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## The Differential Role of Ridicule in Sarcasm and Irony

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Kreuz and Glucksberg (1989) argued that sarcasm and irony are similar in that both are forms of reminder, yet different in that sarcasm conveys ridicule of a specific victim whereas irony does not. This article reports two experiments that provide empirical evidence of this relation. In both experiments, undergraduates read a series of passages. One group rated a target utterance in terms of the extent to which it was a good example of sarcasm, and a second group rated it in terms of the extent to which it was a good example of irony. In Experiment 1, a manipulation of ridicule was found to affect the participants' ratings of sarcasm but not their ratings of irony. In Experiment 2, it was found that ratings of the extent to which an utterance ridiculed a specific victim were correlated with sarcasm to a greater extent than with irony. These findings provide support for the notion that ridicule of a specific victim is one way in which sarcasm differs from irony.

Kreuz and Glucksberg (1989) drew attention to a useful distinction between sarcasm and irony. In sarcasm, there is a specific victim who is the target of ridicule, whereas in irony, there is no one in particular who is the victim. The remark "*What a sunny day!*" uttered during a severe thunderstorm would be sarcastic if it brought to mind a specific weather forecaster's prediction that it would be a sunny day, whereas it would be ironic if it brought to mind a wistful desire for sunny weather. The purpose of research reported here was to examine empirically this distinction between sarcasm and irony.

Kreuz and Glucksberg's (1989) distinction between sarcasm and irony has a long tradition. The English words *sarcasm* and *irony* both originated as derogatory terms. The 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*

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*Dictionary*, Gove et al., 1961), and the word *irony* can be traced back to the Greek word *eironeia*, a term used to refer to unscrupulous trickery (Thomson, 1926). However, 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 (trans. 1959, VII, vi, 54) claimed that an ironist states what is false in order to demonstrate the truth of an opposing idea. 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 idea.

Unlike irony, the concept of sarcasm did not achieve historical significance and positive regard. Sarcasm has not been the subject of comparable historical debate, and it has retained its negative connotation such that, in modern dictionaries, sarcasm is marked by a victim who is the butt of ridicule (*American Heritage Dictionary*, Soukhanov et al., 1992). The failure to achieve historical significance in philosophy has, in our opinion, led to a paucity of research on sarcasm per se, and of studies distinguishing sarcastic from ironic usage. For instance, a large-scale study of the pragmatic functions of figurative language included irony (and seven other forms of indirect language) but ignored sarcasm (Roberts & Kreuz, 1994). In the most inclusive examination of the psychological literature on figurative language (Gibbs, 1994), sarcasm, when discussed, is treated interchangeably with irony.

Kreuz and Glucksberg (1989) tested their account of sarcasm in a set of experiments in which participants read a series of passages. The passages were manipulated such that, in one type of passage, an erroneous prediction was made by an expert; in a second type of passage, the erroneous prediction was made by a layperson; and in a third type of passage, a correct prediction or no prediction at all was made. Kreuz and Glucksberg reasoned that an expert (e.g., a weather forecaster) who made an erroneous prediction (e.g., a prediction of sunny weather) would be a more salient victim than a layperson who made an erroneous prediction, and that any person who made an erroneous prediction would be a more salient victim than a person who made a correct prediction or no prediction at all. In each of three experiments, it was found that passages containing an erroneous prediction were more sarcastic than passages containing a correct prediction or no prediction at all, but the expert and layperson passages did not differ significantly. These results suggest that the availability of a specific victim plays a role in sarcasm, although it appears that characteristics of the victim, such as expertise, did not heighten the sarcasm perceived.

It should be noted that, although Kreuz and Glucksberg (1989) demonstrated that the availability of a specific victim plays a role in sarcasm, they did not examine the role that a victim plays in irony. Consequently, it has not been shown that the

availability of a specific victim is differentially related to sarcasm and irony. A differential relation would be predicted given the argument that a specific victim is one way in which sarcasm differs from irony; that is, the presence of a specific victim should be especially important in producing a sense of sarcasm, but not important in producing a sense of irony. Reported in the following sections are two experiments that were conducted to examine the differential role of ridicule of a specific victim in sarcasm and irony.

## EXPERIMENT 1

In Experiment 1, the role of a specific victim in sarcasm and irony was examined by utilizing the general tendency for people to discount the importance of their own mistakes (see Weiner, 1990). It was hypothesized that a speaker who directs attention to a listener's erroneous prediction would convey more sarcasm than a speaker who directs attention to his or her own erroneous prediction because someone else's mistake would make a more likely target of ridicule than the speaker's own mistake. With respect to a differential relation, this manipulation of the identity of the victim was expected to have little or no effect on the degree of irony perceived, assuming that a specific victim is not an aspect of irony.

### Method

**Participants.** 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 fulfillment of an introductory psychology course requirement.

**Materials and procedure.** Eight passages were selected from the materials used by Kreuz and Glucksberg (1989). These passages were divided randomly into pairs and modified to manipulate two independent variables: the type of prediction made in the passage (correct vs. incorrect) and the identity of the victim (speaker vs. listener). One pair of passages was assigned at random to each condition. In this way, there were two passages in which the speaker repeated a correct prediction that she or he had made previously, two passages in which the speaker repeated a correct prediction that a listener had made previously, two passages in which the speaker repeated an incorrect prediction that she or he had made previously, and two passages in which the speaker repeated an incorrect prediction that a listener had made previously. Thus, the speaker was the victim in two of the passages involving an incorrect prediction, and the listener was the victim in the other two

passages involving an incorrect prediction. The eight passages (see Appendix) 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 10 booklets in each order. A cover page contained the following instructions:

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.

The participants were randomly assigned to one of two groups. One group rated the degree to which the final utterance was a good example of sarcasm, and the other group rated the degree to which the final utterance was a good example of irony. These ratings were made on a 7-point scale, ranging from 1 (*very poor example*) to 7 (*very good example*). No other points on the scale were labeled.

## Results and Discussion

The participant's ratings were submitted to a three-factor analysis of variance (ANOVA): rating group was a between-groups factor with two levels (irony vs. sarcasm), prediction type was a within-subjects factor with two levels (correct prediction vs. incorrect prediction), and victim was a within-subjects factor with two levels (speaker vs. listener). An alpha level of .05 was used for all statistical tests. It was found that the effect of rating group was not significant; the effect of prediction type was significant,  $F(1, 28) = 210.67, p < .001$ ; and the effect of victim was significant,  $F(1, 28) = 8.27, p < .01$ . The analysis also yielded a significant interaction between rating group and victim,  $F(1, 28) = 6.03, p < .05$ , and a significant three-way interaction,  $F(1, 28) = 5.56, p < .05$ . Given the presence of a significant three-way interaction, we examined the effect of prediction type and the effect of victim by conducting tests of simple main effects using the Tukey honestly significant difference (HSD) procedure. These results are presented subsequently. However, before attending to the analysis of simple main effects, it is worth noting that the results of the three-factor ANOVA generalized across items. Similar results were obtained when passages (rather than participants) were treated as cases in the analysis. The effect of rating group was not significant; the effect of prediction type was significant,  $F(1, 4) = 263.69, p < .001$ ; the effect of victim approached significance,  $F(1, 4) = 4.84, p = .09$ ; the interaction between rating group and victim

was significant,  $F(1, 4) = 7.49, p = .05$ ; and the three-way interaction approached significance,  $F(1, 4) = 4.89, p = .09$ .

*Tests of the simple main effect of prediction type.* The Tukey HSD procedure was used to test the simple main effect of prediction type at each of the four combinations of rating group and victim. A difference of 0.87 between a correct prediction and an incorrect prediction is significant using an alpha level of .05 (pooled  $MSE = 1.41$ , pooled  $df = 45$ ). As is evident in Table 1, the effect of prediction type was significant at each combination of rating group and victim. A speaker was both more ironic and more sarcastic when an incorrect prediction was made than when a correct prediction was made.

*Tests of the simple main effect of victim.* The simple main effect of victim was tested at each of the four combinations of rating group and prediction type using the Tukey HSD procedure. A difference of 0.67 between the means of the listener and speaker conditions is significant using an alpha level of .05 (pooled  $MSE = 0.83$ , pooled  $df = 54$ ). A significant simple main effect of victim was found in one of the four tests. Victim had a significant effect on sarcasm ratings when an incorrect prediction had been made, such that a speaker was more sarcastic when referring to a listener's incorrect prediction ( $M = 6.43$ ) than when referring to his or her own incorrect prediction ( $M = 4.90$ ). However, the effect of victim on sarcasm was not significant when a correct prediction had been made. With respect to irony, the effect of victim was not significant, regardless of the type of prediction made.

In sum, it was found that allusions to incorrect predictions were more exemplary of both irony and sarcasm than allusions to correct predictions. In the case of

TABLE 1  
Mean Ratings of Sarcasm and Irony as a Function of Victim and Prediction Type

Rating Condition	Prediction Type	Victim			
		Speaker		Listener	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sarcasm	Incorrect	4.90 <sub>a,e</sub>	1.34	6.43 <sub>c,e</sub>	0.73
	Correct	1.30 <sub>a</sub>	0.49	1.70 <sub>c</sub>	1.05
Irony	Incorrect	5.60 <sub>b</sub>	1.24	5.53 <sub>d</sub>	1.70
	Correct	1.90 <sub>b</sub>	1.15	2.13 <sub>d</sub>	1.40

Note. Two means with the same subscript are significantly different ( $p < .05$ ).

sarcasm, however, the magnitude of this increase depended on the identity of the victim, such that allusions to listeners' incorrect predictions were more sarcastic than allusions to speakers' incorrect predictions. In conclusion, the outcome of this experiment provides support for Kreuz and Glucksberg's (1989) notion that ridicule of a specific victim is one way in which sarcasm differs from irony.

## EXPERIMENT 2

The role played by ridicule of a specific victim in distinguishing between sarcasm and irony, as is evident in Experiment 1, is consistent with the descriptions of these terms that people provided Kreuz and Glucksberg (1989). Participants in Kreuz and Glucksberg's study noted that sarcasm was intended to be hurtful, whereas this characteristic was never noted in describing irony. In addition, Kreuz and Glucksberg found that people reported that both sarcasm and irony were used as reminders; the intention to remind people of something was attributed to sarcasm by 30% of the participants and attributed to irony by 33% of the participants.

The second experiment was conducted to replicate the finding that ridicule of a specific victim plays a more important role in sarcasm than in irony and also to examine the role of reminder in sarcasm and irony. In light of the results of Experiment 1, the participants' ratings of the extent to which an utterance ridiculed a specific victim were expected to correlate positively with ratings of sarcasm. It was hypothesized that the correlation between ridicule and sarcasm would be greater than the correlation between ridicule and irony. In addition, the notion that both sarcasm and irony are used as reminders (Kreuz & Glucksberg, 1989) led us to expect that participants' ratings of the extent to which an utterance served as a reminder of something said earlier in a passage would correlate with ratings of sarcasm to the same extent as with ratings of irony.

The hypothesis that reminding correlates with sarcasm to the same extent as it correlates with irony involves accepting the null hypothesis that these two correlations are equal in the population. In this situation, the power of a statistical test is especially important. In Experiment 2, two groups of people rated the degree of ridicule and reminding conveyed by target utterances in a series of passages, and depending on the group, either rated the target utterance in terms of the extent to which it exemplified sarcasm or rated the target utterance in terms of the extent to which it exemplified irony. In a multiple regression analysis, a significant Ridicule  $\times$  Group interaction would indicate that the correlation between ridicule and sarcasm is different than the correlation between ridicule and irony. Similarly, a significant Reminding  $\times$  Group interaction would indicate that the correlation between reminding and sarcasm is different than the correlation between reminding and irony. A multiple regression analysis performed on data from a sample of 200

people provides sufficient statistical power to detect a Ridicule  $\times$  Group interaction, or a Reminding  $\times$  Group interaction, accounting for 5% of the variance 90% of the time using an alpha level of .05.

## Method

**Participants.** Two hundred students at the University of Western Ontario, ranging in age from 17 to 48 years ( $M = 20.0$ ), chose to participate in this experiment as partial fulfillment of an introductory psychology course requirement. Participants were randomly assigned to either a group that rated sarcasm or a group that rated irony, with 100 participants assigned to each group.

**Materials and procedure.** The participants rated a series of passages in terms of the extent to which a target utterance was intended to ridicule a specific listener, was intended as a reminder of something a specific listener had said, and was a good example of sarcasm or irony. These ratings were made on a 7-point scale with higher values indicating greater ridicule, reminding, sarcasm, or irony.

The passages (see Appendix) involved a variety of reminders: Two passages made reference to a difference of opinion between two friends, two passages made reference to an attitude that two friends shared with a mutual acquaintance, and two passages made reference to an attitude that two friends did not share with a mutual acquaintance. Participants read two additional passages in which a speaker remarked on the similarity between the attitude of a listener and that of a historical figure; these passages, however, proved to be rather metaphorical and were treated as fillers to avoid introducing metaphor as a confound.

Each passage appeared on a separate page. The pages were sorted into 10 different random orders, with 10 participants in each group randomly assigned to each of the 10 random orders. A cover page contained instructions similar to those used in Experiment 1.

## Results and Discussion

Table 2 gives the correlations among ridicule, reminding, and ratings of sarcasm and irony, tabulated separately for the sarcasm and irony groups. It was hypothesized that the correlation between ridicule and sarcasm would be greater than the correlation between ridicule and irony. It was also hypothesized that the correlation between reminding and sarcasm would not be significantly different than the correlation between reminding and irony. As described subsequently, multiple regression analyses were performed to test these hypotheses. An alpha level of .05 was used for all statistical tests.



TABLE 2  
Correlations, Means, and Standard Deviations of Ridicule, Reminding, Irony, and Sarcasm

<i>Rating Condition and Type</i>	<i>Ridicule</i>	<i>Reminding</i>	<i>M</i>	<i>SD</i>
Irony rating condition				
Irony rating	.26*	.14	4.21	1.26
Ridicule	—	.41*	5.24	1.35
Reminding		—	5.56	1.16
Sarcasm rating condition				
Sarcasm rating	.62*	.39*	5.34	1.15
Ridicule	—	.40*	5.09	1.41
Reminding		—	5.59	1.19

\* $p < .05$ .

*The correlation of sarcasm and irony with ridicule of a specific victim.*

A multiple regression analysis was performed to test the hypothesis that the correlation between ridicule and sarcasm would be greater than the correlation between ridicule and irony. In the analysis, group membership was dummy coded such that participants in the irony condition were assigned a value of zero and participants in the sarcasm condition were assigned a value of one. Following the procedure indicated by Cohen (1978; Cohen & Cohen, 1983), the effects of ridicule and group were assessed before the Ridicule  $\times$  Group interaction term was entered into the regression equation: Ridicule and group were entered simultaneously into the regression on Step 1, and the product of ridicule and group was entered on Step 2.

The effect of Step 1 of the regression analysis was significant,  $R^2 = .34$ ,  $F(2, 197) = 50.59$ ,  $p < .001$ . The addition of the Ridicule  $\times$  Group interaction on Step 2 significantly increased the variance explained by the regression,  $R^2$  change = .02,  $F(1, 196) = 5.61$ ,  $p < .02$ , indicating that the correlation between ridicule and sarcasm was significantly different than the correlation between ridicule and irony. As shown in Table 2, the correlation between ridicule and sarcasm was .62, whereas the correlation between ridicule and irony was .26. The results of this analysis suggest that ridicule of a specific victim plays a substantially larger role in sarcasm than in irony. This finding is consistent with those obtained using a different methodology in Experiment 1 and supports Kreuz and Glucksberg's (1989) notion that ridicule of a specific victim is one way in which sarcasm differs from irony.

*The correlation of sarcasm and irony with reminding.* A multiple regression analysis was performed to test the hypothesis that the correlation between reminding and sarcasm would not be significantly different than the correlation between reminding and irony. In the analysis, group membership was dummy

coded such that participants in the irony condition were assigned a value of zero and participants in the sarcasm condition were assigned a value of one. The main effects of reminding and group were entered simultaneously into the regression on Step 1, and the Reminding  $\times$  Group interaction term was entered on Step 2.

The effect of Step 1 of the regression analysis was significant,  $R^2 = .24$ ;  $F(2, 197) = 31.62, p < .001$ . The addition of the Reminding  $\times$  Group interaction on Step 2 did not significantly increase the variance explained by the regression,  $R^2$  change = .01;  $F(1, 196) = 2.56, p = .11$ . This result indicates that the correlation between reminding and sarcasm ( $r = .39$ ) was not significantly different than the correlation between reminding and irony ( $r = .14$ ). The finding that these two correlations are not significantly different implies that the true correlation of reminding with either sarcasm goodness-of-example ratings or irony goodness-of-example ratings is aptly estimated using the full sample rather than estimated separately in the sarcasm and irony conditions. The correlation between reminding and goodness-of-example ratings based on the full sample of 200 participants was .24 ( $p < .05$ ). This result is consistent with Kreuz and Glucksberg's (1989) notion that reminding is an aspect of both sarcasm and irony, although the magnitude of the correlations obtained in this experiment suggest that reminding might have a slightly stronger relation with sarcasm than with irony.

## GENERAL DISCUSSION

The experimental evidence indicates that ridicule of a specific victim plays a more important role in sarcasm than in irony. In Experiment 1, the degree of sarcasm conveyed by a speaker's allusion to an incorrect prediction depended on the identity of the victim. A speaker was more sarcastic when reminding listeners of someone else's incorrect prediction than when reminding listeners of his or her own incorrect prediction, presumably because someone else's mistake is a more salient target for ridicule than a speaker's own mistake. In contrast, the degree of irony conveyed by a speaker's allusion to an incorrect prediction was unaffected by the identity of the victim. The manipulation of a victim accounted for more than 35% of the variance in the degree of sarcasm conveyed by a speaker's allusion to an incorrect prediction but less than 1% of the variance in the degree of irony conveyed. The same pattern of results was found in Experiment 2, in which ridicule explained 38% of the variance in the degree of sarcasm conveyed but only 7% of variance in the degree of irony conveyed. Thus, both experiments indicated that ridicule of a specific victim has a more important role in sarcasm than in irony.

An interpretation of this differential effect of ridicule involves differences between sarcasm and irony in the specificity of the ridicule conveyed. The ridicule conveyed by sarcasm is specific; there is a particular person who is ridiculed for an incorrect expectation. In contrast, the ridicule conveyed by irony seems to be more

diffuse. For example, a speaker could allude to an expectation of fair weather during a thunderstorm with an exclamation of "What a sunny day!" An expectation of fair weather is shared by numerous people and, consequently, there is no specific person who becomes the target of ridicule. Everyone who had expected fair weather is open to ridicule. However, in making inferences, people often rely on recent information (Tversky & Kahneman, 1973), and in the event that someone in particular had recently predicted that it would be a sunny day, the exclamation of "What a sunny day!" could be construed as ridicule of the particular person who made the prediction. The research presented here indicates that an utterance is sarcastic when it targets a specific person for ridicule. Otherwise, an exclamation of "What a sunny day!" is more likely to be ironic as the ridicule it conveys is diffuse rather than specific.

In conclusion, this article supports the notion that ridicule of a specific victim is one way in which sarcasm differs from irony. A sarcastic utterance brings to mind the expectation of a specific person who is identified by that expectation, whereas irony brings to mind the collective expectations of numerous people.

It would be interesting to consider other mechanisms by which people can be reminded of incorrect expectations. For example, in situational irony (Lucariello, 1994), an ironic event serves to bring to mind our expectations about the normal order of things. Consider, for instance, the circumstance of a bankrupt banker. A banker's bankruptcy is an event that can remind one of an expectation that bankers are prudent managers of money. In the case of a banker who has frequently boasted about his or her financial savvy, the event might bring to mind these boasts and identify the banker as a target of ridicule. However, in the case of a less boastful banker, the event is less likely to target the banker for ridicule as the expectation that bankers are prudent managers of money is shared by numerous people in addition to the banker. An interesting direction for future investigations would be to examine other agents of reminder, such as events, in sarcasm and irony.

## REFERENCES

- Cohen, J. (1978). Partialled products are interactions; partialled powers are curve components. *Psychological Bulletin*, 85, 858-866.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Gibbs, R. W. (1994). *The poetics of mind: Figurative thought, language, and understanding*. New York: Cambridge University Press.
- Gove, P. B., et al. (1961). *Webster's third new international dictionary of the English language unabridged*. Springfield, MA: Merriam.
- Kierkegaard, S. (1966). *The concept of irony, with constant reference to Socrates* (L. M. Capel, Trans.). London: Collins. (Original work published 1841)
- 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.
- Quintilian. (1959). *Institutio oratoria of Quintilian* (H. E. Butler, Trans.). Cambridge, MA: Harvard University Press.
- Roberts, R. M., & Kreuz, R. J. (1994). Why do people use figurative language? *Psychological Science*, 5, 159–163.
- Soukhanov, A. H., et al. (1992). *American heritage dictionary of the English language* (3rd ed.). Boston: Houghton Mifflin.
- Thomson, J. A. K. (1926). *Irony: An historical introduction*. London: Allen & Unwin.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5, 207–232.
- Weiner, B. (1990). Attribution in personality psychology. In L. A. Pervin (Ed.), *Handbook of personality theory and research* (pp. 465–485). New York: Guilford.

## APPENDIX

### MATERIALS USED IN THE EXPERIMENTS

#### Materials in Experiment 1

**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.* Diane 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," Diane remarked to Jack.

Diane pulled the cake out of the oven. They both tried a slice and it tasted awful. Diane said to Jack, "I'm a good baker, you know."

## Materials in Experiment 2

*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 tumors 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."

*Bungee-jumping.* The Ministry of Labor 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 all right," 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 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 cafeteria in a few minutes."

While walking to the 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."