Cognition and Communication: Judgmental Biases, Research Methods, and the Logic of Conversation

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2 COGNITION AND COMMUNICATION: THE LOGIC OF CONVERSATION

Central to a conversational analysis of human judgment is the distinction between the *semantic meaning* of a sentence and the *pragmatic meaning* of an utterance. As Clark and Schober (1992, p. 15) noted in a related context, it is a "common misperception 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*." As the examples in this book will illustrate, many of the more surprising shortcomings of human judgment reflect that research participants go beyond the literal meaning of the information provided by the researcher and draw on the *pragmatic* rather than the *semantic* meaning of the researcher's contributions. The researcher, however, evaluates participants' judgments against a normative model that draws only on the logical implications of semantic meaning at the expense of the pragmatic implications of the researcher's utterances.

To understand the underlying processes, we need to understand how people determine a speaker's intentions. In general, determining the intended meaning of an utterance requires extensive inferences on the part of listeners. Similarly, designing an utterance to be understood by a given listener requires extensive inferences on the side of the speaker. In making these inferences, speakers and listeners rely on a set of tacit assumptions that govern the conduct of conversation in everyday life. In their most widely known form, these assumptions have been expressed as four maxims by Paul Grice (1975), a philosopher of language. Subsequent researchers have elaborated on these assumptions, specifying their implications for speakers and listeners (see Clark & Brennan, 1991; Clark & Schober, 1992; Higgins, 1981; Higgins, Fondacaro, & McCann, 1982; Levinson, 1983; Wilson & Sperber, 1981, 1986).

Conversational Implicatures and the Logic of Conversation

Grice introduced his ideas on the logic of conversation in his William James lectures delivered at Harvard University in 1967. The text of these lectures has only been published in part (Grice, 1975, 1978) and his proposals were "relatively brief and only suggestive of how future work might proceed," as Levinson (1983, p. 100) noted. At present, Levinson (1983) provides the most detailed published treatment of Grice's theorizing.

The Cooperative Principle

Grice suggests that conversations are guided by a set of tacit assumptions that can be expressed in the form of four maxims which jointly express a general *cooperative principle* of conversation. Table 2.1, adapted from Levinson's (1983, pp. 101-102) discussion, summarizes these maxims.

Table 2.1

A *maxim of manner* asks speakers to make their contribution such that it can be understood by their audience. To do so, speakers do not only need to avoid ambiguity and wordiness, but have to take the characteristics of their audience into account, designing their utterance in a way that the audience can figure out what they mean -- and speakers are reasonably good at doing so (Krauss & Fussel, 1991). At the heart of this process are speakers' assumptions about the information that they share with recipients, that is, the *common ground* (Schiffer, 1972; Stalnaker, 1978). Listeners, in turn, assume that the speaker observes this maxim and interpret the speaker's utterance against what they assume to constitute the common ground (e. g., Clark, Schreuder, & Buttrick, 1983; Fussel & Krauss, 1989a,b). Whereas the initial assumptions about the common ground are based on the participants' assumptions about their cultural and personal background, each successful

contribution to the conversation extends the common ground of the participants, reflecting that "in orderly discourse, common ground is cumulative" (Clark & Schober, 1992, p. 19).

This cumulative nature of the common ground reflects, in part, the operation of a *maxim of relation* that enjoins speakers to make all contributions relevant to the aims of the ongoing conversation. This maxim entitles listeners to use the context of an utterance to disambiguate its meaning by making bridging inferences, based on the assumption that all utterances pertain to a common underlying theme (Clark, 1977). Moreover, this maxim implies that speakers are unlikely to assume that a contribution to a conversation is irrelevant to its goal, unless it is marked as such. As Sperber and Wilson (1986, p. vi) noted, "communicated information comes with a guarantee of relevance" and if in doubt, it is the listener's task to determine the intended meaning of the utterance by referring to the common ground or by asking for clarification.

In addition, a *maxim of quantity* requires speakers to make their contribution as informative as is required, but not more informative than is required. On the one hand, speakers should provide all the information that is relevant to the conversation. On the other hand, they should respect the established, or assumed, common ground by providing the information that recipients need, without reiterating information that recipients already have (Clark & Haviland, 1977; Prince, 1981). Thus, this maxim requests full provision of relevant information as well as avoidance of redundancy. Finally, a *maxim of quality* enjoins speakers not to say anything they believe to be false or lack adequate evidence for.

Table 2.2

Table 2.2, adapted from McCann and Higgins (1992), summarizes the implications of these maxims in the form of "rules" that speakers and listeners are supposed to follow. These rules apply most directly to situations in which participants attempt to exchange

information or to get things done. Obviously, conversations may be characterized by other goals, in which case participants may not assume that the usual conversational maxims are observed (see Higgins, Fondacaro, & McCann, 1981). This is particularly likely in situations that are not considered cooperative, either due to their antagonistic (e.g., legal cross-examination) or playful (e.g., riddles) character (Levinson, 1983). Given that the present book is concerned with conversational processes in research settings, however, the adjustments required by different conversational goals do not need further elaboration. In general, research participants are likely to perceive the research situation as a task oriented setting in which participants attempt to exchange information as accurately as possible, thus rendering the assumptions underlying task oriented conversations highly relevant.

In summary, according to the tacit assumptions that govern the conduct of conversation in daily life, "communicated information comes with a guarantee of relevance" (Sperber & Wilson, 1986, p. vi) and listeners are entitled to assume that the speaker tries to be informative, truthful, relevant, and clear. Moreover, listeners interpret the speakers' utterances "on the assumption that they are trying to live up to these ideals" (Clark & Clark, 1977, p. 122).

Conversational Implicatures

An obvious objection to Grice's (1975, 1978) portrait of conversational conduct is that "no one actually speaks like that the whole time," as Levinson (1983, p. 102) put it. This, however, is not Grice's point. "It is not the case, he will readily admit, that people follow these guidelines to the letter. Rather, in most ordinary kinds of talk these principles are oriented to, such that when talk does not proceed according to specifications, hearers assume that, contrary to appearances, the principles are nevertheless adhered to at some deeper level" (Levinson, 1983, p. 102). This becomes obvious when we consider the inferences we are likely to draw from utterances that do, at the surface, not conform to

Grice's maxims. Grice refers to these inferences as *conversational implicatures*, that is, inferences that go beyond the semantic meaning of what is being said by determining the pragmatic meaning of the utterance. A few examples, mostly taken from Levinson (1983), may illustrate this point.

Suppose A asks, "Where is Bill?" and B responds, "There's a yellow VW outside Sue's home" (Levinson, 1983, p. 102). If taken literally, B's contribution fails to answer A's question, thus violating (at least) the maxim of relation and the maxim of quantity. When reading the exchange, however, we are unlikely to consider B's contribution an inappropriate change of topic. Rather, we infer that Bill probably has a yellow VW and that the location of the yellow VW may suggest Bill is at Sue's home. These inferences, and the ease with which readers draw them, reflect the implicit assumption that B is a cooperative communicator whose contribution is relevant to A's question. As will become evident in the subsequent chapters, this assumption underlies many biases that reflect subjects' reliance on normatively irrelevant information in research situations -- much as the reader inferred that the yellow VW may have some relevance for the question posed, subjects infer the presented information is relevant to their task.

Moreover, the inferences we draw from speakers' utterances often go beyond the logical truth value of the literal statement. For example, consider the statement, "Nigel has fourteen children" (Levinson, 1983, p. 106). We are likely to interpret this utterance as implying that Nigel has exactly fourteen children, no more and no less. Logically, however, the statement would also hold true if Nigel had twenty children (or any other number larger than fourteen). We are unlikely to draw this inference, however, because if Nigel had more than fourteen children, the speaker should have said so by following the maxim of quantity ("say as much as is required"). Similarly, suppose that A asks, "How did Harry fare in court the other day?" and B answers, "He did get a fine" (Levinson, 1983, p. 106). If it later turned out that Harry got a life-sentence in addition to a fine, and B knew

it all along, we would certainly feel that B was misleading A by not providing all the information relevant to the situation, thereby violating the maxim of quantity. By enjoining the provision of full information the maxim of quantity adds to most utterances "a pragmatic inference to the effect that the statement presented is the strongest, and most informative, that can be made in the situation" (Levinson, 1983, p. 106). Again, this implication of the cooperative principle is often violated in research situations.

As these and numerous other examples illustrate, speakers do not always observe the maxims of conversation in making an utterance. However, listeners are likely to assume that the speaker observed the maxims nevertheless and draw inferences based on these assumptions. It is these inferences that Grice calls conversational implicatures. In fact, in many situations, speakers deliberately flount the maxims of conversation trusting that recipients will arrive at the appropriate implicature. As a pertinent example, offered in Grice's William James lecture, consider a letter of reference that contains the statement, "Miss X has nice handwriting." Assuming that a candidate's handwriting is irrelevant for judging the candidate's qualification for a fellowship, we are likely to infer something else, akin to, "On a fellowship recommendation one is supposed to say only favorable things about the candidate. Well, this is the only point in Miss X favor that I know of. Ergo, this statement implies another: 'Miss X does not deserve to get the fellowship, since she has no relevant good qualities'" (Lakoff, 1975, p. 72). While this example violated the assumption of relevance, other violations may lead to similar conclusions. Consider, for example, a concert review that reads, "Miss Singer produced a series of sounds corresponding closely to the score of an aria from Rigoletto" (Levinson, 1983, p. 112). This statement violates the maxim of manner by being obscure and lengthy rather than clear and brief and we are likely to infer "that there was in fact some considerable difference between Miss Singer's performance and those to which the term singing is usually applied" (Levinson, 1983, p. 112).

In summary, listeners interpret speakers' utterances on the basis of the assumption that the speaker is a cooperative communicator, unless they have reason to believe otherwise -- e.g., because features of the situation suggest that it is not germane to cooperative conduct. If the speaker's utterance seems to violate conversational maxims at a superficial level, listeners search for interpretations that render the utterance compatible with the assumption that the speaker was nevertheless trying to be cooperative. In doing so, they draw inferences that go beyond the literal, semantic meaning of the sentences uttered. "Such inferences are, by definition, conversational implicatures, where the term *implicature* is intended to contrast with terms like *logical implication, entailment* and *logical consequence* which are generally used to refer to inferences that are derived solely from logical or semantic content. For implicatures are not semantic inferences, but rather inferences based on both the content of what has been said and some specific assumptions about the cooperative nature of ordinary verbal interaction" (Levinson, 1983, pp. 103-104). As the following chapters will illustrate, many shortcomings and biases of human judgment reflect that researchers focus solely on the logical implications of the information they provide to research participants while the research participants themselves draw on the implicatures provided by the content and the conversational context to arrive at a judgment.

The Logic of Conversation in Research Settings

The key hypothesis of the present book holds that research participants bring the tacit assumptions that govern the conduct of daily life to the research situation. In fact, one may argue that subjects in psychological experiments and respondents in survey interviews are forced to rely on these assumptions to a larger degree than most communicators in daily life. As many researchers have noted (e.g., Clark & Schober, 1992; Strack, 1994a,b; Strack & Schwarz, 1992), "conversations" in research settings differ from natural conversations by

being highly constrained. Whereas speakers and addressees collaborate in unconstrained natural conversations "to establish intended word meanings, intended interpretations of full utterances, implications of utterances, mutually recognized purposes, and many other such things" (Clark & Schober, 1992, p. 25), their opportunity to do so is severely limited in research settings, due to the researcher's attempt to standardize the interaction. Most importantly, the standardization of instructions, or of the questions asked, precludes that the utterances can be tailored to meet different common grounds. Moreover, when research participants ask for clarification, they may often not receive additional information. Rather, the previously given instructions may be repeated or a well-trained survey interviewer may respond, "Whatever it means to you," when asked to clarify a question's meaning. In some cases, as when a respondent is asked to complete a self-administered questionnaire, there may also be nobody who can be asked for clarification. As a result, a mutual negotiation of intended meaning is largely precluded in many research situations.

Nevertheless, research participants will attempt to cooperate by determining the intended meaning of the researcher's contributions to the constrained conversation. To do so, they will rely even more on the tacit assumptions that govern the conduct of conversation in daily life than they would under less constrained conditions -- and these assumptions grant them every right to do so. That communicators are supposed to design their utterances such that they will be understood by addressees implies an *interpretability presumption*, as Clark and Schober (1992, p. 27) noted. This presumption is emphasized by the fact that the researcher as communicator obviously does not foresee any difficulties with the comprehensibility of his or her utterances, or else he or she would have taken appropriate precautions. As a result, research participants will refer to the conversational maxims in inferring the researcher's intended meaning. Hence, they will assume that every contribution of the researcher is relevant to the aims of the ongoing conversation;

that every contribution is informative, truthful, and clear; and they will refer to the context of the conversation to resolve any ambiguities that may arise.

Unfortunately, however, research participants are bound to miss a crucial difference between the research conversation and conversations in daily life. Whereas the researcher is likely to comply with conversational maxims in most conversations outside the research setting, he or she is much less likely to do so in the research setting itself. In many cases, the researcher may deliberately provide information that is neither relevant, nor truthful, informative and clear -- and may have carefully designed the situation to suggest otherwise. Research participants, however, have no reason to suspect that the researcher is not a cooperative communicator. Accordingly, they try to determine the "deeper" meaning of the researcher's utterances and draw on the conversational implicatures in addition to the semantic information provided to them. The researcher, however, will evaluate their judgments against a normative model that draws solely on the semantic implications of the provided information. Any deviations from the normative model are then attributed to "faulty reasoning," although they may, at least in part, reflect "faulty communication."

The following chapters explore to what extent conversational processes contribute to judgmental biases and shortcomings. These chapters elaborate on two central implications of a Gricean analysis of research communication.

First, communicated information comes with a guarantee of relevance and research participants draw on the cooperativeness assumption in interpreting the researcher's contributions. As a result, information that the researcher considers irrelevant by focusing on its *semantic meaning* is nevertheless relevant in the eyes of research participants, who focus on its *pragmatic implications*. The research reviewed in Chapters 3 and 4 demonstrates that subjects' in psychological experiments will only rely on semantically irrelevant information when they can assume that the experimenter is a cooperative communicator. When this assumption is called into question, many well-known biases are

either attenuated or eliminated. Chapter 5 extends this analysis from psychological experimentation to survey interviews, focusing on the information conveyed by formal features of questionnaires.

Second, research participants design their own contributions in compliance with conversational norms. They rely on the context of the research conversation to determine which information the researcher is interested in and tailor their answers to provide this information without reiterating information that the researcher already has or may take for granted anyway. As a result, conversational norms influence question interpretation as well as the use and disuse of information, giving raise to a variety of context effects in judgment, discussed in Chapter 6.

Table 2.1

The Logic of Conversation

The Cooperative Principle

Make your 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.

Maxim of Manner

Be perspicuous, and specifically:

(i) avoid obscurity;

(ii) avoid ambiguity;

(iii) be brief;

(iv) be orderly.

Maxim of Relation

Make your contributions relevant to the ongoing exchange.

Maxim of Quantity

(i) Make your contribution as informative as is required for the current purposes of the exchange;

(ii) do not make your contribution more informative than is required.

Maxim of Quality

Try to make your contribution one that is true, specifically:

(i) do not say what you believe to be false;

(ii) do not say for which you lack adequate evidence.

Note. Adapted from Levinson, S. C. (1983). Pragmatics (pp. 101-102). Cambridge, UK: Cambridge University Press. Reprinted by permission.

Table 2.2

Rules of the Communication Game

Communicators should:

1. take the recipient's characteristics into account;
2. try to be understood (i.e., be coherent and comprehensible);
3. give neither too much nor too little information;
4. be relevant;
5. produce a message that is appropriate to the context and the circumstances;
6. produce a message that is appropriate to their communicative intent or purpose;
7. convey the truth as they see it;
8. assume that the recipient is trying, as much as possible, to follow the rules of the communication game.

Recipients should:

1. take the communicator's characteristics into account;
2. determine the communicator's communicative intent or purpose;
3. take the context and circumstances into account;
4. pay attention to the message and be prepared to receive it;
5. try to understand the message;
6. provide feedback, when possible, to the communicator concerning their understanding of the message.

Note. Adapted from McCann, C. D., & Higgins, E. T. (1992). Personal and contextual factors in communication: A review of the 'communication game'. In G. R. Semin & K. Fiedler (Eds.), Language, interaction, and social cognition (pp. 144-172). Newbury Park, CA: Sage. Reprinted by permission.

4 QUESTIONS, INNUENDOS, AND ASSERTIONS OF THE OBVIOUS

Whereas the research examples reviewed in chapter 3 pertained to the impact of explicit assertions of little informational value, the questions a researcher asks may also constitute a powerful source of bias. Their impact can be traced to recipients' assumption that the questioner is a cooperative communicator, which renders the presuppositions conveyed by the question relevant to the task at hand.

Inferring a Relevant Background

Questions come with the same guarantee of relevance as any other utterance. When a questioner asks, "Did you see the children getting on the school bus?" (Loftus, 1975, p. 568) he or she implies that there was a school bus in the first place or else the presupposition would violate the maxims of conversation. In other cases, the question does not entail an assertion, but based on the maxim of relevance we may infer that there is a background that renders the question relevant. Hence, asking, "Is Jane taking drugs?" suggests there may be some reason to believe she does (Wegner, Wenzlaff, Kerker, & Beattie, 1981). As the studies reviewed in this chapter illustrate, however, the biasing effects of questions are again mediated by researchers' violations of conversational norms and respondents' erroneous assumption that the questioner is a cooperative communicator.

Making Sense of Ambiguous Questions:
The Case of Fictitious Issues

To begin with an extreme example, consider questions about issues that don't exist. Public opinion researchers have long been concerned that the "fear of appearing uninformed" may induce "many respondents to conjure up opinions even when they had not given the particular issue any thought prior to the interview" (Erikson, Luttberg, & Tedin, 1988, p. 44). To explore how meaningful respondents' answers are, survey researchers introduced questions about highly obscure or even completely fictitious issues, such as the "Agricultural Trade Act of 1978" (e.g., Bishop, Tuchfarber, & Oldendick, 1986; Schuman & Presser, 1981). Presumably, respondents' willingness to report an opinion on a fictitious issue casts some doubt on the reports provided in survey interviews in general. In fact, about 30% of the respondents do typically provide an answer to issues that are invented by the researcher. This has been interpreted as evidence for the operation of social pressure that induces respondents to give answers, which are presumably based on a "mental flip of coin" (Converse, 1964, 1970). Rather than providing a meaningful opinion, respondents are assumed to generate some random response, apparently confirming social scientists' wildest nightmares.

From a conversational point of view, however, these responses may be more meaningful than has typically been assumed in public opinion research. From this point of view, the sheer fact that a question about some issue is asked presupposes that this issue exists -- or else asking a question about it would violate the norms of cooperative conduct. Respondents, however, have no reason to assume that the researcher would ask meaningless questions and will hence try to make sense of it (see Strack & Martin, 1987; Sudman, Bradburn, & Schwarz, 1995, chapter 3; Tourangeau, 1984, for general discussions of respondents' tasks). If the question is highly ambiguous, and the interviewer does not provide additional clarification, respondents are likely to turn to the context of the

ambiguous question to determine its meaning, much as they would be expected to do in any other conversation. Once respondents have assigned a particular meaning to the issue, thus transforming the fictitious issue into a better defined issue that makes sense in the context of the interview, they may have no difficulty in reporting a subjectively meaningful opinion. Even if they have not given the particular issue much thought, they may easily identify the broader set of issues to which this particular one apparently belongs. If so, they can use their general attitude toward the broader set of issues to determine their attitude toward this particular one.

A study by Strack, Schwarz, and Wänke (1991, Experiment 1) illustrates this point. In this study, German college students were asked to report their attitude toward an "educational contribution". For some subjects, this target question was preceded by a question that asked them to estimate the average tuition fees that students have to pay at U.S. universities (in contrast to Germany, where university education is free). Others had to estimate the amount of money that the Swedish government pays every student as financial support. As expected, students supported the introduction of an "educational contribution" when the preceding question referred to money that students receive from the government, but opposed it when the preceding question referred to tuition fees. Subsequently, respondents were asked what the "educational contribution" implied. Content analyses of respondents' definitions of the fictitious issue clearly demonstrated that respondents used the context of the "educational contribution" question to determine its meaning.

Thus, respondents turned to the content of related questions to determine the meaning of an ambiguous one. In doing so, they interpreted the ambiguous question in a way that made sense of it, and subsequently provided a subjectively meaningful response to <u>their</u> definition of the question. Accordingly, it comes as no surprise that responses to fictitious issues do <u>not</u> conform to a model of mental coin flipping as Converse and other

early researchers hypothesized. Rather, they show a meaningful pattern that is systematically related to respondents' attitudes in substantively related domains (e.g., Schwarz, Strack, Hippler, & Bishop, 1991; see also Schuman & Kalton, 1985). What is at the heart of reported opinions about fictitious issues is not that respondents are willing to give subjectively meaningless answers, but that researchers violate conversational rules by asking meaningless questions in a context that suggests otherwise. And much as has been observed in response to useless information presented in psychological experiments, survey respondents work hard at finding meaning in the questions asked. The same theme is echoed in psychological research into the role of leading questions on eyewitness testimony and the impact of innuendos in impression formation.

Leading Questions in Eyewitness Research

In a highly influential program of research, Loftus and collaborators (e.g., Loftus, 1975; see Loftus, 1979, for a review) demonstrated a pronounced impact of the presuppositions conveyed by leading questions on subjects' memory. In a typical study, subjects are shown a brief film clip and subsequently have to answer questions about what they saw. For some subjects, these questions include references to objects or events that were not presented. For example, Loftus (1975, Experiment 4) asked subjects, "Did you see the children getting on the school bus?" although no school bus was shown in the film. One week later, these subjects were more likely to erroneously remember having seen the school bus presupposed in the leading question than subjects who were not exposed to the question. Findings of this type have typically been interpreted as indicating that "a presupposition of unknown truthfulness will likely be treated as fact, incorporated into memory, and subsequently 'known' to be true" (Dodd & Bradshaw, 1980, p. 695).

Not surprisingly, such biasing effects of leading questions received considerable attention in applied research into eyewitness testimony. Several studies suggest, however,

that the applied implications of this line of work may be more limited than has been assumed. In most experiments, the leading question is asked by the experimenter and subjects have no reason to assume that the experimenter may lead them astray by knowingly introducing unwarranted presuppositions, thus violating conversational norms. In an actual courtroom setting, on the other hand, people may be quite aware that communicators may follow their own agenda, may be motivated to introduce misleading information, and may not be cooperative. Hence, the impact of leading questions may be restricted to conditions under which the questioner is assumed to be a cooperative communicator.

In line with this assumption, Dodd and Bradshaw (1980) observed biasing effects of leading questions about an observed car accident when the source of the question was the researcher, but not when the source was said to be the defendant's lawyer (Experiment 1) or the driver of the car who caused the accident (Experiment 2). For example, subjects in the experimental conditions of their first study were asked four misleading questions. Two days later, control group subjects, who were not exposed to misleading questions, falsely remembered having seen .43 of the four presupposed objects. For subjects who were exposed to misleading questions from an unspecified source, the false recognition increased to .94 out of four objects. If the misleading questions were attributed to the "lawyer representing the driver of the car causing the accident" (Dodd & Bradshaw, 1980, p. 697), however, the misleading questions had no significant impact. In this case, subjects' erroneous recognition of .53 objects resembled the errors made under control conditions, where no misleading questions were introduced to begin with. Thus, the otherwise obtained biasing effects of leading questions were "canceled by attributing the verbal material to a source that may be presumed to be biased" (Dodd & Bradshaw, 1980, p. 701), calling the source's cooperativeness into question. Similarly, Smith and Ellsworth (1987) only obtained a biasing effect of leading questions when the questioner was assumed to be

highly familiar with the event that the subject had witnessed. When the questioner was assumed to be unfamiliar with the event, the presupposition was discounted and no impact of the leading question was obtained.

As these results indicate, "presuppositions are not simply and automatically accepted by recipients" (Dodd & Bradshaw, 1980, p. 699). Rather, recipients must assume that the speaker is a cooperative communicator who commands the relevant knowledge and has no intention to mislead. If either of these assumptions is called into question, the presuppositions implied by misleading questions are unlikely to lead subjects astray. Hence, misleading question effects are more likely to be obtained when the misleading questions are introduced by the experimenter, who subjects can assume to be cooperative and knowledgeable with regard to the material presented to them, than under the courtroom conditions on which the experiments are supposed to bear.

Whereas Loftus's research program focused mainly on the impact of leading questions on reconstructive memory, other researchers explored the impact of leading questions on impression formation. Their findings, again, reiterate the same theme.

Questions and Innuendos in Impression Formation

For example, in an exploration of incrimination through innuendo, Wegner, Wenzlaff, Kerker, and Beattie (1981) observed that media questions of the type, "Is Jane using drugs?", may quickly become public answers. Again, recipients infer that there must be some evidence that triggered the question in the first place -- or why else would someone raise it? Here, as well as in Loftus's research program, the impact of the presupposition conveyed by the question rests on the implicit assumption that the communicator is cooperative, as a study by Swann, Giuliano, and Wegner (1982) illustrates. In their study, subjects observed how a questioner asked a respondent a leading question of the type, "What would you do to liven things up at a party?" As

expected, subjects considered the question to provide conjectural evidence that the person asked is an extrovert -- unless they were told that the questions had been drawn from a fishbowl, thus undermining the implicit guarantee of relevance.

On Saying Things that Go Without Saying

In the examples reviewed above, respondents assumed that there is a background that legitimates the presupposition conveyed in the question -- that the fictitious issue exists, that there was a school bus, or that one had reason to wonder whether Jane takes drugs. Without a proper background, the question asked would violate each and every maxim of conversational conduct. Ironically, misleading assumptions about a relevant background may not only be drawn from misleading questions but also from correct assertions -- provided that the assertion asserts the obvious. As noted in chapter 2, speakers are expected to be informative, that is to provide information that is new to the recipient, rather than information that the recipient already has or may take for granted anyway. Hence, a speaker who asserts something that "goes without saying" must have reason to believe that the assertion is informative. This is the case when there is some background that suggests that the apparently obvious may not hold in the specific case.

As an example, suppose that I tell you my friend Peter does not beat his wife. Assuming that most people do not beat their spouses, you may wonder why I am providing this information? Perhaps Peter is generally an aggressive person, who beats many people, but at least he doesn't beat his wife? Or perhaps he has many fights with his wife, but they don't involve physical violence? Or perhaps something is wrong with me and I assume beating one's wife is a normal part of life, rendering Peter's good behavior noteworthy? In fact, each of these inferences may be drawn as Gruenfeld, Wyer, and their colleagues observed (see Wyer & Gruenfeld, 1995, for a review). Again, however, recipients' assumptions about the applicability of conversational norms is crucial.

For example, Gruenfeld and Wyer (1992) presented college students with propositions that most subjects in the population considered false to begin with. Some statements asserted the validity of the proposition (e.g., "The CIA is engaged in illegal drug trafficking."), whereas other statements denied the validity of the proposition, thus confirming what subjects believed to begin with. In one condition of their experiment, the statements were attributed to a newspaper, that is, a source supposed to provide newsworthy information. In this case, affirming as well as denying the validity of the proposition increased subjects' belief that the proposition was actually true. For example, confirming subjects' a priori belief that the CIA is <u>not</u> engaged in illegal drug trafficking, increased their belief that the CIA may indeed be involved in drug trafficking -- or else, why would the denial be newsworthy? This inference of a background that renders an otherwise irrelevant denial informative, however, was not obtained when the statements were attributed to an encyclopedia. Encyclopedias are supposed to convey archival knowledge, which includes pieces of information that may "go without saying" for many readers. Hence, finding the obvious in an encyclopedia does not trigger inferences about a relevant background.

The same process underlies the effectiveness of many misleading advertisements (see Harris & Monaco, 1978, for a general review). Suppose, for example, that the label on a bottle of olive oil asserts that the oil is "cholesterol free." This assertion is correct and applies to all olive oils. Nevertheless, consumers assume that there must be a reason for presenting this information -- and infer that other brands of olive oil are likely to contain some cholesterol (Schwarz, unpublished data). Hence, statements of the obvious allow advertisers to implicitly mislead about other products by asserting the truth about their own.

Conclusions

In combination, the reviewed research on answers to fictitious issues and the impact of leading questions and innuendos again highlights the crucial role of the Gricean cooperativeness principle in the conduct of research. Facing a question that pertains to an ambiguous issue, research participants draw on the context of the question to infer its meaning. And being confronted with their own poor recollection of the stimulus materials shown to them, they draw on the cues provided by the experimenter's questions. Their key mistake is that they do not expect the researcher to ask a question about an issue that doesn't exist, or to present a question that presupposes a stimulus they have not been shown. Clearly, theoretical accounts of the processes underlying answers to fictitious issues or the impact of leading questions and innuendos have to take the assumed cooperativeness of the questioner into account.

What renders a leading question "leading," for example, is not the semantic information it conveys, but the inferences recipients draw based on the assumption that the communicator is cooperative. Accordingly, leading question effects are only observed when recipients can assume that the speaker has access to the relevant knowledge and is a cooperative communicator who complies with the Gricean maxims. Only under those conditions can they expect the communicator to provide information that is informative, truthful, relevant, and clear. From this perspective, the robustness of leading question effects under laboratory conditions is not surprising: As the research reviewed in the preceding sections illustrated, subjects typically assume that the experimenter is a cooperative communicator and are hence likely to rely on the implications conveyed by the experimenter's questions. Moreover, the experimenter is presumably a particularly knowledgeable source -- after all, who would be more likely to know what was presented in the stimulus materials? By the same token, however, leading questions may provide less of a problem in natural settings, in which "there is often a basis to believe that the

interrogator does not know the facts and is likely to have reasons to mislead" (Dodd & Bradshaw, 1980, p. 696). Much as the examples reviewed in chapter 3, the research discussed above again suggests that we need to pay closer attention to the communicative aspects of our research procedures if we are to understand the operation of judgmental biases in natural settings.