Journal of Experimental Psychology: General
1989, Vol. 118, No. 4, 374-386

0096-3445/89/$00.75

How to Be Sarcastic: The Echoic Reminder Theory of Verbal Irony

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Positive statements, such as "A fine friend you are," can readily be used sarcastically. Negative statements, such as "You're a terrible friend," can be used sarcastically only under special circumstances. We account for this asymmetry in terms of echoic reminder theory, which asserts that listeners recognize sarcasm when they perceive that a speaker is alluding to some antecedent state of affairs. Positive statements do not require explicit antecedents because such statements may implicitly allude to societal norms and expectations, and these norms are almost invariably positive. Negative statements, however, cannot implicitly allude to such positive norms, and so they should require explicit antecedents if they are to be understood. An explicit victim of a sarcastically intended remark can provide such an antecedent and so should enable negative statements to be used sarcastically. Three experiments, involving scenarios with and without victims, provide support for this theory of sarcastic irony.

People often use language to convey something other (or more) than what the words themselves mean. In speech-act theory (Miller & Glucksberg, 1988; Searle, 1969), such usage exemplifies the distinction between sentence meaning and intended meaning. For example, the sentence meaning of "Do you think you might get to the point a bit more quickly?" is a question about some future event. Most people, however, would interpret this as a thinly disguised request or, perhaps, plea to stop dawdling and get to the point. In response to this hint, the point of this article is to examine how people recognize and interpret verbal irony and, in particular, sarcastic irony.

We can distinguish among various forms of irony, such as irony of fate and verbal irony, among others (Muecke, 1970). *Irony of fate* refers to states of affairs, such as

> "Isn't it ironic that by the time we can afford luxury, we're too old to enjoy it?" (1)

Such statements about ironic matters are true and can be interpreted in a perfectly straightforward manner. The speaker refers directly to the ironic state of affairs and can even explicitly label that state as ironic. *Verbal irony*, in contrast, need not refer explicitly to an ironic event or state. Instead, in verbal irony a speaker expresses an attitude toward some object, event, or person by saying something that is not literally true.

The research was supported by National Science Foundation Grant BNS 85-19462 to Princeton University, Sam Glucksberg, principal investigator. This article is based in part on a doctoral dissertation submitted by Roger J. Kreuz to the Graduate School of Princeton University. Portions of this research were reported at the meetings of the Eastern Psychological Association (April 1988, Buffalo, New York) and the Psychonomic Society (November 1988, Chicago).

Editor-elect Earl Hunt graciously served as action editor for this article, which underwent blind review. We thank Kay Deaux, Cristina Cacciari, Boaz Keysar, Sachi Kumon, and Kay Locitzer for their critiques of various drafts of this article; the comments of Dan Sperber and two anonymous reviewers were also most helpful.

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Sarcasm is often characterized as a form of verbal irony and has been defined as "a sharp and often satirical or ironic utterance designed to cut or give pain" (*Webster's Ninth New Collegiate Dictionary*, 1988, p. 1043). Muecke (1980), though acknowledging that sarcasm need not necessarily involve irony, nevertheless described sarcasm as "the crudest form of irony" (p. 54). Despite the various specific views and definitions of sarcasm and irony, there is a consensus in the literature that in using sarcastic irony, people utter what is blatantly false in order to convey a negative and truthful comment on some topic, as in

> "How clear and sunny it is, with such gentle southerly breezes!" (2)

uttered during a howling gale after a weather forecaster had promised sunny skies and gentle southerly breezes.

We focus here specifically on sarcasm expressed by verbal irony—that is, sarcastic irony. People can use verbal irony without being sarcastic and can also be sarcastic without being ironic. An example of nonsarcastic irony would be

> "Another gorgeous day!" (3)

said when it has been gray and raining for the 15th day in a row. The remark about the gorgeous day would normally be interpreted as rueful and ironic, indicating displeasure with the weather, but not necessarily as an intention to hurt anyone. An example of a sarcastic remark that is not ironic would be

> "Thanks a lot!" (4)

Such an obviously insincere expression of gratitude would not be viewed as ironic, but it would almost certainly be viewed as sarcastic. For our purposes, sarcastic irony involves the use of counterfactual statements to express disapproval, usually with intent to hurt or wound someone or some group of people. When a speaker says something that is clearly not true and both speaker and listener know that the statement is not true, then the listener may make one of several interpretations. The speaker may be mistaken or may be trying to mislead the listener. If the speaker intends to be ironic, then

the listener must recognize that intent. Furthermore, the listener must infer what the speaker wants to communicate by saying something that is obviously not true. How do listeners (a) recognize such intentions (i.e., to be ironic) and (b) infer specifically what a speaker intends to convey?

According to Grice (1975), participants in a conversation observe the cooperative principle. Listeners assume that speakers will be truthful and informative. When a speaker says something that is patently untrue, and when both speaker and listener know this and know that each other knows this, and so on (see Clark & Carlson, 1981, for a description of common ground), then a listener can make one of two interpretations: Either the speaker is violating the cooperative principle or he or she is deliberately trying to communicate something by *appearing* to violate that principle. When speakers appear to violate the cooperative principle, they implicitly invite their listeners to make an inference. In Grice's terms, apparent violations of the cooperative principle are taken as "conversational implicatures" (p. 45): They suggest to a listener that there is a communicative intent behind the apparent violation. Being untruthful is one way to appear to violate the cooperative principle. Being irrelevant, as in Example 5, is another:

MARY: Is Tom a good dancer?
SHEILA: He's got terrific taste in ties. (5)

Mary has asked a question and has received an apparently irrelevant answer. Rather than conclude that Sheila is being unresponsive, Mary might infer that Sheila intends to communicate that Tom is not a good dancer at all but that she prefers not to say so directly, perhaps out of politeness considerations (Brown & Levinson, 1987).

This type of analysis can account for why listeners go beyond the meaning of what is said in cases of irony or sarcasm. A listener should generally assume that speakers intend to be truthful and relevant, even when a speaker says something that is counter to the facts. One way in which a speaker may be considered truthful in such cases is to understand him or her as intending the opposite of what is actually said. This is precisely what the standard theory of irony assumes: When someone says something that is patently opposite to the facts, then listeners interpret the utterance as meaning the opposite of what it appears to mean (Grice, 1975, 1978; Searle, 1969).

This form of the standard theory, however, does not account for the most interesting and important aspects of irony. To begin with, this theory does not account for why a speaker would choose to say the opposite of what is meant, nor does it consider the potential relevance of saying the opposite of what is meant (Sperber & Wilson, 1986). Surely if a speaker intends to communicate only proposition X, why try to communicate X by saying not-X? Why, for example, say "What a beautiful day" if all you want to communicate is that it is a terrible day?

If a speaker does follow Gricean maxims in order to be relevant, informative, and truthful, then he or she should not say "It's a beautiful day" merely to communicate the opposite (that it is a terrible day). After all, the listener presumably knows that already, and so speakers must intend something other (or more) than a straightforward description of an event or a state of affairs. An ironic or sarcastic remark is, instead, a comment that is used to communicate the speaker's attitude toward an event or a state of affairs (Grice, 1978), such as disappointment with the weather itself or ridicule of a weather forecast that had gone sadly awry. In either case, the expression "It's a beautiful day" can *remind* a listener of what might have been expected and hoped for or of that inaccurate prediction. The reminding function of ironic expressions was implied by Sperber and Wilson (1981, 1986) in their treatment of irony as a case of echoic interpretation. According to Sperber and Wilson, listeners understand an ironically intended utterance by recognizing that it is echoic, that it alludes to the thoughts, opinions, utterances, or behavior of some person other than the speaker. Once the utterance is identified as echoic, then the source of the echoed opinion, and so on, can be identified. The speaker's attitude toward that source is also recognized, usually as disapproval or, as in the case of sarcastic irony, as ridicule or contempt.

Such reminding can be either implicit or explicit (Jorgensen, Miller, & Sperber, 1984). If there is no immediately relevant antecedent remark or event, then the reminding is implicit, usually of an implicit positive norm or expectation (see Boucher & Osgood, 1969, and Matlin & Stang, 1978, for a description of cultural norms of success and excellence). If there is a relevant antecedent remark or event, such as an incorrect weather forecast, then the reminding is explicit, and the object of disapproval or ridicule is that specific antecedent event. In either case, the ironical utterance serves to express an attitude, usually negative.

According to Sperber and Wilson (1981, 1986), then, the literal meaning of an ironic or sarcastic remark is precisely what the speaker intends, not its opposite. The utterance is interpreted as an "echo," either of an implicit norm or expectation or of an explicit antecedent event. The communicative function of such echoic utterances is to remind a listener of implicit or explicit norms or expectations that are known to both speaker and listener (Tannen, 1984). The speaker accomplishes the reminding by saying the opposite of what is true because the listener can thus be reminded not only of a shared expectation or cultural norm but also of a discrepancy between what is and what should be. By reminding listeners of such a discrepancy, a speaker expresses disapproval of it. Sperber and Wilson (1981, 1986) referred to this account of verbal irony as *echoic interpretation.* We propose to call this account *echoic reminder theory* for two reasons. The first is that this term highlights the reminder function of echoic utterances. The second reason is perhaps more important: Although all ironic utterances accomplish their communicative intent by reminding listeners of some antecedent event, not all such reminders are "echoic"—that is, not all antecedent events are actual or even implied utterances. The remark illustrated in Example 3, "Another gorgeous day," need not echo anyone's utterance, thought, or opinion. It simply alludes to a generalized expectation or desire for good weather and, in so doing, expresses the speaker's disappointment at the actual weather. Echoic interpretation, then, may well be a special case of reminders in general: allusions to prior occurrences or states of affairs.

Formulated in this way, the echoic reminder theory of verbal irony not only provides a motivation for saying the opposite of what is true, but it also provides a principled explanation for one of the most salient and important characteristics of verbal irony: the marked asymmetry of ironic statements. In general, positive statements can readily be used ironically, as in

"You're a fine friend!" (6)

in the context of a close acquaintance's failing to be helpful when he or she should have been. In contrast, the negative statement

*"You're a terrible friend!"[1] (7)

cannot be used ironically in the context of someone's being extremely helpful, unless there is some reason to have expected otherwise. For example, if a friend had earlier said that he or she was terribly unreliable and cowardly and then courageously foils an attempted mugging, then a negative statement about this positive event could be used ironically. The statement is a reminder of the friend's prior prediction of cowardice and calls attention to the discrepancy between that prediction and what actually happened. In so doing, the speaker conveys an attitude of gentle mockery of that incorrect prediction, along with admiration for the courageous behavior.

The principled reason for this asymmetry is the implicit expectation of success or adherence to positive norms. As Jorgensen et al. (1984) put it, "Expectations of success are intrinsic to any action; culturally defined criteria of excellence and rules of behavior are invoked in most value judgments. Thus it is always possible to mention those expectations ironically when they are frustrated, or to mention those norms ironically when they are violated" (p. 115). Implicit reminding, therefore, is sufficient for positive statements intended ironically because there are positive norms to be reminded of. In contrast, implicit reminding should not be sufficient for negative statements intended ironically because normally there are no implicit negative norms to be reminded of. Examples 8 and 9 illustrate this asymmetry:

A car ahead turns sharply without signaling. Your companion says, "Now there's a terrific driver!" (8)

*A car ahead signals a left turn, then turns left. Your companion says, "Now there's a terrible driver!" (9)

Example 8 is readily understood as a sarcastic remark directed at the nonsignaling driver. Example 9 is uninterpretable, unless there is a relevant antecedent, such as an explicit prior expectation that the driver in the car ahead would in fact fail to signal properly (e.g., if one had expressed an opinion that teenage drivers drove recklessly, and then a teenaged driver clearly and carefully signaled). In this latter case, the ironic remark reminds the listener of an explicit incorrect expectation and, in so doing, ridicules that expectation.

Jorgensen et al. (1984) tested Sperber and Wilson's (1981) echoic hypothesis by seeing whether people would be more likely to perceive counterfactual statements as ironic when an explicit antecedent was available. The basic assumption for this prediction was that explicit antecedents should be easier to identify than implicit antecedents. The results were equivocal. Explicit antecedents did lead to more frequent judgments of irony than did implicit antecedents, but in only four of the six test items that were used. Of more importance, Jorgensen et al. did not examine the critical contrast between positive and negative counterfactual assertions. According to reminder theory, an explicit antecedent should not be necessary for positive statements about negative events because positive statements can remind people of implicit positive expectations or culturally shared norms. In contrast, negative statements about positive events should require explicit antecedents because there are no implicit negative expectations or cultural norms to be reminded of.

Gibbs (1986a), in a similarly motivated study, asked college students to understand and to remember stories that could end with sarcastic remarks. Sarcastic remarks that explicitly alluded to a prior statement or event in a story were understood more quickly than those that relied entirely on implicit antecedents; such remarks were also better remembered. Gibbs also found that positive sarcastic remarks were understood more readily than negative ones. However, the critical difference in the relative importance of explicit antecedents for positive and negative forms of sarcastic utterances was again not considered. This difference is critical because any theory of comprehension, including the standard theory of verbal irony, would predict that explicit antecedents should aid comprehension and subsequent memory.

The purpose of our studies was to discriminate between general models of comprehension (including the standard theory of verbal irony) and echoic reminder theory in the context of one form of verbal irony: sarcastic irony. The standard theory makes no differential predictions about the relative importance of explicit antecedents for positive, in comparison with negative, sarcastic utterances. For either type of utterance, explicit antecedents merely provide additional contextual information. Echoic reminder theory, in contrast, predicts that positive sarcastic utterances do not require explicit antecedents because such utterances can remind people of implicit positive expectations or cultural norms. Explicit antecedents may well be helpful because they can provide useful contextual information, but they should not be necessary. Negative sarcastic utterances, in contrast, should require explicit antecedents because negative utterances would be less effective reminders of implicit positive expectations or norms. There should, therefore, be an interaction between the polarity of a sarcastic utterance and the availability of an explicit antecedent. Specifically, explicit antecedents should be much more important for understanding negative sarcastic remarks than for understanding positive sarcastic remarks.

To test this prediction, we examined the role of one common form of antecedent in sarcastic contexts: the victim of a sarcastic remark. The availability of someone to be victimized provides an explicit antecedent. When a remark is positive about a negative event, then victimless irony should be pos-

[1] Following standard linguistic convention, we have denoted anomalous utterances with an asterisk. In linguistics, these markers typically indicate syntactically anomalous utterances; in this article, they denote pragmatically anomalous utterances.

sible, as when someone says, as in Example 3, "Another gorgeous day!" when the weather is terrible and when no explicit victim, such as a mistaken weather forecaster, is involved. According to standard theory, the remark expresses the opposite of what is factually the case and may also express dislike of the weather. According to reminder theory, the remark may also express disappointment with the weather and perhaps disdain for some imagined optimist. Providing an explicit victim as a target for such positive remarks might aid and influence comprehension, but it should not be necessary, according to either theory. Now consider the opposite case, in which someone says

*"It's a terrible day, isn't it?" (10)

when, in fact, the sun is shining brightly. In this case, victimless irony is difficult (if not impossible) to interpret. The standard theory is silent on this issue. Reminder theory, however, predicts this outcome: Unless a listener can infer some plausible antecedent, such as a meteorologist's mistakenly predicting terrible weather, then the statement cannot be sensibly interpreted. Reminder theory, then, requires an explicit antecedent for negative remarks about positive events. An explicit victim of such negative remarks can provide such an antecedent.

The logic of our three studies rests on this argument. For standard theory, victimless irony is acceptable and comprehensible, irrespective of the polarity of a sarcastically intended remark. For reminder theory, victimless irony is acceptable and comprehensible only for positive sarcastic remarks. Victimless irony should not be acceptable for negative remarks: These should require an explicit antecedent, such as some relevant behavior of a victim.

General Method

In all three experiments, we used the same set of very short stories (anecdotes, really) that had the following characteristics: (a) Each consisted of four sentences that described a brief interaction between two people: a potential ironist and a potential victim. The two people and a situation were introduced in the first sentence, as in the following example:

Nancy and her friend Jane were planning a trip to the beach. (11a)

(b) In the second sentence, the potential victim (in this case, Jane) said something about a future event: She uttered a positive or negative prediction, or made a neutral statement, such as

"It's probably going to rain tomorrow," said Jane, who worked for a local TV station as meteorologist. (11b)

In this example, Jane was made out to be an expert, and she made a negative prediction. In half of the story types, the predictor was an expert; in the remainder, the predictor was a layperson. We felt that an expert making a mistake would be a more salient victim than a layperson and so might provide a more effective target for a sarcastic remark. (c) An event, either positive or negative, was described in the third sentence. If a prediction had been made, then the event either confirmed or disconfirmed that prediction, as in

The next day was warm and sunny. (11c)

In this example, the event was positive and so disconfirmed Jane's prediction. (d) The potential ironist either accurately described the event or said the opposite of what had happened so as to make a potentially sarcastic remark:

As she looked out the window, Nancy said, "This certainly is awful weather." (11d)

In this example, the negative remark about the positive event should be understood as sarcastic, ridiculing Jane's incorrect prediction. If Jane had not previously made a prediction (as in 11b), but had simply said

"I hope everyone doesn't have the same idea", said Jane, who hated crowds, (11e)

then Nancy's remark (Example 11d) would be difficult to interpret as sarcastic.

In Table 1 we provide all the types from the aforementioned story frame that we used; in the Appendix we provide examples from the 20 story frames that we used. According to this scheme, there were 20 possible types of stories. There were 5 initial statements that could be made by the potential victim: a positive prediction or a negative prediction by either an expert or a layperson, and a neutral statement by someone whose expertise was not specified. The event that actually occurred was either positive or negative and thus either confirmed or disconfirmed a prediction. Positive events disconfirmed negative predictions, and vice versa. Last, the potential ironist either accurately described the event or contradicted the event. This format yielded 10 types of stories in which the final remark was true and 10 in which the final remark was counterfactual and thus potentially sarcastic.

In Experiment 1, we asked college students to read the stories, one at a time, and then to indicate their interpretation of the final remark

Table 1
Variants of "The Beach Trip" Story

Prediction sentence: Five possibilities
Expertise, positive prediction
"The weather should be nice tomorrow," said Jane, who worked for a local TV station as a meteorologist.
Novice, positive prediction
"The weather should be nice tomorrow," said Jane, who was always trying, with little success, to predict the weather.
Expertise, negative prediction
"It's probably going to rain tomorrow," said Jane, who worked for a local TV station as a meteorologist.
Novice, negative prediction
"It's probably going to rain tomorrow," said Jane, who was always trying, with little success, to predict the weather.
Neutral statement
"I hope everyone doesn't have the same idea," said Jane, who disliked crowds.
Event sentence: Two possibilities
Positive outcome
The next day was a warm and sunny one.
Negative outcome
The next day was a cold and stormy one.
Reaction sentence: Two possibilities
Positive remark
As she looked out the window, Nancy said, "This certainly is beautiful weather."
Negative remark
As she looked out the window, Nancy said, "This certainly is awful weather."

Note. The introductory sentence was the same for all stories: Nancy and her friend Jane were planning a trip to the beach.

with respect to three measures: (a) to report what the characters meant by their final remark in each story; (b) to rate how positive or negative the final remark was; and (c) to rate how sensible that remark was. The 10 true-statement types were essentially fillers, although they also provided useful baseline data. We expected that the true statements would not elicit judgments of sarcasm or irony, would be rated in accord with their surface polarity (positive statements would be judged as positive, and negative as negative), and would all make sense. Of more interest, of course, were the responses to the 10 counterfactual story types.

In five of these types, a positive remark was made about a negative event (see the Appendix for examples). This is the canonical form for sarcastic irony, and so we expected all five of these types to be identified as ironic or sarcastic, to be rated as negative despite their positive surface form, and to be judged as sensible. Presence or absence of an explicit victim would have little, if any, effect on any of these three measures of comprehension. In the other five counterfactual types, a negative remark was made about a positive event (e.g., a sunny day is referred to as "awful weather"). In these types, presence or absence of an explicit potential victim would make a difference. In two of these five counterfactual types, a potential victim made an incorrect prediction. This victim was either an expert or a nonexpert in the domain of the prediction (see the example in Table 1). We expected these two types to be indistinguishable from the five canonical types that contained positive remarks about negative events because the availability of an explicit antecedent should have made echoic reminding possible. Greater expertise on the part of a victim should have increased the salience of the victim's gaffe and should therefore have affected the degree of negative evaluation and perhaps the ratings of sarcasm or irony as well.

The three counterfactual types that contained negative remarks about positive events without an explicit victim (i.e., either no one made a prediction or the prediction was accurate; an example appears in Table 2) were the critical conditions. They were critical in that they provided no antecedent of which to be reminded. Therefore, they should have made less sense than the stories that did provide an antecedent: implicit antecedents when positive counterfactual remarks were made, and explicit antecedents when negative counterfactual remarks were made with an available victim. People might also be less willing to identify negative remarks as sarcastic when no victim is available. The results reported by Jorgensen et al. (1984) and by Gibbs (1986a) would be consistent with such a finding. Alternatively, people might judge any blatantly counterfactual statement as potentially ironic or sarcastic, but they would be puzzled by negative statements in the absence of any explicit antecedent, such as a victim.

Experiment 1: Effect of Victim Availability on Interpretation of Counterfactuals

In this experiment we tested the reminder theory prediction that explicit antecedents are more important for negative sarcastic statements than for positive sarcastic statements. Standard theory, as we noted earlier, makes no differential predictions for positive versus negative statements. We asked people to interpret and then to rate the sensibility and affective valence of both negative and positive sarcastic remarks when a victim was either available or not. Availability of a victim in these conditions provided an explicit antecedent for the potentially sarcastic remark.

Table 2
Example of a Story in Which a Negative Remark Is Made About a Positive Event Without an Explicit Victim

Nancy and her friend Jane were planning a trip to the beach.
"The weather should be nice tomorrow," said Jane, who worked for a local TV station as a meteorologist.
The next day was a warm and sunny one.
As she looked out the window, Nancy said, "This certainly is awful weather."

Method

Subjects. One hundred nine introductory psychology students at Princeton University served as volunteer subjects in groups of 12–18 students each.

Materials and design. Each subject received a booklet with instructions and 20 stories, as described earlier. Each subject saw only one story of each type and only one frame from each story. The story types were presented in 60 orders, and story type and story frame were systematically varied so that each story frame appeared approximately equally often in each type. For example, the story frame of "The Beach Trip" (see Table 1) appeared approximately equally often in each of the 20 types, and any given subject saw this story in only one type. The distribution of story types across story frames was only approximately equal because we had 109 subjects instead of a number evenly divisible by 20.

This produced a 2 × 5 design, wherein the 10 true-statement types served essentially as fillers. The factors in this design were polarity of statement (positive or negative) and nature of antecedent. In two conditions a victim provided an explicit antecedent in the form of an inaccurate prediction, and this victim either was an expert or was not. In two other conditions an accurate prediction was made. This provided only a general topic as a potential antecedent, and we did not expect this to suffice for interpreting a counterfactual remark as sarcastic. In the fifth condition, no predictions concerning the critical event were made, and so there was no antecedent at all for a potential sarcastic remark. Therefore, we expected that counterfactual remarks would be difficult to interpret as sarcastic.

This design completely confounded subjects and items, and so separate analyses with subjects and items as random factors were neither possible nor required.

Procedure. Subjects began the experiment by reading the following instruction printed on the first page of their booklets:

> We're interested in how people use language to communicate ideas to each other. As you are probably aware, people can accomplish this in a variety of ways. You can help us better understand this process by participating in this experiment.
>
> In the following pages, you will read a number of short stories. In each story, two characters will have a brief interaction, and in the final sentence, one of the characters will say something to the other character.
>
> We'd like you to evaluate this final comment. You will be asked what the character means by making this comment, and you will also be asked to rate how positive or negative this final comment was. Finally, we would like you to indicate how much sense the comment made in the situation.
>
> The best way to do this is to quickly read through each story, and then go back and concentrate on the important parts. Finally, when you are sure that you fully understand the interaction that is described, you can answer the questions.
>
> Before you begin making your ratings, look over a few of the stories to get a feel for the amount of variety they have. If you find yourself unsure about what kind of rating to make, just use your best judgment. Remember, there are no right or wrong answers; we are interested in your intuitions. Please be sure to answer all the questions. Thank you very much for your participation.

The subjects then read the stories and answered the three questions for each story. The meaning question was "What did [character name] mean by his/her final comment?" The polarity question was "How positive or negative was [character's] final remark?"; subjects answered by indicating their response on a 7-point scale on which 1 = *very negative* and 7 = *very positive.* The sensibleness question was "How much sense did [character's] final comment make?"; again, subjects used a 7-point scale on which 1 = *very little sense* and 7 = *a lot of sense.*

After subjects had completed their booklets, they were given a written description of the purpose and design of the experiment.

Results and Discussion

The first question that subjects answered concerned the interpretation of the final, potentially sarcastic remark. We initially studied the entire set of answers to the open-ended question "What did [character name] mean by her/his final comment?"; then we grouped responses into 14 categories. The critical category for our purposes was "Sarcastic." A response was judged to belong to this category if the response actually contained one of the words *sarcastic, sarcasm,* or some variant of these specific terms. A response was judged to belong to the "Ironic" category only if the response actually contained one of the words *ironic, irony, ironical,* or a variant of these terms. The other categories were "Character Was Angry"; "Compliment"; "Fact"; "Insult"; "Joking"; "Opposite Meant"; "Surprise"; "Character Was Right"; "Character Was Wrong"; and "Don't Know". In each of these categories, subjects could use a range of terms (e.g., responses such as "kidding," "joking," and "being funny" were all categorized as "Joking"; "don't know" and "can't say" were subsumed under "Don't Know"). Responses that paraphrased the target remark were labeled as "Paraphrase," and responses that could not be placed into any of the categories just mentioned were labeled "Other."

Interpretations of sarcasm or irony were rare for the true story types: Only 2.4% of the responses indicated an interpretation of these stories as sarcastic or ironic. In contrast, sarcasm was the modal interpretation for 9 of the 10 counterfactual story types. A preliminary analysis revealed that expertise of victim or potential victim had no effect on proportion of sarcasm interpretations, and so the data were pooled across this variable. Similarly, there was no reliable difference between types with a correct prediction and types with no prediction at all, and so these data were pooled into a "no-victim" condition. These data poolings yielded a 2 × 2 design for analysis. In Table 3 we present the proportion of sarcastic interpretations as a function of polarity of final remark and availability of victim.

These data were subjected to a 2 × 2 (Polarity × Victim) analysis of variance (ANOVA). As expected, the polarity of the final remark had a reliable effect; positive statements yielded more judgments of sarcasm than did negative statements (.39 vs. .32), $F(1, 108) = 5.42$, $MS_e = 0.08$, $p < .03$. This reflects the well-known asymmetry of sarcastic/ironic remarks. Presence or absence of an explicit antecedent in the form of a victim also had a reliable effect. Remarks in the context of an identifiable victim were more likely to be interpreted as sarcastic than were identical remarks in the absence of a victim (.44 vs. .28), $F(1, 108) = 39.95$, $MS_e = 0.06$, $p < .001$.

Table 3
Proportion of Sarcastic Interpretations as a Function of Statement Polarity and Victim Availability

Statement polarity	Availability of victim	
	Victim	No victim
Positive	.46	.32
Negative	.41	.23

The interaction between statement polarity and victim was in the predicted direction but was not reliable ($F < 1$). In the stories that we used, of course, both participants in the conversation knew what happened, and so counterfactual statements could not be interpreted as lies or as attempts to deceive. Under such circumstances, a reasonable interpretation of such obviously counterfactual statements is that they were intended sarcastically. This would account for the tendency to interpret negative counterfactual remarks as sarcastic even when there was no explicit victim and, presumably, no negative expectation or cultural norm of which to be reminded.

This finding would be consistent with reminder theory if such counterfactual remarks are interpreted as *attempts* at sarcasm that do not quite work. To determine whether this is the case, we turn to the ratings of sensibleness. In Table 4 we present the mean sense ratings for the 10 counterfactual story types, collapsed across expertise of potential victim. Four subjects did not complete their questionnaires, and so the analysis of the sense rating data was based on the data of the 105 remaining subjects. A 2 × 2 ANOVA of these data revealed the predicted main effects of statement polarity and availability of victim and, of more importance, the interaction of these two factors.

Positive statements were rated as more sensible than were negative statements (*M*s = 4.67 and 3.99), $F(1, 104) = 36.00$, $MS_e = 1.57$, $p < .001$. As expected, presence of victim had reliable effects on the sense ratings. The mean sense rating for remarks with an explicit victim (4.83) was higher than that for remarks without a victim (3.86), $F(1, 104) = 90.76$, $MS_e = 1.05$, $p < .001$. The interaction of statement polarity with victim was consistent with reminder theory: Presence of a victim was more important for negative statements than for positive ones. Positive statements with and without victims

Table 4
"Sense" Ratings as a Function of Statement Polarity and Victim Availability

Statement polarity	Availability of victim	
	Victim	No victim
Positive		
M	5.05	4.35
SD	1.55	1.73
Negative		
M	4.61	3.37
SD	1.65	1.67

were rated 5.05 and 4.61, respectively, and negative statements with and without victims were rated 4.35 and 3.37, respectively. This interaction was reliable, $F(1, 104) = 6.50$, $MS_e = 1.23$, $p < .02$.

The third question, concerning the rated polarity of the final remark, was included only as a check on the expectation that the conveyed attitude toward the subject of a sarcastic remark is opposite to the expressed attitude. In Table 5 we present the mean polarity ratings as a function of statement polarity and presence of victim, again pooled over level of expertise. For these data, only 104 subjects completed their questionnaires, and so the analyses are based on just those 104 sets of responses.

Only one variable, statement polarity, influenced these ratings. The mean rating for positive statements was 2.81 on a 7-point scale. The mean rating for negative statements was 3.73. This difference was reliable, $F(1, 103) = 36.59$, $MS_e = 2.55$, $p < .001$. Neither the presence of a victim nor the interaction of Victim × Statement Polarity had reliable effects. As expected, the polarity of the counterfactual statements was interpreted as opposite to the intended polarity. In this highly limited sense, the standard theory of sarcasm seemed to hold: Speakers were seen as expressing an attitude toward the object of sarcasm by expressing the opposite of that attitude.

The reminder function of sarcastic remarks was supported by the sensibility ratings. On positive statements, the availability of an explicit antecedent in the form of a victim had minimal effects. On negative statements, the availability of an explicit antecedent had significant effects, which is consistent with the notion that negative statements have no implicit expectations or norms to serve as reminder targets. This finding is not accommodated by the standard theory of irony.

One result that we did not expect was the absence of any differential effect of victim on judgments of sarcastic intent for positive and negative statements. Although positive statements produced more sarcasm interpretations than did negative statements, and statements with explicit victims led to more interpretations of sarcasm than did statements without explicit victims, the expected interaction between these two factors was not found.

It may be that people assume a sarcastic intent whenever a statement is blatantly counterfactual (i.e., deceit or lying would not be a plausible interpretation), especially when there is an available victim. Alternatively, our measure may not have been sufficiently sensitive to detect the expected interaction. Experiment 2 was designed to explore this possibility. We used the same materials but asked for ratings of degree of sarcasm instead of an open-ended question about the meaning of the critical remarks. In addition, we asked the subjects what sarcasm and irony meant to them.

Table 5
Polarity Ratings as a Function of Statement Polarity and Victim Availability

Statement polarity	Availability of victim	
	Victim	No victim
Positive		
M	2.67	2.94
SD	1.21	1.11
Negative		
M	3.67	3.78
SD	1.49	1.34

Experiment 2: Degree of Sarcasm as a Function of Statement Polarity and Victim Availability

Method

Subjects. Forty undergraduate students at Princeton University served as paid subjects. All were native English speakers, and none had participated in Experiment 1.

Materials. The story frames and types from Experiment 1 were used. Each subject read one story frame in each story type, and again subjects and items were confounded so that separate analyses by subjects and stories were not necessary. The stories were presented in 20 orders to minimize ordering effects.

Procedure. Subjects were tested individually and were given the following instructions to read:

> We're interested in how people use language to communicate ideas to one another. As you know, people can accomplish this in a variety of ways. You can help us better understand this process by participating in this experiment.
>
> In the following pages you will read a number of short stories. In each story, two characters will have a brief interaction, and in the final sentence, one of the characters will say something to the other character.
>
> We'd like you to judge how *sarcastic* the final sentence seems to you (if at all). For each story, you will have a scale on which to indicate your judgment. The scale will look like this:
>
> |-------|-------|-------|-------|-------|-------|-------|
> not at all sarcastic — moderately sarcastic — extremely sarcastic
>
> To make your rating, you should circle one of the seven vertical bars on the scale. For example, if you thought that the final remark in a story was not at all sarcastic, you would circle one of the bars at the far left. If you felt that it was extremely sarcastic, you would use one of the bars on the far right. Finally, if you thought that the remark was only somewhat sarcastic, you would circle one of the bars in the middle of the scale.
>
> Before you begin, please look over a few of the stories. This will give you a general feel for the types of stories you will be seeing. If you occasionally find yourself unsure about your rating, juts use your best judgment. Remember, there are no right or wrong answers; we are simply interested in your intuitions. Please be sure to provide a rating for all the stories. Thank you for your participation.

The subjects were asked if they had any questions, and then they were told to begin. On the final page of the booklet subjects read these instructions:

> Finally, we would like you to take a moment and tell us just what the word *sarcasm* means to you. After you finish that, we'd like you to do the same for the word *irony*. Define these terms in any way that makes sense to you, and feel free to use as much or as little of the space provided as you want.

Eight lines were provided for each term.

Results and Discussion

As expected, true statements were rated much lower on the sarcasm scale than counterfactual statements. The mean sar-

casm ratings were 1.9 for the true statements and 6.3 for the counterfactual statements, and the two groups differed significantly, $t(18) = 21.19$, $p < .01$.

We subjected the counterfactual statements to a separate analysis to see whether the presence of a victim had a greater effect for negative statements than for positive statements. As in Experiment 1, the expertise of the victims had no reliable effect, and so the data were pooled. In Table 6 we present the mean sarcasm ratings as a function of victim and statement polarity.

These data were subjected to a 2 × 2 ANOVA. In keeping with the hypothesis that social norms provide implicit antecedents for positive statements, positive statements were rated as more sarcastic than negative statements, $F(1, 39) = 8.24$, $MS_e = 1.11$, $p < .01$. Presence of victim also had a reliable effect, which was consistent with the notion that availability of an explicit antecedent is important for sarcasm, $F(1, 39) = 22.00$, $MS_e = 0.81$, $p < .001$.

Unfortunately, the predicted interaction between statement polarity and victim presence was not found ($F < 1$), which suggests again, as in Experiment 1, that a blatantly counterfactual statement may be a sufficient condition for inferring sarcastic intent. Although this is consistent with standard theory, standard theory would also predict that this is a sufficient condition for the understanding of such remarks. Echoic reminder theory, in contrast, requires either a positive remark or an explicit antecedent for comprehension in addition to sheer perception of sarcastic intent. In Experiment 3 we addressed this issue in more detail.

One possibility for failing to find the predicted interaction between statement polarity and victim presence is that our subjects had somewhat different conceptions of sarcasm and irony than we did. The definitions given by the 40 subjects are partly summarized in Table 7. Even a superficial examination of these definitions reveals a clear distinction between sarcasm and irony. For these subjects, sarcasm was verbal (95% of the definitions included this characteristic), whereas irony did not need to be verbal (only 30% of responses concerning irony included this characteristic). Verbal sarcasm was usually seen as counterfactual: 68% of the sarcasm definitions included this characteristic, whereas only 25% of irony definitions did. Furthermore, sarcasm was often seen as involving hurting someone: 53% of the sarcasm definitions mentioned hurting, or a victim, or a target. In stark contrast, none of the definitions of irony included this characteristic. In keeping with this finding, 23% of the sarcasm definitions described sarcasm as intentional, whereas none of the irony definitions did so. Indeed, four irony definitions explicitly stated that ironic actions or statements are unintentional.

Table 6
Sarcasm Ratings as a Function of Statement Polarity and Victim Availability

Statement polarity	Availability of victim	
	Victim	No victim
Positive		
M	6.27	5.60
SD	0.80	1.25
Negative		
M	5.80	5.12
SD	1.05	1.14

Table 7
Sarcasm and Irony Definitions: Summary of Relevant Characteristics

Characteristic attributed	Sarcasm	Irony
Verbal	.95	.30
Counterfactual	.68	.25
Unexpected	.00	.50
Intended to hurt; victim present	.53	.00[a]
Intentional	.23	.00
Mentioning	.30	.33

[a] Four subjects explicitly reported that irony was *not* intentional.

One final characteristic seems to differentiate sarcasm and irony. Fifty percent of the subjects stated that irony involved surprising or unexpected *events*; none of the sarcasm definitions did so. This, along with the other differences between the definitions of irony and sarcasm, suggests that these subjects viewed irony as irony of fate and sarcasm as a verbal device to express an attitude or to hurt someone. Interestingly, when irony was seen as verbal, it shared an important characteristic with sarcasm: 30% of the subjects said that sarcasm and irony were used to remind people of something. One subject, for example, described sarcasm as "comments aimed at a target person to remind the target of incorrect previous assertions." This subject described irony as "the fact that what has happened was not likely, but had been mentioned/noticed previously."

These characterizations of sarcasm and irony may not reflect people's understanding of these concepts in general. After all, these definitions were written after the subjects had seen a set of stimulus materials in which incorrect predictions and sarcastic comments were fairly salient. What these definitions do suggest is that our subjects had a clear understanding of what we, the experimenters, meant by the sarcasm scale. Thus the failure to find the predicted interaction between statement polarity and victim presence cannot be attributed to misunderstanding about that sarcasm rating scale.

Another possibility for that failure may be the questionnaire itself. Half of the items contained true statements, and these of course were rated as nonsarcastic (mean rating = 1.9). These items may have produced an anchoring effect—in a sense, pushing the counterfactual statements toward the other end of the scale. This could, in turn, produce a restriction in the range of rated sarcasm at the high end of the scale.

A third possibility is that rated sarcasm is not differentially sensitive to the availability of a victim in positive- and negative-statement contexts. Instead, the appropriate measure is interpretability, or how appropriate a sarcastic statement would be in these various story types.

Experiment 3 was designed to test these alternative hypotheses. We asked subjects to provide sarcasm ratings for the 10 counterfactual-statement story types only, to see whether the ratings would then differentiate more finely among these. We also asked for ratings of how appropriate the final remark was, in addition to how sarcastic it was. We

included these ratings of appropriateness to see whether subjects' understanding of counterfactual remarks would be influenced by statement polarity and availability of an explicit antecedent. Standard theory would predict no interaction of statement polarity and antecedent; echoic reminder theory predicts that antecedence availability is more important for negatively phrased remarks than for positively phrased sarcastic remarks.

Experiment 3: Degree and Appropriateness of Sarcasm as a Function of Statement Polarity and Victim Availability

Method

Subjects. Forty undergraduate students at Princeton University served as paid subjects. All were native English speakers, and none had served in Experiments 1 or 2.

Materials and procedure. The same questionnaire as in Experiment 2 was used here, but the 10 true-remark story types were not included. In addition, subjects were asked to rate both the degree of sarcasm and the degree to which the target statements were appropriate in each story.

Results and Discussion

As in Experiments 1 and 2, the expertise of victim had no reliable main effects or interactions, and so the data were pooled. In Table 8 we present the mean ratings for degree of sarcasm and appropriateness. Each of these sets of ratings were subjected to a 2 × 2 ANOVA.

Rated sarcasm again varied as a function of statement polarity; positive statements were rated as more sarcastic than were negative statements, $F(1, 38) = 12.54$, $MS_e = 0.60$, $p < .01$. Statements with explicit victims were rated as more sarcastic than statements without such victims, $F(1, 38) = 13.48$, $MS_e = 0.73$, $p < .001$. However, the interaction between victim and polarity again failed to reach statistical significance, $F(1, 38) = 2.77$, $MS_e = 0.38$, $p = .10$. These data replicated in every respect those of Experiment 2.

In contrast to sheer degree of sarcastic intent, the measure of comprehension, rated appropriateness, did provide support for the critical prediction that explicit antecedents are more important for negative sarcastic statements than for positive ones. With an explicit victim, rated appropriateness of positive and negative sarcastic remarks did not differ: Positive statements received a mean rating of 4.31, and negative statements a mean rating of 4.32. When there was no explicit victim, both positive and negative statements were rated as less appropriate (Ms = 3.82 and 3.26, respectively), $F(1, 38) = 22.74$, $MS_e = 1.03$, $p < .001$, for the main effect of victim on appropriateness ratings.

Of more importance, the interaction of victim and statement polarity was also reliable, $F(1, 38) = 5.24$, $MS_e = 0.59$, $p < .03$. These data provide a conceptual replication of Experiment 1, in which the ratings of how sensible a remark was also depended jointly on statement polarity and victim. The presence of a victim was more important for negative sarcastic remarks than for positive ones.

These data are not consistent with standard theory; they are consistent with echoic reminder theory. Over all three experiments, positive statements were seen as more sarcastic than were negative statements, and this is consistent with the notion that people can be reminded of implicit positive norms or expectations, even in the absence of an explicit antecedent. Negative statements were also seen as sarcastic when they were counterfactual, but such statements were seen as more sensible and as more appropriate if they occurred in the context of an explicit antecedent (i.e., an identifiable victim).

Table 8
Sarcasm and Appropriateness Ratings: Experiment 3

	Degree of sarcasm		Degree of appropriateness	
Statement polarity	Victim	No victim	Victim	No victim
Positive				
M	5.72	5.38	4.31	3.82
SD	0.85	0.98	1.19	0.75
Negative				
M	5.44	4.78	4.32	3.26
SD	1.11	1.36	1.14	1.12

General Discussion

Before we consider the implications of our results for various theories of irony and sarcasm, what can we conclude with regard to the determinants of sarcasm comprehension? First, it seems that the factual status of descriptive statements is highly salient. When a statement is obviously counterfactual to both speaker and listener, then this seems to be sufficient to prompt at least a suspicion of sarcastic intent. In Experiment 1, all of the stories that contained statements that were counterfactual elicited relatively high rates of sarcasm judgments. Approximately 36% of these statements were judged to be sarcastic, whereas less than 3% of factually accurate statements were.

In keeping with echoic reminder theory, both the availability of a victim and the polarity of the counterfactual statement affected the way in which counterfactual statements were interpreted. When such statements could be referred to an explicit victim, they were judged to be sarcastic more often than when they could not be (44% vs. 28%, respectively). Positive statements about negative events (e.g., saying "Nice day!" during a storm) were judged to be sarcastic more often than negative statements about positive events (e.g., "What a terrible day!" uttered in bright sunshine): 39% versus 32%, respectively. However, the influence of an explicit victim was not reliably greater for negative remarks, which suggests that people are likely to judge a remark as sarcastic whenever it is obviously false to both speaker and listener, even when that remark has no explicit victim.

The hypothesis of implicit social norms and expectations, however, strongly implies that an explicit antecedent should be more important for negative remarks than for positive, and the data on rated sensibleness address this issue directly. Positive and negative counterfactual statements were rated as equally sensible when there was an explicit victim. Without a

victim, positive statements were rated as more sensible than negative. The data from Experiments 2 and 3 essentially replicated this pattern of results. When asked to rate degree of sarcasm, people were not differentially sensitive to victim presence as a function of the positive or negative form of the statements. However, when asked to rate how appropriate such sarcastic remarks were, victim presence became more important for negative statements than for positive statements. These data, taken as a whole, are consistent with the notion of implicit reminding through positive social norms and expectations. These data are also generally consistent with the findings of Jorgensen et al. (1984), who reported that people had difficulty interpreting potentially ironic remarks when there was no explicit antecedent.

In that study, Jorgensen et al. were interested in testing Sperber and Wilson's (1981) echoic mention theory of verbal irony. If we consider sarcasm as a particular type of verbal irony, and if we confine consideration of the theories to the type of sarcasm that we used in these experiments, then echoic mention and echoic reminder theories are closely related to one another. According to mention theory, a person who utters a counterfactual statement, intended ironically, is said to *mention* the idea that is literally expressed by that statement in order to communicate a derogatory attitude toward that idea (Sperber, 1984). Presumably, when sarcasm is specifically intended, a person who may express or accept such an idea is also derogated, albeit indirectly. The critical claim here is that the intended target is *mentioned*, not *used*, in the technical linguistic sense of these terms. The difference between use and mention is illustrated in these two expressions that contain the word *page*:

"My typewriter gets about 250 words on a standard page." (12)

"The word *page* is contained in the sentence above." (13)

In sentence 12, the word *page* is used to refer to the concept "page"; in sentence 13 (and in this sentence as well) the word *page* is mentioned to refer to itself as a word.

In expressions such as Example 3 ("Another gorgeous day"), the sentence can be used to refer to an actual state of the weather. This same sentence can be mentioned as a vehicle of ridicule or disapproval (Jorgensen et al., 1984). This mention in turn can serve as a remainder of what is being ridiculed or disapproved of.

Mention theory, then, is primarily addressed to the issue of how the language itself is used. Echoic reminder theory is perfectly consistent with this account, but it is addressed to a different aspect of the problem, namely, how the communicative goal of expressing an attitude is accomplished. In mention theory terms, an ironic utterance (and by extension, sarcastic ironic utterances) "echoes" a thought that corresponds to the literal meaning of the utterance. The irony is successful if the listener recognizes the "echo" (i.e., recognizes the meaning of the utterance and can attribute it to "specific people, specific types of people, or people in general"; Sperber, 1984, p. 132). In other words, irony succeeds if it draws attention to an idea and to a source of that idea—that is, the intended target. Drawing attention to the target—be it an idea or a specific person—can be done only if the target is known to the listener. As Clark and Gerrig (1984) pointed out, irony can be accomplished only when speaker and listener share relevant knowledge. Clark and Gerrig used the example of two people, Harry and Tom, who have just attended a lecture that had been unexpectedly fascinating. As they leave the lecture hall, they run into Anne, and Harry says

"Tedious lecture, wasn't it?" (14)

Tom, if he now remembers the earlier expectation of a tedious lecture, will understand the statement as ironic. Anne, who has no relevant antecedent in memory, can understand the statement only to be true or else nonsensical.

Mention theory, because it is not explicitly addressed to such issues as shared relevant knowledge, is incomplete as a psychological account of how ironic or sarcastic communications are accomplished. In a more recent treatment of the role of relevance in language comprehension, Sperber and Wilson (1986) noted that the concept of mention fails to cover a range of cases: "Mention is a self-referential ... use of language: it requires full linguistic or logical identity between representation and original.... We have therefore abandoned the term 'mention' in favor of the more general term 'interpretation'" (p. 264).

One example of the limitations of mention is the case in which the literal meaning of an expression is used but sarcastic irony is intended as well. One common example of this is a speaker's being excessively polite in order to be sarcastic. Brown and Levinson (1987) pointed out that within a given culture, the degree of politeness of, say, requests is determined by such factors as the amount of imposition on the addressee and the social status differential between requester and addressee, among other things. Thus a mother being excessively polite to her daughter, as in

"Would you very much mind if I asked you, please, to perhaps consider cleaning up your room sometime this month?" (15)

is simultaneously expressing several communicative intentions. She is directly asking a question, indirectly making a request, and also being sarcastic. This is clearly a case of use, not mention. The statement simultaneously communicates a request and reminds—in the sense of calling attention to—the speaker's attitude towards the listener's own customary attitudes and behaviors. That this functions as a reminder of the attitudes and expectations of both parties is indicated by the fact that such sarcasm would be totally misplaced if such an excessively polite request were to be made of a stranger. This kind of sarcasm can succeed only when speaker and addressee can share expectations and when the sarcastic remark can remind the listener (and perhaps those who overhear) of those expectations. In Sperber and Wilson's (1986) terms, such remarks can be interpreted echoically—that is, as alluding to something that both speaker and listener know.

This example suggests that the concept of mention versus use can provide an adequate account of verbal irony for those cases in which literal meanings are not intended—that is, for cases in which meanings are mentioned instead of being used. Echoic reminder theory accounts for these cases and also for cases in which literal meanings are intended and are used, as

in Example 15. Mention, then, can be considered a special case of echoic reminding, in which implicit antecedents are echoically mentioned in order to remind a listener of those antecedents and, in sarcastic irony, to derogate an idea and the source of that idea.

One other proposal merits consideration here. Clark and Gerrig (1984) argued that verbal irony involves pretense rather than echoic mention. Citing Grice (1978), "To be ironical is, among other things, to pretend" (p. 125), Clark and Gerrig used an example that corresponds closely to the kinds of remarks that we used in our experimental materials. A speaker says, in the context of a rain storm:

> "Trust the weather bureau! See what lovely weather it is: rain, rain, rain." (Cited from Jorgensen et al., 1984, p. 114) (16)

Clark and Gerrig argued that "the speaker is pretending to be an unseeing person, perhaps a weather forecaster, exclaiming to an unknown audience how beautiful the weather is" (p. 122). If the pretense involved only the appearance of asserting the opposite of what is clearly the case, then pretense theory would be a notational variant of echoic mention theory. Clark and Gerrig asserted that the pretense goes beyond this: The speaker is pretending to be someone else (the "unseeing person") and is also pretending to be talking to some person other than the listener. If the listener recognizes this pretense, then the listener understands that the speaker is expressing a derogatory attitude toward three entities: the idea expressed, the imaginary speaker, and the imaginary listener. These imaginary speakers and listeners "may be recognizable individuals (like the TV weather forecaster) or people of recognizable types [such as inaccurate weather forecasters in general]" (p. 122).

Clark and Gerrig (1984) preferred pretense theory to echoic mention theory on grounds similar to those discussed earlier. There are clear cases of irony and of sarcasm that seem not to involve mention at all, such as Jonathan Swift's (1729/1971) essay, "A Modest Proposal." This essay proposed that Irish children be used as food to serve to the rich and so provide income for their poor parents while simultaneously expanding the culinary repertoire. Clark and Gerrig correctly pointed out that this entire essay could not be a case of mention, let alone echoic mention. It can, however, be treated as a pretense, in which Swift is pretending to be someone else, speaking to an imaginary audience who would accept the ideas that he is proposing in all seriousness. The idea and the imaginary speaker and audience are all simultaneously derogated by this pretense.

Clark and Gerrig (1984) were correct in asserting that the pretense theory is more powerful than echoic mention theory. Pretense theory may, however, be too powerful and too limited simultaneously. The pretense notion can, with little stretching, be applied to all indirect speech acts. When someone says, "Can you pass the salt?" pretense can be invoked: The speaker is only pretending that some obstacle prevents the addressee from complying with the request (see Gibbs, 1986b). When someone says, "It sure is hot in here!" the speaker is only pretending to comment on the temperature when in fact she wants someone to open a window.

When applied to sarcastic irony, the pretense theory in this very general sense can hold. However, the special sense of a speaker's pretending three things—belief in the assertion, pretending to be someone else, and talking to an imaginary audience—seems both unnecessary and implausible. Who are the imaginary speaker and audience in cases such as Example 15, in which excessive politeness is used to convey sarcasm? Even when sarcasm is accomplished by verbal irony, as in Example 16 ("What beautiful weather"), the elaborated pretense notion seems unnecessary. As our results show, sarcasm is suspected whenever a remark is blatantly counterfactual. Sarcasm is further judged to be sensible and appropriate when the listener can be reminded of a positive implicit expectation or when there is an identifiable, explicit victim. The notion of pretense to accomplish such reminding seems unnecessary. Therefore, on grounds of generality and of parsimony, echoic reminder theory seems preferable to pretense theory.

Last, pretense theory and mention theory may not differ significantly from one another. As Williams (1984) pointed out, there may be no linguistic difference between utterances that involve mention and utterances that involve pretense: "Most participant utterances seem to be explained plausibly in terms of either mention or pretense. . . . [A] more elaborated version of [mention theory] would probably look very much like . . . pretense theory" (p. 129). Both mention and pretense theory are theories of linguistic use. In both theories, the communicative function of mention or pretense is to communicate an attitude by calling attention to an idea that both speaker and listener can derogate. Both pretense and mention, then, serve to remind a listener of an idea or the source of that idea (i.e., a victim). Echoic reminder theory is the more general of the three theories because it applies to those cases in which neither mention nor pretense is involved.

We agree with Williams (1984) that "the distinction between the mention and the pretense theories is ultimately an issue for linguistic analysis and is not a matter for psychological test at all" (p. 129). This position is consistent with both Sperber and Wilson's (1986) and our view that mention is a concept of linguistic use. Echoic reminding (or, as Sperber & Wilson put it, echoic interpretation) is, in contrast, a psychological concept and so may hold promise as the basis for a psychologically testable theory of verbal irony in general and of sarcasm in particular. One task for linguistic theory would then be to describe the linguistic devices that people use to remind one another of the intended objects of irony and sarcasm.

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Appendix

The 20 story frames used in the experiments are reproduced as follows. All are in the form of expert victim, positive prediction, negative outcome, and positive remark. For an example of all the story types from one story frame, see Table 1.

The Beach Trip

Nancy and her friend Jane were planning a trip to the beach.

"The weather should be nice tomorrow," said Jane, who worked for a local TV station as a meteorologist.

The next day was a cold and stormy one.

As she looked out the window, Nancy said, "This certainly is beautiful weather."

The Lecture

John and Steve were walking together to their morning class.

As they entered the lecture hall, Steve said, "I read over the assignment pretty carefully, and I'll bet this is going to be a great lecture."

The professor proceeded to give a dry and boring presentation of the material.

As they left the lecture hall, John said to Steve, "Great lecture, wasn't it?"

The Election

Tom and Dave were discussing the big election over drinks at a bar.

"I'll bet the mayor's race will be no contest this year; I've been following the polls pretty closely," said Dave.

A couple of hours later, they learned that the mayor had been reelected by a very slim margin.

Tom commented, "Gee, that guy running against the mayor got blown away, didn't he?"

The Fishing Trip

Mike was preparing to go fishing, and Jim was watching him get ready.

"I was talking to some of the guys just getting back from the lake, and they say the fish are really biting this year," Mike remarked.

In the evening, Mike returned without any fish at all.

Jim remarked, "Well, it looks like they're really biting this year."

The Stock Market

Frank had just invested in the stock market for the first time.

"You did the right thing; I've been investing for years, and I think the market's about to take off," his friend Larry told him.

Over the next few weeks, the stock market fell sharply, and Frank lost a lot of money.

The next time Frank saw Larry, he said "Well, I really made a killing on the market."

The Baby

Linda stopped by to visit Mary, who was expecting her first child and really hoping for a son.

"I'm sure it'll be a boy; most first births are," said Linda, who worked in the maternity ward of the local hospital.

A week later, Linda drove Mary to the hospital, where she gave birth to a daughter.

A few days later, Mary phoned Linda, and said "You must come visit my beautiful baby boy."

The Exam

Carol and Sam had just taken their calculus midterm.

"I think I did pretty well," said Sam, who had studied a lot before the test.

A few days later, Sam found out that he had gotten one of the lowest grades in the class.

When Carol heard the news, she said to Sam, "Maybe you can help me study for the next test."

The Plane

Cathy and Bob were waiting at the airport for their plane to arrive.

"I fly on this airline all the time; I'm sure the plane will be on time," Cathy told Bob.

The plane landed over an hour behind schedule.

As they were boarding, Bob said "These punctual airlines are really impressive."

The Chess Game

Karen and Ed were playing a game of chess.

Karen knew that Ed was an expert player, and she sighed when Ed said, "You played well, but I'll finish you off soon."

A few minutes later, Ed lost the game.

Karen said, "Gee, you sure finished ME off pretty fast."

The Piano Recital

Susan was waiting to go onstage for her piano recital.

She told Paul, "I'm really going to play well tonight," since she had practiced for many days.

When it was her turn, Susan played her piece very poorly.

After the recital, Paul remarked to a friend, "What a wonderful performance!"

The Restaurant

Joan and Mark were waiting for service at Joan's favorite restaurant.

"This shouldn't take any time at all," said Mark, who had heard many positive stories about the restaurant's service.

It took over half an hour for a waiter to appear.

After they ordered, Joan remarked, "The service is really good here, isn't it?"

The Auction

Sue and Jerry were at an art auction.

"I know quite a bit about art, and the next painting looks like a very valuable one," said Sue.

Few people bid for the painting, and it sold for only a few hundred dollars.

Jerry said, "Wow, the bidding was really high for that picture."

The Fuel Gauge

Betty and Sally were on a trip in Betty's old car.

"The fuel gauge in this car doesn't work, but we have enough gas to get where we're going," said Betty, and Sally knew that Betty usually knew what she was talking about.

A few minutes later, the engine sputtered and died.

Sally said, "Well, it looks like we had enough gas."

The Sweaters

George was doing his laundry, and his friend Fred was helping him.

"Your sweaters won't shrink if you wash them with your shirts; I wash them together all the time, so I know," said Fred.

George went ahead and washed all his clothes together, and his sweaters shrank several sizes.

Holding a sweater against himself, George said, "They didn't shrink at all, did they?"

The Opera

Judy and Joyce had decided to go to the opera together, and they were waiting for the orchestra to begin.

"You should really like this—it's a great production," said Judy, who had seen the opera the night before.

The performance was uninspired, and the soloists were uniformly poor.

As they emerged from the music hall, Joyce said, "I just love great performances!"

The Bowling Incident

Bill and Ann had decided to go bowling.

"I'm feeling pretty lucky tonight," said Bill, who was a very good bowler.

A few minutes later, they began their game, and Bill had several gutter balls in a row.

Ann turned to Bill, and said "Well, I bet you're really glad we came."

The Cake

Dianne was taking a home economics course, and she decided to practice baking a cake.

"I'd like you to try this cake—I'm a good baker, you know," Dianne remarked to Jack and his brother.

Dianne pulled the cake out of the oven, and it was far too dry.

Jack and his brother tried a slice, and they said to each other, "This cake is REALLY delicious."

The Clock

Harry was helping Pat move into her new apartment.

"Don't worry, I can move this grandfather's clock by myself," said Harry, who was very muscular.

Harry only managed to tip the clock over, and it crashed to the floor.

Pat looked up from some boxes she was moving, and said "You're really helping me out."

The Dinner Party

Betty and Jean were on their way to a formal dinner party.

"I'll bet I really make a good impression," said Betty, who was very sophisticated and graceful.

During the dinner, Betty managed to spill her soup all over the hostess.

As they were leaving the party, Jean remarked, "You sure were the hit of the party!"

The Commuters

Pete and Rick were in a hurry to get to work.

"We can avoid all the traffic if we stay on this road; I know this area pretty well," said Pete.

A few minutes later, their car was bogged down in a huge traffic jam, and Pete was slowed to a crawl.

Rick observed, "This route sure saved us a lot of time!"

Received July 29, 1988
Revision received March 14, 1989
Accepted March 21, 1988 ■