know, and this affects the value of traditional unstructured and semistructured interviewing. In particular, informants' knowledge or other data of in-

terest may be tacit and difficult for them to explicate in simple discourse. This is where elicitation techniques come in—the aim of these techniques in general is to uncover unarticulated informant knowledge.

The elicitation interviewing methods discussed in this chapter have been variously referred to by anthropologists as “systematic data collection techniques” (Weller and Romney 1988) and “structured interviewing methods” (Bernard 1994). Although they are certainly structured, elicitation methods should not be confused with structured interviews, such as those found in survey research. Although both generally involve asking questions in a stan-

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ard way, elicitation methods have more of an exploratory or emergent character in their attempts to reveal tacit subjective understandings in some cultural domain. Most of the elicitation methods described here assume no a priori knowledge of informant understandings on the part of the researcher; thus researchers can use them to describe informant responses while minimizing the amount of researcher bias introduced into the research process (Weller and Romney 1988).

When we speak of *responses* here, we mean a variety of things that people actually are able to report on with some degree of accuracy, including beliefs, attitudes, perceptions, judgments, emotions, feelings, and decisions, as well as responses focused on particular areas of experience, such as specific cultural, technical, environmental, or biological matters. Researchers have employed elicitation techniques in various attempts to construct mental models, cultural models, task or process models, and any number of other forms of descriptive and explanatory models of tacit knowledge, the goal of which is to understand how this knowledge is structured and how it is shared in a population.

In the next section of this chapter, we briefly describe the breadth of application of elicitation techniques across disciplines and in relation to research strategy, focusing on anthropology, where many of the techniques originated. Following that, we provide a glimpse of the origins of these techniques in anthropology, the disciplinary home of “elicitation methods,” and relate these origins to a study’s overall research strategy. We then move on to discuss the specific usages of elicitation techniques at various stages of research. Finally, we present a sampling of commonly used semistructured and structured techniques for eliciting informant knowledge, including methods for probing, question framing, use of visual stimuli, and traditional approaches, such as folk taxonomies and free-recall listing.

◆ *Breadth of Application*

The search for models of tacit knowledge has involved researchers from a vast array of disciplines and backgrounds, including anthropologists, linguists, computer scientists, psychologists, statisticians, economists, sociologists, accountants, political scientists, product developers, and market researchers, to name just a few. All share a reliance on these techniques in the pursuit of human-knowledge-based research problems. For example, economists may be concerned with the elicitation of the relative values of things (Holms and Kramer 1995), accountants may wish to elicit descriptions of accounting processes (Abdolmohammadi and Wright 1992), statisticians may be interested in eliciting prior knowledge for the construction of Bayesian models (Kadane 1996), and linguists may want to elicit knowledge concerning language production (Menn and Ratner 2000).

Computer scientists have employed elicitation methods in order to model expert knowledge concerning software and hardware development. Sometimes referred to as “knowledge engineering,” elicitation methods are used to aid in expert knowledge acquisition through the identification of domain content, reasoning strategies and modes, and explanations of domain processes and relations on the part of informants (e.g., experts, hardware engineers, and pilots). Ultimately, the goal is to create a formal model of an expert system, a model of a user-system interface, or a model of the software and hardware development process. Elicitation methods are especially critical for the elicitation of unarticulated personal experience, in this case forms of expert knowledge that are often tacit and difficult to obtain through normal interviews or from simple descriptive discourse. (A good example of this kind of work on expert systems, undertaken by psychologists, can be found in Hoffman 1992.)

In contrast to modeling often rather esoteric expert knowledge and improving related complex decision-making information, elicitation methods also may be used to assess the “needs” of a community or a specific group. The success of a project or activity can depend upon how well it meets the group’s unarticulated needs. Thus an important first step for the researcher is to obtain an accurate description of these needs. Rather than assuming from the start that he or she knows what might be best for the group or what should be offered, the researcher applies elicitation techniques to elicit subjective understandings. When trying to determine community needs, the best or the most accurate approach a researcher can take is to elicit the needs directly from community members through a needs assessment study. Techniques such as the free-recall listing interviews described below, conducted either with individuals or with groups, are extremely useful for eliciting concerns, problems, and unmet needs that can be incorporated into action strategies.

Even survey researchers and psychologists who rely on highly structured questionnaires (multiple-choice, checklist, and rating scale formats) integrate elicitation methods into their instruments. Initially, researchers may use open-ended interviews to elicit items for study. Then, after a questionnaire is designed, they may conduct additional exploratory interviews to discover respondents’ understandings and interpretations of instructions, questions, and even their own responses. Understanding is a key element in interviewing: All participants must understand the task, understand each question, have the same interpretation of each question, and organize their responses accordingly (Fowler 1995). In order for researchers to combine responses across individuals and make meaningful comparisons between groups, all informants must interpret all questions in the same way.

Although we note the existence of this rather large and disparate body of work, we

deal here primarily with examples from the social sciences, mostly from anthropology, where it all began, so to speak. However, we wish to emphasize the high degree of overlap with regard to problems, techniques, and modes of analysis among the various disciplines that use these techniques; we encourage the reader to examine this extensive body of literature for creative solutions that are especially pertinent in particular disciplinary areas.

◆ *Origins and Research Strategies*

Many elicitation techniques grew out of the empirical problems of early cognitive anthropology. Componential analysis, folk taxonomies, and frame elicitation techniques all are early examples of methods that anthropologists have employed to reveal various types of tacit knowledge held by informants in societies or social contexts whose cultural particulars were unknown (D’Andrade 1995). The general purpose of these methods was the elicitation of informants’ subjective understanding of some given domain or well-bounded body of cultural knowledge. Researchers used the elicited information, for example, to develop formal models or ethnographic descriptions.

Good examples of elicitation in the descriptive mode come from James Spradley’s work and his various ethnographies of such groups as cocktail waitresses (Spradley and Mann 1975) and urban nomads (Spradley 1970). In the course of ethnographic description of men on skid row, for example, Spradley used structured questions to obtain information from informants about social processes (“ways to beat a drunk charge”), locations (“places to be busted within jail”), and activities (“hustling”). He also used a number of different elicitation interviewing techniques in both group and one-on-one settings. Spradley was inter-

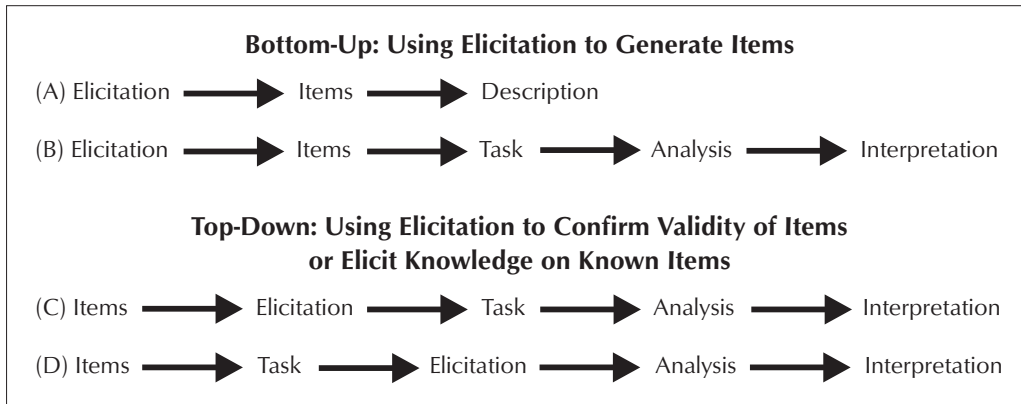


Figure 24.1. The Place of Elicitation Methods in the Overall Research Sequence

ested in all aspects of life on skid row; in fact, he changed his research focus and the labels he used for the men he studied, from an outsider label of *alcoholics* to *urban nomads*, owing to his growing appreciation for how they themselves figured their worlds.

An early example of the use of elicitation techniques to produce more formal models of cultural knowledge is found in Roy D'Andrade's (1976) propositional analysis of U.S. beliefs about illness. Dissatisfied with attempts at eliciting beliefs about illness with taxonomies (described below) and componential approaches that identified important distinctive features, D'Andrade used "sentence frames" to ask relational questions about the properties of illnesses. He was particularly concerned with the logical relations among diseases and their properties as perceived by informants. He used in-depth interviews to elicit statements about illnesses and their properties, such as "You can catch influenza from other people." By removing references to specific illnesses in such statements, D'Andrade produced sentence frames that could be compared across all disease terms, such as "You can catch _____ from other people." In this way, D'Andrade used an initial stage of interviewing to elicit information on illnesses and their culturally relevant properties; in a subsequent set of inter-

views he collected systematic comparisons of illnesses with illness properties in sentence frames. Further analysis led to a model of those relations.

Another important feature of D'Andrade's study concerns the place of elicitation techniques in the overall data collection and analysis process. In Spradley's work on skid row, elicitation led directly to ethnographic description—from the ground up, as it were. However, in D'Andrade's case, elicitation was one element in a long sequence of data collection, analysis, and model development and interpretation. Spradley used elicitation methods initially to explore the structure of experience in many related domains. He presented informants with diagrams of topic-specific structures and then used the information he gathered to create an integrated description. D'Andrade's work, in contrast, represents a more focused inquiry. D'Andrade attempted to model informants' underlying assumptions that could potentially generate behavior. He used elicitation methods to get relevant material from informants, in a manner similar to Spradley, and then used additional structured questions and statistical models to help him further interpret his informants' beliefs about illness.

Figure 24.1 shows four different data collection and analysis sequences and the place of elicitation methods within them. It

summarizes how elicitation methods figure in different overall research strategies. The first two methods (A and B) represent the processes described above, with the Spradley example most similar to sequence A and the D'Andrade example most similar to sequence B. Both Spradley and D'Andrade used interviewing in the initial stages of their projects expressly to learn the subjective contours of their respective topics in the most rudimentary sense. The less a researcher knows about a topic, the more appropriate is the use of open-ended and less structured interviewing techniques. This is a bottom-up approach similar to that recommended by advocates of "grounded theory" (see Charmaz, Chapter 32, this volume).

As the researcher attains greater cultural understanding, the use of interview techniques with more structure is appropriate. The bottom two sequences in Figure 24.1 (C and D) represent cases where the items or categories in a domain are already substantially documented, where the researcher may have already studied the topic but seeks to elicit further or to reelicite properties, features, or reactions that are directly and/or indirectly relevant to the content area. Researchers undertake these more top-down approaches for a variety of reasons. Often, they use such approaches to explore the meaning or validity of previous work. For example, Roberta Baer (1996) conducted descriptive interviews to elicit understandings and possible responses to questions used in a national survey regarding mental health (the National Survey of Health and Stress). The survey was originally thought to contain questions that assessed symptoms indicative of depression, but Baer's results suggest that the questions may not be valid indicators of depression among Hispanics in the United States. Her in-depth interviews with a Hispanic sample indicated that although her informants' responses appeared to be consistent with the biomedical symptoms of depression, the responses could be attributed to the informants' work (hard physical labor) and life-

style conditions, not necessarily to depression. Informants' understanding of the questions and their own responses indicated that the survey would report many false positives for Hispanics on mental illness.

The descriptive interview technique is used especially by psychologists and survey developers to ensure that survey questions are reliable and valid. Such researchers select a preliminary sample and ask the individuals in that sample about the meanings and possible responses to each survey question (Fowler 1995). Based on the answers, they can then make modifications to the questionnaire to ensure that all respondents interpret questions in the same way, and that their interpretations are consistent with the researchers' intended meanings (see Singleton and Straits, Chapter 3, this volume).

Of course, research practice can lead researchers to combine strategies in various ways. The place of elicitation methods in the research process and the particular data collection and analysis sequence used depend on just what is being studied (e.g., domain type) and the nature of the research population (e.g., literate versus nonliterate), among other contingencies of a project. Spradley (1970) makes the point in describing his research with men on skid row:

Participant observation and recording casual conversations among these men made it possible to formulate many hypotheses and hunches which were later the basis for more formal ethnographic interviews. Specific question frames were then developed along with a variety of sorting tasks for testing the adequacy of these hypotheses. The result presented here is an ethnographic description which approaches the way insiders of this culture define their own identity, environment, and life style. Although listening, engaging in participant observation, formulating hypotheses, and testing these hypotheses with specific eliciting techniques were all

used throughout the research, some tended to precede others. In this chapter the formal questioning and sorting tasks will be discussed in some detail but it should be understood they were used in gathering and analyzing the data presented in later chapters also. (Pp. 69-70)

◆ *Specific Uses at Various Stages of Research*

Elicitation techniques may be useful at different stages in a research project. Researchers can employ these methods as exploratory or explanatory mechanisms to aid in the development of theory, to supplement other information or enhance an ethnographic description, to test hypotheses, and to elaborate and construct models. In addition, researchers can use such methods in an exploratory-explanatory sequence, where the results of earlier elicitation help to determine later elicitation approaches used in the testing of hypotheses (see Johnson 1998). Probably the best source on getting started with interviewing using these methods is Spradley's book *The Ethnographic Interview* (1979). We rely heavily on it here and recommend that beginners consult the original work.

GETTING STARTED

The very first step in interviewing is the selection of a topic area for exploration. It is easier for researchers to study areas in which they have little or no experience, because familiarity with a topic may cause them to overlook details about which they assume they are already informed. Also, researchers who are familiar with their topics of study may give informants the impression that the researchers already know the answers to the questions they ask; informants may feel that the researchers are test-

ing them. When interviewing in an unfamiliar area, it is generally easier for a researcher to take the role of a student and orient to learning from the informant.

After selecting at least a general topic, the researcher must find an informant. Jeffrey Johnson (1990) describes several strategies for selecting informants. For exploratory interviews, researchers might select informants using random or nonrandom strategies. Random strategies are typically used when a random, representative sample has been drawn for interviewing with a questionnaire and in-depth interviews are to be conducted with a subset of the larger sample. In that case, a randomly selected subset may be taken or individuals can be identified by their personal characteristics (social class, gender, and so on) and then interviewed further.

Usually, however, nonrandom strategies are used for exploratory interviewing. A nonrandom or convenience sample does not necessarily imply that informants were not chosen without a prior plan. In fact, there are a variety of types of convenience samples. Informants may be chosen haphazardly or truly without a prior plan, or they may be chosen for theoretical reasons. For example, a researcher might select informants or groups of informants by using a stratified convenience sample (Johnson 1990), where important variables such as gender, social class, and role may be used to guide the selection. Some studies focus on social networks or the location of influential individuals and so may best use a "snowball" sampling technique, where individuals who are interviewed name other individuals for interviewing.

Although it is important that the selection of informants be guided by the theoretical requirements of the study, the development of fruitful relationships with informants, in practice, also depends upon the individual characteristics of the informant and the researcher. Spradley (1979: 46-54) outlines the characteristics that are important in an informant. An informant should have expertise in the area that the

researcher wishes to study or learn about. This means that the person(s) identified for interviewing should have at least a year or more of full-time experience or three to four years of part-time experience in the topic area. The more experience an informant has, the better. The informant should be currently involved in the activity or area of interest and not retired or withdrawn from it. An informant also should have time to speak with the researcher. Although some busy people may make time to sit and talk, it is necessary that an informant be able to devote a few sessions of one hour or more to the project. Finally, an informant needs to be able to speak as a member of the culture in the usual language, and not overly interpret or analyze from some imagined outsider's perspective, so that the researcher can obtain an "insider's" knowledge of the topic.

The next stage is to get started with the interview itself. Spradley (1979) describes several steps in conducting exploratory interviews. After choosing a topic and locating informants, the researcher's next step is to begin interviewing with broad, descriptive questions before moving to more focused questions to understand local perceptions and categorizations of experience. Elicitation at this stage is broad and exploratory. As the researcher learns more about a topic and a group, relevant questions regarding meaningful areas for exploration become clearer and questions become more focused. This step may involve detailed elicitation of items relevant to a specific topic. Finally, with a complete set of (insider) terminology relevant to a particular topic or domain, the researcher can apply more highly structured interview techniques.

Spradley (1979:85-89) presents some introductory interviewing procedures that he refers to categorically as the "grand tour" and the "mini tour." For the researcher who is a novice to the topic, asking an informant for a grand tour can be especially informative. A grand-tour question is one that asks for a description of a place;

the informant does not necessarily literally take the researcher on a tour, but may do so. The researcher might also ask an informant to describe a "typical" day, a "typical" procedure, or how he or she did something last night or on some other occasion. This form of questioning also helps to establish the informant-ethnographer relationship and aids in putting both interviewer and informant at ease. The mini tour is a similar type of information gathering, but focused on a smaller area of activity, such as a specific part of a typical day.

Spradley describes several techniques for establishing the informant-ethnographer relationship and reducing anxieties on the part of both. An important starting point is the interviewer's explaining the reason for the interview and the purpose of the project. This also establishes the interview as different from an ordinary conversation. Throughout the interview, the ethnographer may need to repeat the explanation of the interview's purpose in different ways, along with expressions of his or her own ignorance, thus conveying to the informant that the ethnographer's purpose in conducting the interview is to learn. This helps to explain the asymmetry in the talking and asking of questions (see Briggs, Chapter 44, this volume). In a conversation, participants take turns; each person gets to ask and answer questions. In an interview, turn taking is unbalanced, with the interviewer asking many questions and the informant being encouraged to explain, describe, and give examples. To justify this, the ethnographer may need to express ignorance repeatedly, as well as interest in the topic and what the informant is saying.

FOCUSING ON SPECIFIC TOPICS

Mastery of local terminology and knowing what issues and questions to broach allow the ethnographer to focus on a specific topic. An essential part of moving ahead depends upon the researcher's knowing what questions are good ones. The important

thing is that a question should ask about a relevant topic in a *subjectively* meaningful way.

An example of a more structured interviewing technique is the *taxonomic* approach. The purpose of taxonomic interviewing is to elicit both topical terminology and structure. Interview questions are structured to elicit categories, with set and subset relationships among items. Initial questions can be as simple as “What’s that?” possibly followed by “What kind of _____ is it?” or “Are there other kinds of _____?” (Metzger and Williams 1966). Subsequent questions explore relations among items (possible set-subset relations), with further elicitation focused on types of items. Although this may seem to be an artificial method in terms of imposing categories upon the informant, in fact it is a very natural method of interviewing; a researcher might use it when trying to understand how someone does something or the nature of the materials the person uses, especially in the role of a learner.

Specific questions like “What kinds of _____ are there?” can be used to elicit domain items. A domain is a set of things that go together. This may be a set of attributes that something has or a set of types or examples of a specific thing, or it may be a set of sequences or developmental stages of something. Joseph Casagrande and Kenneth Hale (1967; cited in Spradley 1979: 110) list all the different types of relationships that a set may have. In exploratory interviewing, one of the interviewer’s purposes is to obtain as complete a list as possible in local terms and to understand the meaning of each term. And, of course, the interviewer strives to understand informants’ understandings of how the things are interrelated.

“Domain definition” interviews are known by a variety of names and involve a variety of procedures across the social sciences. In anthropology, researchers may use interviews with individuals or groups (focus groups) to collect and learn about things related to the topic of interest. In

psychology, such interviews are called “item generation” interviews, the purpose of which is to elicit as many items on a given topic as possible. Psychologists use the results of such interviews to write items/questions for tests and attitude scales. Sociologists also conduct such “pilot” interviews to help them write more meaningful questions on surveys. They also may conduct such interviews using questions from existing surveys to understand the many ways respondents interpret survey questions and multiple-choice answers.

The many methods available for eliciting domain items differ mainly in style and in the amount of effort required to summarize responses. We have already mentioned the taxonomic interview, in which informants are asked to explain a domain in depth, listing the items in the set and their relationships to one another. Another direct interviewing technique is *free-recall listing* (discussed in detail below), in which informants are asked to list all of the things they can think of on a given topic. This technique is very efficient in terms of both the interviewer’s and the informant’s time. Because each informant is asked to provide a full list, fewer informants are needed to establish the set of relevant items than if each person provided only a few items. Also, because of the usual simple structure of questions and responses, the responses are generally quite readily tabulated across informants. Free-recall lists can be collected in one-on-one interviews or in groups (if collected prior to group discussion).

Some researchers prefer to study the actual texts of interviews (see in this volume Schaeffer and Maynard, Chapter 28; Baker, Chapter 37). Although such studies can be particularly informative (see Quinn’s 1996 study of the use of metaphors and the development of a model of American marriage), the transcription alone is extremely time-consuming (see Poland, Chapter 30, this volume). Many researchers combine methods and do not rely solely on any one technique. Thus some may con-

duct free-recall listing but tape-record the interviews to check on the accuracy of their notes and to obtain details they may have missed. Tape-recorded interviews may provide more detailed accountings of case descriptions than the interviewers' notes alone.

ADDING STRUCTURE TO THE INTERVIEW

Researchers use elicitation interviewing techniques to gain rudimentary knowledge of specific topics about which their informants have considerable expertise. When a researcher has developed sufficient understanding of the topic area and has elicited items relevant to the topic or domain, he or she may be interested in moving to a more structured approach. A next step, for example, would be for the researcher to design an interview using the results of previous interviews.

A disadvantage in relying solely upon the results of open-ended interviews is that this makes it difficult for the researcher to make reasonable and valid comparisons across informants. To make comparisons across people and to summarize the results in a meaningful way, the researcher must ask all informants the same questions. With the open-ended procedures that we have described, all interviews may begin with the same question or may have similar skeleton outlines of questions to be asked, but each informant may need different probes and may be encouraged to explain in more or less detail at different points in the interview. Initial elicitation interviews are more flexible, with the goal of teaching the investigator about the material. This can result in considerable bias in the results. Some informants talk a lot or offer greater detail in their remarks. Some talk briefly, providing little detail and instead focusing on general issues. It is important for researchers to understand that they cannot conclude that their informants know nothing about a subject, or that the subject is not important to

them, just because the informants may say little about it. What informants say is a function of many factors in addition to knowledge, including the broader attributed relevance of the topic, memory, and even the informants' perceived self-worth.

The advantages of conducting open-ended interviews are found in the uses to which researchers can put the results. Researchers can use the information gathered in such interviews to develop psychological scales, to improve question wording in survey questionnaires, to study the categories informants use to classify and think about items in particular topic areas, and to develop relevant questions for the study of informants' specific beliefs about those items. In a bottom-up approach, the researcher interviews a small sample of individuals to gain an understanding of the topic and to gather items relevant to the topic of study. Some researchers do not go further than that initial set of exploratory interviews (see Figure 24.1A). Such findings, however, can only be suggestive, owing to the kinds of response bias that can affect open-ended interviews. In a variation on this approach, the researcher uses responses from the open-ended interviews to construct a meaningful interview protocol for use in exploring concepts that were suggested in the elicitation interviews (Figure 24.1B).

A number of different kinds of structured questions can be created from the results of open-ended interviews. Some examples include questions about informants' sociodemographic characteristics or behaviors, questions designed to gather information on informants' specialized knowledge, and questions about informants' perceptions, classifications, and beliefs concerning a particular domain (for a related discussion, see Weller 1998). Researchers in many fields rely upon open-ended interviewing techniques as a first step in moving toward greater structure. Psychologists, sociologists, and anthropologists all use open-ended interviewing techniques to gain understanding of

particular topic areas, even if for somewhat different purposes. Anthropologists may also use domain items eventually to study the categorization of those items. Researchers usually create response categories themselves, naming and defining categories of responses and then coding informants' responses into those categories, but an alternative and preferable way to do this is for researchers to collect data directly from informants as to their categorization of items and then use that category system in the interpretation of responses.

Procedures for discovering informants' own categorizations of items are called *similarity data collection tasks*. These include techniques such as pile sorting, in which the researcher asks informants to judge which items go together into categories (we discuss pile sorting in greater detail below; see also Weller and Romney 1988:chap. 3). Another, related interviewing technique, sentence-frame elicitation, relies on direct statements and allows for the study of multiple sets of items (we also discuss sentence-frame elicitation below; see also Weller and Romney 1988:chap. 9).

The same elicitation methods can be used to ensure the reliability and validity of existing survey questions or other structured interview materials. The most important part of any study based on interviews that attempt to combine responses across people is that each and every respondent should have the same understanding/interpretation of the questions, and that interpretation should be the same as that intended by the researcher. After interview materials have been designed, the researcher can conduct top-down elicitation interviews, in which participants are not asked to answer the questions per se but instead are asked what the questions mean to them, what the possible responses might be, and why (Figure 24.1C or 24.1D). These interviews, whether conducted with individuals or groups, are a very important part of ensuring that questions are clear, that interpretations are the same across informants, that the response categories are

appropriate and complete, and that respondents' interpretations are consistent with the intended meaning of the questions.

◆ *A Sampling of Techniques*

We will now focus in greater detail on a sampling of commonly used elicitation techniques, several of which we have mentioned above. We present these techniques in the order in which they may be most appropriate in a research project. We pay particular attention to the theoretical question of interest, how the method contributes to the research project, the kinds of analyses appropriate for the data collected, and any possible drawbacks and problems with the methods as employed.

TAXONOMIC ELICITATION

As we have noted, the less that is known about a topic, the more appropriate are broad, general questions. Grand-tour and mini-tour questions are especially appropriate for getting started. Spradley (1979) illustrates the use of such questions with examples from his own work. He provides a verbatim excerpt of a conversation he had with a waitress in which he asked her to describe a typical night at work. Within the larger grand tour, he asked her a mini-tour question, namely, to describe what "setting up a tray" is. In his work with urban nomads, he used grand-tour questions to get descriptions of the city jail, for example. In a study of hunters and fishermen, Michael Orbach (1977; cited in Spradley 1979) elicited descriptions of the parts of a tuna boat from informants. A grand tour of a tuna boat oriented Orbach to the parts of the boat and indicated which parts or categories were important to the fishermen. Researchers' initial interviews should focus on discovering such categories and the terminology used by people in the setting to classify their thoughts and experiences.

In order to describe some aspect of culture or experience from the point of view of the informant, it is essential that the researcher understand the local dialect. A researcher might ask, for example, “What do they call _____?” or “What are your names for _____?” Thus during the initial stages of the project, the researcher’s focus is on learning the local names for things, becoming familiar with local concepts, and, most important, uncovering locally relevant questions. Taxonomically structured questions are excellent for helping the researcher gain an organized understanding of a new topic.

A taxonomy is a structured set of inclusive relations among categories and items, such as set and subset relations among items. For instance, Steven Tyler (1969) discusses folk taxonomies and the features that distinguish categories. Charles Frake (1961) presents a detailed taxonomy of kinds of illnesses relevant to the Subanum in the Philippines. Although Frake had no initial interest in ethnobotany or illnesses, he found that these were among the top three topics of conversation among the Subanum. By asking, “What kinds of illnesses are there?” he elicited 134 words for illnesses. Subsequently, by applying more structured interviewing techniques, he also elicited the relations among the illnesses, including diagnostic criteria, and stages of progression of different illnesses.

FREE-RECALL ELICITATION

As the researcher learns more from informants about a topic, interviewing methods can become more structured and focused. Free-recall listing is related to taxonomic interviewing, except that in the free-recall method the interviewer requests only a single set of related items. When conducting taxonomic interviews, researchers explore items, categories, and subset relationships among items in order to flesh out much broader areas. In contrast, free-recall listing focuses on a single

level of contrast, such that all items are members of the same set and there are no set or subset relations among them. In general, a researcher needs to have a basic understanding of the broader taxonomy in order to ask focused free-recall questions. Specifically, the researcher needs to know what questions are likely to elicit the category members. This type of elicitation is called *free-recall* because informants are asked to recall as much as they can on a topic without being given specific examples. It is referred to as a *listing* task because the purpose is to get an exhaustive list from each informant rather than a few short answers. The interviewer may use probes to increase the numbers of things recalled. These probes are generally of two types, and they serve two purposes: First, by repeating the question, the interviewer can emphasize the message that he or she is seeking an exhaustive list of items; second, by reading the last two to four items the informant has mentioned, the interviewer can improve the informant’s memory or recall for more items.

The advantage of getting more information from each informant is that the researcher will then need fewer informants to obtain a complete mapping or listing of domain items. Although free-recall listing interviews may be conducted with individuals or with groups, individual interviews are more efficient. If a single question can generate approximately 10 to 20 responses from each informant and there is considerable overlap in responses among informants, as there often is, then a small sample of informants (10-20) may be adequate for the researcher to collect the most important items in a set. (For more detail on free-recall lists, see Weller and Romney 1988:chap. 2.) Focus groups retrieve about 60 percent as many items as do individual interviews (Fern 1982). With high agreement across groups (redundancy in items), a minimum of four groups with about eight people in each may suffice (Morgan 1996; see Morgan, Chapter 7, this volume). But in either case, the key factor that deter-

mines sample size is the point at which the set of items becomes “stable,” meaning that few new items are being added to the set.

Frake’s (1961) study of illnesses is a relatively simple and straightforward example of the elicitation of a full set of items. Illnesses constitute a coherent domain that is readily identified by informants. In a comparative study of illness concepts in Guatemala and the United States, Susan Weller (1984) wanted to be sure that the illness terms she selected for use in her study were recognized and understood by her informants, so she began her study with free-recall listing of illness terms from both a Guatemalan sample and a U.S. sample. In each sample, informants were asked to “name all the illnesses that they could think of.” After listing the illnesses, each person was also asked to describe each illness.

Other domains must be elicited with series of related or contrasting questions. In a study measuring the attributes of success and of failure, Kimball Romney, Howard Freeman, and their colleagues asked informants to think of five friends and then describe the ways in which each was successful and/or a failure (Romney et al. 1979; Freeman et al. 1981). James Young (1980) was interested in why people sought health care from various sources in an indigenous community in Mexico. He could have asked, “Why do you or would you go to a doctor?” and “When would you go to a pharmacist?” However, contrasting questions such as “Could you tell me why you would go to a doctor and not a pharmacist?” and “Why would you go to a pharmacist and not a doctor?” revealed much more detailed and specific information. Young used questions that systematically compared all sources of health care and then asked about each pair.

In a study examining the reasons women choose either to breast-feed or to bottle-feed their infants, Susan Weller and Claibourne Dungy (1986) asked women to list all the reasons they might want to breast-feed, the reasons they might want to

bottle-feed, and all the advantages and disadvantages of breast- and bottle-feeding. Weller and Dungy used a series of free-recall listing questions to elicit the reasons women choose a particular infant feeding method. Because they wanted to understand all of the reasons the women might have so that they could study the related decisions of individuals in the population, they used several questions to tap the broader set of reasons.

In a variation on the use of contrasts, in a study comparing adolescents’ perceptions of adult/parental disciplinary actions, Weller, Romney, and Donald Orr (1987) elicited two related sets of items. First, they asked adolescents about things they might “do wrong” or things that teenagers might “do wrong.” Then, for each item that was mentioned, they asked for a new list of possible adult/parental responses to that infraction. Because the purpose of the study was to examine the perceptions of possible physical abuse among ethnic groups, the researchers also took some items from the description of abuse in the emergency room of a university hospital to use in the next stage of their study in conjunction with the items obtained from the free-recall lists.

Finally, free-recall listing can help researchers in validating or modifying existing questionnaires and tests. For example, C. E. Lewis, J. M. Siegel, and M. A. Lewis (1984) wanted to measure “stress” among children, but existing stress scales had been developed for adults, and it was not clear whether such scales would be meaningful when applied to children. This problem parallels the kinds of problems encountered by cross-cultural psychologists, who often wish to apply scales or tests developed through research on a particular group to groups in different countries or different ethnic groups (see in this volume Ryen, Chapter 17; Tierney and Dilley, Chapter 22; Latham and Millman, Chapter 23). Lewis and his colleagues conducted interviews with children, both individually and in groups, and asked them about all the

things that make them “feel bad.” From the lists of responses, the researchers could see whether there was a correspondence between existing adult scales for stress and the items relevant for children. The results indicated that children listed different items, and so the researchers developed a new stress scale for children.

INTEGRATING APPROACHES

An integration of these approaches can be seen in exploratory interviews conducted to discover cultural models for social support, for example. In the social sciences, *social support* refers to the support and assistance individuals might need from their social networks in various situations. Because it is unclear whether members of the general population share this concept, the researcher’s initial questions might explore the problem area generally. The researcher might find a few folk taxonomy interviews useful for exploring the meaning of the concept, specifically to find out how to phrase questions in a meaningful way.

After discovering that words like *help*, *assistance*, and *support* do seem to have general meaning, the researcher might ask, “Sometimes things happen to people and they need some kind of help, support, or advice. Can you tell me situations in which someone might need some help, support, or advice?” Here, the goal would be to elicit the kinds of situations in which someone might require “social support.” Then, in order to understand these situations better, the researcher might elicit another set of responses using questions such as “You mentioned [a particular situation]; what kind of help or support might be offered in that situation?” After eliciting this second set, the researcher might elicit a third set to find out about sources of support, such as could be drawn from the question, “You mentioned [a particular kind of help]—who or what might be the best person or place to do that?”

However, if initial interviews on the topic reveal that the meaning of the concept in question is not straightforward, the researcher’s first task would be to find out if the concept even exists among members of the study population. It may turn out that the researcher needs to modify the whole initial plan for the interviews, so that respondents are asked, instead, “What people might offer you help or advice if you needed it?” From there, the researcher would move on to specific examples of the help offered by each person named. Such questions would help to elicit the cultural definition of social support through the use of specific examples.

Commonly, researchers then use such elicited items in further interviews or in conjunction with other elicitation tasks to increase understanding of the area of cultural knowledge under study. For example, in the study of social support, the next phase of the project might involve the researcher’s using the elicited situations or scenarios where people need social support to study community beliefs about social support, to describe community behaviors and the kind of social support people actually have, or to see if there are relationships among community beliefs about social support, individual resources for social support, and health status.

A study conducted by William Dressler, Mauro Balieiro, and José dos Santos (1997) illustrates how these different kinds of interviews and data can be integrated. These researchers used ethnographic and case history information about social support to create a structured interview task about scenarios in which social support is needed. They asked informants about possible persons (parents, spouses, and others) who might fill particular needs. Dressler and his colleagues derived a cultural model of social support from a small sample of informants and then used a larger sample to test the relations among personal reports of social support resources, the cultural “ideal,” and blood pressure.

SENTENCE-FRAME ELICITATION

Some structured interview tasks involve full statements rather than simply terms or other descriptors to be sorted by informants. Prime examples are psychological tests in which informants are asked about their agreement with various statements. These tests use sentence frames that allow for systematic comparison of one set of items, such as illnesses, with another set, such as illness attributes. An initial step in the research leading to the creation of such tests is the elicitation of the items and their properties. The researcher then uses another informant sample to collect the sentence-frame substitution data, which systematically compare each item with each property. The researcher then analyzes and interprets the response data.

Sentence-frame elicitation can be used in exploratory interviews and eventually re-applied in more highly structured tasks. For example, Jeff Johnson and M. L. Miller (1983) and Johnson and Ben Finney (1986) have described the importance of the presence of certain social roles in creating group cohesion and harmony in small to moderate-sized groups. Based on this earlier research, Johnson, James Boster, and Larry Palinkas (1991) sought to test hypotheses concerning the relationships among social roles, group cohesion, and well-being in isolated Antarctic work groups. An important element of the study was the elicitation of social roles relevant to a group of this kind. The study site was the Amundsen-Scott South Pole Station, which is located at 90 degrees south latitude.

Because the researchers had not been to the station prior to the study, they needed to interview individuals who had previously “wintered-over” (8.5 months of isolation) at the station in order to elicit statements concerning the types of culturally relevant informal social roles found in such small groups. During the period of the research, the winter-over crews at the station consisted of between 20 and 28 individuals. The researchers compiled an extensive list

of previous winter-over crew members from South Pole Station and made arrangements to interview seven individuals in depth concerning their experiences during their winter-overs, particularly with respect to the informal social roles of various group members.

Because the number of crew members was relatively small, the researchers asked each informant to list the members of his or her winter-over crew, either by their initials or by their first names. Upon completing the list, the informant was asked to describe “how each individual crew member got along with others in the group” and to discuss the “types of roles each played in the group.” The following extract is from one of the interviews with a female scientist we will call Pat. The italicized portions of the transcript are examples of the types of statements the researchers identified as pertinent to the role-playing in question.

Interviewer: Why don’t we get the initials of the people?

Pat: All 20 of them? There’s me; that’s P.D., R.T., F.M., G.S., T.F., N.P., L.T., I.B., B.L., L.S., S.H., K.D., D.T., T.C., L.S2., R.K., K.R., R.B.

Interviewer: We’ll come back to you last. Describe how these people interacted in the group, the kind of roles they played in the group—if they hindered things, if they helped things. How about R.T.?

Pat: *This was your class clown you’re looking for or suggesting as part of the group. He was definitely one of the motivating people on station.* He was one of the science people, and most of the science crew out here was quite young, and I think that had a lot to do with the fact that we all got along so well, because we were around the same age. *But he was the motivator—maybe not the motivator, but if you said, “P, we’re going to do this,” he was there for it. He was very good professionally as well as personal-*

ity-wise, very intelligent and he was fun, a good person.

Interviewer: You said he was always there, he was always there to help you if you needed that?

Pat: Yeah, when he could. He was always more concerned with his project than anyone else's, obviously, because his grant was very important to him. *His work was very, very important to him.* But in time of "Hey, we've decided we're going to watch James Bond movies all night, it's going to be James Bond night," P. would be making popcorn for the event and saying, "Yeah, that's a good idea. Let's do that." *He may never have initiated something or made a suggestion, but he was always there for the event and made sure he supplied something, whether it's just a hilarious night of—I don't even know, joking, running around, shaving his hair off except for down the middle . . .*

Interviewer: What about F.M.?

Pat: He was a NOAA [National Oceanic and Atmospheric Administration] officer. I hope you get to meet him this evening; he's supposed to be coming down to dinner with us. F.'s a *very quiet person*, until you get to know him or until he has sort of a punch line to the story, and then he'll just blurt out and then continue doing what he's been doing. *So he was the person who everyone got along with.* If there was a problem, you knew F. wasn't part of it. And if—we just had a reunion recently, and the woman who was sending out the invitations for the reunion, most of them she put her name on to respond to, and about four or five of them she put "Respond to F.," because he was just the guy that everybody liked. There wasn't anything spectacular about him except for the fact that he—I've seen him angry once, I think—and *he was proba-*

bly the stable person on the base. I think we had two of those.

The interview continued until all crew members, including the informant, were discussed in depth. The interviews were then transcribed and two of the researchers took on the task of identifying all statements in the interviews relating to either the informal role characteristics or the social interaction characteristics of winter-over crew members (the italicized portions in the extract). Each of the researchers compiled a complete list of statements and then the two compared their lists for overlaps. Those statements that were most often identified by both researchers were then identified and sorted by similarity. For example, the statements "so he was a person who everyone got along with" and "he was the guy everybody liked" would have been seen as similar in intent.

Once the researchers had identified categories of roles, they selected the statement that best represented a category for inclusion in the final list of sentence frames. Table 24.1 shows the 11 frames that were finally used in the study. Sentence frame 7, for example, was chosen as the frame best reflecting the types of informal roles concerning someone "everyone got along with" and "everybody liked."

It is important to note that there are a number of other considerations for selecting frames that may relate to wording or the negative or positive valence of a statement. In this study, the researchers excluded statements of either a negative or valued (e.g., like or dislike) nature in favor of more value-neutral items. In preliminary tests of the frames and other questions, Johnson et al. discovered that the crew members felt too self-conscious making judgments concerning liking or even degrees of friendship due to the interactive intensity of the group setting.

Because the informants in this case were highly literate, the sentence completion task was done with paper and pencil. With a nonliterate group, an interviewer could

Table 24.1 FINAL SET OF SENTENCE ELICITATION FRAMES CONCERNING THE INFORMAL ROLE PROPERTIES OF CREW MEMBERS

1. ____ is a natural leader in getting things done around station.
2. ____ is a leading organizer of parties and other social events.
3. ____ is one of the station entertainers or comedians.
4. ____ is a good listener and serves as a counselor or confidant for a number of people on station.
5. ____ always volunteers to pitch in and help out whenever s/he can.
6. ____ is particularly involved in and committed to his/her work.
7. ____ doesn't just hang out with one group but is really everybody's buddy.
8. ____ is someone who you can really count on to come through in a jam.
9. ____ is fun to tease or joke with, s/he takes it in stride.
10. ____ is a good storyteller.
11. ____ serves as a peacemaker, is very good at helping people resolve their differences.

have read each of the sentence frames as well as each of the crew members' names (items). In any case, it is important that researchers recognize how potentially demanding this kind of task can be, particularly in face-to-face interviews. For example, if there are 20 crew members (items) and 11 sentence frames, an informant will have to evaluate 220 individual statements.

Data of this type are amenable to a number of analytic techniques that will help to reveal underlying structure and allow the researcher to assess patterns of agreement among informants to determine overall consensus. Volney Steffle (1972), for example, who refers to data matrices constructed from sentence elicitation tasks as "item-by-use matrices," used a method that sorts the rows and columns of a matrix according to row and column similarities. Boster and Johnson (1989) used hierarchical clustering, correspondence analysis, and multidimensional Guttman scaling in analyzing the similarities and logical relations between and among fish (items) and their characteristics (sentence frames). (Weller and Romney 1990 provide an excellent background discussion of appropriate analytic methods for data of this type.)

A common problem in the elicitation of names is the omission of names due to limits on human recall. Invariably, even in the relatively small groups (20-28) under consideration in Johnson et al.'s study, informants would forget to list some fellow crew members. This was not a big problem in the winter-over project, because the researchers' probing and reading through the lists helped facilitate the recall of all members of this rather limited domain. But what about domains that are larger and less well bounded? We discuss this problem in a later section of this chapter, where we consider the use of various techniques for eliciting names in the study of social networks.

ELICITATION OF STATEMENTS FOR STUDIES OF BELIEFS

Many elicitation studies focus on belief structures. In one such study, Jeffrey Johnson and David Griffith (1996) were interested in understanding the intracultural variation of knowledge concerning the toxicological risks of eating seafood in the United States. A primary portion of the overall research effort involved the elicitation of statements from informants con-

cerning the risks of eating seafood as part of a cultural consensus analysis (Romney, Weller, and Batchelder 1986). Cultural consensus analysis is a formalization of the notion of culture as consensus. In such analysis, the researcher first tests whether responses to a series of related questions exhibit a single pattern or theme and thus can be considered to reflect a single set of beliefs for those questions. The researcher then uses the same method to estimate the group's aggregated responses to the questions and how much each individual's responses agree with those of the group.

In the study under consideration, Johnson and Griffith initially selected a purposive sample of expert informants for the elicitation of free-recall lists of different types of pollution. They asked the informants to "list all the possible types of pollution that can be found in the sounds, bays, and nearshore waters of the Atlantic Coast" (e.g., coastal erosion and acid rain). They then asked the informants to list all the possible problems that might have been caused by these types of pollution (e.g., deformities in sea life or diseases in fish) and to list all estuarine and marine species they know about that might be affected by the different types of pollution elicited in the first step (e.g., tuna, clams, crabs). Based on these initial interviews, Johnson and Griffith identified 12 types of pollution, 11 causes of pollution, and 10 species for use in a further set of interviews.

Johnson and Griffith conducted a second set of elicitation interviews with a convenience sample of informants that included people in the coastal plain of North Carolina who had some environmental and ecological knowledge of the coast. The informants were commercial fishermen and longtime coastal residents of various ethnic backgrounds. The researchers typed up cards showing the different kinds of pollution, the problems these types of pollution might cause (e.g., deformities in sea life), and the species affected (e.g., swordfish, oysters) and presented the cards to each of informants individually. They asked each

informant to (a) sort the types of pollution into piles according to their similarity, (b) link each of the pollutants to the possible problems they cause, and (c) identify which of the species the pollutants would affect the most. The researchers also asked each informant to explain his or her answers. The interviews were taped and later transcribed, and the researchers conducted a search for statements in a process much like that used in the frame elicitation analysis discussed earlier.

Three researchers independently reviewed the transcribed interviews and listed all statements that dealt with informants' descriptions of the relationships among seafood, pollutants, human health, and other risks. Those statements with the highest reliability (those identified by most or all of the researchers) were considered for use in the study. Statements that were redundant were removed, and the remaining statements were edited for clarity, but not so much as to alter the intent and language of the informants' original statements. About half of the statements selected were positive (e.g., "Heavy metals cause sores on both fish and people") and about half were negative (e.g., "Heavy metals are necessary nutrients for both fish and people"). The researchers balanced the statements this way to avoid possible response-set bias patterns in subsequent data collection (e.g., a lot of yes or a lot of no answers). Table 24.2 lists a sample of 8 of the 53 statements eventually used in the study.

The researchers administered the final statements to a random sample of 142 informants who were interviewed face-to-face and stratified on the basis rural versus urban residence, coastal versus inland residence, ethnic identity, and socioeconomic status. Two comparison subsamples consisted of university students and marine scientists. The interviewers asked the informants to state whether each of the 53 statements was true or false, and to take a guess if uncertain about any of them. The researchers analyzed the data using the cultural consensus model (Romney et al.

Table 24.2 EXAMPLES OF STATEMENTS ELICITED FROM INFORMANTS FOR USE IN THE CULTURAL CONSENSUS ANALYSIS

1. If a seafood is being sold in a supermarket or restaurant, it must be okay.
2. Seafood that have shells are more protected from the affects of pollution than those that don't.
3. The dumping of human and industrial waste in the coastal waters can cause sores and lesions in some marine species.
4. We rarely eat contaminated fish, since they usually die before they even get caught.
5. Sea life can swallow trash, causing them to die.
6. Although not always directly lethal, pesticides can affect the reproductive success of many marine organisms.
7. Most people don't think much about the possible dangers of eating seafood.
8. Much of the pollution dumped into coastal and ocean waters has no effect on the flavor of seafood.

1986) to determine the level of agreement within and across the subsamples and to estimate each group's preferred answer to each question.

Parenthetically, this is a good example of a hybrid combination of research sequences A and D from Figure 24.1, in which the researchers used the elicitation of items (pollutants, problems, and marine species) in a structured task (i.e., a pile sort) to help them to discern statements about the relationships among the items. This would have been difficult to achieve through the use of less structured interview methods. The researchers then used the elicited statements in a more structured interview format in order to understand and compare systematically the informants' knowledge about marine pollution and seafood safety.

NETWORK ELICITATION

Researchers concerned with the study of social networks usually need to elicit the names and characteristics of a large number of informant ("ego") alters, including friends, family members, sex partners, and

needle-sharing partners (McCarty et al. 1997; Brewer, Garrett, and Kulasingam 1998; Brewer, Garrett, and Rinaldi 1999). An important concern, particularly with respect to comparisons across egos, is the informant's ability to recall accurately all the alters in a given context. This is similar to free-recall listing, but here the lists contain names rather than cultural items of one kind or another.

There is an important distinction between the two methods, however, in that there are different consequences in terms of issues of reliability and validity. As we noted earlier with respect to the free-recall listing of cultural items, knowledge is by definition shared among informants; this implies that only a few interviews should elicit a valid list of cultural items. On the other hand, the elicitation of names of acquaintances from an individual informant involves knowledge that is unique to that informant alone; therefore problems of reliability and validity are relegated to each individual interview. The comparability and validity of interviews will depend on the interviewer's ability to elicit an exhaustive list from each informant. (There is a long-standing debate on the validity of ret-

respective data of this kind. For reviews of this issue with respect to social networks, see Bernard et al. 1984; Johnson 1994.)

Although there are limitations and constraints on individuals' ability to recall people, events, and behaviors, there are a number of things interviewers can do to help informants to recall items of interest. To illustrate some of these methods, we use an example from the research of Devon Brewer and his colleagues (1998, 1999) on the elicitation of the names of sexual and drug injection partners. Accurate information on the numbers and frequency of both sexual contacts and drug injection partners of infected individuals is critical for the understanding and control of the spread of HIV and other sexually transmitted diseases. The problem in question is that of getting informants to recall the names of individuals who may vary widely in relational strength (close versus distant), length of interaction (limited versus frequent contact), and time of last contact (recent versus distant past). In addition, there is a need to control for what is called forward telescoping of the recall of events (e.g., sexual partners) that may have actually happened before the recall period of interest.

In the elicitation of the names of an ego's friends, family members, sex partners, and others, the extent to which responses will be reliable and accurate will depend to some degree on the recall period of interest and the skills of the interviewer in helping the informant to remember. Brewer and his associates describe how interviewer prompting of the informant by reading back the list of names several times improved recall by about 10 percent. (Note that this kind of probe parallels one of those recommended for free-recall listing.) Returning to name elicitation at later points in a longer interview improved recall an additional 2 percent.

To improve informants' ability to recall people, some researchers employ different types of cues (e.g., social proximity, chronology, location, social role) or anchoring (i.e., providing a mnemonic point of refer-

ence) in which further information is gathered on those already recalled that might help to improve the informant's recall ability (e.g., Brewer et al. 1999; Fraser and Hawkins 1984). In the use of social proximity cues, the informant is asked to provide information about other persons the elicited individuals may know or interact with. The informant is then asked to recall if he or she had interacted in specific ways (e.g., had sex, injected drugs) with anyone in the set of newly listed people but had forgotten to mention them earlier. In addition to social proximity, interaction contexts or locations and social roles can be used as cues to aid in enhancing recall. Brewer et al. (1999) describe this process this way:

To assess the list of location and role cues, we first noted all the responses our subjects gave to the questions about locations where subjects interacted with partners and partners' role relationships. Then we compiled a list of all the locations and roles mentioned by two or more subjects to ensure that the locations were not idiosyncratic. . . . To administer these cues, the interviewer says each location/role (in an individually randomized order) and asks the subject to think of all persons with whom she or he has interacted/had sex/injected drugs in that location or has that kind of relationship. The interviewer then asks the subject to list any of these other persons if she or he had sex/injected drugs with them during the recall period but forgot to mention before. (P. 5)

This is a nice example of how a series of questions can help in the overall elicitation of more complete, and hence more accurate, information, particularly for the types of idiosyncratic knowledge discussed here. The elicitation sequence involves the generation of names, prompting through the repetition of responses, followed by various cues as references, and in turn by further elicitation of names in relation to the

cues. As in sequence B in Figure 24.1, these elicited names can subsequently be used in more structured interviews (e.g., survey) that target information on particular aspects of the social relations themselves.

VISUAL ELICITATION

Sometimes verbal questioning is inadequate for eliciting data of interest. In such cases, visual approaches may be more effective. Photographs, artifacts, actual items of interest, or virtually anything that can be visualized can be used in the elicitation process.

William Foote Whyte (1984) refers to such visual stimuli as projective aids or devices. Projective devices are appropriate for use in a wide range of settings, especially when the subject matter or domain defies the use of strictly verbal or written approaches, such as cards with the names of items on them. This can be the case when the nature of the subject matter of interest is especially difficult to characterize in linguistic terms or when informants themselves lack written language or are preliterate, as in the case of young children (Johnson et al. 1997).

There are numerous examples of the use of such devices in the literature. They include plant and animal specimens (Boster 1987), pictures of preschool children (Johnson et al. 1997), maps (Johnson 1990), drawings of occupations and rituals (Ericksen and Hodge 1991-92), and photographs of different types of processed meats found in grocery stores (Johnson and Griffith 1998). Visual items can be treated in the same manner as the verbal stimuli discussed in previous examples. Researchers can ask informants to relate items, determine the subjective similarity among them, describe what they see, or express any emotions they feel about the visual content.

Johnson (1990), for example, was interested in informants' subjective understand-

ing of social class and status in the context of the small midwestern community where they lived. Understanding community ideas concerning social class posed a challenging problem, because these concepts were not easily articulated. The solution, in part, involved the use of visual materials and the interviewing of community experts. Johnson took photographs of the houses of 30 informants who had been interviewed earlier as a part of an ethnography of food consumption in the community. The 30 photographs were numbered, and each was encased in plastic for greater durability. Figure 24.2 shows two of these photos, which are representative of houses that were literally on "opposite sides of the tracks."

Johnson visited real estate agencies and city hall in attempts to identify and interview experts who would have knowledge about housing in the community. He presented the photographs to real estate agents, city housing inspectors, and code enforcement officers, focusing the interviews on housing values, neighborhood characteristics, and other types of information that would help him to understand the social and economic statuses of the original 30 informants and their households. Johnson asked the experts to sort the photographs into piles, as many or as few as they liked, and to make sure that photographs in given piles were similar to one another in "some way"—the nature of the similarities was left totally up to each informant (such a technique is often referred to in the literature as an *unconstrained judged similarity task*). Upon completion of the sorting task, Johnson asked each expert to explain in detail the reasoning for his or her placements. These explanations contained information that helped Johnson to discern not only the hierarchical nature of community organization itself, but also the relationship between status within the community and status in the world outside of it. As one expert informant put it in explaining one of the groupings, "Upper-class within the community, but nationwide would only be up-

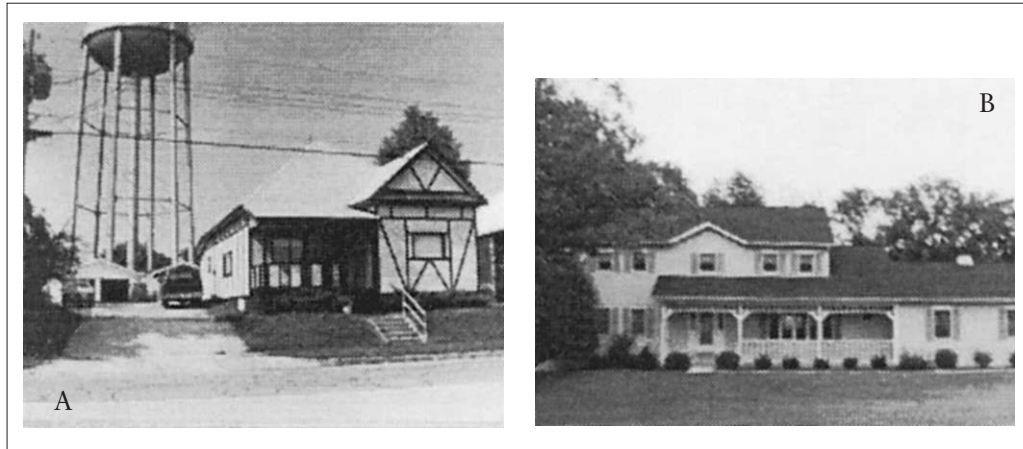


Figure 24.2. Examples of Informants' Houses

NOTE: Houses A and B are literally "on different sides of the tracks" in the community.

per-middle-class." The data collected were both quantitative and qualitative. The pile sort of house photographs could be compiled and the relationship among photographs visualized using multidimensional scaling, and the qualitative descriptions could be used in ethnographic description and the interpretation of analytic results (see Johnson and Griffith 1998).

Ever-improving photographic technology facilitates researchers' use of visual devices in the study of a wide range of subjects. For example, digital cameras place picture taking, development, and production almost entirely in the hands of the researcher, making this an especially practical approach for elicitation, even in the remotest areas.

REPERTORY GRID ANALYSIS

A final approach is particularly noteworthy because it parallels many of the issues discussed in this chapter. Repertory grid analysis (Kelley 1955; Bell 1990) comes originally from psychology, but has spread to organizational research, computer science and knowledge acquisition, psychiatry, and nursing. Like some of the ap-

proaches discussed above, repertory grid techniques can be primarily qualitative or exploratory (e.g., using narratives), primarily quantitative or explanatory (e.g., applying computerized interviewing), or a blend of the two. Ultimately, however, as with all elicitation methods, the approach aims to identify the subjective understandings of individuals concerning some aspect of the world around them.

The main idea of repertory analysis interviewing is similar to free-recall listing, but the researcher's ultimate goal is to find elements of a domain that are subjectively viewed in a bipolar manner, leading to what are termed *constructs*. This stems from psychologist George Kelley's (1955) early work on personal construct theory. For example, the different social roles and role attributes elicited for the South Pole study (see Table 24.1) could also have been elicited with respect to bipolar distinctions or constructs, such as hard worker versus slacker. The initials of the winter-over crew members elicited in the interview with the informant Pat could have been written on cards. Pat then would have been asked to compare the individuals represented by the cards in triads (i.e., groups of three), possibly drawn at random, and asked to explain

who is most different among the three cards or which two out of three are the most similar. She would then have been asked to explain the bases for her distinctions. The interview itself would have elicited social roles and role characteristics similar to what were elicited using a simple list. The following is an example of how 2 of the 11 roles and role attributes could be formatted in terms of bipolar constructs:

Hard worker—slacker

Count on—undependable

These constructs would serve eventually to uncover each informant's subjective assessment of the degree to which each other member of the winter-over crew was a hard worker or a slacker, and so on for other polarities. The resulting data would then be put into a grid or matrix in which values across the rows containing constructs show the subjective placement of each of the winter-over crew members on the various bipolar continua, possibly on a five-point scale. The resulting data could then be analyzed in many of the same ways as data gathered using other elicitation techniques, including the application of multivariate methods, such as multidimensional scaling or principal-components analysis. (Johnson and Griffith 1995 briefly discuss the similarities between grid techniques and sentence-frame elicitation techniques in their study of travel agents' perceptions of tourism destinations in the Caribbean. For a more in-depth discussion of repertory grid techniques, see Fransella and Bannister 1977.)

◆ *Conclusion*

As we have seen, elicitation techniques can be applied at many points in the research process. Researchers can use such techniques at the questionnaire design stage of a project, to support the interpretation of questionnaire responses, to help them to interpret interview transcripts, to enhance ethnographic description, to aid them in the modeling of subjective understandings, or any combination of these. Ultimately, elicitation techniques, no matter where in the research process they are employed, serve to curb researcher biases and to increase the production of reliable and valid findings.

We have presented and discussed several examples of elicitation interviewing techniques used by researchers today. Preparing such a review might appear to be a daunting task, given the vast array of disciplines and fields of study that are currently incorporating these techniques, but despite differences in researcher backgrounds and interests, all elicitation techniques have a similar aim: Almost universally, researchers employ them so that they can better understand, describe, capture, and model tacit knowledge. Whether researchers' use of such techniques is exclusively qualitative, exclusively quantitative, or a combination, elicitation interviewing is central to improving our understanding of how people see the world, especially those who cannot readily tell interviewers what they know through the use of traditional interviewing methods.

■ *References*

- Abdolmohammadi, M. J. and A. Wright 1992. "A Multi-attribute Investigation of Elicitation Techniques in Tests of Account Balances." *Behavioral Research in Accounting* 4.
- Baer, R. D. 1996. "Health and Mental Health among Mexican American Immigrants: Implications for Survey Research." *Human Organization* 55:58-66.
- Bell, R. C. 1990. "Analytic Issues in the Use of Repertory Grid Technique." *Advances in Personal Construct Psychology* 1:25-48.

- Bernard, H. R. 1994. *Research Methods in Anthropology*. Walnut Creek, CA: AltaMira.
- Bernard, H. R., P. D. Killworth, D. Kronenfeld, and L. Sailer. 1984. "The Problem of Informant Accuracy: The Validity of Retrospective Data." *Annual Review of Anthropology* 13:495-517.
- Boster, J. S. 1987. "Agreement between Biological Classification Systems Is Not Dependent on Cultural Transmission." *American Anthropologist* 89:914-19.
- Boster, J. S. and J. C. Johnson. 1989. "Form or Function: A Comparison of Expert and Novice Judgments of the Similarity of Fish." *American Anthropologist* 91:866-89.
- Brewer, D. D., S. B. Garrett, and S. Kulasingam. 1998. "Forgetting as a Cause of Incomplete Reporting of Sexual and Drug Injection Partners." *Sexually Transmitted Diseases* 26(3):166-76.
- Brewer, D. D., S. B. Garrett, and G. Rinaldi. 1999. "Patterns and Recall of Sexual and Injection Partners." Paper presented at the Third Biannual Meeting of the Society for Applied Research in Memory and Cognition, July, Boulder, CO.
- Casagrande, J. B. and K. L. Hale. 1967. "Semantic Relationships in Papago Folk-Definitions." In *Studies in Southwestern Ethnolinguistics: Meaning and History of the Languages of the American Southwest*, edited by D. H. Hymes and W. E. Bittle. The Hague: Mouton.
- D'Andrade, R. 1976. "Propositional Analysis of U.S. American Beliefs about Illness." In *Meaning in Anthropology*, edited by K. H. Basso and H. A. Selby. Albuquerque: University of New Mexico Press.
- . 1995. *The Development of Cognitive Anthropology*. Cambridge: Cambridge University Press.
- Dressler, W. W., M. C. Balieiro, and J. E. dos Santos. 1997. "The Cultural Construction of Social Support in Brazil: Association with Health Outcomes." *Culture, Medicine, and Psychiatry* 21:303-35.
- Ericksen, K. P. and R. W. Hodge. 1991-92. "Occupations and Ritual in Contemporary Egypt." *Journal of Quantitative Anthropology* 3:207-27.
- Fern, E. F. 1982. "The Use of Focus Groups for Idea Generation: The Effects of Group Size, Acquaintanceship, and Moderator on Response Quantity and Quality." *Journal of Marketing Research* 19:1-13.
- Fowler, F. J., Jr. 1995. *Improving Survey Questions: Design and Evaluation*. Thousand Oaks, CA: Sage.
- Frake, C. O. 1961. "The Diagnosis of Disease among the Subanum of Mindanao." *American Anthropologist* 63:113-32.
- Fransella, F. and D. Bannister. 1977. *A Manual for Repertory Grid Technique*. London: Academic Press.
- Fraser, M. and J. D. Hawkins. 1984. "Social Network Analysis and Drug Misuse." *Social Service Review* 58:81-97.
- Freeman, H. E., A. K. Romney, J. Ferreira-Pinto, R. E. Klein, and T. Smith 1981. "Guatemalan and U.S. Concepts of Success and Failure." *Human Organization* 40:140-45.
- Hoffman, R. R. 1992. *The Psychology of Expertise*. New York: Springer-Verlag.
- Holms, T. P. and R. A. Kramer 1995. "An Independent Sample Test of Yea-Saying and Starting Point Bias in Dichotomous-Choice Contingent Valuation." *Journal of Environmental Economics and Management* 29:121-32.
- Johnson, J. C. 1990. *Selecting Ethnographic Informants*. Newbury Park, CA: Sage.
- . 1994. "Anthropological Contributions to the Study of Social Networks: A Review." In *Advances in Social Network Analysis: Research in the Social and Behavioral Sciences*, edited by S. Wasserman and J. Galaskiowicz. Thousand Oaks, CA: Sage.
- . 1998. "Research Design and Research Strategies." Pp. 131-71 in *Handbook of Methods in Cultural Anthropology*, edited by H. R. Bernard. Walnut Creek, CA: AltaMira.
- Johnson, J. C., J. S. Boster, and L. Palinkas. 1991. "Social Structure, Agreement and Conflict in Groups in Extreme and Isolated Environments." Grant proposal submitted to the National Science Foundation.
- Johnson, J. C. and B. R. Finney. 1986. "Structural Approaches to the Study of Groups in Space: A Look at Two Analogs." *Journal of Social Behavior and Personality* 1:325-47.
- Johnson, J. C. and D. C. Griffith. 1995. "Promoting Sportfishing Development in Puerto Rico: Travel Agents' Perceptions of the Caribbean." *Human Organization* 54:295-303.

- . 1996. "Pollution, Food Safety, and the Distribution of Knowledge." *Human Ecology* 24:87-108.
- . 1998. "Visual Data: Collection, Analysis, and Representation." In *Using Methods in the Field*, edited by V. de Munck and E. Sabo. Walnut Creek, CA: AltaMira.
- Johnson, J. C., M. Ironsmith, A. L. Whitcher, G. M. Poteat, and C. W. Snow. 1997. "The Development of Social Networks in Preschool Children." *Early Education and Development* 8:389-406.
- Johnson, J. C. and M. L. Miller 1983. "Deviant Social Positions in Small Groups: The Relation between Role and Individual." *Social Networks* 5:51-69.
- Kadane, J. B. 1996. *Bayesian Methods and Ethics in a Clinical Trial Design*. New York: John Wiley.
- Kelley, G. 1955. *The Psychology of Personal Constructs*. New York: Norton.
- Lewis, C. E., J. M. Siegel, and M. A. Lewis. 1984. "Feeling Bad: Exploring Sources of Distress among Preadolescent Children." *American Journal of Public Health* 74:117-22.
- McCarty, C., H. R. Bernard, P. D. Killworth, G. A. Shelly, and E. C. Johnsen. 1997. "Eliciting Representative Samples of Personal Networks." *Social Networks* 19:303-23.
- Menn, L. and N. B. Ratner, eds. 2000. *Methods for Studying Language Production*. Mahwah, NJ: Lawrence Erlbaum.
- Metzger, D. G. and G. E. Williams. 1966. "Some Procedures and Results in the Study of Native Categories: Tzeltal Firewood." *American Anthropologist* 68:389-407.
- Morgan, D. L. 1996. "Focus Groups." *Annual Review of Sociology* 22:129-52.
- Orbach, M. K. 1977. *Hunters, Seamen and Entrepreneurs: The Tuna Seiners of San Diego*. Berkeley: University of California Press.
- Quinn, N. 1996. "Culture Contradictions: The Case of America's Reasoning about Marriage." *Ethos* 24:391-425.
- Romney, A. K., T. Smith, H. E. Freeman, J. Kagan, and R. E. Klein. 1979. "Concepts of Success and Failure." *Social Science Research* 8:302-26.
- Romney, A. K., S. C. Weller, and W. Batchelder 1986. "Culture as Consensus: A Theory of Culture and Informant Accuracy." *American Anthropologist* 88:313-38.
- Spradley, J. P. 1970. *You Owe Yourself a Drunk: An Ethnography of Urban Nomads*. Boston: Little, Brown.
- . 1979. *The Ethnographic Interview*. New York: Holt, Rinehart & Winston.
- Spradley, J. P. and B. J. Mann 1975. *The Cocktail Waitress: Women's Work in a Man's World*. New York: John Wiley.
- Stefflre, V. J. 1972. "Some Applications of Multidimensional Scaling to Social Science problems." In *Multidimensional Scaling: Theory and Applications in the Behavioral Sciences*, Vol. 2, edited by R. N. Shepard, A. K. Romney, and S. B. Nerlove. New York: Seminar.
- Tyler, S. A. 1969. *Cognitive Anthropology*. New York: Holt, Rinehart & Winston.
- Weller, S. C. 1984. "Cross-Cultural Concepts of Illness: Variation and Validation." *American Anthropologist* 86:341-51.
- . 1998. "Structured Interviewing and Questionnaire Construction." Pp. 365-410 in *Handbook of Methods in Cultural Anthropology*, edited by H. R. Bernard. Walnut Creek, CA: AltaMira.
- Weller, S. C. and C. I. Dungy. 1986. "Personal Preferences and Ethnic Variations among Anglo and Hispanic Breast and Bottle Feeders." *Social Science and Medicine* 23:539-48.
- Weller, S. C. and A. K. Romney. 1988. *Systematic Data Collection*. Newbury Park, CA: Sage.
- . 1990. *Metric Scaling: Correspondence Analysis*. Newbury Park, CA: Sage.
- Weller, S. C., A. K. Romney, and D. P. Orr. 1987. "The Myth of a Sub-culture of Corporal Punishment." *Human Organization* 46:39-47.
- Whyte, W. F., with K. K. Whyte. 1984. *Learning from the Field: A Guide from Experience*. Beverly Hills, CA: Sage.
- Young, J. C. 1980. "A Model of Illness Treatment Decisions in a Tarascan Town." *American Ethnologist* 7:106-31.