QUESTIONS ABOUT QUESTIONS

Inquiries into the Cognitive Bases of Surveys

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Sponsored by the Committee on Cognition and Survey Research of the Social Science Research Council

1992

Russell Sage Foundation New York

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Asking Questions and Influencing Answers

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On the face of it, survey interviews are simple. An interviewer steps into the home of a randomly selected member of the public, asks a series of questions, records the answers, and departs with new facts or opinions to add to her collection. (For convenience let us think of the interviewer as female and the respondent as male.) The information she takes away is determined by the questions she asks—how they are worded and what they require of the respondent. Properly designed, they will give her the facts and opinions she wants.

But this view of survey interviews is too simple, as the history of surveys has shown again and again. How a question is worded makes a difference, but so do many other factors—how the question is introduced, what questions come before and after, what answers are allowed, and much, much more. The factors are so diverse that they may seem impossible to account for. Even wording is mystifying.

From the perspective of language use, many of these factors aren't so mysterious. At least this is what we will argue. What makes them seem that way is the common misconception that language use has primarily to do with words and what they mean. It doesn't. It has primarily to do with people and what *they* mean. It is essentially about *speakers' intentions*—what speakers intend in choosing the words they do, and what their addressees take them as intending. Once we understand the role of speakers' intentions in language use, we will find many of the problems of survey design more tractable.

Our goal is to convince you that you can't understand what happens in survey interviews without understanding the role of intentions in language use. We will begin by describing five basic principles of language use that

apply wherever language is found. We will then look at how they might help account for many so-called response effects in survey interviews. Along the way we will formulate a number of general propositions about how you can ask questions and influence answers.

Understanding and Responding

Language use is fundamentally a social activity. Words and sentences are merely the props people need as they engage in the social activity—whether it is gossiping, telling stories, arguing, transacting business, or courting. In each of these activities, the participants have social goals, and language is just one means they have for reaching them. Survey interviews are no exception. When an interviewer questions a respondent, the two of them take part in a social process—in the manufacture and exchange of information. What they do with language, and what they understand, depends on how they construe that process.

Speaker's Meaning

The idea is that language use, whether it is in conversations, interviews, debates, or writing, is built on what people intend by what they say and do. An essential part of these intentions is captured in this principle:

> *Principle of speaker's meaning:*
>
> Speakers and their addressees take it for granted that the addressees are to recognize what the speakers mean by what they say and do.

When Ann utters "Sit down" to Ben, she *means something*. She intends Ben to recognize that she wants him to sit down—and that she has this particular intention (Grice, 1957); that is, she is trying to make certain of her intentions public—open, accessible, shared, mutually known—between Ben and her, and she won't have established her meaning until she has succeeded in making them public.

What counts, then, is not the meanings of words per se, but what speakers mean by using them. The point is so obvious that we rarely give it a second thought. Take these actual newspaper headlines (Perfetti et al., 1987):

> Girl, 13, Turns in Parents for Marijuana, Cocaine
>
> Toronto Law to Protect Squirrels Hit by Mayor
>
> Deer Kill 130,000

Although each headline has many interpretations, we assume the newspaper intended only one. The drugs were the parents' problem and not the girl's reward. The mayor criticized the law and didn't beat up squirrels. And there were 130,000 deer and not people killed. For each headline, we tacitly ask, "What could they have meant by that?" and we work out its interpretation accordingly.

All sentences have alternative interpretations or readings, though usually not as blatant or silly as these headlines. Most words have more than one conventional sense—think of *post, blue, hot, for, by*—and most sentences fit more than one construction, as in, "I watched the man with a telescope" and "They are cooking apples." Yet we rarely notice the alternatives. We infer the intended readings quickly, unconsciously, and without apparent effort. How do we do this?

Common Ground

The key to recognizing the speaker's meaning is the *common ground* between the speaker and addressees—the information they believe they share. Technically it consists of their mutual knowledge, mutual beliefs, and mutual suppositions (Clark and Marshall, 1981; Lewis, 1969; Schiffer, 1972; Stalnaker, 1978). Speakers choose their words, we suggest, according to this principle:

> *Principle of utterance design:*
>
> Speakers try to design each utterance so that their addressees can figure out what they mean by considering the utterance against their current common ground.

People try to say things their addressees will understand. To do that, they need to root what they say in information they believe they share with them—their common ground. That makes common ground an essential ingredient of language use.

As a simple example, take what Veronica could mean by "Two please." At a cinema ticket window on the right night, she could mean, "I'd like two adult tickets to *Animal Crackers*." How? By relying on the common ground she assumed she shared at the moment with the ticket seller. On entering an elevator, she could mean, "Please push the button for the second floor." She could assume that the common ground between her fellow passenger and her included the fact that she had just got on, that he was near the buttons, and that she was looking at them. Or with a dentist's receptionist, she could mean, "I'd like my dentist appointment to be at two o'clock on Thursday, March 20, please." She could exploit the fact that the receptionist had just

asked, "Would you prefer one or two o'clock on March 20?" In every situation she would count on her addressees to use their common ground to fill in what she had left unsaid.

Common ground divides roughly into *cultural common ground* and *personal common ground*. Two people's cultural common ground draws on information that is common to the cultural groups they belong to. Their personal common ground draws on joint personal experiences as viewed against their cultural common ground.

When Veronica and John meet at a party, and as they establish the cultural groups they have in common, they can each assume an enormous body of cultural common ground. Once they realize they are both university graduates, for example, they can assume as common ground all those facts and beliefs they assume university-educated people take for granted. These range from theories of gravity, light, and biological systems to the basic facts of geography, history, and social organization. Or as two speakers of western American English, they can assume as common ground the phonology, syntax, and vocabulary of that dialect of English. As two baseball fans, they can assume as common ground the names of the major players, their statistics, and such jargon as *rbi* and *era*. Here are some common cultural communities:

Language (English, California dialect, San Francisco high school argot)
Education (grade school, high school, university)
Geography (United States, California, San Francisco, Nob Hill)
Profession (psychology, plumbing, law, pediatrics, sheep ranching)
Avocation (skiing, Giants' baseball fan, classical music, philately)

Once two people jointly establish they are both members of any of these communities, they are licensed to add vast quantities of information to their common ground.

Cultural common ground is essential in interpreting everything people say. Suppose it is 1981 and you are handed a picture of then President Ronald Reagan and his budget director David Stockman sitting side by side (Clark, Schreuder, and Buttrick, 1983). The interviewer, without pointing at either man, asks you one of two questions:

1. You know who this man is, don't you?
2. Do you have any idea at all who this man is?

Which man, Reagan or Stockman, did the interviewer mean by "this man"? When fifteen people on the Stanford University campus were asked question 1, fourteen of them said, "Sure, Reagan," or pointed at him. But when fifteen others were asked question 2, seven of them said, "Sure, Stockman," or pointed at Stockman; only two pointed at Reagan. (The remainder asked, "Which one?") Most people assumed that the reference in question 1 was to Reagan but the reference in question 2 was to Stockman—or at least not Reagan. Why?

Respondents drew on two main pieces of common ground in construing "this man." One was the interviewer's explicit presupposition about "this man." In question 1 "this man" was presupposed to be familiar, but in question 2, unfamiliar. The other was the respondents' assumption that Reagan was more recognizable to the public than Stockman, a belief about cultural common ground. Afterward all the respondents judged Reagan to be more recognizable than Stockman, even though they were able to identify both men. As utterance design predicts, they tried to figure out what the interviewer meant by considering the utterance against their current common ground.

Accumulating Common Ground

Veronica and John build up their personal common ground as they talk and experience things together. They add to it when they jointly witness a car hit a tree or hear a soprano sing an aria. They also add to it each time one asserts something to the other. Personal common ground is established from joint perceptual and linguistic experiences interpreted against cultural common ground. But how does this work?

In language use, common ground accumulates in a highly systematic way, as expressed in this principle:

Principle of accumulation:

In a conversation the participants add to their common ground each time they contribute to it successfully.

When Veronica speaks, John interprets her utterance against their initial common ground, and then they both add the content of what she says to that common ground. Then when John speaks, Veronica interprets him against their updated common ground, and the two of them update their common ground once more. And so it goes. Every successful contribution adds to the common ground of the participants. In orderly discourse, common ground is cumulative.

Each contribution adds to the common ground in a special way (Clark and Haviland, 1977; Haviland and Clark, 1974; Prince, 1981). When Veronica says, "The guy next door just bought a motorcycle," she *presupposes*

there is a man John can readily identify in their common ground as "a guy next door." She treats this as *given information*. What she and John are to add to their common ground is her belief that the person so identified just bought a motorcycle. She treats this as *new information*. But listeners often have to draw *bridging inferences* to get the speaker's presuppositions to fit into their current common ground (Clark, 1977; Lewis, 1979). If John goes on, "And how bad is the noise?" he presupposes that there is a uniquely identifiable "noise" in common ground. Since there has been no explicit mention of any noise, Veronica has to draw the bridging inference that the motorcycle makes noise, and that is the noise John is referring to. This is a simple inference. Others are far more elaborate. Bridging inferences are ubiquitous in discourse.

Perspective

Perspective is an important part of what speakers establish with their presuppositions. When Veronica speaks of "the guy next door," she is viewing him as a guy next door. If she had said "that awful pest you met," she would be viewing him as an awful pest John had just met. She can refer to the same person from an infinity of different perspectives. Which perspective she chooses can be critical. By deciding to view him as awful pest, for example, Veronica can imply that the motorcycle is a nuisance.

Speakers ordinarily expect their addressees to accept their perspectives. When Veronica says "the guy next door" or "that awful pest you met," she takes it for granted that she and John will now view the man this way. That is the way presuppositions work. If John doesn't object, he implies that he accepts her perspective, at least for the moment. If he cannot accept her perspective, it is incumbent on him to say so. Suppose a friend asks you, "How many sociologists came to your party last night?" If you had no party last night, you should object, "But I had no party last night." It would be uncooperative, even deceptive, to answer "None," even though that is in one sense correct. If you don't demur, you tacitly accept her presupposition—that there *was* a party last night—which she then incorrectly believes to be common ground.

Perspectives are easy to plant in the common ground of a discourse. There are many perspectives that speakers can take on a situation, and for addressees it often matters little which one is selected. It is also polite for addressees to accept speakers' perspectives. After all, speakers choose perspectives they judge their addressees will accept, so to object is to question their judgment. It also takes special effort to object—as by saying, "But he isn't an awful pest." Perspectives usually get established automatically, without notice, as the participants in a discourse proceed with what they have to say.

The perspectives that get established should influence listeners' responses, and they do. In an experiment by Loftus and Palmer (1974) on eyewitness accounts, people were shown brief movies of car accidents and were then asked questions about them. For one movie, they were asked, "How fast were the cars going when they contacted each other?" in which the final verb was *contacted, hit, bumped, collided*, or *smashed*. The more violent the verb, the more violent the collision presupposed. If the eyewitnesses accepted the questioner's perspective, they should add that information to their common ground, and that should influence the speeds they estimated. In fact, the average estimates increased systematically from 31.8 mph for *contacted* to 40.8 mph for *smashed*. And when eyewitnesses returned a week later, they were more likely to report broken glass in the accident if they had been asked the *smashed* question than if they had been asked the *hit* question.

Perspectives are especially influential in defining vague situations. How often do you get headaches? "Well," you think, "that depends on what you call a headache—how severe it has to be, what counts as one or two headaches, and so on." In a study by Loftus (1975), people were asked one of these two questions:

1. Do you get headaches frequently, and if so, how often?
2. Do you get headaches occasionally, and if so, how often?

By presupposing that people get headaches either frequently or occasionally, the interviewer helps respondents calibrate just what it means to get a headache. For question 1, respondents replied, on average, that they got 2.2 headaches per week, but for question 2, only .7 headaches per week. The perspective helped define an otherwise vague situation.

Perspectives get established more generally by how speakers *frame* what they say. Framing an issue includes not merely choices of wording—for example, *contact* versus *smash*, or *frequently* versus *occasionally*—but other choices as well. Consider the following two ways of describing what amounts to the same situation:

1. A company is making a small profit. It is located in a community experiencing a recession with substantial unemployment but no inflation. The company decides to decrease wages and salaries 7% this year.
2. A company is making a small profit. It is located in a community experiencing a recession with substantial unemployment and inflation of 12%. The company decides to increase salaries only 5% this year.

In a telephone interview, respondents given scenario 1 judged it as "unfair" or "very unfair" 62% of the time. This proportion was only 22% for scenario 2

(Kahneman, Knetsch, and Thaler, 1986; see also Tversky and Kahneman, 1981, 1986). The "nominal increase" perspective was less unpleasant than the "real loss" perspective, even though they both imply the same financial loss. Perspective is influential everywhere.

Common Purpose

Whenever we take part in a discourse, we do so purposefully. Some of our goals are private, even embarrassing if they were to come out. But others become public, a shared, mutually recognized part of the discourse. When you plan a party with a friend, your primary goal is to arrive at a plan, and it must be mutually recognized as such if you and your friend are to progress. As Grice (1975, p. 45) said:

> Our talk exchanges do not normally consist of a succession of disconnected remarks, and would not be rational if they did. They are characteristically, to some degree at least, cooperative efforts; and each participant recognizes in them, to some extent, a common purpose or set of purposes, or at least a mutually accepted direction.

The participants take these common purposes, or the mutually accepted direction, to be part of their common ground, and they design their utterances accordingly. According to Grice, they do so by observing this principle:

> *Cooperative principle:*
>
> Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged (p. 45).

If people observe this principle, the mutually accepted purpose should be essential in figuring out the speaker's meaning, and all evidence suggests that it is.

Suppose you run a restaurant, and one day a woman with a pleasant voice telephones, says "Hello," and asks one of three questions:

1. Do you accept American Express cards?
2. Do you accept credit cards?
3. Do you accept any kinds of credit cards?

With each question she asks whether you accept something, but what that something is varies from "American Express cards" to "credit cards" to "any

kinds of credit cards." As it happens, you can answer yes to each one, so if you take her literally, you should respond simply, "Yes, we do." But would you?

No, you wouldn't. The percentages of responses actually elicited from fifty restaurateurs per question in the San Francisco area go as follows (Clark, 1979):

	Question		
Response Examples	1	2	3
Yes, we do	100	44	10
Yes, we do. We accept American Express and Visa	0	38	56
We accept American Express and Visa	0	16	34
Other	0	2	0
Total	100	100	100

For "Do you accept American Express cards?" restaurateurs took the caller as asking merely whether they accepted American Express cards. But for "Do you accept credit cards?" many took her as asking, in addition, for a list of the credit cards they accepted. And when she explicitly spoke of "any kinds of credit cards," even more took her as asking for the list of acceptable cards.

Restaurateurs interpreted the caller by inferring her purpose. They supposed that she wanted to patronize their restaurant and pay with a credit card, so she wanted to know if they accepted a card she owned. She signaled the cards she was interested in by her question. She specified an American Express card in question 1 but credit cards in general in questions 2 and 3. By mentioning "any kinds" of cards in question 3, she showed an interest in the *particular* cards they accepted, and most restaurateurs told her about them. So restaurateurs looked for the caller's mutually recognizable purpose, and their responses were attempts to satisfy it.

This example brings out an important point: Questions can themselves serve many different purposes. We usually think of questions as *information questions*, as asking for information the questioner doesn't or couldn't possibly know. In our example, "Do you accept American Express cards?" is taken as an information question. But there are also *exam questions*, which ask for information the questioner already could or does know. These are common in the classroom, as when a teacher demands, "What is the capital of South Dakota?" or "What is the longest river in Scotland?"

Still other questions serve as *presequences*. With these, questioners check on a precondition for the next action they want to take (Levinson, 1983; Schegloff, 1980). Take this exchange at a food counter (Merritt, 1976):

Customer: Do you have hot chocolate?
Server: Mmhmm
Customer: Can I have hot chocolate with whipped cream?
Server: Sure (leaves to get)

The first question serves as a *prerequest* because it opens the way for a request of hot chocolate. Prerequests are often interpreted as requests proper as well, as illustrated by the customer's, "Can I have hot chocolate with whipped cream?" The server not only answers this question but also treats it as a request for hot chocolate with whipped cream. Prerequests are common, as in "Do you have a watch?" and "Can you pass the butter?" So are preinvitations ("What are you doing tonight?"), preannouncements ("Do you know what happened to me yesterday?"), and prequestions ("Do you know anything about New Guinea?"). In the restaurant example, "Do you accept any kinds of credit cards?" is a prequestion. In most presequences, speakers are less interested in the question itself than in the request, invitation, announcement, or question that it prefigures. Often, the question isn't expected to be taken seriously at all, and it is treated as merely pro forma (Clark, 1979).

People interpret a speaker's purpose against the accumulating common ground. Suppose Veronica asks John two questions in a row, "How is your wife?" and then "How is your family?" In answering the first, John updates their common ground with news about his wife's health. So when Veronica asks the second, he construes her goal as finding out about the rest of the family—she already knows about his wife—and interprets "your family" as referring to family members *other than* his wife. Interpreting the speaker's purpose is complicated simply because the current common ground changes moment by moment.

Grounding

Fundamental to everyday language use is a process called *grounding* (Clark and Brennan, 1991; Clark and Schaefer, 1987, 1989; Clark and Wilkes-Gibbs, 1986; Isaacs and Clark, 1987; Schober and Clark, 1989). When Veronica and John talk to each other, they work to formulate utterances that express what they mean. But by the principle of accumulation, they must make sure what they say becomes part of their common ground; that is, they must also *ground* what gets said, as expressed in this principle:

Principle of grounding:

For each contribution to discourse, the participants try to reach the mutual belief that the addressees have understood what the speaker meant to a criterion sufficient for current purposes.

Grounding is ordinarily achieved through collaboration, through joint actions. When Veronica speaks, she looks for evidence from John that he has understood her. John, in turn, tries to provide that evidence by saying "uh huh," nodding his head, or taking the relevant next turn. If he hasn't understood her, he will ask her to repeat, confirm, or paraphrase what she said (Clark and Schaefer, 1989; Jefferson, 1972; Schegloff, Jefferson, and Sacks, 1977; Schegloff, 1972, 1982).

What Veronica and John accomplish in this process is a shared construal of what Veronica meant. Consider this example from spontaneous conversation (Svartvik and Quirk, 1980):

A well wo uh what shall we do about uh *this* boy then
B Duveen?
A m
B well I propose to *write*, uh saying (continues)

In his first turn A tries to ask B a question, but his reference to the boy isn't explicit enough for B. B therefore asks for confirmation before he is willing—or even able—to answer the question. It takes the two of them to establish the reference to the boy. In general it takes speaker and addressee working together to establish intended word meanings, intended interpretations of full utterances, implications of utterances, mutually recognized purposes, and many other such things. Grounding and the collaboration it requires are essential to everyday language use.

So far, then, we have argued for five principles of language use. Speakers mean things by what they say, and their addressees are expected to recognize that meaning (principle of speaker's meaning). Speakers design what they say so that their meaning can be worked out by appealing to the common ground they currently share with their addressees (principle of utterance design). In orderly discourse this common ground accumulates (principle of accumulation) as the participants collaborate in establishing a shared understanding of what the speaker meant (principle of grounding). And when people engage in a discourse, they have mutually recognizable purposes. These are salient parts of their current common ground and are essential in determining what speakers are understood to have meant (cooperative principle).

Responses to Survey Interviews

Over the years survey researchers have puzzled over a number of unexpected problems with surveys. Reword a question and the answers often change. Move a question from one survey to another and the answers often change.

Switch the order of two questions and the answers often change. Alter the response alternatives for a question and the answers often change. "Response effects" like these have been the bane of survey researchers (Cannell, 1985b; Converse and Presser, 1986; Hippler and Schwarz, 1987; Schuman and Presser, 1981; Sudman and Bradburn, 1974, 1982). Where do they come from?

Many of these effects, we will argue, have ultimately to do with speaker intent. Survey interviews are in many ways like any other discourse: They are a collective activity in which people—here, the interviewer and respondent—use language to accomplish some purpose. But they are unlike most types of discourse in at least three features. They are built around a single type of exchange: questions and answers. Their course is predetermined by a written schedule. And the person who is really asking the questions, the writer of the questions, isn't present. Some response effects arise because respondents treat the survey interview like any other type of discourse, and others arise as respondents try to deal with these special features (see Suchman and Jordan, chapter 12 in this volume). Let us consider some of these consequences.

Interviewers as Intermediaries

The questions in survey interviews are special in several ways. When Veronica asks John, "How's your wife?" in conversation, the two of them take several features for granted. First, she is asking the question because she herself wants to know the answer. She is speaking on her own behalf and not on behalf of anyone else. Second, she is formulating the utterance extemporaneously. And third, she will make use of John's answer—say, "She's fine, and so is the baby"—in deciding what to say next. Everyday conversation is unmediated, extemporaneous, and interactive. But survey interviews are mostly mediated, predetermined, and noninteractive, features that have a range of influences on interpreting and responding to questions.

In survey interviews, who is really asking the questions? Who really wants to know the answers? Certainly not the interviewer. She is merely acting on behalf of the survey researcher, the person who has written the survey, as his intermediary. For convenience, we will call this person the *surveyer*, and we will consider him male. It is his intentions, his meaning, that are at issue. The interviewer and the respondent take all this for granted. They both recognize that the interviewer has little or no authority. Ordinarily she cannot change the questions. Sometimes she cannot even interpret them. This encourages respondents to assume that what the surveyer means should be self-evident, and they interpret him that way.

Also unlike everyday conversation, survey interviews follow a route planned in advance. Ordinary talk is controlled by the participants working together. But in survey interviews the respondent has no say in the direction of the talk, except in special branching questions. It is the written survey schedule that controls the topics raised, the questions asked, and the answers recorded. The course of the discourse is determined by the surveyer working unilaterally through his intermediary. All respondents surely recognize this too. After all, the questions are couched in such nonconversational language and are read out in such a manner that they would never be mistaken for extemporaneous ones.

Indeed, survey interviews preclude most of the usual techniques for grounding. The interviewer doesn't check for understanding, at least not to the degree people do in everyday conversation. Nor can the respondent do much when he doesn't understand. He might get the interviewer to repeat a question. But if he asks, say, "What do you mean by 'military spending'?" she is sometimes required to reply, "Whatever it means to *you*." This reply would be nonsense in ordinary conversation. It is the speaker who is the final arbiter of what she means, not the addressee. If the interviewer does offer a definition of "military spending," she reads it from a script, and it isn't open to further clarification. If the interviewer is a mere intermediary, and if she doesn't command complete authority about what the surveyer means, then the ordinary course of establishing what the speaker means is blocked.

The Presumption of Interpretability

Respondents, therefore, make the *interpretability presumption*: "Each question means what it is obvious to me here now that it means." They assume the surveyer chose his wording so they can understand what he meant—and can do so quickly. After all, he prepared and edited the question carefully, and since he knows they have no way of getting clarification, he must think a question won't need clarification. If a word seems vague, ambiguous, or strange, it isn't really vague, ambiguous, or strange, because the surveyer is confident respondents can figure out what it means. The interpretability presumption has several surprising consequences.

1. RESPONDENTS ANSWER VAGUELY WORDED QUESTIONS IN IDIOSYNCRATIC WAYS. Whenever a surveyer chooses a vague word, as just noted, respondents can presume that he means something specific by it, namely, the interpretation most obvious to them at that moment. These interpretations will often be idiosyncratic just because vague words allow such latitude of interpretation.

Idiosyncratic interpretations turn up surprisingly often. In one survey interview (Belson, 1981) respondents were asked a series of questions about television, and they seemed quite certain about the meanings of such general terms as *usually, children, few,* and *have*. Yet, when the respondents were

questioned after the interviews, they revealed strikingly different interpretations of almost every question. In one question *few* (in "over the last few years") was interpreted as "no more than two years" by seven of the fifty-nine respondents interviewed, as "seven years or more" by nineteen of them, and as "ten years or more" by eleven of them. In a survey about politics (Fee, 1979), the term *energy crisis* was interpreted in *nine* distinct ways. Respondents think, "If the surveyer thinks this word has an obvious meaning, then it must be the meaning that is obvious to me at the moment." Surveys differ, of course, and respondents can show considerable agreement with the surveyer in their interpretations (e.g., Smith, 1989).

2. RESPONDENTS FAIL TO SEE WHEN THE SURVEYER IS USING WORDS DIFFERENTLY FROM THE WAY THEY USE THEM. Respondents can generally assume that the surveyer is using each word in the way it is conventionally used in their culture or subculture. One survey went awry in a European country because the researchers didn't realize that in that country the word translating English *washing machine* referred to a hand-turned agitator that fits over the top of a washtub (Payne, 1951, p. 28). The point of this example may be obvious, yet in subtler form the problem has plagued a good many surveys. Words vary in unexpected ways not only in translation from one language to the next, but in unchanged form from one culture and subculture to the next. In a study carried out in Mexico,[1] villagers in the Yucatán were asked in Spanish, "How many children do you have?" (*"Cuántos niños tienen Ustedes?"*). The count would have been wrong if it hadn't been discovered that these villagers interpreted the word *niños* to include not only living children but also unsuccessful pregnancies and children who had died. And in one set of studies (Belson, 1981), respondents were found to give terms in an interview interpretations not intended by the surveyer more than 70% of the time. And, again, the respondents felt entirely comfortable with their interpretations.

3. RESPONDENTS SEEM TO HAVE STABLE OPINIONS ON ISSUES THEY KNOW NOTHING ABOUT. This is another consequence of the interpretability presumption. Respondents tacitly reason, "When the surveyer asks me a question, he assumes it is one I can answer, one I have valid opinions about. So it must be about an issue I *do* have an opinion on. (Also, if he assumed this, I would lose face if I admitted I couldn't answer the question, so I must.)" In one study (Hartley, 1946) college students were asked for their opinions about three nationalities that didn't exist—Danireans, Pireneans, and Wallonians—and they gave their opinions willingly. If they were supposed to know about these nationalities, they must. In another study (Schuman and Presser, 1981) respondents were asked about a proposed law they knew nothing about (the law was fictitious). About 30% of them were willing to provide an opinion; 10% were willing even after they were told they could say they didn't know about the law.

1. Brigitte Jordan, personal communication.

The first three response effects, then, come about from the interpretability presumption. In ordinary language use, when people ask us questions, they choose their words with us in mind. They ask them confident we can make the intended interpretation. And if we run into problems, we can ask for clarification: "What do you mean by 'a few'?" In survey interviews respondents can make an even stronger presumption of interpretability. After all, the questions are prepared ahead of time, are worded very carefully, and often cannot be clarified. The trouble with the interpretability presumption lies not with respondents but with surveyers. Surveyers cannot possibly write perfect questions, self-evident to each respondent, that never need clarification. And because they cannot, the answers will often be surprising.

Perspective

Every question, as we noted, implies a perspective. Suppose you are one of those eyewitnesses to the car crash and you are asked, "How fast were the cars going when they smashed into each other?" The questioner presupposes that the cars are to be viewed as smashing, not contacting, hitting, bumping, or colliding, and this way she establishes a particular perspective on the collision. Now, unless you demur, it becomes common ground that you accept her perspective. Ordinarily, it is more than just polite to take a questioner's perspective—although there is that pressure, too. You must express your answer from some perspective, and unless you create a new one, the questioner will interpret your answer, by default, from the perspective she has established. Worse yet, in the eyewitness report you have no opportunity to demur. You are almost forced to accept her perspective. So it isn't surprising that answering questions is influenced by the questioner's perspective.

4. LOADED TERMS HELP SET THE PERSPECTIVE FROM WHICH QUESTIONS ARE TO BE ANSWERED. Many terms are politically loaded. There is *pro-choice* versus *proabortion*, and *pro-life* versus *antiabortion*. There is *freedom fighters* versus *antigovernment guerrillas*, and *peacekeeping forces* versus *occupation army*, and *war* versus *armed conflict*, and *neutron bomb* versus *enhanced radiation device*, and *MX missile* versus *Peacekeeper*. There is the *Department of War* (the United States department until 1947) versus the *Department of Defense*. There is *taxes* versus *revenues*. Suppose respondents are asked one of these two questions:

1. Do you favor increasing government revenues to pay for new roads?
2. Do you favor increasing taxes to pay for new roads?

They will assume that the term chosen—*revenues* versus *taxes*—reflects the perspective from which they are to answer the question. They will interpret the two terms differently (no two terms are exactly synonymous), so they might suppose, for example, that revenues are fees paid for services rendered whereas taxes are just, well, taxes. If so, they might say yes to question 1 but no to question 2. Or suppose respondents are asked a question whose perspective they cannot accept, such as, "Are you in favor of aborting babies on demand?" Since they cannot object—"Do you mean, am I pro-choice?" to which they might answer yes—they have to answer from the surveyer's perspective and say no.

No one would be surprised that loaded questions—questions with loaded terms—influence responses by the perspectives they establish. But it is often difficult to recognize loaded questions for what they are. Compare these two questions (Mueller, 1973; Schuman and Presser, 1981):

1. If a situation like Vietnam were to develop in another part of the world, do you think the United States *should* or *should not* send troops to stop a communist takeover?
2. If a situation like Vietnam were to develop in another part of the world, do you think the United States *should* or *should not* send troops?

In a 1974 SSRC survey the first question was agreed to 33% of the time and the second only 18%. During the Cold War, whenever a survey question referred to communist activities, Americans tended to assume it was being asked from the perspective of defending American interests from foreign aggressors, and they were more likely to support American military operations (Mueller, 1973; Payne, 1951). Examples like this are common.

It is futile to search for truly neutral questions. They don't exist. Every question carries presuppositions, so every question establishes a perspective. So for each question we must ask: Is the perspective taken really the one from which we want the respondent to answer? If the answer is yes—if we can justify the perspective—then we can also justify the question.

5. THE RESPONSE ALTERNATIVES TO A QUESTION HELP DETERMINE THE DOMAIN OF INQUIRY IN WHICH IT IS TO BE ANSWERED. When a friend asks, "What type of wine do you like, red or white?" the *domain of inquiry* is red and white wines only. If she had said "red, white, or rosé," it would have included rosé wines as well. The two questions specify distinct perspectives on what is of current interest, and you will also go about answering them very differently. So it goes in survey

interviews. Respondents confronted with "Which do you believe, A or B?" assume a different domain of inquiry from those confronted with "Which do you believe, A, B, or C?" As Schuman and Kalton (1985, p. 648) put it, "the rules of the game call for working within the categories offered." The game isn't special to surveys. It is played wherever language is used. The categories help specify the questioner's perspective.

One famous example is the *forbid-allow* discrepancy. Compare these two questions (Rugg, 1941):

1. Do you think the United States should forbid public speeches against democracy?
2. Do you think the United States should allow public speeches against democracy?

Both questions are answered yes or no, but these are really different alternatives. In question 1 yes and no mean "forbid" and "not forbid," but in question 2 they mean "allow" and "not allow." Of course, to forbid a speech is to not allow it, and vice versa, so saying yes to question 1 is logically equivalent to saying no to question 2. Still, 54% of the respondents to question 1 said yes, public speeches against democracy should be forbidden, whereas fully 75% of the respondents to question 2 said no, such speeches should not be allowed. Questions 1 and 2 elicited discrepant answers—a difference of 21%. The same discrepancy has been noted in many other domains (Schuman and Presser, 1981).

How are questions 1 and 2 different? They present different perspectives on public speeches precisely because of the response alternatives offered. To agree to question 1 (to "forbid" speeches) implies a real act of opposition. But to disagree with question 2 (to "not allow" those same speeches) means merely to abstain from support. Respondents without strong opinions on the matter should be willing to say no to both questions: "I don't oppose such speeches, but I also don't support them." Indeed, according to Hippler and Schwarz (1986), this is exactly where the discrepancy arises.

There is another striking change when the alternatives to a question include "don't know." In one survey (NORC–1974, reported in Schuman and Presser, 1981, p. 120) respondents were asked, "In general, do you think the courts in this area deal too harshly or not harshly enough with criminals?" They responded as follows:

Too harshly	5.6%
Not harshly enough	77.8%
About right (volunteered)	9.7%
Don't know (volunteered)	6.8%

Their responses changed dramatically when "or don't you have enough information about the courts to say?" was included at the end of the question:

Too harshly	4.6%
Not harshly enough	60.3%
About right (volunteered)	6.1%
Not enough information to say	29.0%

As in other questions of this sort, some 22% more people answered "don't know" for the second question. Why is this? When "don't know" isn't an explicit alternative, the implication is that they are to give their general impression. They are to answer from what they know. When the alternatives do include "don't know," the implication is that respondents are to give only informed judgments. They are to answer only if they *do* know. As expected from the presumption of interpretability, almost no one refused to answer substantively when "don't know" wasn't an alternative.

6. QUESTIONS WITH AND WITHOUT RESPONSE ALTERNATIVES IMPLY DIFFERENT PERSPECTIVES. Imagine being asked, "What type of fruit do you like best?" The inferred domain of inquiry is the full gamut of fruit, though you might give more attention to common than to uncommon ones. Now imagine being asked, "What type of fruit do you like best—apples, oranges, grapes, or watermelons?" in which the fruits are the ones most often thought of by other respondents. By specifying the four fruits, the questioner restricts the domain of inquiry to them alone and, indeed, invites you to consider each one about equally. These two types of questions are called *open* and *closed* questions. Their domains of inquiry differ in both range and distribution.

Survey questions, too, can be open or closed, and the difference may be dramatic. One example comes from a 1977 telephone survey (Schuman and Presser, 1981) in which people were asked about the most important problem currently facing the United States. The question they were asked took one of two forms:

1. What do you think is the most important problem facing this country at present?
2. Which of these is the most important problem facing this country at present? Unemployment, crime, inflation, quality of leaders, breakdown of morals and religion.

For question 1 fully 22% responded that fuel and energy shortages were the most important problem, making it the second most frequent response. This

isn't surprising, since the survey was taken during the coldest winter in recent history. But for question 2 only one of 592 respondents even mentioned the energy crisis. Of the respondents to question 2, fully 99% answered with one of the five options they were given.

Which are better in surveys—open or closed questions? There has been a long debate about this. Open questions are time-consuming to administer and their answers hard to analyze. Closed questions are quicker and easier. For years survey researchers assumed that open and closed formats would elicit similar responses as long as the closed questions had the right response alternatives. But they don't and the differences are large enough to matter (see Hippler and Schwarz, 1987; Schuman and Presser, 1981). When respondents in one survey were asked what is the most important thing for children to learn to prepare them for life, 62% picked "to think for themselves" from a list of five options, but only 5% spontaneously came up with that answer in an open format (Schuman and Presser, 1981).

Why are the differences so large? In open questions respondents have to judge whether the first answer they think of lies within the surveyer's domain of inquiry. If the answer seems self-evident, they won't give it; after all, it is already part of their common ground with the surveyer. But if it is an explicit alternative, they infer that it is part of the domain of inquiry—a legitimate answer—and they are happy to give it. They assume the surveyer put it among the alternatives for a reason, so it must be relevant to his intent. An explicit list of alternatives may remind them of things they might not otherwise have thought of (Hippler and Schwarz, 1987). But more than that, respondents infer they were intended to consider the rare alternatives on the same footing as the common ones. They are then as free to choose a rare alternative as a common one.

7. RESPONSE ALTERNATIVES ARE OFTEN CONSTRUED AS WHAT IS TYPICAL OR NORMAL IN THE POPULATION. In a study by Schwarz, Hippler, Deutsch, and Strack (1985), Germans were asked, "How many hours a day do you spend watching TV?" Half were given the response alternatives in set 1, and the other half those in set 2.

Set 1	Set 2
up to ½ hour	up to 2½ hours
½ to 1 hour	2½ to 3 hours
1 to 1½ hours	3 to 3½ hours
1½ to 2 hours	3½ to 4 hours
2 to 2½ hours	4 to 4½ hours
more than 2½ hours	more than 4½ hours

Estimates of TV watching differed dramatically between the two groups of respondents. Of those given set 1, the number who watched more than 2½ hours of TV each day was 16%, but of those given set 2, it was 38%. Indeed, respondents used the response alternatives they were given to infer what is normal for German TV viewing. Later, when asked in an open format, "What is the average TV consumption of German citizens?" Set 1 respondents estimated 2.7 hours and set 2 respondents, consistent with the higher alternatives, estimated the higher average of 3.2 hours. Conversely, when asked later, "How important a role does TV play in your life?" set 1 respondents gave an average rating of 4.6 (on a 1 to 10 scale), and set 2 respondents, the reliably lower average of 3.8—that is, set 1 respondents judged TV to be more important than did set 2 respondents, even though set 1 respondents estimated that they watched less TV.

Why should response alternatives be taken as typical or normal? These are part of what the surveyer presupposes, or takes for granted, in asking the question. Respondents can therefore assume that he chose them because they specify a perspective that is appropriate, hence normative, for the people he is surveying. The alternatives given specify the norm they are to compare themselves to. Respondents have no choice but to accept the perspective anyway: they have no easy way to object to it. They are forcefully invited to think of the alternatives as more than an arbitrary set of categories.

Pressure to Respond

Questions and answers form a unit of language use called *adjacency pairs* (Schegloff and Sacks, 1973). Other adjacency pairs include request and compliance, offer and acceptance, invitation and acceptance, apology and acceptance, thanks and acceptance, compliment and agreement, greeting and greeting, and farewell and farewell. Each pair has a first and a second part spoken by two different people. The crucial property is conditional relevance. Once Veronica has asked John a question, it is relevant and expectable that he provide the answer in the very next turn, and the same goes for other adjacency pairs.

In this way questions and answers are subject to the conventions governing turn taking in conversation (Sacks, Schegloff, and Jefferson, 1974). Veronica, in asking John a question, designates him as the next speaker. He in turn is obligated to begin his turn the moment she completes hers. Ordinarily, he will start in on his answer without a pause. But if he cannot, he must show Veronica that he realizes that it *is* his turn at that moment. He is under pressure to say something—for example, "um"—within about one second (Jefferson, 1989).

The pressure to answer immediately has its effects. John cannot take much time thinking about his answer, so he will usually give the type of answer he could be expected to formulate in the time he has. If Veronica asks, "How many meals did you eat out last week?" he doesn't have time to recall each one. He is forced to estimate, "Oh, about three." Indeed, John will interpret Veronica as requesting only an estimate, since she couldn't have expected anything more in so short a time. Veronica, of course, can take the pressure off ("Take one minute to recall and count the meals you ate out last week and tell me the number"), but ordinarily she won't. So time pressure affects both the interpretation of the question and the precision of the answer. Here are two consequences for surveys.

8. RESPONDENTS ESTIMATE FACTUAL ANSWERS THAT WOULD TAKE TOO LONG TO FIGURE OUT PRECISELY. Respondents tacitly reason, "The surveyer is asking me a question I should be able to answer immediately. So even though he seems to be asking for a precise answer, he couldn't be, because he couldn't possibly expect me to compute it in the time available. So I will make a best guess." This way precise questions get less precise answers than surveyers expect.

One manifestation of this is what is called *telescoping*. People often include more events in a time interval than they should. In a police study (Garofalo and Hindenlang, 1977), about 20% of the crimes reported by victims to have happened in a particular period of time actually happened before the beginning of that period, as determined by comparing their reports with actual police records. In a study of purchases of housewares and small appliances (Sudman and Ferber, 1970), people reported buying 43% more in the last three months than the department store records indicated they had. For other questions people include too few events in the reported time interval. Telescoping of both types has turned up in questions about voting, doctor visits, illnesses, accidents, grocery shopping, leisure activities, and many other types of events (Cannell, 1985a; Sudman and Bradburn, 1973, 1982).

People telescope, we suggest, largely because they assume the questioner wants to know only about the events they can think of quickly, so they estimate rather than compute their answers. Telescoping itself can often be traced to people's uncertainty about when or how often past events occurred (Bradburn, Rips, and Shevell, 1987; Brown, Rips, and Shevell, 1985; Loftus and Marburger, 1983; Wagenaar, 1986). Precisely what form it takes depends on people's methods of estimating. Sometimes it leads to overestimation, and other times to underestimation. The point is that telescoping can be reduced by forcing respondents to take their time, recall each event, and count the events (Cannell, Oksenberg, and Converse, 1977; Neter and Waksberg, 1964; Sudman and Bradburn, 1973, 1982). The more people calculate rather than estimate, generally, the more accurate they are. So, although memory

accounts for the fallibility of estimating, it is the pressure to answer quickly that leads them to estimate in the first place.

9. RESPONSES TO SURVEY QUESTIONS CHANGE WITH THE MODE OF ADMINISTRATION—FACE-TO-FACE, TELEPHONE, OR SELF-ADMINISTERED QUESTIONNAIRE. Many aspects of language use change with mode of administration, and these may change communication in a variety of ways (see Clark and Brennan, 1991). One way these modes differ is in how they deal with unwanted pauses. In face-to-face interviews, respondents have the full range of verbal and nonverbal signals at their disposal. They can use not only "ums" and "wells" but also gestures and eye gaze to signal that they are still thinking about a question. On the telephone they are more limited in their signals, so pauses are more disruptive (Hippler and Schwarz, 1987). In self-administered questionnaires pauses don't even count. Hence, time pressure is strongest in telephone interviews and weakest in questionnaires (Bishop, Hippler, Schwarz, and Strack, 1988, p. 323).

Time pressure counts. Telephone interviews go more quickly than face-to-face interviews (Groves and Kahn, 1979; Williams, 1977; Wilson and Williams, 1977). On the telephone people give shorter answers to open-ended questions, and they pause less (Williams, 1978), as if they were under more pressure to answer questions quickly. By our logic they should also estimate more and calculate less when asked factual questions. On the telephone they should assume they were intended to answer more quickly and so estimate more often. And, indeed, many of these response effects are stronger over the telephone than in self-administered questionnaires (Bishop et al., 1988). Mode of administration has other effects, too (Bishop and Hippler, 1986; Schuman and Presser, 1981).

Structure in Survey Interviews

Survey interviews, like any discourse, have both a global and a local structure. Overall, an interview might begin with a general orientation, move to questions on health, switch to questions on employment, and end with questions about the respondent's age and occupation. The section on health would have its own local structure, consisting perhaps of an orientation followed by questions ordered by topic. In conversation we interpret each assertion, question, offer, and other speech act relative to such a structure as it accumulates in our common ground. Respondents to survey interviews do the same, and that has its consequences.

The Pressure for Consistency

In any discourse the participants are under pressure to be consistent. When Veronica speaks to John, as we noted, what she says now is to be interpreted against what she and John have said before. It is directly dependent on what they have made public so far—on their accumulating common ground. If she says one thing now and something contradictory later, John will take her as confused or, worse, deceitful. Survey interviews are no different. There, too, the participants push for consistency, and this has its consequences.

10. SO-CALLED KNOWLEDGE FILTERS CAN SUPPRESS OPINIONS IN LATER QUESTIONS. Many surveys contain what are called *knowledge filters*, such as these two questions:

1. Do you have an opinion about gasoline taxes?
2. Have you thought enough about gasoline taxes to have an opinion?

When respondents answer no to a knowledge filter, they should be less willing to offer an answer to the next substantive question, and they are. They are discouraged from doing so apparently because they think they need to know a lot in order to answer the questions. To be consistent, they should refuse to answer them. That, indeed, is the purpose of knowledge filters.

But are knowledge filters always what they claim to be—knowledge filters? Note that they really function as what we have called prequestions. They are asked merely to check on preconditions for the interviewer's next question. As we noted earlier, presequences are not always intended to be taken seriously. When you are asked, "Can you tell me the time?" you usually don't say yes before giving the time. You take the question of ability as pro forma, as a mere gesture of politeness. The same goes for many knowledge filters. It is natural to view question 1 as pro forma, but not question 2. For question 1 respondents could respond immediately with their opinion ("I think they are too low"), but for question 2 they couldn't easily do that. That makes them likely to treat question 2 as a true knowledge filter, but to interpret question 1 as a mere gesture of politeness. That would make question 2 a stronger filter than question 1. Indeed, the more strongly a filter is worded, the more it discourages answers to the later questions (Hippler and Schwarz, 1987).

11. PEOPLE USE THEIR EARLIER ANSWERS AS EVIDENCE FOR THEIR LATER JUDGMENTS. We have already noted an example of this proposition in the study on TV watching. People whose earlier answer led them to believe they watched TV

more than average judged that TV played a *more* important role in their lives. The difference was induced entirely by the response alternatives they were offered with the first question, set 1 or set 2. Likewise, in a study of images of foods (Noelle-Neumann, 1970), 30% of the respondents rated potatoes as "particularly German." This figure rose to 48% after they had just rated rice. Earlier questions help set the structure of the interview by indicating what the later question is relative to.

Although most questions in survey interviews are what we have called information questions, others are interpreted as exam questions—with all the implications that exam questions usually carry. The structure they add to the interview can therefore be especially influential. In a study by Bishop (1987), Ohio residents were asked, among other things, one of two exam questions:

1. Do you happen to remember anything special that your United States representative has done for your district or for the people in your district while he has been in Congress? (Yes 12%; no 88%)

1′. Do you happen to know the name of the governor of Ohio? (Yes 69%; no 31%)

Then they were asked, either immediately or later in the interview:

2. Would you say you follow what's going on in government and public affairs most of the time, some of the time, only now and then, or hardly at all?

Respondents who said no to either question 1 or 1′ were, in effect, giving the interviewer evidence that they were not really following public affairs. Indeed, once they had said no to either question 1 or 1′, they were less likely to say they followed public affairs "most of the time" for question 2. But since question 1 prompted more no answers than question 1′, it should also keep people from saying "most of the time" more than question 1′ would. It did, by a reliable margin of 32% to 26%. Respondents, trying to be consistent, brought their later answers into line with their earlier ones.

The influence of one question on the next in circumstances like this has at least two possible explanations. One is priming. "Specific features" of the current question have been automatically "activated" or "primed" in memory by the previous question, and that directly affects people's answers to the current question (Strack and Martin, 1987). A second explanation is that respondents pursue consistency—either publicly, privately, or both. So as they build up common ground with the interviewer, they may try to appear to have a consistent set of beliefs as part of their public self-presentation. Or,

privately, they may see themselves as competent people with a coherent set of beliefs, and to maintain that image, they try to be consistent in what they do.

The pressure for consistency seems to be the major, if not sole, explanation for these effects. Memory, of course, is required for participants to keep track of their common ground—to check that an answer now is consistent with earlier answers. If priming were necessary, the influence of one question on another should disappear if enough irrelevant questions are asked in between. But it doesn't disappear. In Bishop's study, questions 1 and 1′ influenced the responses to question 2, whether they came immediately before or five questions before. Such an influence may last as long as the interview and even longer (Schwarz and Strack, 1981). Evidence like this suggests that priming per se is not very important in these effects; consistency is.

The pressure for consistency can be very influential indeed. In a well-known study by Hyman and Sheatsley (1950), people were asked two questions:

1. Do you think the United States should let communist newspaper reporters from other countries come in here and send back to their papers the news as they see it?
2. Do you think a communist country like Russia should let American newspaper reporters come in and send back to America the news as they see it?

When the respondents were asked question 1 first, 36% of them said yes. But when they were asked question 2 first, the number saying yes to question 1 jumped to 73%. Likewise, 90% of the respondents said yes to question 2 when it was asked first, but the number dropped to 66% when it was asked after question 1. Why? Apparently, the respondents were again trying to be consistent. People who would never allow a communist reporter into the United States will do it just to follow rules of fair play—that is, when they have just let a United States reporter into a communist country. Consistency effects like this are common in surveys (Link, 1946; Rugg and Cantril, 1944; Schuman and Presser, 1981; Turner and Krauss, 1978).

The Quest for Structure

In conversation, speakers are not always explicit about how their current utterance is to be related to the previous ones, so we are expected to infer the relation. Suppose a friend tells you:

1. John fell. He stood up again.
2. John fell. He broke his arm.
3. John fell. He tripped on a rock.
4. John fell. He wanted to scare Mary.

Your friend has used no explicit connectives. If she had, they would have been "and then" in item 1, "and therefore" in item 2, and "because" in items 3 and 4. Still, she intends you to infer the connections, and you do, without giving it a thought. Indeed, we build these connections as a part of the bridging inferences we draw as we relate each utterance to the current common ground. These connections can take dozens of shapes (Clark, 1977; Mann and Thompson, 1986). We have illustrated the relations of sequel in item 1, consequence in item 2, physical cause in item 3, and reason in item 4, but there are many more.

People should infer these connections in survey interviews as readily as they do in conversation, news stories, or novels. And they do. They sometimes even infer relations that surveyers didn't intend. None of this should be surprising. If people search for the structure they think the surveyer intended, they will infer the obvious relations, unless they are told not to. Here are several consequences.

12. PEOPLE INTERPRET SUCCESSIVE QUESTIONS AS RELATED IN TOPIC—UNLESS THEY ARE TOLD OTHERWISE. Ordinarily, survey questions either continue the current topic of conversation or introduce a new topic. When a question is heard as continuing the current topic, it should be interpreted as related to the previous questions, and it is. In one study (Hippler and Schwarz, 1987) respondents were asked, "What are the major problems facing the country today?" Those who had just been asked, "Is the president doing enough about the drug problem?" were more likely to mention drugs in answer to the second question. It is as if they inferred the bridging connective "and so." In another survey (Sears and Lau, 1983) respondents were asked to evaluate the president's overall performance. Those who had just answered a question about their personal income were more likely to rate the president's performance on the basis of his economic success. The relations that respondents infer, however, are not merely vague connections. They usually take quite definite shapes.

13. WHEN A GENERAL QUESTION FOLLOWS A SPECIFIC QUESTION ON THE SAME TOPIC, IT MAY GET AN EXCLUSIVE OR AN INCLUSIVE INTERPRETATION, DEPENDING ON THE CIRCUMSTANCES. We have argued throughout that people expect common ground to accumulate in discourse. Recall what happens when Veronica asks

John, "How is your wife?" and then, "How is your family?" He reasons, "Veronica has already asked me about my wife. That is already part of our common ground. So by 'your family' she must be referring to family members other than my wife." Let us call this the *exclusive* interpretation of "your family." But when Veronica asks only, "How is your family?" John interprets "your family" as including his wife—the *inclusive* interpretation. So whether John takes "How is your family?" to have an inclusive or an exclusive interpretation depends on the circumstances—here, on its connection with a previous question.

Exclusive and inclusive interpretations often arise in a general question that follows a specific one. In one study respondents were asked two questions:

1. Do you think it should be possible for a pregnant woman to obtain a legal abortion if she is married and does not want any more children?
2. Do you think it should be possible for a pregnant woman to obtain a legal abortion if there is a strong chance of serious defect in the baby?

Of these two questions, 1 is general and 2 is specific, much as "How is your family?" is general and "How is your wife?" is specific. When question 1 came first, 61% of the respondents answered yes, but when it followed question 2, only 48% did; that is, once people had been asked about birth defects—and 84% of them said yes to question 2—they appeared to interpret question 1 exclusively and not inclusively. They excluded birth defects from consideration in question 1 and were less likely to approve of abortions in cases other than birth defects. Respondents assumed that they were not to repeat an opinion they had already rendered (Schuman and Presser, 1981; Strack and Martin, 1987).

General questions following specific ones may also get inclusive interpretations. In a study by Strack, Martin, and Schwarz (1988), respondents were asked these two questions, among others:

1. How happy are you with life in general?
2. How often do you normally go out on a date? about ____times a month

Here, question 1 is general and question 2 is specific. When question 1 came after question 2, respondents heard it as a summary question that *included* the information they had just provided in question 2. It is as if they read it: "Now, considering what you have just told me about dating, how happy are you with life in general?" Indeed, the two answers were highly correlated (.66). But when question 1 came *before* question 2, the two questions

pertained to very different topics, and indeed the two answers were almost uncorrelated (−.12).

What is the difference in the two situations? A general question can bear many relations to the specific question it follows. Just as with successive assertions, the bridging connective inferred might be "and also," "and therefore," "for example," or "and in summary." Precisely what relation is inferred depends on the information asked for, the wording, and many other factors. For the general abortion question 1, the content leads to "and also," forcing an exclusive interpretation. For the general happiness question, the phrase "in general" suggests "and therefore" or "and in summary," which forces an inclusive interpretation. We suggest that it is futile to look for only one or several factors that distinguish the two circumstances. These factors, like the connections themselves, are probably open-ended.

14. EXPLICITLY STATED CONNECTIONS ORDINARILY TAKE PRECEDENCE IN RESPONDENTS' QUEST FOR STRUCTURE. Suppose your friend says the following:

> John fell. He got a speck of dirt in his eye.

Depending on the circumstances you could infer the connection to be "and then," "and therefore," "because," or many others. Whatever bridging inference you drew would be preempted if she had said "and then," "and therefore," or "because." This is common sense. You assume that your friend chose the connectives so that you could infer her intent.

Explicit structure like this can be powerful. Let us return to the study of happiness (Strack, Martin, and Schwarz, 1988) when general question 1 was asked *after* question 2. Recall that question 1 was taken as a summary question that included people's response to question 2, and the two answers were highly correlated (.66). Another group of respondents heard this preface before being asked question 2 and then question 1:

> Now we would like to learn about two areas of life that may be important for people's overall well-being: (a) happiness with dating, (b) happiness with life in general.

This preface was designed to get people to treat the two questions as independent, and it did. With the preface the answers to the two questions were almost uncorrelated (.15). Once again, priming offers no explanation. High satisfaction with dating didn't automatically "prime" a judgment of great happiness with life in general. Respondents were trying to infer the surveyer's intent, and the explicit structure in the preface helped them do that.

Summary

When people are interviewed in a survey, they don't leave behind the principles they would ordinarily apply in using language. They proceed much as they would in ordinary conversation, though with limitations. They look for the speaker's intent. They look for common ground to accumulate. They deal with the speaker's perspective. But interviews also have their limitations. People realize that the interviewer is only an intermediary for the surveyer and that she has little authority. Also, since the form of the interview is writ in stone, it isn't easy to ask for clarification or qualify answers. So, for example, they make an even stronger presumption of interpretability than they ordinarily would.

The principles of language use that people bring with them to survey interviews have a range of consequences. We have documented only some of them, but our point should be clear. To understand surveys and the data they produce, we must see survey interviews as a type of discourse, as a specialized arena of language use. Only then will we resolve many of the puzzles of survey design.

We thank the members of the SSRC Committee on Cognition and Survey Research for their valuable counsel on this paper. The preparation of the paper was supported in part by Grant BNS 83-20284 from the National Science Foundation.

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