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**AN EXAMINATION OF WHETHER *IRONY* AND *SARCASM*
ARE DIFFERENT TERMS FOR THE SAME PSYCHOLOGICAL CONSTRUCT**

by

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**Submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy**

**Faculty of Graduate Studies
The University of Western Ontario
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ABSTRACT

Researchers have studied counterfactual statements, such as "There's not a cloud in the sky!" uttered during a violent thunderstorm, both as instances of irony (Jorgensen, Miller & Sperber, 1984; Kreuz & Glucksberg, 1989; Katz & Lee, 1993) and as instances of sarcasm (Gibbs, 1986; Kreuz & Glucksberg, 1989). It is not surprising that some terms are used inconsistently in a young field of investigation such as the psycholinguistics of irony and sarcasm. However, the inconsistent use of the terms *irony* and *sarcasm* across different empirical studies is problematic when research participants are asked to judge whether or not counterfactual statements that they read are good examples of the term selected by the researcher. Indeed, to make meaningful inferences from the results of these empirical studies, it is necessary to accept the assumption that *irony* and *sarcasm* are different terms for the same psychological construct. The purpose of this dissertation was to test this assumption that *irony* and *sarcasm* are, in fact, terms for the same psychological construct. Two experiments were conducted. In experiment one, it was found that the construct associated with *sarcasm* was affected by a speaker's use of different types of echoic mention whereas the construct associated with *irony* was not affected. In experiment two, it was found that irony and sarcasm are used differentially with respect to the concept of victim. These findings demonstrate that the terms *irony* and *sarcasm* are not interchangeable with regard to their psychological meaning.

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**AN EXAMINATION OF WHETHER *IRONY* AND *SARCASM*
ARE DIFFERENT TERMS FOR THE SAME PSYCHOLOGICAL CONSTRUCT**

Researchers have studied counterfactual statements, such as "There's not a cloud in the sky!" uttered during a violent thunderstorm, both as instances of irony and as instances of sarcasm. For example, in the first empirical test of Sperber and Wilson's (1981) Mention Theory of Irony, Jorgensen, Miller and Sperber (1984) scored a participant as having judged a counterfactual statement to be ironic if any of the terms *ironic*, *sarcastic*, *facetious*, or *ridic'ile* were used to describe the statement. Sperber and Wilson's (1981; Jorgensen, Miller & Sperber, 1984) theory of irony formed the basis of Gibbs' (1986) investigation of the psycholinguistics of sarcasm, and the concept of mention was extended by Kreuz and Glucksberg (1989) to account for sarcastic irony in the Echoic Reminder Theory of Verbal Irony (Kreuz & Glucksberg, 1989).

It is not surprising that some terms are used inconsistently in a young field of investigation such as the psycholinguistics of irony and sarcasm. However, the inconsistent use of the terms *irony* and *sarcasm* across different empirical studies is problematic when research participants are asked to judge whether or not counterfactual statements that they read are good examples of the term selected by the researcher. Very little is known about the way in which people generally use the terms *irony* and *sarcasm*. If people use these two terms differently, it is quite conceivable that the outcome of an experiment could depend on the researcher's choice of term. Indeed, to make meaningful

inferences from empirical studies of the psycholinguistics of irony and sarcasm, it is necessary to accept the assumption that *irony* and *sarcasm* are simply different terms for the same psychological construct. The main purpose of this dissertation is to clarify the relationship between irony and sarcasm by testing the assumption that *irony* and *sarcasm* are, in fact, terms for the same psychological construct.

There are three main sections to the introduction of the dissertation. The first section presents preliminary evidence that *irony* and *sarcasm* are not terms for the same construct. The second section examines four concepts (mention, pretence, audience and victim) that are central to understanding the extant psycholinguistic theories of irony and sarcasm. Finally, the third section considers the Mention Theory of Irony (Sperber & Wilson, 1981; Sperber, 1984), the Pretence Theory of Irony (Clark & Gerrig, 1984) and the Echoic Reminder Theory of Verbal Irony (Kreuz & Glucksberg, 1989) in relation to the concepts of mention, pretence, audience and victim.

Evidence That Irony and Sarcasm Are Not Terms for the Same Construct

Irony and Sarcasm Have Different Histories. The fact that irony and sarcasm have different histories may suggest that they are terms for different constructs. The origin of the English word *ironist* can be traced back to the Greek word *eiron*, a term used to refer to someone who engages in unscrupulous trickery (Thomson, 1926). The English word *sarcasm* can be

traced back to the Greek word *sarkazein*, meaning to speak bitterly as to tear flesh like dogs (Webster's Third New International Dictionary, 1963).

Although both *irony* and *sarcasm* originated as terms with derogatory connotations, *irony* became positively valued as a result of its association with Socrates and his method of revealing truths and insights by means of contradictory assertions. This association with Socrates prompted serious discussion of the concept of *irony* by the rhetorician Quintilian and the philosopher Kierkegaard. Quintilian (Institutio, VII, vi, 54) claimed that an ironist states what is false in order to demonstrate the truth of an opposing opinion. In contrast, Kierkegaard (1841/1966) argued that an ironist's purpose in stating what is false is simply to draw attention to the statement's lack of truth; it is not an ironist's intention to advance an opposing opinion. The concept of *sarcasm*, on the other hand, did not achieve historical significance and positive regard. *Sarcasm* has not been the subject of historical debate, and it has retained its negative connotation such that, in modern dictionaries, the distinction between the terms *irony* and *sarcasm* remains primarily a distinction based on intentional derision, with *sarcasm* considered to convey malevolence.

The words irony and sarcasm elicit different lists of features. Kreuz and Glucksberg (1989) present a partial summary of definitions of the terms *irony* and *sarcasm* that were elicited from participants as an ancillary task in one of their experiments. These characterizations of *irony* and *sarcasm* were written after participation in an experiment about *sarcasm*; consequently, the stimulus materials people read as part of the experiment may have affected the content of

these definitions. None the less, these data provide provisional evidence that *irony* and *sarcasm* are terms for different psychological constructs.

Of the 40 participants in the Kreuz and Glucksberg (1989) study, 95 per cent indicated that *sarcasm* was verbal in nature whereas only 30 per cent indicated that *irony* was verbal; 53 percent of the participants noted that *sarcasm* was intended to be hurtful whereas, when describing *irony*, this characteristic was never noted. The differences observed in the characterizations of these two terms, along with the fact that the historical development of these concepts has followed different paths, represent preliminary evidence that the terms *irony* and *sarcasm* are not associated with the same psychological construct.

Four Concepts Found in Theories of Irony and Sarcasm.

The concepts of mention, pretence, audience, and victim are central to understanding psycholinguistic theories of irony and sarcasm. This section provides a description of each of these concepts.

The concept of mention. In general terms, mention occurs when words refer to themselves, as in "The colour of the cloud (on this page) is black." In contrast, the term "use" is applied to the more familiar situation where the word cloud refers to visible condensed water vapour. The concept of mention can be applied to phrases, as in "the concept of mention is the heading of this paragraph."

Sperber and Wilson (1981; Sperber, 1984) argue that linguistic representations of any level can be mentioned. Consider the following three examples from Sperber (1984):

- Cat* rhymes with *mat*. (1)
- Cat* is an English word. (2)
- The French word *chat* means cat. (3)

The phonetic representation of the word *cat* is mentioned in (1); the lexical representation of the word *cat* is mentioned in (2); and the semantic representation of *cat* is mentioned in (3).

As discussed in a later section, the concept of mention is an aspect of the Mention Theory of Irony (Sperber & Wilson, 1981; Sperber, 1984) and the Echoic Reminder Theory of Verbal Irony (Kreuz & Glucksberg, 1989).

The concept of pretence. In pretence, a speaker plays the role of a naive person addressing a naive audience. The speaker does not express his or her own ideas but expresses false ideas to an imaginary audience. The real audience is composed of those listeners who see through the pretence; the real audience recognizes that the purpose of the pretence is to deride the ideas expressed. Clark and Gerrig (1984) use Swift's (1729/1971) essay, "A Modest Proposal", as an example of pretence. In this essay, Swift proposes that poor children be used as food for the rich thereby providing a source of income for their parents and a new dish for the rich. As discussed in a later section, the

concept of pretence plays an important role in the Pretence Theory of Irony (Clark & Gerrig, 1984).

The concept of audience polarization. An audience becomes polarized when some listeners misunderstand a speaker's meaning because they lack the necessary background information. It is generally the case that a speaker will design an utterance to complement the information that he or she shares with listeners (Clark & Carlson, 1982; Clark & Murphy, 1982; Gibbs, 1987). However, speakers are at liberty to design an utterance in such a way that the information needed to properly interpret the utterance is known only by a subset of listeners. Clark and Carlson (1982, p. 368) note that differences in background information can be exploited in order "to convey one thing to one hearer, and something else to another."

One source of shared information is what Clark and Murphy (1982) term linguistic co-presence. When Person A and Person B have participated in a conversation, they share knowledge of the information presented in that conversation. Linguistic co-presence can be manipulated when others subsequently join a conversation as well as in future conversations involving A, B, and others. For example, in an earlier conversation, Alice tells Brian that she has discovered a new restaurant that has now become her favourite place to eat. Subsequently, Catherine interrupts their conversation and suggests that the three of them get together later. Brian responds, "Sure, lets meet at Alice's favourite restaurant." Assuming that Catherine is unaware that Alice has a new

favourite restaurant, Brian has designed his utterance to mean one thing to Catherine and another thing to Alice.

The concept of audience polarization has an historical association with irony. Quintilian introduced the idea that ironists sometimes disguise their meaning, and Kierkegaard argued that one of the functions of irony was to exclude some listeners from understanding the intended meaning of an utterance "just as kings and rulers speak French so as not to be understood by the commoners (Kierkegaard, 1841/1966, p. 266)."

The concept of victim. In the literature on irony and sarcasm, an utterance has a victim when it functions to ridicule a listener. For example, a student who boasts that he or she will achieve a high grade on a particular examination is a potential target for ridicule when it turns out that he or she failed the examination. As discussed in the following section, the concept of victim is an important aspect of the Echoic Reminder Theory of Verbal Irony (Kreuz & Glucksberg, 1989).

Psycholinguistic Theories of Irony and Sarcasm

In this section, the Mention Theory of Irony (Sperber & Wilson, 1981; Sperber, 1984), the Pretence Theory of Irony (Clark & Gerrig, 1984) and the Echoic Reminder Theory of Verbal Irony (Kreuz & Glucksberg, 1989) are examined in relation to the concepts of mention, pretence, audience, and victim. As this is a young field of investigation, there is a scarcity of empirical data that

directly tests the tenets of these theories. Furthermore, there have been no investigations that specifically contrast aspects of these theories in order to test which theoretical explanation is superior. In this regard, a notable aspect of this dissertation is an examination of whether the concepts of pretence and mention are psychologically equivalent interpretations of a speaker's repetition of a listener's erroneous prediction.

The Mention Theory of Irony. The Mention Theory of Irony (Sperber, 1984; Sperber & Wilson, 1981) is based on a distinction between *use* and *mention* of an expression. As described earlier, *use* involves reference to what a word usually refers; *mention* involves reference to words themselves. In terms of the Mention Theory of Irony, verbal ironies are mentions of meaning. A speaker is not representing his or her own thought when he or she mentions a meaning; the purpose of mention is to convey something about a meaning. In the case of irony, a speaker mentions a meaning in order to derogate it. For instance, a speaker who utters "There's not a cloud in the sky!" when caught in a downpour is not using the utterance to represent his or her thoughts. Rather, to make sense of this utterance, a listener must assume that the speaker "is expressing a belief ABOUT his utterance, rather than BY MEANS OF it" (Sperber & Wilson, 1981, p. 302). In this example, the speaker is derogating the idea that there is not a cloud in the sky.

In order for the derogation of an idea to be compelling, the idea that is mentioned by a speaker must not be so absurd that no one would ever entertain it; such ideas are seldom worth derogating (Sperber, 1984). Although a speaker

can derogate ideas that are widely shared, such as the hope for good weather, the paradigmatic form of mention found in the research literature is an utterance made by a speaker that repeats a specific statement made earlier by someone else.

Jorgensen, Miller and Sperber (1984) tested the Mention Theory of Irony by having people read one of two versions of a series of short passages. A mention version of each passage contained a final statement that repeated an earlier utterance within the passage. A non-mention version of the same passage was manipulated such that the final statement did not repeat a previous utterance. For all passages, the final utterance expressed an opinion that both the speaker and the listener believed to be false. After reading each passage, participants were asked to indicate why the speaker had made the final statement in the passage.

Jorgensen, Miller and Sperber (1984) employed a rather broad operational definition of irony, scoring an utterance as having been judged to be ironic if any of the terms *ironic*, *sarcastic*, *facetious*, or *ridicule* were used to describe the utterance. It was found that the passages were more likely to be judged as ironic when they involved mention than when they did not. This result was interpreted as support for the Mention Theory of Irony as it demonstrated that the act of repeating an erroneous prediction was associated with people's use of the term *ironic* and other related terms. It must be noted that interpretation of this result as support for the Mention Theory of Irony assumes

that terms such as *sarcastic* and *ridicule* are associated with the same psychological construct as the term *ironic*.

In a subsequent investigation of sarcasm, Gibbs (1986) had participants read passages similar to those used in the Jorgensen, Miller and Sperber (1984) study. Gibbs (1986) had participants read short passages in which the content of the passage was manipulated such that, for half of the passages, the final target utterance repeated an opinion expressed earlier in the passage, and for the other half of the passages, the final target utterance did not repeat an opinion expressed in the passage. Participants rated the degree to which the passages were sarcastic. It was found that target utterances were rated as more sarcastic when they repeated an opinion expressed earlier in the passage than when they did not repeat an opinion expressed in the passage.

Katz and Lee (1993) investigated verbal irony using instances of mention that pragmatically suggested a figurative resemblance. For instance, one of the passages read by participants described an early morning conversation between Jane and Bob about roses. Bob informs Jane that "Roses like the morning." Later, their friend Sally joins them and sits down with a deep sigh. Jane gestures toward Sally and says to Bob, "Roses like the morning". In this study, the final statement of each passage (e.g., "Roses like the morning") always repeated an utterance made earlier in the passage. After reading each passage, participants rated the degree to which the final statement was ironic. It was found that a statement (e.g., "Roses like the morning") was judged to be more ironic when the passage content (e.g., Sally sits down with a deep sigh)

was incongruent with the figurative resemblance suggested in the passage (e.g., Sally resembles a rose because she likes the morning) than when the passage content was congruent with the figurative resemblance (e.g., Sally sits down happily).

Katz and Lee (1993) also examined the effect of audience polarization on irony judgements using linguistic co-presence as a means of creating a polarized audience. In a polarized audience version of a passage, the latecomer (e.g., Sally) entered the conversation after the important background information had been presented (e.g., Bob had told Jane that "Roses like the morning" before Sally joined the conversation). In a non-polarized version of a passage, the latecomer arrived before the background information was presented. Katz and Lee argued that when the latecomer joined the conversation after the background information had been presented, the latecomer was likely to miss the ironic interpretation of the concluding remark because he or she was unaware of the basis of the figurative resemblance. It was found that polarized versions of the passages were rated as more ironic than the non-polarized versions of the passages, suggesting that the concept of audience polarization plays a role in people's judgments of irony. Although Katz and Lee's (1993) study is not a test of the Mention Theory of Irony, it does demonstrate that mention can provide a means of creating a polarized audience.

The Pretence Theory of Irony. According to the Pretence Theory of Irony (Clark & Gerrig, 1984), ironies are instances of pretence. In pretence, a speaker plays the role of an imaginary person who expresses naive ideas to imaginary

listeners who uncritically accept these naive ideas. For instance, the speaker who utters "There's not a cloud in the sky!" when caught in a downpour is pretending to be someone who is naively advising an unknowing audience about the weather. Clark and Gerrig (1984) argue that, in making this statement of pretence, the speaker is derogating the naive notions that he or she expresses.

Clark and Gerrig (1984) note that instances of mention can be interpreted as instances of pretence. However, an empirical test of whether people actually interpret instances of mention as instances of pretence has yet to be conducted. The first empirical test of this claim is part of experiment two.

The Echoic Reminder Theory of Verbal Irony. In the Echoic Reminder Theory of Verbal Irony (Kreuz & Glucksberg, 1989), irony is conceived of as a reminder of thoughts and expectations, whereas sarcasm is associated with the concept of a victim. The concept of mention, as described by Sperber and Wilson (1981; Sperber, 1984), is characterized as a form of reminder by Kreuz and Glucksberg (1989).

An utterance can be ironic without being sarcastic when it reminds listeners of a thought or expectation that many people share. For instance, the remark "What lovely weather!", when uttered on the 15th consecutive day of rain, is an example of non-sarcastic irony (Kreuz & Glucksberg, 1989). This remark reminds listeners of a widely held hope for good weather. As the hope for good weather is not associated with any particular individual, this remark does not have a victim.

Sarcastic irony occurs when an utterance functions to remind a listener of his or her erroneous prediction and simultaneously ridicules the listener for having held this false expectation. It is the act of reminding a specific listener that he or she held a false expectation that distinguishes sarcastic irony from non-sarcastic irony.

Kreuz and Glucksberg (1989) tested their explanation of sarcastic irony in three experiments. In each of these experiments, participants read a series of passages describing a conversation. These passages manipulated the availability of a victim by varying whether or not a target remark repeated a prediction made by a listener. In the first experiment, participants were asked to indicate why the speaker had made the final statement in the passage. Participants were scored as having judged the passage to be sarcastic if their response contained one of the words *sarcastic* or *sarcasm*. In the second and third experiments, participants were asked to rate the extent to which the target utterance was sarcastic. In each experiment, Kreuz and Glucksberg found that the presence of a victim affected judgments of sarcasm. Utterances were more likely to be judged sarcastic when the discourse contained a victim than when it did not. This result is consistent with their hypothesis that the concept of victim is an aspect of sarcastic irony. It is worth noting that, as the relationship between the concept of victim and non-sarcastic irony was not examined, it has not been demonstrated that non-sarcastic irony has a different relationship with the concept of victim than sarcastic irony has with the concept of victim. That is,

it has not been examined whether the concept of victim is differentially related to the terms *irony* and *sarcasm*.

An Examination of Whether Irony and Sarcasm are Terms for the Same Psychological Construct

The motivation for this dissertation is the belief that an important aspect of the development of psycholinguistic theories of irony and sarcasm is the refinement of the vocabulary in empirical research and theoretical writing such that it evolves in parallel with our understanding of the natural categories of utterance use. In an earlier section, preliminary evidence was presented that the terms *irony* and *sarcasm* are associated with different constructs: irony and sarcasm have different histories, and the task of defining these terms tends to elicit different lists of features. In light of this preliminary evidence, two experiments were conducted with the purpose of testing whether *irony* and *sarcasm* are terms for the same psychological construct. A basic empirical criterion for distinguishing between two constructs is to determine whether they are affected in different ways by the same experimental manipulation (Bower & Clapper, 1989). Therefore, if the terms *irony* and *sarcasm* were to produce different research results, it would indicate that these terms are not associated with a unitary psychological construct.

EXPERIMENT ONE

As reviewed earlier, Sperber and Wilson (1981) argued that verbal ironies are mentions of meaning. The paradigmatic form of mention in the research literature is an utterance made by a speaker repeating a statement made by a listener. Kreuz and Glucksberg (1989) argued that the repetition of an erroneous prediction serves to ridicule the person who made the prediction. However, as well as mentioning statements made by others, speakers can also mention their own prior statements. Given the general tendency of people to discount the importance of their own mistakes (see Weiner, 1990 for a review), it is likely that repeating one's own erroneous prediction would convey less ridicule than repeating a listener's erroneous prediction because listeners would not expect a speaker to be self-deprecating.

Kreuz and Glucksberg (1989) argued that a sarcastic utterance ridicules a person by reminding that person of his or her erroneous prediction. If a speaker's repetition of his or her own erroneous prediction conveys less ridicule than repetition of a listener's erroneous prediction, it is likely that a speaker's repetition of his or her own erroneous prediction would be construed as less sarcastic than a speaker's repetition of a listener's erroneous prediction. Inasmuch as *irony* and *sarcasm* are terms for the same psychological construct, one would also anticipate that a speaker's repetition of his or her own erroneous prediction would be construed as less ironic than a speaker's repetition of a listener's erroneous prediction. However, if *irony* and *sarcasm* are terms for

different psychological constructs, and if the concept of victim is not a characteristic of an ironic utterance (Kreuz & Glucksberg, 1989), the effect of manipulating whether a speaker repeats his or her own erroneous prediction or a listener's erroneous prediction should not affect whether an utterance is a good example of irony. In experiment one, the effect of manipulating whether a speaker repeats his or her own erroneous prediction or a listener's erroneous prediction was examined by having participants read instances of both types of utterance. One group of participants rated whether the utterances were good examples of sarcasm and a second group of participants rated whether the utterances were good examples of irony.

As Bower and Clapper (1989) point out, a basic empirical criterion for distinguishing between two constructs is to determine whether they are affected in different ways by the same experimental manipulation. In this experiment, a significant interaction between type of rating (*irony* versus *sarcasm*) and type of repetition (speaker versus listener), indicating that manipulation of the type of repetition has a differential effect on irony and sarcasm ratings, would suggest that *irony* and *sarcasm* are terms for different psychological constructs.

In this experiment, participants also rated the extent to which they were certain about their goodness-of-example ratings. If a speaker's repetition of a listener's erroneous prediction is a more paradigmatic form of mention than a speaker's repetition of his or her own erroneous prediction, it is reasonable to anticipate that participants would be more certain when rating paradigmatic utterances that are likely to be more easily classifiable than when rating

non-paradigmatic utterances. Therefore, it was anticipated that participants would be more certain when an utterance repeated a listener's erroneous prediction than when it repeated a speaker's erroneous prediction.

Method

Subjects

Thirty students (14 women, 16 men) from the University of Western Ontario, ranging in age from 18 to 22 years ($M = 19.5$), participated in this experiment as partial fulfilment of an introductory psychology course requirement. Fifteen of the participants were randomly assigned to the irony rating condition and 15 to the sarcasm rating condition. All participants provided ratings in both the listener-repetition condition and the speaker-repetition condition.

Materials and Procedure

Eight passages were selected from the materials used by Kreuz and Glucksberg (1989) and modified slightly to serve as stimuli for this experiment. The materials comprised four passages in which the speaker repeated a prediction made by someone else and four passages modified such that the speaker repeated his or her own prediction. In the original Kreuz and Glucksberg passages, the speaker always repeated a prediction made by someone else.

Two of the listener-repetition passages and two of the speaker-repetition passages served as experimental passages in which the prediction was always incorrect. The following is an example of an experimental passage that concludes with an utterance that repeats a listener's erroneous prediction:

Karen and Ed were playing a game of chess. Karen knew that Ed was an expert player.

She sighed when Ed said to her, "You play well, Karen, but I'll finish you off quickly."

A few minutes later, Ed lost the game.

Karen said to Ed, "You sure finished me off quickly."

The following is an example of an experimental passage that concludes with an utterance that repeats the speaker's own erroneous prediction:

Susan was waiting to go on stage for her piano recital. She had been practicing for many days.

She told Paul, "My performance tonight will be perfect."

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

She was disappointed.

After the recital, Susan remarked to Paul, "A perfect performance, wasn't it?"

In addition, there were four passages that served as fillers. In these passages, the prediction was always correct. Appendix A contains the eight passages used in this experiment.

Printed below each passage were two questions. The first question was manipulated such that half of the participants rated the degree to which the final utterance was a good example of irony, while the other half of the participants rated the degree to which the final utterance was a good example of sarcasm. These goodness ratings were made on a seven point scale, where a value of one was labelled "very poor" and a value of seven was labelled "very good". No other points on the scale were labelled. The second question asked participants to rate how certain they were of this first rating. These certainty ratings were made on a seven point scale, where a value of one was labelled "very uncertain" and a value of seven was labelled "very certain". Again, no other points on the scale were labelled.

The eight passages were assembled into booklets, with each passage appearing on a separate page. The pages were sorted into one of three random orders such that there were ten booklets in each order, with five participants in each of the irony and sarcasm rating groups receiving each of the random orders. The following instructions were printed on the cover page:

**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 several short passages. Each passage describes a conversation. The topic of conversation is different in each passage. The conversations always involve two people and, in this respect, the passages resemble one another. Read each passage at your own pace.

Participants were informed of a short comprehension test that followed completion of the passages. This comprehension test (given in Appendix A) provided a means of evaluating whether the two groups of participants were equally diligent in reading the passages. In the test, participants indicated whether a series of statements were true or false based on the information given in the passages. Each true or false question was based on a different passage.

Results and Discussion

Analysis of the comprehension questions indicated that participants in both the irony and sarcasm groups had little difficulty understanding the experimental passages. The mean percent correct for the irony group ($M = 86.7$, $SD = 18.6$) was not significantly different ($t(28) = 0.44$, $p > .05$) from the mean percent correct for the sarcasm group ($M = 93.3$, $SD = 14.8$), suggesting that the two groups were equally diligent in reading the passages.

The certainty ratings were submitted to a rating type (*irony* versus *sarcasm*) by repetition type (speaker versus listener) split-plot analysis of variance. In this analysis, rating type is a between-subject factor and repetition type is a within-subject factor. It was found that the participants in the irony group ($M = 6.17$, $SD = 0.60$) were as certain about their goodness-of-example ratings ($F(1, 28) = 0.34$, $p > .05$) as were participants in the sarcasm group ($M = 6.30$, $SD = 0.65$). As hypothesized, people were significantly less certain ($F(1, 28) = 20.86$, $p < .05$) when rating speaker-repetition passages ($M = 5.93$, $SD = 0.87$) than when rating the more paradigmatic listener-repetition passages ($M = 6.53$, $SD = 0.52$). The interaction between rating type and repetition type was not significant ($F(1, 28) = 2.32$, $p > .10$).

The goodness-of-example ratings were submitted to a rating type (*irony* versus *sarcasm*) by repetition type (speaker versus listener) split-plot analysis of variance. In this analysis, rating type is a between-subject factor and repetition type is a within-subject factor. It was found that the effect of rating type was not significant ($F(1, 28) = .07$, $p > .05$), the effect of repetition type was significant ($F(1, 28) = 6.39$, $p < .05$), and the interaction between rating type and repetition type was also significant ($F(1, 28) = 7.61$, $p < .05$). The nature of this interaction (shown in Figure 1) was examined by calculating tests of simple main effects using the Tukey procedure. With respect to the sarcasm ratings, it was found that the passages in which the speaker repeated his or her own erroneous prediction ($M = 4.90$, $SD = 1.34$) were rated as less sarcastic ($F(2, 28) = 5.28$, $p < .05$) than the passages in which the speaker repeated a listener's erroneous

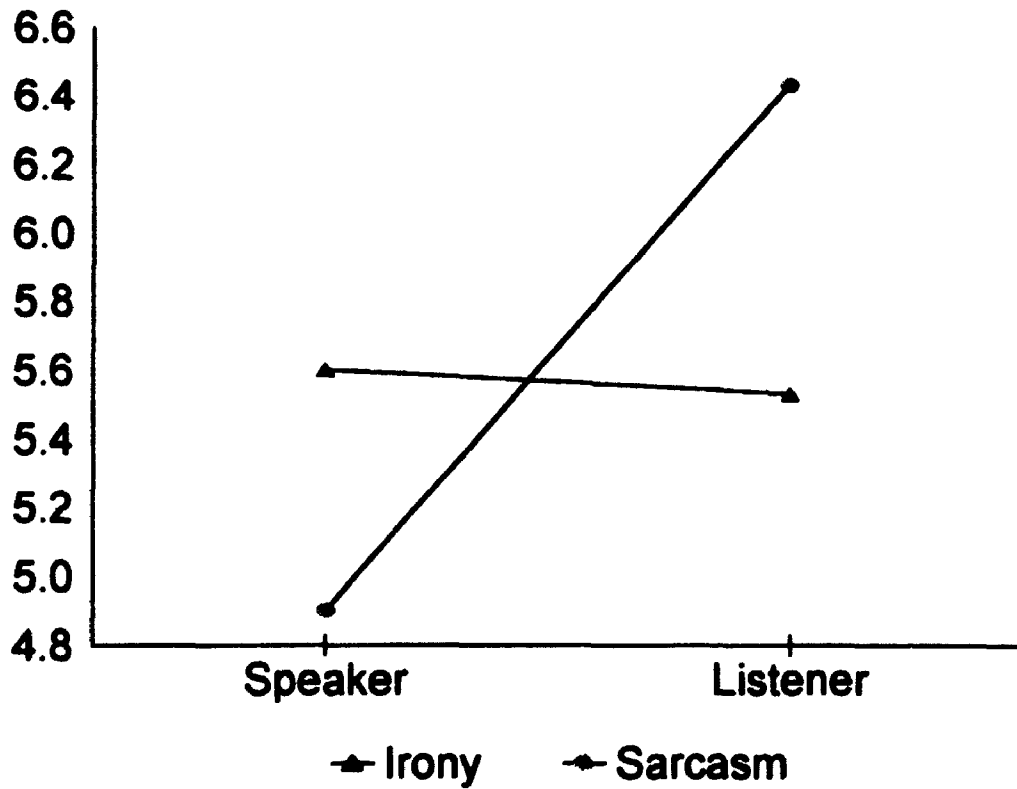


Figure 1. The Effect of Repetition Type (Speaker vs. Listener) on Irony and Sarcasm Goodness-of-Example Ratings.

prediction ($M = 6.43$, $SD = 0.73$). However, with respect to the irony ratings, the passages in which the speaker repeated his or her own erroneous prediction ($M = 5.60$, $SD = 1.24$) and the passages in which the speaker repeated a listener's erroneous prediction ($M = 5.53$, $SD = 1.71$) were equally ironic. Thus, the nature of the interaction was such that the manipulation of repetition type had a significant effect on ratings only in the sarcasm rating group and not in the irony rating group. The presence of this interaction effect, revealing that irony and sarcasm ratings are differentially affected by the manipulation of repetition type, suggests that *irony* and *sarcasm* are terms for different psychological constructs.

The simple main effect for the sarcasm ratings suggests that a speaker's repetition of his or her own erroneous prediction is construed as less sarcastic than a speaker's repetition of a listener's erroneous prediction. This finding is consistent with the hypothesis that, when interpreting the purpose of a speaker's remark, listeners do not expect a speaker to be self-deprecating. As a result, the speaker is not perceived as a victim of serious ridicule when repeating his or her own erroneous prediction. Furthermore, given that the simple main effect for irony ratings was not significant, the nature of the interaction suggests that the concept of victim is a characteristic of the psychological construct associated with the term *sarcasm* but not a characteristic of the psychological construct associated with the term *irony*. This interpretation is quite consistent with the distinction between irony and sarcasm made by Kreuz and Glucksberg (1989).

The difference in the relevance of the concept of victim suggested by the interaction effect is a clear indication that the terms *irony* and *sarcasm* are not

interchangeable with regard to their psychological meaning. Because this finding has implications for the validity of any research that has considered *irony* and *sarcasm* to be psychologically synonymous terms, or has casually neglected to distinguish between *irony* and *sarcasm*, it would be prudent to undertake a second investigation in which the equivalence of irony and sarcasm as psychological constructs is tested. If a similar interpretation is afforded by a second experiment that employs a substantially different methodology, it would greatly substantiate claims of inequivalence of the terms *irony* and *sarcasm*.

EXPERIMENT TWO

As Pedhazur and Schmelkin (1991) note, the measurement of psychological concepts is always indirect and each particular measure of a concept serves as an indicator of the psychological concept rather than a direct measure of the concept. The external validity of conclusions made on the basis of the measurement of a concept depends, in part, on the extent to which the method of measurement reflects the diversity and complexity of the concept under investigation. It is reasonable to suppose that the use of multiple indicators would measure more of the diversity and complexity of a concept than the use of a single indicator, thereby enhancing the generalizability of the conclusions made about the concept. The statistical analyses used to test the hypotheses described in the following sections involve the use multiple indicators to measure the concepts under investigation. There were three hypotheses examined in experiment two, each explained separately below.

Hypothesis One

In experiment one, it was found that the construct associated with the term *irony* and the construct associated with the term *sarcasm* were affected differently by the manipulation of whether a speaker repeated his or her own erroneous prediction or repeated a listener's erroneous prediction. The nature of the interaction suggested that the term *sarcasm*, but not the term *irony*, is

associated with the use of an utterance to convey ridicule. It was assumed in experiment one that a speaker's repetition of a listener's erroneous prediction served to ridicule the specific listener who made the prediction.

One purpose of this second experiment was to test the assumption that repetition of a listener's erroneous prediction is a means of ridiculing the specific listener who made the prediction. This hypothesis was examined by having participants rate the degree to which two different listeners were ridiculed by a speaker's remark. Participants rated the degree to which the speaker's remark was intended to ridicule the listener who actually made the prediction and also rated the degree to which the speaker's remark was intended to ridicule a second listener who did not make the prediction. Were it found that the listener who actually made the prediction was ridiculed to a greater extent than the second listener who did not make the prediction, it would substantiate the claim of the Echoic Reminder Theory (Kreuz & Glucksberg, 1989) that a speaker's repetition of a listener's erroneous prediction serves to ridicule the specific listener who made the prediction. This element of the Echoic Reminder Theory is especially germane to the issue of whether *irony* and *sarcasm* are terms for the same psychological construct because the results of experiment one suggest that the concept of victim is associated with the term *sarcasm* but is not associated with the term *irony*.

Hypothesis Two

A second purpose of experiment two was to test whether the repetition of a listener's erroneous prediction is construed in terms of the speaker pretending to be unaware of the listener's prediction (Clark & Gerrig, 1984) or in terms of the speaker making reference to the listener's prediction (Kreuz & Glucksberg, 1989, Sperber & Wilson, 1981; Sperber, 1984). According to the Pretence Theory (Clark & Gerrig, 1984), people interpret the repetition of an erroneous prediction in terms of the speaker pretending to be unaware of the prediction rather than in terms of the speaker making reference to the prediction. In contrast, both the Echoic Reminder Theory (Kreuz & Glucksberg, 1989) and the Mention Theory (Sperber & Wilson, 1981; Sperber, 1984) contend that a speaker makes reference to the listener's erroneous prediction by repeating it. Although either interpretation can be justified in theoretical terms, there is no empirical evidence demonstrating that people actually construe a speaker's repetition of a listener's erroneous prediction in accord with either theoretical account. As part of experiment two, these opposing theoretical accounts were examined by having participants rate the degree to which the speaker was pretending to be unaware of the prediction and the extent to which the speaker was making reference to the prediction. A comparison of the extent to which participants hold these interpretations provides a test of whether the concept of pretence and mention are equivalent psychological interpretations. In choosing between the concepts of pretence and mention as psychological interpretations of a speaker's repetition of a listener's erroneous prediction, it would be

appropriate to prefer the concept that best characterized participants' interpretation of a speaker's repetition of a listener's erroneous prediction.

Hypothesis Three

The third purpose of experiment two was to examine, using a different methodological approach than used in experiment one, whether *irony* and *sarcasm* were terms for the same psychological construct. In experiment two, the concepts of mention, audience, victim and goodness-of-example were measured as factors in a confirmatory factor analysis. The correlations between the goodness factor and the mention, audience and victim factors were examined to determine whether the relationship between goodness and each of the other factors differed as a function of whether the term *irony* or the term *sarcasm* was used. The logic of this test is the same as in experiment one. If the terms *irony* and *sarcasm* are psychologically synonymous, the manipulation of these terms should not affect the nature of the relationship between the goodness factor and the factors of mention, audience, and victim. For example, if the terms *irony* and *sarcasm* draw reference to the same psychological construct, the correlation between the goodness factor and the victim factor when estimated on the basis of *irony* goodness-of-example ratings should not differ significantly from the correlation obtained when estimated on the basis of *sarcasm* goodness-of-example ratings. Furthermore, the manipulation of the terms *irony* and *sarcasm* should not affect the correlation between the goodness factor and the mention factor, and it should not affect the correlation between the

goodness factor and the audience factor. Were it found that the mention factor, the audience factor, or victim factor was correlated with the goodness factor to a different degree when the term *irony* was used than when the term *sarcasm* was used, this finding would suggest that *irony* and *sarcasm* are associated with constructs that have different psychological meaning.

Method

Subjects

There were 200 students (138 women, 62 men) at the University of Western Ontario, ranging in age from 17 to 48 years ($M = 20.0$), who chose to participate in this experiment as partial fulfilment of an introductory psychology course requirement. Participants were randomly assigned to an irony rating condition or a sarcasm rating condition such that 100 participants were assigned to each condition.

Materials and Procedure

Six brief passages were written to serve as stimuli for this experiment. Each passage began with two people (A and B in the description that follows) talking about a recent newspaper report. In some passages, A and B agreed in their opinion of the issue; in other passages, A and B differed in their opinions of the issue. In all cases, A makes a prediction about another person's (C) opinion of the issue. Later, when C joins the conversation, his or her opinion of the issue is requested. In the concluding utterance of each passage, B repeats A's

prediction concerning C's opinion. In all cases, the prediction made about C's opinion was incorrect. That is, C's opinion always differed from what was predicted by A.

Three variations of this general formula were written to serve as multiple indicators in multivariate tests of the three hypotheses. In the first variation, A and B held the same opinion of the issue, but the nature of the prediction was that C held an opposing opinion. That is, A and B were in agreement about the issue, but C was predicted to be in disagreement. In the second variation, A and B held the same opinion and the nature of the prediction was that C also held this opinion. That is, not only did A and B agree on the issue, but C was also predicted to be in agreement. In the third variation, A and B held opposing opinions and A predicted that C would share his or her opinion about the issue. That is, A and B differ in their opinions, and C was predicted, by A, to agree with A. In all three variations, B is the speaker who repeats the incorrect prediction. Six passages were prepared using these three variations by writing two passages for each variation. These passages are given in Appendix B. The general format of these passages is similar to materials used in previous research (e.g., Jorgensen, Miller & Sperber, 1984; Katz & Lee, 1993; Kreuz & Glucksberg, 1989).

Consider the following passage about World Bank loans for development projects in Third World countries:

The World Bank provides loans for development projects in Third World countries. It has recently been criticized for financing projects that damage the environment.

"I read in the newspaper," said Carol, "that more than a third of the projects financed by the World Bank turn out to be unsuccessful. In my opinion, there is no justification for environmental damage caused by development projects, especially unsuccessful ones."

"I disagree," said Alice, "the majority of international developmental projects are successful and, in my opinion, the economic benefits outweigh the environmental costs, even when the project turns out to be unsuccessful."

"Most people value the environment more than you do, Alice", commented Carol. "I'm sure that Susan, for one, believes that there is no justification for environmental damage."

Later, when they met Susan, Carol asked her about her opinion of this issue.

"I think we have to accept some environmental damage as the price of economic development in the Third World," answered Susan.

Alice looked at Carol and said, "I'm sure that Susan, for one, believes there is no justification for environmental damage."

In the above passage, Carol and Alice hold different opinions of whether the economic benefits of development projects outweigh their environmental costs. Carol predicts that Susan believes there is no justification for environmental damage. Susan's opinion turns out to be that some environmental damage is an acceptable price for economic development. The passage concludes with Alice repeating Carol's prediction.

Printed below each passage was a series of statements regarding the concluding utterance of the passage. There was one statement corresponding to each of the concepts of mention, pretence, audience, victim (ridicule of Person A) and goodness-of-example. In addition, there was a sixth statement concerning ridicule of Person C. Responses to this sixth statement were compared to responses to the victim statement as a test of hypothesis one. With respect to goodness-of-example, half of the participants ($n = 100$) rated whether the concluding utterance was a good example of irony, while the other participants ($n = 100$) rated whether the concluding utterance was a good example of sarcasm.

For example, in the World Bank passage, people in the *irony* goodness-of-example group rated the degree to which they agreed or disagreed with the following statements about Alice's concluding remark "I'm sure that Susan, for one, believes there is no justification for environmental damage":

- In making this remark, Alice was referring to Carol's prediction that Susan would share Carol's opinion of development projects that damage the environment.
- Alice made this remark to pretend that she doesn't know Susan has a different opinion than Carol of development projects that damage the environment.
- Susan doesn't understand the real meaning of this remark.
- Alice was mocking and ridiculing Carol with this remark.
- This remark is a good example of irony.
- Alice was mocking and ridiculing Susan with this remark.

The first four statements served as measures of the concepts of mention, pretence, audience, victim and goodness-of-example, respectively. The last statement served as a measure of ridicule of Person C.

Participants rated the extent to which they agreed or disagreed with each statement using a seven point scale, where a value of one was labelled "strongly disagree" and a value of seven was labelled "strongly agree". The middle point of the scale was labelled "undecided", the values of three and five were labelled "slightly disagree" and "slightly agree" respectively, and the values of two and six were respectively labelled "moderately disagree" and "moderately agree".

The six passages along with two filler passages were assembled into booklets. The purpose of the filler passages was to add variety to the materials that the participants read. The two filler passages used in this experiment were

designed to be unlike the experimental passages: no prediction was made in the filler passages and the final utterance of the filler passages, while being counterfactual, did not repeat a previously made remark. It is worth noting that the number of filler passages used in previous research varies widely. In Kreuz and Glucksberg (1989), for instance, half of the 20 passages read by participants were filler passages. In Katz and Lee (1993), all of the 20 passages read by participants were experimental passages; filler passages were not used.

Each passage appeared on a separate page. The statements were listed in a different random order below each of the eight passages. The pages were sorted into ten different random orders, with ten participants in each group (irony and sarcasm) randomly assigned to each of the ten random orders. The following instructions were given on the cover page:

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 passages. Each passage describes a conversation. The topic of conversation is different in each passage. The conversations always involve three people and, in this respect, the passages resemble one another. Read each passage at your own pace. Below each passage there is a series of statements referring to the concluding remark made by one of the characters. We'd like you

to rate the degree to which you agree (or disagree) with each of these statements....

Participants were informed of a short comprehension test that followed completion of the passages. This test provided a means of evaluating whether the two groups of participants were equally diligent in reading the passages. In the test, participants indicated whether a series of statements were true or false based on the information given in the passages. Each true or false question was based on a different passage.

Results and Discussion

Before examining the hypotheses of theoretical interest, it is first necessary to establish that the irony and sarcasm groups were equally diligent in completing the task. Establishing such equivalence makes it possible to interpret differences found in later analyses solely in terms of the concepts. Analysis of the comprehension questions indicated that participants in both the irony and sarcasm groups had little difficulty understanding the experimental passages. The mean percent correct for the irony group ($M = 82.5$, $SD = 16.3$) was not significantly different ($t(198) = 1.80$, $p > .05$) than the mean percent correct for the sarcasm group ($M = 86.7$, $SD = 15.0$), suggesting that the two groups were equally diligent in reading the passages.

Hypothesis One

According to the Echoic Reminder Theory (Kreuz & Glucksberg, 1989), a speaker's repetition of a listener's erroneous prediction serves to ridicule the specific listener who made the prediction. This hypothesis was examined by having participants rate the degree to which the speaker's remark was intended to ridicule the listener who actually made the prediction and the degree to which the speaker's remark was intended to ridicule a second listener who did not make the prediction. On the basis of the Echoic Reminder Theory, it was expected that participants would construe the listener who actually made the prediction as being ridiculed to a greater extent than the second listener who did not make the prediction.

This hypothesis was tested by performing a multivariate analysis of variance. In this analysis, the type of listener was a within subject independent variable with two nominal levels; it contrasted participants' ratings of the degree to which the speaker was ridiculing the listener who actually made the prediction and participants' ratings of the degree to which the speaker was ridiculing the listener who did not make the prediction. Participants' ratings of the three passage variations were the dependent variables in this analysis.

The type of listener had a significant multivariate effect ($F(3, 197) = 99.62, p < .05$). Each of the three variations were highly related with the canonical variable that differentiated the two types of listener. The squared correlations of the dependent variables with the canonical variable ranged from

.44 for the second variation to .78 for the third variation. The univariate effects of type of listener were also significant. In the case of the first passage variation, the listener who made the prediction ($M = 5.43$, $SD = 1.75$) was perceived by participants as being ridiculed to a greater degree ($F(1, 199) = 212.72$, $p < .05$) than the listener who did not make the prediction ($M = 2.37$, $SD = 1.69$). Similarly for the second passage variation, the listener who made the prediction ($M = 4.87$, $SD = 1.87$) was perceived by participants as being ridiculed to a greater degree ($F(1, 199) = 133.02$, $p < .05$) than the listener who did not make the prediction ($M = 2.50$, $SD = 1.61$). Finally, in the case of the third passage variation, the listener who made the prediction ($M = 5.21$, $SD = 1.61$) was perceived by participants as being ridiculed to a greater degree ($F(1, 199) = 236.32$, $p < .05$) than the listener who did not make the prediction ($M = 2.32$, $SD = 1.60$). These results are strong evidence that a speaker's repetition of a listener's erroneous prediction serves to ridicule the specific listener who made the prediction, and it suggests that sarcasm is not perceived as an indiscriminate verbal attack.

Hypothesis Two

The second purpose of experiment two was to test whether the repetition of a listener's erroneous prediction is construed in terms of the speaker pretending to be unaware of the listener's prediction (Clark & Gerrig, 1984) or in terms of the speaker making reference to the listener's prediction (Kreuz &

Glucksberg, 1989, Sperber & Wilson, 1981; Sperber, 1984). These opposing interpretations were examined by having participants rate the degree to which the speaker was pretending to be unaware of the prediction and the degree to which the speaker was making reference to the listener's prediction. Were it found that participants believed the speaker was pretending to be unaware of the listener's prediction rather than making reference to the listener's prediction, this result would be consistent with the Pretence Theory (Clark & Gerrig, 1984). On the other hand, were it found that participants believed the speaker was making reference to the listener's prediction rather than pretending to be unaware of the listener's prediction, this results would be consistent with the Mention Theory (Sperber & Wilson, 1981; Sperber, 1984) and the Echoic Reminder Theory (Kreuz & Glucksberg, 1989).

A multivariate analysis of variance was performed to test which of these two interpretations better characterized participants' interpretation of a speaker's repetition of a listener's erroneous prediction. In this analysis, the type of interpretation was a within subject independent variable with two nominal levels; it contrasted participants' ratings of the degree to which the speaker was pretending to be unaware of the listener's prediction and participants' ratings of the degree to which the speaker was making reference to the listener's prediction. Participants' ratings of the three passage variations were the dependent variables in this analysis.

The type of interpretation had a significant multivariate effect ($F(3, 197) = 143.05, p < .05$). Each of the three variations were highly related with the

canonical variable that differentiated the two types of interpretation. The squared correlations of the dependent variables with the canonical variable ranged from .49 for the third variation to .79 for the first variation. The univariate effects of type of interpretation were also significant. In the case of the first passage variation ($E(1, 199) = 341.22, p < .05$), participants believed the speaker was making reference to the listener's prediction ($M = 5.57, SD = 1.51$) rather than pretending to be unaware of the listener's prediction ($M = 2.60, SD = 1.57$). Similarly for the second passage variation ($E(1, 199) = 322.52, p < .05$), participants believed the speaker was making reference to the listener's prediction ($M = 5.85, SD = 1.44$) rather than pretending to be unaware of the listener's prediction ($M = 2.70, SD = 1.63$). Finally, in the case of the third passage variation ($E(1, 199) = 213.65, p < .05$), participants believed the speaker was making reference to the listener's prediction ($M = 5.30, SD = 1.63$) rather than pretending to be unaware of the listener's prediction ($M = 2.75, SD = 1.61$).

These results are contrary to the prediction formed on the basis of the Pretence Theory (Clark & Gerrig, 1984) that the repetition of a listener's erroneous prediction would be interpreted in terms of the speaker pretending to be unaware of the listener's prediction rather than making reference to the listener's prediction. However, these results are quite consistent with both the Echoic Reminder Theory (Kreuz & Glucksberg, 1989) and the Mention Theory (Sperber & Wilson, 1981; Sperber, 1984); in these theories, a speaker draws reference to the listener's erroneous prediction by repeating it. Therefore, the

psychological interpretation of a speaker's repetition of a listener's erroneous prediction is best characterized in terms of concept of mention rather than the concept of pretence.

Hypothesis Three

The third purpose of experiment two was to examine, using a different methodological approach than used in experiment one, whether *irony* and *sarcasm* were terms for the same psychological construct. As was the case for testing hypotheses one and two, a multivariate approach was used for testing the final hypothesis.

A multivariate analysis of variance and a series of confirmatory factor analyses were performed as tests of whether *irony* and *sarcasm* were terms for the same psychological construct. The multivariate analysis of variance addressed the issue of whether the degree to which the passages were judged to be good examples differed as a function of whether the term *irony* or the term *sarcasm* was used when eliciting the ratings. If *irony* and *sarcasm* are psychologically equivalent terms, the effect of manipulating these terms when eliciting goodness-of-example ratings should not be significant.

The confirmatory factor analyses were performed to test whether the factors representing the concepts of mention, audience and victim have the same correlation with the factor representing goodness when measured on the basis of *irony* goodness-of-example ratings as when measured on the basis of

sarcasm goodness-of-example ratings. Were it found, for instance, that the correlation between the victim factor and the goodness factor was different when the term *irony* was used to elicit the goodness-of-example ratings than when the term *sarcasm* was used to elicit the goodness-of-example ratings, this result would indicate that these terms are associated with different constructs.

Multivariate analysis of variance. In the multivariate analysis of variance, the term used to elicit the goodness-of-example ratings was a between-subjects independent variable with two nominal levels; it contrasted participants' ratings of the degree to which the speaker's remark was a good example of irony and participants' ratings of the degree to which the speaker's remark was a good example of sarcasm. Participants' ratings of the three passage variations were the dependent variables in this analysis.

The manipulation of the term used to elicit the goodness-of-example ratings had a significant multivariate effect ($F(3, 196) = 22.15, p < .05$). Each of the three variations were highly related with the canonical variable that differentiated the ratings of *irony* goodness-of-example and *sarcasm* goodness-of-example. The squared correlations of the dependent variables with the canonical variable ranged from .61 for the second variation to .86 for the first variation. The univariate effects were also significant. The goodness-of-example ratings of the first passage variation were higher ($F(1, 198) = 58.08, p < .05$) when the term *sarcasm* was used ($M = 5.62, SD = 1.45$) than when the term *irony* was used ($M = 3.94, SD = 1.64$). Similarly for the second passage variation, the goodness-of-example ratings were higher ($F(1, 198) = 41.16, p <$

.05) when the term *sarcasm* was used ($M = 5.35$, $SD = 1.57$) than when the term *irony* was used ($M = 3.92$, $SD = 1.59$). Finally, the goodness-of-example ratings of the third passage variation were higher ($F(1, 198) = 42.53$, $p < .05$) when the term *sarcasm* was used ($M = 5.33$, $SD = 1.54$) than when the term *irony* was used ($M = 3.88$, $SD = 1.61$). The significant differences found between *irony* goodness-of-example ratings and *sarcasm* goodness-of-example ratings demonstrates that *irony* and *sarcasm* are not psychologically interchangeable terms.

Confirmatory factor analyses. A series of confirmatory factor analyses were performed to test whether the factors representing the concepts of mention, audience and victim have the same correlation with the factor representing goodness when measured on the basis of *irony* goodness-of-example ratings as when measured on the basis of *sarcasm* goodness-of-example ratings. The three passages variations served as indicators of the factors. Two-group (*irony* versus *sarcasm*) confirmatory factor analyses were performed using LISREL (Jöreskog & Sörbom, 1993). The covariance counterparts of the correlation matrices presented in Table 1 were analyzed using maximum likelihood estimation.

Table 2 gives the within group completely standardized factor loadings and factor intercorrelations for an initial analysis in which no constraints were imposed on any of the estimated parameters in the two groups. This analysis provided a good fit to the data ($\chi^2(96) = 212.40$, $p < .05$; GFI = .85; CFI = .85).

Table 1

Correlations Among the Indicator Variables in Irony and Sarcasm Groups

	Goodness			Mention			Audience			Victim		
	G1	G2	G3	M1	M2	M3	A1	A2	A3	V1	V2	V3
Irony Group												
G1	1.00											
G2	.72	1.00										
G3	.76	.69	1.00									
M1	.08	.04	.17	1.00								
M2	-.03	.02	-.07	.21	1.00							
M3	.10	.08	.15	.30	.51	1.00						
A1	.00	.02	.03	.12	.20	.10	1.00					
A2	.10	.07	.06	.06	.19	.22	.71	1.00				
A3	.04	.03	.09	-.17	.15	.09	.60	.64	1.00			
V1	-.01	.00	.07	.23	.12	.22	.27	.28	.22	1.00		
V2	.03	.07	.04	-.01	.39	.33	.06	.10	.19	.56	1.00	
V3	-.03	.17	.17	.10	.26	.52	.14	.15	.19	.33	.35	1.00
<i>M</i>	3.94	3.92	3.88	5.48	5.91	5.28	4.26	4.39	4.56	5.51	4.95	5.26
<i>SD</i>	1.64	1.59	1.61	1.52	1.39	1.70	1.80	1.68	1.64	1.70	1.92	1.54
Sarcasm Group												
G1	1.00											
G2	.57	1.00										
G3	.30	.39	1.00									
M1	.10	.12	.21	1.00								
M2	.17	.26	.41	.40	1.00							
M3	.09	.12	.39	.44	.41	1.00						
A1	.39	.30	.05	.17	.20	.16	1.00					
A2	.28	.30	.03	.25	.21	.20	.60	1.00				
A3	.18	.15	-.07	.25	.05	.05	.52	.47	1.00			
V1	.28	.26	.20	.20	.35	.15	.17	.15	.05	1.00		
V2	.29	.48	.28	.12	.31	.22	.15	.25	.21	.60	1.00	
V3	.04	.09	.54	.20	.34	.35	-.03	.03	-.07	.36	.39	1.00
<i>M</i>	5.61	5.35	5.33	5.66	5.80	5.32	4.95	4.62	4.46	5.35	4.78	5.15
<i>SD</i>	1.45	1.57	1.54	1.50	1.51	1.56	1.54	1.68	1.59	1.81	1.82	1.68

Note: The digit in each variable name is the passage variation.

Table 2

**Within Group Completely Standardized Factor Loadings and Factor Correlations
for Initial Confirmatory Factor Analysis**

Factor	Loadings of Passages			Factor Correlations			
	Passage 1	Passage 2	Passage 3	Goodness	Audience	Mention	Victim
Irony Group							
Goodness	.89	.81	.85	1.00			
Audience	.81	.88	.73	.08	1.00		
Mention	.34	.62	.83	.12	.25	1.00	
Victim	.68	.73	.56	.08	.31	.60	1.00
Sarcasm Group							
Goodness	.69	.83	.47	1.00			
Audience	.82	.74	.62	.44	1.00		
Mention	.62	.68	.64	.38	.37	1.00	
Victim	.71	.85	.48	.57	.27	.48	1.00

The pattern of factor loadings on the goodness factor and the correlations among the factors are considered below.

This pattern of loadings on the goodness factor was somewhat different in the irony group than in the sarcasm group. In the irony group, the three passage variations differed little in their loadings on the goodness factor, ranging from .81 to .89. This result suggests that the passage variations were equally strong indicators of the construct associated with the term *irony*. In the sarcasm group, on the other hand, the loadings of the passage variations on the goodness factor varied more substantially. These loadings ranged from .47 for the third passage variation to .83 for the second passage variation. This result suggests that the passage variations were not equally strong indicators of the construct associated with the term *sarcasm*.

The correlations between the goodness factor and the audience, mention and victim factors varied substantially between the two groups. In the irony group, the correlations between the goodness factor and the audience factor ($r = .08$), the mention factor ($r = .12$), and the victim factor ($r = .08$) were not significant. In the sarcasm group, on the other hand, the correlations between the goodness factor and the audience factor ($r = .44$), the mention factor ($r = .38$), and the victim factor ($r = .57$) were significant. This finding suggests that *irony* and *sarcasm* are terms for different constructs because the significance of the research result depended on the term used.

The hypothesis that the correlations between the goodness factor and the audience, mention and victim factors were different in the two groups was tested

in a second confirmatory factor analysis by forcing these correlations to be equal in the two groups. The difference between the chi-square goodness-of-fit statistic in the initial analysis and the chi-square goodness-of-fit statistic in the second analysis provides a test of difference between the correlations in the two groups. It was found that the second analysis did not fit the data as well as the initial analysis ($\Delta\chi^2 (3) = 12.16, p < .05$), indicating that, as a set, the correlations were significantly lower in the irony group than in the sarcasm group. Further analyses indicated that the source of the significant decrement in fit was the inequivalence of the correlation between the goodness factor and the victim factor. When each of the three correlations was tested individually, controlling type one error at .05 for the set of three tests, the effect of equating the correlation between the goodness factor and the victim factor was significant ($\Delta\chi^2 (1) = 8.96$), whereas the effect of equating the correlation between the goodness factor and the audience factor was not significant ($\Delta\chi^2 (1) = 5.02$), and the effect of equating the correlation between the goodness factor and the mention factor was not significant ($\Delta\chi^2 (1) = 1.97$). The correlation between the goodness factor and the audience factor was .24 when equated in the two groups ($z = 2.95, p < .05$), and the correlation between the goodness factor and the mention factor was .23 when equated in the two groups ($z = 2.63, p < .05$).

The results of the multivariate analysis of variance and the confirmatory factor analyses support the conclusion that *irony* and *sarcasm* are terms for different psychological constructs. The results of the multivariate analysis of variance indicated the stimuli used in experiment two were better examples of

sarcasm than examples of *irony*. The results of the confirmatory factor analyses indicated that concept of victim is positively correlated with *sarcasm* goodness but is not correlated with *irony* goodness. These findings are a clear indication that the terms *irony* and *sarcasm* are not interchangeable with regard to their psychological meaning.

A substantially different method of examining the relationship between *irony* and *sarcasm* was used in experiment two than in experiment one. The fact that both experiments afforded the same conclusion greatly substantiates the claim that the *irony* and *sarcasm* are terms for different psychological constructs.

GENERAL DISCUSSION

The main purpose of this dissertation has been to clarify the relationship between the terms *irony* and *sarcasm*. As discussed below, the main finding of this dissertation is that *irony* and *sarcasm* are related terms that are used differentially with respect to the concept of victim.

The results of experiment two suggested that *irony* and *sarcasm* are commensurate terms with respect to the concepts of mention and audience. The mention factor was positively correlated with the goodness factor such that participants who believed a speaker was referring to an earlier-made prediction tended to give higher goodness-of-example ratings. The magnitude of this correlation did not differ significantly between the irony rating group and the sarcasm rating group. A positive correlation was also found between the audience factor and the goodness factor such that participants who believed a speaker was misunderstood by one of the listeners tended to give higher goodness-of-example ratings. Again, the magnitude of this correlation did not differ significantly between the two rating groups. These findings suggest that the concepts of mention and audience are aspects of the psychological meaning of the term *irony* and the term *sarcasm*.

The results of experiments one and two indicate that the terms *irony* and *sarcasm* are used differentially with respect to the concept of victim. In experiment one, it was found that a speaker's repetition of his or her own erroneous prediction was construed as less sarcastic than a speaker's repetition

of a listener's erroneous prediction. In interpreting this result, it was suggested that participants did not expect speakers to be self-ridiculing and, consequently, did not consider a speaker's repetition of his or her own erroneous prediction to be as good an example of sarcasm as a speaker's repetition of a listener's erroneous prediction because the former represented a more ambiguous way of expressing ridicule than the latter. Furthermore, it was found that a speaker's repetition of a listener's erroneous prediction and a speaker's repetition of his or her own erroneous prediction were equally good examples of irony, suggesting that participants' use of the term *irony* is not associated with the concept of victim. This interpretation of the results of experiment one is entirely consistent with the finding of experiment two that the victim factor was positively correlated with the *sarcasm* goodness factor and was uncorrelated with the *irony* goodness factor. In experiment two, the perception that the speaker intended to ridicule the listener who made the prediction was associated with higher *sarcasm* goodness-of-example ratings, but this perception was not associated with *irony* goodness-of-example ratings. Thus, both experiment one and experiment two provided empirical evidence that the terms *irony* and *sarcasm* are used differentially with respect to the concept of victim.

It is interesting to note that the differential relevance of the concept of victim is evident in the early histories of the terms *sarcasm* and *irony*. In definitions of these terms found in early English dictionaries of the period 1500 to 1755, the term *sarcasm*, although considered near in meaning to *irony*, was seen as a bitter verbal attack, a characteristic not associated with the term *irony*

(Knox, 1961). This contrast is also evident in the meanings of these terms in Greek antiquity. As noted in the introduction, the word *sarcasm* referred to a bitter form of speech, whereas the word *irony* referred to a positively valued form of speech associated with Socrates' method of revealing truth by means of contradictory assertions.

Evaluation of Current Theories

Experiment one and experiment two provide a basis for evaluating the Pretence Theory (Clark & Gerrig, 1984), the Mention Theory (Jorgensen, Miller & Sperber, 1984; Sperber, 1984; Sperber & Wilson, 1981), and the Echoic Reminder Theory (Kreuz & Glucksberg, 1989). Each theory is discussed in relation to the results of the experiments, and future research is suggested in the context of each theory.

The Pretence Theory. The central hypothesis of the Pretence theory (Clark & Gerrig, 1984) is that a speaker's repetition of a listener's erroneous prediction is interpreted to be an instance of pretence rather than an instance of mention. This hypothesis was tested in experiment two by contrasting the degree to which the speaker was pretending to be unaware of the listener's prediction and the degree to which the speaker was making reference to the listener's prediction. It was found that participants believed the speaker was making reference to the listener's prediction rather than pretending to be unaware of the listener's prediction. This result suggests that the psychological

interpretation of a speaker's repetition of a listener's erroneous prediction is better characterized by the concept of mention than the concept of pretence.

The concept of pretence is a crucial aspect of the Pretence theory. It is the concept of pretence, as an alternative to the concept of mention, that clearly distinguishes the Pretence Theory (Clark & Gerrig, 1984) from the Mention Theory (Sperber & Wilson, 1981; Sperber, 1984) and the Echoic Reminder Theory (Kreuz & Glucksberg, 1989). Therefore, without substantiation of the concept of pretence in future research, the Pretence Theory can not be considered a tenable account of irony or sarcasm. An effort to substantiate the concept of pretence should consider alternate forms of irony and sarcasm than those typifying the research literature at present. The standard form of utterance studied to date involves repetition of an erroneous prediction. Empirical evidence indicates that an utterance that repeats an erroneous prediction is interpreted as an instance of mention rather than an instance of pretence. It remains an empirical issue whether other forms of irony and sarcasm are interpreted in terms of pretence rather than mention.

The Mention Theory. The Mention theory (Jorgensen, Miller & Sperber, 1984; Sperber, 1984; Sperber & Wilson, 1981) can accommodate the conclusion that *irony* and *sarcasm* are commensurate terms with respect to the concept of mention. Jorgensen, Miller and Sperber scored an utterance as having been judged ironic if any of the terms *ironic*, *sarcastic*, *facetious*, or *ridicule* were used to describe the utterance. Using this operational definition of irony, it was found that passages were more likely to be judged as ironic when they involved

mention than when they did not involve mention. The treatment of the terms *ironic* and *sarcastic* as measures of the same construct is substantiated to some degree by the current finding that the mention factor was positively correlated with the *irony* goodness factor and the *sarcasm* goodness factor. In this respect, the conclusion that *irony* and *sarcasm* are commensurate terms with respect to the concept of mention is consistent with Jorgensen, Miller and Sperber's (1984) operational definition of irony.

However, it is important to recall that the stimuli used by Jorgensen, Miller and Sperber (1984) to test the Mention theory of irony involved repetition of a listener's erroneous prediction. The present research suggests that this sort of utterance serves to ridicule the listener who made the prediction. Although Jorgensen, Miller and Sperber included the term *ridicule* as part of their operational definition of irony, the present research indicates that the term *ridicule*, as subsumed by the concept of victim, is associated with the psychological meaning of the term *sarcasm*, and that the term *ridicule* is not associated with the psychological meaning of the term *irony*. Given the nature of the stimuli used, it is possible to speculate that participants in the Jorgensen, Miller and Sperber (1984) study may have used the terms *sarcastic* or *ridicule* more frequently than the term *ironic*. Were it the case that participants used either of the terms *sarcastic* or *ridicule* more frequently than the term *irony* when describing a speaker's repetition of an erroneous prediction, it would suggest that the concept of mention was more strongly associated in the minds of participants with a term indicative of the concept of sarcasm than with a term

indicative of the concept of irony. A replication of the Jorgensen, Miller and Sperber study that excluded terms related to the concept of sarcasm, such as *sarcastic* and *ridicule*, would afford a more precise interpretation of the results of the study in terms of the psychological meaning of *irony*.

The Echoic Reminder Theory. The conclusion that *irony* and *sarcasm* are related terms that are used differentially with respect to the concept of victim is quite consistent with Kreuz and Glucksberg's (1989) notion that the intent of sarcastic irony is to hurt or wound, whereas the intent of non-sarcastic irony is to comment on widely held expectations such as the hope for good weather. In the Echoic Reminder theory (Kreuz & Glucksberg, 1989), the function of mention is to remind people of expectations. Sarcastic reminders draw attention to expectations that are strongly associated with a specific individual, whereas ironic reminders draw attention to expectations that are strongly associated with many individuals.

Individuals who have the same expectations are a type of community (Clark & Murphy, 1982). A speaker who mentions a community's expectation when the expectation appears to be false is not targeting a specific individual for ridicule. The expectations of a community have diffuse origins. A community's expectations are not strongly associated with any one member of the community. Therefore, a speaker who mentions a community's expectation when the expectation appears to be false is not ridiculing a specific individual for holding this expectation. Moreover, the mention of a community's expectation when the expectation appears to be false would not be a vehicle for ridiculing the

community for holding an erroneous expectation because it is unlikely that an occasional counterfactual instance would be sufficient to persuade members of the community that the expectation is erroneous. Therefore, the hypothesis that ironic reminders are mentions of community expectations provides an explanation for the lack of correlation found between *irony* goodness and the concept of victim because ironic reminders are not a means of ridiculing a specific individual for holding an erroneous expectation, and ironic reminders are not a means of ridiculing a community for holding an erroneous expectation.

In experiment two, it was also found that the passages were better examples of *sarcasm* than examples of *irony*. This result can be explained when it is considered that the term *sarcasm* is associated with a complex concept defined by the intersection of the concept of victim and the concepts associated with the term *irony*. Figure 2 depicts the nature of the relationship between sarcasm and irony in terms of the concept of victim and the concepts of mention and audience. As Lakoff (1987) notes, good examples of a complex concept are often poor examples of their component concepts. This relationship between a complex concept and a component concept is evinced, in experiment two, by the *irony* goodness-of-example ratings and the *sarcasm* goodness-of-example ratings. Higher goodness-of-example ratings were obtained when the term *sarcasm* was used to elicit the goodness-of-example ratings than when the term *irony* was used to elicit the goodness-of-example ratings. This result is consistent with the conclusion that the term *sarcasm* is associated with a complex concept defined by the intersection of the concept of victim and the

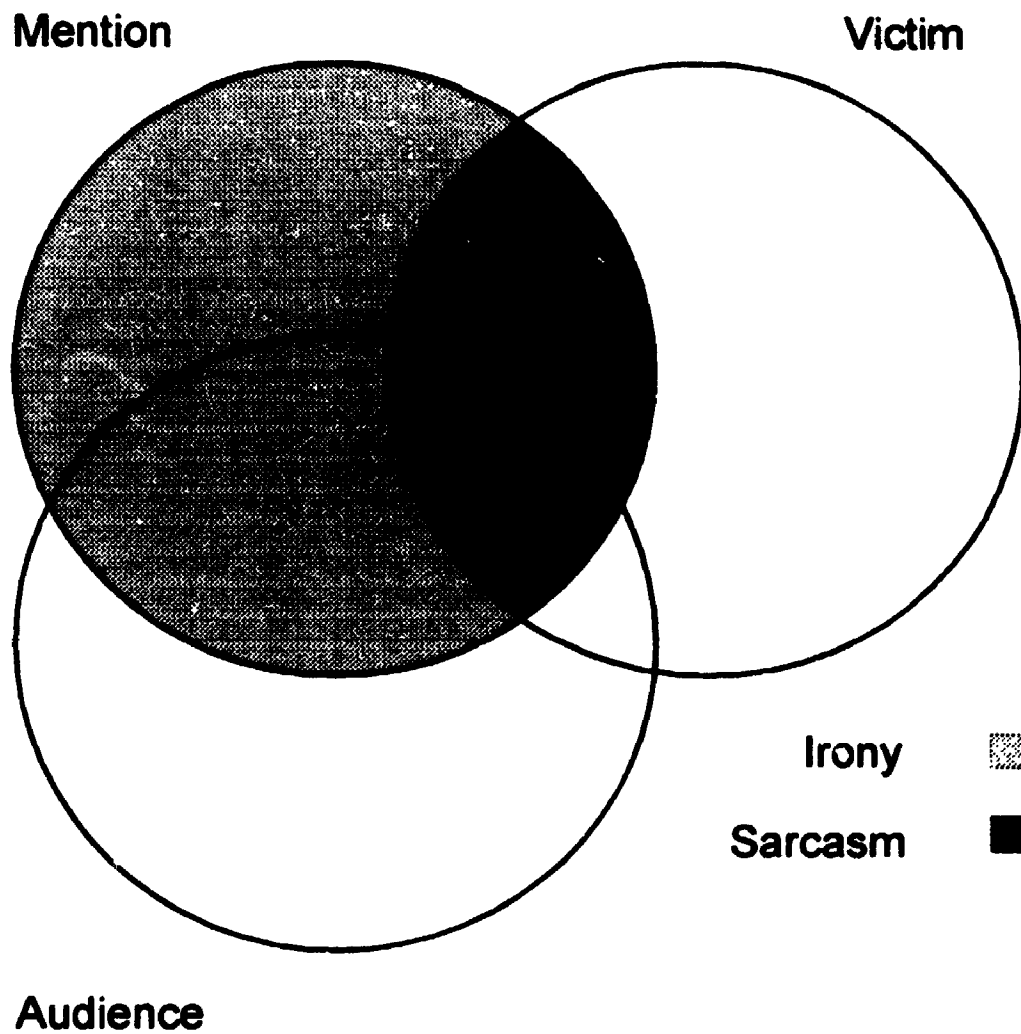


Figure 2. The Relationship Between Sarcasm and Irony in terms of the Concepts of Mention, Audience and Victim

concepts associated with the term *irony*.

In experiment two, it was found that the concept of audience had the same relationship with *sarcasm* goodness as it had with *irony* goodness. This finding is explained when it is considered that sarcasm and irony are both forms of reminder. Although ironic and sarcastic reminders can polarize an audience, it is unlikely that a polarized audience is an essential condition for an utterance to be ironic or sarcastic. Many utterances that create a polarized audience are not considered ironic nor sarcastic. There are a variety of deceptive utterances that achieve their effect by exploiting information that is only known by some listeners (Clark & Carlson, 1982). In addition, MacCormac (1985) argues that metaphoric utterances, especially novel ones, polarize an audience by relying on resemblances that are unnoticed by some listeners. Moreover, the results of experiment one indicated that a polarized audience is not essential for an utterance to be ironic or sarcastic. In experiment one, the stimuli always involved two people, both of whom were aware of an erroneous prediction having been made. Participants found these stimuli to be good examples of irony and sarcasm even though the audience was not polarized with respect to knowledge of the erroneous prediction.

Finally, it should be noted that ironic reminders are not necessarily verbal. In a recent paper, Lucariello (1994) describes situational forms of irony. An example of a situational irony is the circumstance of a bankrupt banker. In this example, the banker's situation is incongruent with the widely held expectation that bankers are prudent managers of money. It is parsimonious to conceive of

situational forms of irony as instances of reminder. The person who perceives the situation of a bankrupt banker is reminded of an expectation about the vocation of bankers that has proven to be erroneous. The form of this reminder is similar to the example given by Kreuz and Glucksberg (1989) of someone who remarks "What lovely weather!" on the 15th consecutive day of rain. The situation of a bankrupt banker draws attention to a widely held expectation that bankers are prudent managers of money, and the utterance "What lovely weather!" draws attention to a widely held expectation of what constitutes good weather. Situational forms of reminder can be ironic when they draw attention to widely held expectations. It is unclear whether situational forms of reminder would be sarcastic if they drew attention to the expectations of a specific individual.

In conclusion, the current experiments are supportive of the hypothesis that irony and sarcasm are reminders of expectations that are differentially relevant to the concept of victim. Sarcastic reminders draw attention to expectations that are strongly associated with a specific individual, whereas ironic reminders draw attention to expectations that are strongly associated with many individuals. Therefore, it should not be assumed that *irony* and *sarcasm* are terms for the same psychological construct.

REFERENCES

- Bower, G. H. & Ciapper, J. P. (1989). Experimental methods in cognitive science. In M. Posner (Ed.) Foundations of Cognitive Science (pp. 245-300). Cambridge, MA: MIT Press.
- Clark, H. H. & Carlson, T. B. (1982). Hearers and speech acts. Language, 58, 332-373.
- Clark, H. H. & Gerrig, R. J. (1984). On the pretense theory of irony. Journal of Experimental Psychology: General, 113, 121-126.
- Clark, H. H. & Murphy, G. L. (1982). Audience design in meaning and reference. In J. F. LeNy & W. Kintsch (Eds.), Language and comprehension (pp. 287-299). New York: North Holland Publishing.
- Gibbs, R. W. (1986). On the psycholinguistics of sarcasm. Journal of Experimental Psychology: General, 115, 3-15.
- Gibbs, R. W. (1987). Mutual knowledge and the psychology of conversational inference. Journal of Pragmatics, 11, 561-588.
- Jöreskog, K. G., & Sörbom, D. (1993). LISREL 8 [Computer Program]. Mooresville, IN: Scientific Software.
- Jorgensen, J., Miller, G. A. & Sperber, D. (1984). Test of the mention theory of irony. Journal of Experimental Psychology: General, 113, 112-120.
- Katz, A. N. & Lee, C. J. (1993). The role of authorial intent in determining verbal irony and metaphor. Metaphor and Symbolic Activity, 8, 257-279.
- Kierkegaard, S. (1966). The concept of irony, with constant reference to socrates (L. M. Capel, Trans.). London: Collins.

- Knox, N. (1961). The word IRONY and its context, 1500-1755. Durham, NC: Duke University Press
- Kreuz, R. J. & Glucksberg, S. (1989). How to be sarcastic: The echoic reminder theory of verbal irony. Journal of Experimental Psychology: General, 118, 374–386.
- Lucariello, J. (1994). Situational irony: A concept of events gone awry Journal of Experimental Psychology: General, 123, 129-145.
- MacCormac, E. R. (1985). A cognitive theory of metaphor. Cambridge: MIT Press.
- Pedhazur, E. J. & Schmelkin, L. P. (1991). Measurement, design, and analysis: An integrated approach. Hillsdale, NJ.: Lawrence Erlbaum Associates.
- Quintilian. (1959). Institutio oratoria of Quintilian. (H. E. Butler, Trans.). Cambridge, MA: Harvard University Press.
- Sperber, D. (1984). Verbal irony: Pretence or echoic mention. Journal of Experimental Psychology: General, 113, 130–136.
- Sperber, D. & Wilson, D. (1981). Irony and the Use–Mention distinction. In P. Cole (Ed.), Radical Pragmatics (pp. 293- 318). New York: Academic.
- Swift, J. S. (1971). A modest proposal for preventing the children of poor people from being a burthen to their parents or country, and for making them beneficial to the public. In T. Scott (Ed.), The prose works of Jonathan Swift (Vol. 7, pp. 205-216). New York: AMS Press.
- Thomson, J. A. K. (1926). Irony: An historical introduction. London: Allen & Unwin.

Webster's Third New International Dictionary of the English Language

Unabridged. (1963). Springfield, MA: Merriam.

Weiner, B. (1990). Attribution in personality psychology. In L. A. Pervin (Ed.)

Handbook of personality theory and research (pp. 465-485). New York:

Guilford Press.

APPENDIX A

The Materials Used in Experiment 1

The four filler passages are listed before the four experimental passages. The comprehension questions appear last.

The Election

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

"I'll bet the mayor's race will be a close 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 to Dave, "The mayor's race was certainly a close contest this year."

The Fishing Trip

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

"I was talking to some of the guys just getting back from the lake, and they say the fish aren't biting this year," Mike remarked.

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

Jim remarked, "Well, it looks like the fish aren't biting this year."

The Lecture

John and Steve were walking across campus to their Monday morning economics class.

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

The professor gave a very dry and boring presentation of the material.

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

The Beach Trip

Nancy and her friend Jane had been planning a trip to the beach for a few weeks, but each time they could go the weather had been poor.

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

The next day was a warm and sunny one.

As they looked out the window, Jane said to Nancy, "This certainly is beautiful weather."

The Chess Game

Karen and Ed were playing a game of chess. Karen knew that Ed was an expert player.

She sighed when Ed said to her, "You play well, Karen, but I'll finish you off quickly."

A few minutes later, Ed lost the game.

Karen said to Ed, "You sure finished me off quickly."

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. Sally believed that Betty knew what she was talking about.

A few minutes later, the engine sputtered and died.

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

The Piano Recital

Susan was waiting to go onstage for her piano recital. She had been practicing for many days.

She told Paul, "My performance tonight will be perfect."

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

After the recital, Susan remarked to Paul, "A perfect performance, wasn't it?"

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.

Dianne pulled the cake out of the oven. They both tried a slice and it tasted awful.

Dianne said to Jack, "I'm a good baker, you know."

Comprehension Test

Indicate whether the following statements are *true* or *false* based on the passages you read.

- _____ The mayor was reelected by a very slim margin.
- _____ The guys said the fish were really biting this year.
- _____ The economics professor gave a very boring lecture.
- _____ The two friends had been to the beach several times during the past few weeks.
- _____ The chess game was won by the expert player.
- _____ The fuel gauge in the car didn't work.
- _____ Everyone at the recital gave a wonderful performance.
- _____ The cake tasted awful.

APPENDIX B

The Materials Used in Experiment 2

The two filler passages are listed before the six experimental passages. The comprehension questions appear last.

Cold Weather

Alice, Carol and Susan share an apartment on Richmond Street near the university. On Tuesday evening, Alice and Carol were sitting around talking. A strong north wind was blowing the snow against the windows. Alice began to tell Carol about Roald Amundsen, the Norwegian arctic explorer who discovered the south pole.

"Amundsen must have liked cold weather," said Carol with a grin.

Later that evening, Susan arrived home from her Psychology class. "It's miserable outside," she complained. "I hate cold weather!"

Alice looked at Carol and said "Susan is our Roald Amundsen".

Blues Music

John and Mike are taking a course on the history of American music. This past Thursday evening, the professor was talking about the career of Bessie Smith, the American blues singer who influenced American blues music until her death in the late 1930's.

That evening, John and Mike were surprised to meet Doug as they walked home from class.

"I thought you always went to the pub on Thursdays," John said to Doug.

"I was at the pub," replied Doug, "but, the band tonight plays blues music, so I left. I can't stand the blues."

Bungee-jumping

The Ministry of Labour recently closed several bungee-jumping operations in the province because of safety concerns and, according to a recent newspaper report, new regulations for bungee-jumping operations are now being considered.

John and Mike were talking about this newspaper report while waiting for Doug to get out of class.

"I think bungee-jumping is foolish and dangerous," Mike commented.

"Yeah, it's dangerous alright," said John. "I wouldn't trust anyone who fastens a cord around my ankles and tells me to jump."

"I'm surprised that so many sensible people think it's safe", said Mike. "I bet Doug even thinks it's safe."

When Doug arrived, Mike asked him if he thought bungee-jumping was safe.

"In my opinion," answered Doug, "bungee-jumping is extremely dangerous and should be banned."

John looked at Mike and said, "I bet Doug even thinks it's safe."

Nuclear Power

The cost of electricity in Ontario has increased by more than 25 per cent since 1989. Once a province known for its inexpensive energy, Ontario now has the second highest hydro rates in Canada. According to a recent newspaper report, costly repairs at the Darlington nuclear power station, located east of Toronto, have greatly increased Ontario Hydro's operating expenses and additional repairs to the Darlington plant are still required.

Alice and Carol were talking about this newspaper report as they walked to their economics class.

"In my opinion," said Alice, "these constant repairs simply demonstrate that nuclear power is not a practical source of power."

"I agree," said Carol, "but there are many people who believe that nuclear power plants are worth their high cost. I'm sure that Susan, for one, thinks we should build more nuclear power plants."

Later, when they met Susan for lunch, Alice told Susan about the newspaper article.

"Do you think we should build more nuclear power plants?" Carol asked.

"Definitely not," answered Susan. "We have too many of them already!"

Alice looked at Carol and said, "I'm sure that Susan, for one, thinks we should build more nuclear power plants."

Confiscated Drug Money

John, Mike and Doug always go for coffee after their morning law class. After Wednesday's class, Doug stayed behind in order to talk to the professor. "Go ahead," Doug said to his two friends, "I'll meet you at the Centrespot in a few minutes."

While walking to the Centrespot cafeteria, John and Mike were talking about the recent decision of the federal government to share monies obtained from drug seizures with municipal police forces that help in making the arrests. Both John and Mike agreed with the government's decision.

"It seems like a reasonable thing to do," said John. "Besides, the local police forces could use the money to help finance future drug investigations."

"I agree completely," said Mike. "And, I'm sure that Doug would also agree that it's a reasonable thing to do."

When Doug arrived, Mike asked him about this issue.

"In my opinion," said Doug, "the federal government should use the money obtained from drug seizures to support research on drug addiction. None of the money should go to police forces."

John looked at Mike and said, "I'm sure that Doug would also agree that it's a reasonable thing to do."

Report Cards

Alice, Carol and Susan work-out at the gym every Thursday evening. They take turns driving there. This past Thursday, Alice drove. Alice picked up Carol, who lives nearby, and then headed across town to pick up Susan.

Both Alice and Carol have school-aged children. While driving to Susan's, they talked about the school board's decision to eliminate grades on children's report cards. In place of grades, parents get written comments from the teacher describing their child's progress in such areas as personal growth, social interaction, language and arts.

"I don't like these new report cards," said Alice. "These subjective comments don't tell me how my child is doing in comparison to others. This is something that is important to know. Don't you agree, Carol?"

"I agree completely," replied Carol. "And I'm sure that Susan doesn't like these new report cards either."

When they picked-up Susan, Alice asked her about her opinion of the new report cards.

"As a parent," said Susan, "I think it was a good decision to eliminate grades on young children's report cards because grades make children too competitive. We should encourage children to be more cooperative and less competitive."

Alice looked at Carol and said, "I'm sure that Susan doesn't like these new report cards either."

World Bank Projects

The World Bank provides loans for development projects in Third World countries. It has recently been criticized for financing projects that damage the environment.

"I read in the newspaper," said Carol, "that more than a third of the projects financed by the World Bank turn out to be unsuccessful. In my opinion, there is no justification for environmental damage caused by development projects, especially unsuccessful ones."

"I disagree," said Alice, "the majority of international developmental projects are successful and, in my opinion, the economic benefits outweigh the environmental costs, even when the project turns out to be unsuccessful."

"Most people value the environment more than you do, Alice", commented Carol. "I'm sure that Susan, for one, believes that there is no justification for environmental damage."

Later, when they met Susan, Carol asked her about her opinion of this issue.

"I think we have to accept some environmental damage as the price of economic development in the Third World," answered Susan.

Alice looked at Carol and said, "I'm sure that Susan, for one, believes there is no justification for environmental damage."

Garlic

On Thursday nights, John, Mike and Doug usually go to see a movie. John had to work last Thursday evening. To save time, Mike and Doug arranged to meet John at the health food store where he works.

Mike arrived before the store closed. He wandered around the store to put in time.

"You should buy some of those garlic pills, Mike," said John. John proceeded to tell Mike, who is a heavy smoker, about a newspaper report that he'd read suggesting that garlic may inhibit the growth of lung tumours caused by tobacco smoke.

"You might sell garlic to your customers with nonsense like that," replied Mike. "But, any sensible person knows that garlic isn't a medicine."

"Garlic has been used for centuries as a remedy for "

Mike interrupted John, saying, "And I'm sure that Doug also believes that garlic has no medicinal benefits."

When Doug arrived, Mike insisted that John tell him about the newspaper report about garlic.

"Garlic seems to have quite a few benefits," remarked Doug. "I've read it may also protect the liver from damage caused by large doses of the pain-killer acetaminophen."

John looked at Mike and said, "I'm sure that Doug also believes that garlic has no medicinal benefits."

Comprehension Test

- _____ **New regulations for bungee-jumping operations are now being considered by the Ontario Ministry of Labour.**
- _____ **The federal government has decided to share monies obtained from drug seizures with municipal police forces that help in making the arrests.**
- _____ **The south pole was discovered by the Norwegian explorer, Roald Amundsen.**
- _____ **Some school boards have decided to eliminate subjective comments on children's report cards.**
- _____ **The World Bank has recently been criticized for financing projects that damage the environment.**
- _____ **The Darlington nuclear power plant has reduced Ontario Hydro's operating expenses.**
- _____ **Garlic may cause liver damage and lung tumours.**
- _____ **Bessie Smith was an opera singer who died in the late 1930's.**