

## The Effectiveness of Humor in Persuasion: The Case of Business Ethics Training

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**ABSTRACT.** In this study, persuasion theory was used to develop the following predictions about use of humor in persuasive messages for business ethics training: (a) cartoon drawings will enhance persuasion by creating liking for the source, (b) ironic wisecracks will enhance persuasion by serving as a distraction from counterarguments, and (c) self-effacing humor will enhance persuasion by improving source credibility. Canadian business students ( $N = 148$ ) participated in 1 of 4 versions of "The Ethics Challenge," a training exercise used by the Lockheed Martin Corporation. Three versions were modified by adding or removing cartoon drawings (of cartoon characters Dilbert and Dogbert) and humorous responses (Dogbert's wisecracks). Removing the cartoon drawings had little effect on persuasiveness. Removing ironic wisecracks had more effect, and interfering with the self-effacing combination of cartoons and wisecracks had the strongest effect. The results suggest that researchers should ground their predictions in existing theory and that practitioners should differentiate among humor types.

**Key words:** business ethics, humor, persuasion

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HUMOR IS WIDELY USED as an aid to persuasive messages such as advertisements and lesson plans. Humor is presumed to aid in persuasion in both advertising (Heinecke, 1997) and education (Wallerger, 1997), but empirical research has rarely been able to demonstrate these effects (Bryant, Comisky, Crane, & Zillmann, 1980; Gruner & Freshley, 1979). It is not yet clear whether the investment of time and effort in the use of humor in persuasion is justified. In the present study, persuasion theory was used to develop predictions about the effectiveness of humor.

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Persuasion has been defined as a successful, intentional effort at influencing another's mental state through communication, assuming the person to be persuaded has some measure of freedom (O'Keefe, 1990). By "mental state," O'Keefe seems to mean attitude. One theory of persuasion that is well established, despite occasional challenges (e.g., Kruglanski & Thompson, 1999), is the elaboration likelihood model (Petty & Cacioppo, 1986). According to this theory, receivers assess persuasive messages differently depending on (among other things) their involvement with the issue. If the issue is salient to them, then they will focus systematically on the message itself and analyze it according to traditional criteria such as logos, pathos, and ethos. If they find the argument compelling, they will become convinced. This is known as systematic processing (Chaiken, 1980) or the central route to persuasion (Petty & Cacioppo, 1981).

However, when the issue is less urgent, people are willing to rely on heuristic factors such as source qualities and situational elements. This is known as heuristic processing (Chaiken, 1980) or the peripheral route to persuasion (Petty & Cacioppo, 1981). Some writers have argued that heuristic/peripheral processing is the convenient, natural, or default mode and that receivers use the other mode only when they are exceptionally involved in an issue (e.g., Stroebe, 1999).

The heuristic/peripheral factors that are considered by receivers include (a) the credibility of the source, in terms of both expertise (Hennigan, Cook, & Gruder, 1982) and lack of self-interested motives (Eagly & Chaiken, 1975); (b) whether the source is likable, in terms of both being attractive (Mills & Harvey, 1972) and being similar to the receiver (Mackie & Worth, 1989); and (c) situational factors such as whether the receiver feels comfortable (Jorgensen, 1998).

One way that humor might be effective in persuasion is by creating positive affect (Kuiper, McKenzie, & Belanger, 1995). According to persuasion theory, people who are in a good mood are less likely to disagree with a persuasive message (Freedman, Sears, & Carlsmith, 1978) and more likely to rely on heuristic/peripheral cues (Bless & Schwarz, 1999). Humor has been shown to produce such positive affect (Moran, 1996); therefore, I predicted that the use of any humor would increase the effectiveness of a persuasive message.

Another way that humor might be effective in persuasion is by increasing liking for the source. In particular, the choice of humor might illustrate a shared sense of humor that hints at a similar set of underlying values (Meyer, 1997). Students have been shown to have a preference for cartoon humor (Burns, 1999), and cartoons in textbooks have been linked to a relaxed learning environment (Carpenter, 1997). It has been suggested that moods during a persuasive message might be attributed to the source (Sinclair, Mark, & Clore, 1994). Thus, I predicted that the use of cartoon humor would increase the effectiveness of a persuasive message among students.

Another way that humor might be effective in persuasion is to block systematic/central processing by distracting receivers from constructing counterarguments (Osterhouse & Brock, 1970). This effect has been confirmed repeatedly

(e.g., Romero, Agnew, & Insko, 1996) and has even been observed using "zany films" as the distraction (Festinger & Maccoby, 1964). The effect may be even stronger when ironic humor is used. To understand irony, one must process not only the surface meaning of a statement but also its ironic meaning (Giora & Fein, 1999). Thus, I predicted that the use of ironic humor would increase the effectiveness of a persuasive message.

Another way that humor might be effective in persuasion is to increase trust in the source (Hampes, 1999). It has been shown that people who are speaking (or seem to be speaking) against their own self-interest enjoy great credibility (e.g., Walster, Aronson, & Abrahams, 1966). Therefore, I modified versions of the study materials by introducing or removing cartoon characters (Dilbert and Dogbert) and their wisecracks. Since Dilbert cartoons make fun of management (Johnson, 1997), any use of these cartoons by management should probably be considered self-effacing. Thus, I predicted that the use of self-effacing humor by a source would increase the effectiveness of a persuasive message.

## Method

### *Participants*

The participants were 148 adults enrolled in the introductory business course at a large Canadian university. Seventy of the participants (47%) were men and 78 (53%) were women. There was remarkable homogeneity of age, probably because the participants had entered the program directly from high school. Ninety-six of the participants (65%) were 19 years old, and 140 of them (95%) fell in the 18- to 20-year-old age range.

The participants had an average of 2.6 years of part-time work experience and negligible full-time work experience, averaging less than 5 months. At the time of the experiment, 89 of the participants (60%) held part-time jobs. There was a significant level of cultural diversity, with only 86 participants (58%) having lived their entire lives in North America.

Although business students were expected to be familiar with Dilbert (Zielinski, 2000), 57 of the participants (39%) reported that they had not seen a Dilbert cartoon.

### *Materials*

Mini-cases were taken from "The Ethics Challenge," a board game that Lockheed Martin uses to persuade its employees to call on company officials when faced with an ethical dilemma. A copy of the original version of the game was provided by Carol R. Marshall, then vice president of Ethics and Business Conduct (personal communication, August 11, 1997).

The training is conducted each year with every employee. In small groups,

the employees read mini-case descriptions and related questions, then select one of four multiple-choice answers. Then the leader (a Lockheed Martin manager) reveals the score assigned to each choice by a team of ethics officers and explains the reasoning behind it.

In addition to the four official choices, there is a fifth response that is a wisecrack from Scott Adams's cartoon character Dogbert. Adams had approval over the material and rewrote 35 of the 50 wisecracks to make them more true to the character (Raugust, 1998).

The following is Case File Number 17, as an example: "You work in a purchasing department and have been asked to select a vendor for an upcoming purchase. One of the competing companies is owned by your manager's spouse. Your manager told you that she wants you to make the decision all on your own, and to take care not to give any extra consideration to her husband's bid. In your judgment, the husband's bid has the best value. How are you going to handle this?" The four multiple choice answers are "(a) select the husband's bid and make the purchase, (b) talk to the Legal Department, (c) tell your manager you're uncomfortable making this decision without first discussing it with the Ethics Office, and (d) select the second best bid and make the purchase." The fifth response (wisecrack) is "Try to break up the marriage."

Paul Haney, director of ethics and corporate compliance programs for Lockheed Martin, expressed faith in the effectiveness of humor by saying, "People relate to 'Dilbert' and find it to be non-threatening. The characters can say what people are really thinking. . . . The cartoon breaks down a lot of barriers in discussing delicate situations that people encounter in their jobs" (Carey, 1998).

### *Manipulation*

A small panel of students from a local institute of technology was convened. This panel rejected mini-cases that were found to be not very funny or that tended to lead participants to prefer one response over another. From the 50 mini-cases that were provided in the game, 6 were selected for inclusion in the experiment, 1 from each category specified by Lockheed Martin (ho nesty, integrity, responsibility, trust, respect, and citizenship).

Then four versions of each of the mini-cases were prepared. One quarter of the participants saw the intact version, which had an ironic wisecrack (signified by a small drawing of Dogbert) as the fifth choice and a cartoon drawing of Dilbert in the upper right corner. Another quarter of the participants saw a different version, which retained the Dilbert graphics but had no ironic wisecrack, instead offering "I prefer not to answer" as the fifth choice. The third group saw a version that retained the ironic wisecrack, but used no Dilbert graphics. Instead, there was a drawing of Zeus (serving as a generic Greek figure) in the upper right corner and only a small arrow to indicate the fifth choice. The final group of

participants saw a version that included neither the Dilbert graphics nor the wise-crack. Instead it had the graphic of Zeus, the small arrow, and the response "I prefer not to answer."

These four versions became the treatment levels of the independent variable, humor.

### *Procedure*

Experimental packets, prepared in a randomized order, were distributed to the participants. The facilitator read a scripted introduction, which included brief information about the history of Lockheed Martin and the development of its ethics program. Participants filled out an informed consent form and reported whether they had seen Dilbert cartoons, whether they liked them, and whether they agreed with Dilbert's point of view. They also completed four standardized items for purposes unrelated to this study.

Persuasion, the dependent variable, was assessed both directly with descriptive adjective ratings (Derks & Berkowitz, 1989) and indirectly with behavioral intentions. Authors in the field of persuasion have suggested that behavioral intentions, while poor predictors of behavior, can serve as effective indicators of attitude change (e.g., Albarracin, 1998).

In a pilot study conducted before the present study, a group of employees had been asked, "Given what you know about the Lockheed Martin company, which of these words do you think apply to it?" The words chosen most frequently were *successful*, *serious*, *ethical*, *caring*, and *fun*. In the present study, both before and after working through the six mini-cases, the participants rated the five adjectives on a 5-point Likert-type scale ranging from *does not apply* (1) to *applies very well* (5).

Both before and after working through the mini-cases, participants rated six sources that they might consult when they had an ethics question. These were their behavioral intentions. Four of the items were expected to show gain scores (the ethics office, the ethics help line, the legal department, and their manager), and two were expected to show reduced scores (co-workers and friends or family). For example, participants were asked, "If you worked for Lockheed Martin and had to make a decision on an ethical issue, whom would you likely contact for advice?" They rated each response on a 5-point Likert-type scale ranging from *very unlikely* (1) to *very likely* (5).

When all participants had finished the preliminary section, they read the first mini-case and selected their answers. The facilitator revealed the scores assigned by the ethics officers for each choice and their justifications from the Leader's Guide (Lockheed Martin, 1997) that accompanied "The Ethics Challenge" game material. Participants then moved on to the next mini-case until all six had been completed.

Finally, the participants rated the aspects of the game that they had found entertaining, completed posttests of attitude and behavioral intention, and

provided minimal demographic information (age, gender, years of experience, and years living in North America). When all experimental packets had been collected, the participants were debriefed on the experiment and had the opportunity to discuss any questions or issues.

## Results

Non-directional tests and an alpha level of .05 were adopted throughout.

In a test for biased assignment, one-way analyses of variance (ANOVAs) detected no differences among the treatment groups in terms of age, gender, full-time work experience, part-time work experience, or years living in North America (all  $p$  values  $> .25$ ). As a manipulation test, one-way ANOVA demonstrated that there was a significant difference in reporting that the mini-cases were entertaining among the four humor treatment groups,  $F(3, 138) = 6.86, p < .001$ .

In a test of the effectiveness of the intact version of "The Ethics Challenge," the results of paired  $t$  tests verified that participants who had been given that version increased their intention to consult the ethics office,  $t(34) = 3.53, p = .001$ , power = .9291, the ethics help line,  $t(34) = 3.36, p = .002$ , power = .9025, and the legal department,  $t(34) = 2.69, p = .011$ , power = .7430, and they decreased their intention to consult friends or family,  $t(34) = -3.27, p = .003$ , power = .8881. In terms of the adjective list, participants ranked only *serious*,  $t(33) = 4.15, p < .001$ , power = .9807, and *ethical*,  $t(34) = 2.99, p = .005$ , power = .8264, as significantly more applicable after the administration of the mini-cases. All of the elements had moved in the expected direction, with the exception of the descriptive adjective *fun*.

The research predictions were then assessed. In anticipation of small effects, specific predictions had been made about the effects so that planned (a priori) comparisons could be made between pairs of means. Independent  $t$  tests were used to make these comparisons. To maintain rigor, I prepared adjusted alphas using the Benjamani and Hochberg procedure for false discovery rate that has most recently been recommended (Keselman, Cribbie, & Holland, 1999; Williams, Jones, & Tukey, 1999). In this procedure, relationships are ranked according to decreasing significance. An alpha-prime of  $1 - (1 - \alpha)^{1/4} = .01274$  is applied to the first relationship,  $1 - (1 - \alpha)^{1/3} = .01695$  to the second one, and so forth.

Because it was a goal of "The Ethics Challenge" to convince employees to call on the Ethics Office, it was presumed that the gain scores for intention to consult the Ethics Office would show the most effect. Indeed, that was the only measure of the dependent variable to achieve significance according to the Benjamani and Hochberg procedure.

The first prediction was that participants who saw items with the humor removed altogether would not develop the "good mood" that was presumed to enhance the effectiveness of the persuasive message. Gain scores for the intact version were contrasted with those using no humor at all. Removing all the humor

reduced the gain score for reported intention to consult the Ethics Office,  $t(57) = -2.37, p = .021$ .

The second prediction was that participants who saw items with the cartoon drawings removed would not develop the liking of the source that was presumed to enhance the effectiveness of the persuasive message. Gain scores for the intact version were contrasted with those for the version with only the ironic wisecracks. Removing the cartoons reduced the gain score for reported intention to consult the Ethics Office,  $t(53) = -2.33, p = .024$ .

The third prediction was that participants who saw items from which the ironic wisecracks had been removed would not experience the distraction that was presumed to enhance the effectiveness of the persuasive message. Gain scores for the intact version were contrasted with those for the version with only the cartoon drawings. Removing the wisecracks reduced the gain score for reported intention to consult the Ethics Office,  $t(62) = -2.56, p = .013$ .

The last prediction was that participants who saw items without the combination of ironic wisecracks and cartoon drawings would not perceive the self-effacing context that was presumed to enhance the effectiveness of the persuasive message. Gain scores for the intact version were contrasted with those for the version with only one element of the humor. Removing either the wisecracks or the cartoons reduced the gain score for reported intention to consult the Ethics Office,  $t(48) = -2.80, p = .007$ .

There was also some variance in gain scores for intention to consult the Ethics Help Line. These gain scores were reduced by removing the wisecracks,  $t(61) = -2.55, p = .013$ , and by removing the self-effacing context,  $t(46) = -2.37, p = .022$ , but not at the level of significance required by the Benjamani and Hochberg procedure. The descriptive adjective measures provided no significant results except that removing the wisecrack reduced the gain score for agreeing with the descriptive adjective *serious*,  $t(65) = -2.32, p = .023$ .

Because many participants had not seen Dilbert cartoons, ANOVAs were conducted on all measures of the dependent variable to see if that lack of exposure had any effect. Only one significant difference was found. Those who had not seen Dilbert cartoons reported less increase in their agreement with the descriptive adjective *ethical*,  $F(1, 138) = 7.40, p = .007$ .

## Discussion

In this study, theoretical predictions from persuasion theory about when humor would and would not support persuasion were tested empirically. The findings gave some support to the predictions.

Past research has suggested that humor can compensate for weak arguments (Cline & Kellaris, 1999), but the effects in this case were expected to be small. Although humor was the independent variable in the present study, its role in the original instrument was only to "add spice." As a peripheral element of "The



Ethics Challenge," its effects were expected to be small. However, it was the difference among the treatment conditions that was of interest in this study rather than the magnitude of the overall effect.

Of all the measures of persuasion, only the intent to consult the Ethics Office demonstrated strong differences among the humor conditions. This was to be expected because an Ethics Office was a new concept for participants, and it was mentioned in several of the mini-case answers. Furthermore, the mini-cases for "The Ethics Challenge" were written by ethics officers from the various business units of Lockheed Martin. Although participants may have entered the experiment with robust preconceived notions about managers and the legal department, they were more receptive to information about the Ethics Office.

The effects of simply removing or retaining the humor, while significant at the  $p < .05$  level, were small in magnitude. If the experiment had stopped there, the conclusion might have been that humor produced only minor positive effects. However, differentiating among types of humor revealed that the cartoon drawings alone produced little effect. Participants did not even report that the sponsor was more fun when there were cartoon drawings present. These findings contradicted the claims of enthusiasts (e.g., Hill, 1988) but were in accordance with the findings of previous scholarly research (e.g., Bryant, Brown, Silberberg, & Elliott, 1981).

The effect of removing ironic wisecracks was stronger, suggesting that there were persuasive benefits specific to the use of irony. This was consistent with the claim that irony would require dual processing (Giora & Fein, 1999) and serve as a distraction, and with the knowledge that distraction tasks interfere with the creation and rehearsal of subvocal counterarguments (Osterhouse & Brock, 1970). Humor that engages listeners in such a process seems to create more persuasive effect than visual humor that can be more passively observed.

The self-effacing combination of the ironic wisecracks with the cartoon drawings was the most effective of all, suggesting strong persuasive advantages specific to the combination of these ironic wisecracks and these cartoon drawings. Because Scott Adams had approval on this humor and is a successful humorist, it is not surprising that the interaction of his cartoon drawings and ironic wisecracks was particularly effective. There was some evidence that these benefits were due to increased credibility gained through self-effacing humor. The existence of both the cartoon drawings and the ironic wisecracks was slightly correlated with an increase in the selection of the descriptive adjective *serious* as applicable to the sponsor, although it did not quite reach statistical significance,  $r = .166, p < .053$ .

The findings also suggested that "The Ethics Challenge" was a very effective instrument for persuasion, even in the altered form adopted for this study. For this study, the game had been stripped of its introductory and closing videotape segments, which featured the chief executive officer taking some ribbing from the cartoon characters Dilbert and Dogbert. It had also been stripped of its colorful



game pieces, game board with bonus cards, and humorous wall posters. Most important, the small group interactions were removed in order to focus the study at the individual level. Nonetheless, the intact version of the mini-cases was able to generate significant changes in the expected directions for almost all measures of the dependent variable.

Differentiating among forms of humor seems to have produced more specific results, and grounding predictions in persuasion theory (as opposed to humor theory) helped make the results more interpretable. Tight controls for internal validity, though limiting the generalizability of the results, produced results that could safely be attributed to the humor manipulation. The classroom setting seemed to be a useful compromise between the sterile laboratory and uncontrolled field observations.

Future researchers could draw on more experienced participants (such as returning, mature graduate students) to improve the external validity of the results. To find stronger effects, researchers should focus directly on the predicted mechanisms for the persuasive effects. For example, the distraction effects of processing irony could be assessed directly by measuring response times.

Practitioners who want to use humor in persuasion—including educators, advertisers, and politicians—should consider that ironic humor may be more effective than cartoon drawings and that self-effacing humor may be the most effective of all. In addition, they should consider that the effects produced by humor may be too small to compensate for any weaknesses in the persuasive message itself.

## REFERENCES

- Albarracín, D. (1998). Processing of behavior-related communications as a function of cognitive elaboration: A multiple-stage model. *Dissertation Abstracts International*, 58(10-B), 5696.
- Bless, H., & Schwarz, N. (1999). Sufficient and necessary conditions in dual-mode models: The case of mood and information processing. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 423–440). New York: Guilford Press.
- Bryant, J., Brown, D., Silberberg, A. R., & Elliott, S. M. (1981). Effects of humorous illustrations in college textbooks. *Human Communication Research*, 8, 43–57.
- Bryant, J., Comisky, P. W., Crane, J. S., & Zillmann, D. (1980). Relationship between college teachers' use of humor in the classroom and students' evaluations of their teachers. *Journal of Educational Psychology*, 72, 511–519.
- Burns, D. M. (1999). University students' responses to and preferences for various types of humor. *Dissertation Abstracts International*, 59(07-A), 2339.
- Carey, R. (1998). The ethics challenge. *Successful Meetings*, 47(5), 57–58.
- Carpenter, K. A. (1997). *Working papers for scholarly comics: The college instructor's visual communications advisor*. Bridgeport, CT: Housatonic Community-Technical College.
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39, 752–766.

- Cline, T. W., & Kellaris, J. J. (1999). The joint impact of humor and argument strength in a print advertising context: A case for weaker arguments. *Psychology & Marketing, 16*, 69-86.
- Derks, P., & Berkowitz, J. (1989). Some determinants of attitudes toward a joker. *Humor: International Journal of Humor Research, 2*, 385-396.
- Eagly, A. H., & Chaiken, S. (1975). An attribution analysis of the effect of communicator characteristics on opinion change: The case of communicator attractiveness. *Journal of Personality and Social Psychology, 32*, 136-144.
- Festinger, L., & Maccoby, M. (1964). On resistance to persuasive communications. *Journal of Abnormal Social Psychology, 68*, 359-366.
- Freedman, J. L., Sears, D. O., & Carlsmith, J. M. (1978). *Social psychology* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Giora, R., & Fein, O. (1999). Irony comprehension: The graded salience hypothesis. *Humor: International Journal of Humor Research, 12*, 425-436.
- Gruner, C. R., & Freshley, D. L. (1979, November 13-16). *Retention of lecture items reinforced with humorous and non-humorous exemplary material*. Paper presented at the 70th Annual Meeting of the Speech Communication Association, New York, NY.
- Hampes, W. P. (1999). The relationship between humor and trust. *Humor: International Journal of Humor Research, 12*, 253-259.
- Heinecke, S. (1997). Proof positive: Humor does work. *Direct Marketing, 60*(6), 36-40.
- Hennigan, K. M., Cook, T. D., & Gruder, C. I. (1982). Cognitive tuning set, source credibility, and the temporal persistence of attitude change. *Journal of Personality and Social Psychology, 42*, 412-425.
- Hill, D. J. (1988). *Humor in the classroom: A handbook for teachers (and other entertainers!)*. Springfield, IL: Thomas.
- Johnson, C. A. (1997). Schizoid defenses, transitional phenomena and humor in bureaucratic corporate life. *Dissertation Abstracts International, 58*(04-B), 2165.
- Jorgensen, P. F. (1998). Affect, persuasion, and communication processes. In P. A. Andersen & L. K. Guerrero (Eds.), *Handbook of communication and emotion: Research, theory, applications, and contexts* (pp. 403-422). San Diego, CA: Academic Press.
- Keselman, H. J., Cribbie, R., & Holland, B. (1999). The pairwise multiple comparison multiplicity problem: An alternative approach to familywise and comparisonwise Type I error control. *Psychological Methods, 4*, 58-69.
- Kruglanski, A. W., & Thompson, E. P. (1999). Persuasion by a single route: A view from the unimodel. *Psychological Inquiry, 10*(2), 83-109.
- Kuiper, N. A., McKenzie, S. D., & Belanger, K. A. (1995). Cognitive appraisals and individual differences in sense of humor: Motivational and affective implications. *Personality and Individual Differences, 19*, 359-372.
- Lockheed Martin. (1997). *The Ethics Challenge: Leader's guide*. Westlake Village, CA: Cohen/Gebler Associates.
- Mackie, D. M., & Worth, L. T. (1989). Processing deficits and the mediation of positive affect in persuasion. *Journal of Personality and Social Psychology, 57*, 27-40.
- Meyer, J. C. (1997). Humor in member narratives: Uniting and dividing at work. *Western Journal of Communication, 61*, 188-208.
- Mills, J., & Harvey, J. (1972). Opinion change as a function of when information about the communicator is received and whether he is attractive or expert. *Journal of Personality and Social Psychology, 21*, 52-55.
- Moran, C. C. (1996). Short-term mood change, perceived funniness, and the effect of humor stimuli. *Behavioral Medicine, 22*, 32-38.
- O'Keefe, D. J. (1990). *Persuasion: Theory and research* (Vol. 2). Newbury Park, CA: Sage.
- Osterhouse, R., & Brock, T. (1970). Distraction increases yielding to propaganda by

- inhibiting counterarguing. *Journal of Personality and Social Psychology*, 15, 344–358.
- Petty, R. E., & Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary approaches*. Dubuque, IA: Brown.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration-likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 19, pp. 123–205). San Diego, CA: Academic Press.
- Raugust, K. (1998). Using comic strips in training. *Training*, 35(3), 43–47.
- Romero, A. A., Agnew, C. R., & Insko, C. A. (1996). The cognitive mediation hypothesis revisited: An empirical response to methodological and theoretical criticism. *Personality and Social Psychology Bulletin*, 22, 651–665.
- Sinclair, R. C., Mark, M. M., & Clore, G. L. (1994). Mood-related persuasion depends on (mis)attributions. *Social Cognition*, 12, 309–326.
- Stroebe, W. (1999). The return of the one-track mind. *Psychological Inquiry*, 10(2), 173–176.
- Wallinger, L. M. (1997). Don't smile before Christmas: The role of humor in education. *NASSP Bulletin*, 81(589), 27–34.
- Walster, E., Aronson, E., & Abrahams, D. (1966). On increasing the persuasiveness of a low prestige communicator. *Journal of Experimental Social Psychology*, 2, 325–342.
- Williams, V. S. L., Jones, L. V., & Tukey, J. W. (1999). Controlling error in multiple comparisons, with examples from state-to-state differences in educational achievement. *Journal of Educational and Behavioral Statistics*, 24, 42–69.
- Zielinski, D. (2000). Stop joking . . . and start using humor to communicate better. *Presentations*, 14, 34–42.

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