

Human Communication. A Publication of the Pacific and Asian Communication Association.
Vol. 12, No. 2, pp.187 - 198.

**Uncertainty Reduction and Information Valence:
Tests of Uncertainty Reduction Theory, Predicted Outcome Value,
and an Alternative Explanation?**

Jina H. Yoo
University of Missouri – St. Louis

Jina H. Yoo (Ph.D., 2004) is an assistant professor in the Department of Communication at the University of Missouri at St. Louis. This paper was presented in the Interpersonal Communication Division in 2003 at the annual meeting of the National Communication Association, Miami Beach, FL. For correspondence, contact Jina H. Yoo, 571 Lucas Hall, One University Boulevard, St. Louis, MO 63121-4400, (314) 516-5234 (office), (314) 516-5816 (Fax), e-mail: yooji@umsl.edu.

Abstract

Uncertainty reduction has a major role in communication theory of relational development. Two competing theories, Berger and Calabrese's (1975) *uncertainty reduction theory* (URT) and Sunnafrank's (1986) *predicted outcome value* (POV), provide different perspectives on the uncertainty reduction process during initial interactions. Research suggests that when forming a first impression, negative information weighs more heavily than positive information, which is called the "negativity effect" (Kellermann, 1984). This research examined the relationship between the level of uncertainty and the negativity effect in initial interaction.

This paper incorporates the negativity effect with uncertainty reduction to explain how negative information will affect uncertainty level during an initial interaction. The basic assumption of uncertainty reduction is that when two individuals meet for the first time, their primary goal is to reduce uncertainty and increase predictability through communicating with each other, since uncertainty is an uncomfortable state (Berger & Calabrese, 1975). This assumption suggests that the quantity of information is a major determinant of reducing the uncertainty level. The implication is that ANY kind of information will serve to reduce the uncertainty level tends to be hasty and deficient. This research will propose a different perspective on uncertainty reduction, that not only the quantity of information, but also the valence of information has an impact on uncertainty reduction.

The major goal of this research is to explore the function of information valence on uncertainty reduction in initial interaction. This paper will begin by discussing negativity effect and its relation to uncertainty reduction and impression formation. Next, a brief comparison will be conducted between two competing uncertainty reduction theories, Berger and Calabrese's (1975) uncertainty reduction theory (URT) and Sunnafrank's (1986) predicted outcome value (POV). Then the relationship between uncertainty reduction and the characteristics of shared information will be presented.

Negativity Effect

The negativity effect occurs when negative information is disproportionately weighted more heavily when compared to positive information about objects, events, and people (Kellermann, 1984, 1989). Numerous studies reveal that even if the relative number of positive and negative attributes is controlled and balanced, negative impressions tend to emerge (e.g., Anderson, 1965; Brinbaum, 1973; Fiske, 1980; Oden & Anderson, 1971; Reeder & Coovert, 1986; Van der Pligt & Eiser, 1980). Similarly, studies of impression formation have found that negative personality traits generally outweigh equally polarized positive traits in the formation of an overall impression of a stimulus person (e.g. Anderson, 1965; Richey, Koenigs, Richey, & Fortin, 1975; Richey, McClelland, & Shimkunas, 1967; Wyer, 1970). For instance, Richey and colleagues (1967) report a finding of a negative effect in the impression of moral-ethical character. In their study, when participants were presented with equal amounts of polarized positive and negative information about a hypothetical stranger, the negative information had significantly more influence on character rating. As a follow-up study, they varied the amounts of favorable and unfavorable information to describe behaviors of an unknown person (Richey et al., 1975), and found that a single negative behavior neutralized five positive behaviors. This negativity effect in impression formation has been exhibited in naturally occurring situations, such as employment interviews where negative characteristics of employees influence hiring decisions more than positive characteristics (Bolster & Springbett, 1961; Springbett, 1958). Similarly, negative information is more influential than comparable positive information in evaluations of political candidates (Klein, 1991, 1996; Lau, 1985).

To answer the question why negativity bias occurs, numerous explanations have been proposed (e.g., Brinbaum, 1973; Fiske, 1980; Helson, 1964; Sherif & Sherif, 1967). Yet no single explanation accurately answers that question, so Skowronski and Carlston (1989) proposed a "category diagnostic approach" as the ultimate explanation of the negativity effect. This approach asserts that the informational value of a perceived behavior is related to its category diagnosticity. Lupfer, Weeks, and Dupuis (2000) offer an explanation of a category diagnostic approach as when a negative behavioral trait is used to describe a target person, the observer infers that the trait is the person's true attribute, and the observer perceives that information as

highly diagnostic of understanding the target. Whereas a positive behavioral trait inhibits making confident inferences that the person possesses only that certain personality trait. For instance, an immoral behavior, such as habitually stealing money from acquaintances, appears to be high in the category of diagnosticity, whereas moral behavior, such as habitually donating money to charitable organizations, is less so.

Cost orientation explanation also provides an explanation for the negativity effect in terms of individuals' primary motivation (Klein, 1991). This hypothesis postulates that people tend to be more risk oriented in general, so that they are more strongly motivated to avoid potential costs than to approach potential gains. Hamilton and Zanna (1972) apply the cost orientation hypothesis in interpersonal communication, and explain when forming a first impression of a stranger, people are concerned more with determining "whether or not the person poses a substantial threat for future interactions with him, rather than focusing on those desirable qualities that might be a basis for a positive relationship with the person" (p. 205); consequently, individuals give more attention to negative information. The cost orientation hypothesis provides a motivational explanation that the desire to avoid costs is believed to increase motivation to change attitudes toward the target person more than the desire to obtain rewards (Allen & Burrell, 2000). For instance, when people interact with a person who is perceived to have a negative characteristic (i.e., dishonesty), people are more motivated to avoid costs resulting from the interaction than to approach a person who is perceived to have a positive characteristic (i.e., honesty), which might bring a potential reward for them.

As previously mentioned, if negative information affects impression formation of other people, then the question should ask how the negative information influences uncertainty levels. When developing an interpersonal relationship, uncertainty reduction plays a major role in interpersonal communication. Numerous researchers have established that uncertainty reduction is an important predictor of liking since uncertainty and social attraction are inversely related (e.g., Berger, 1979, 1987; Berger, Gardner, Parks, Schulman, & Miller, 1976; Douglas, 1990). The next section will discuss the uncertainty reduction and impression formation.

URT vs. POV

Two major theories of uncertainty reduction, Berger and Calabrese's (1975) URT and Sunnafrank's (1986) POV exist in communication, although no theory explicitly clarifies the function of information valence on uncertainty reduction. The goal of this research is to incorporate the negativity effect with uncertainty reduction, by inquiring how different valences of information have an influence on the uncertainty level, since the negative information is perceived to be deviant and non-normative (Kellermann, 1984, 1989; Kellermann & Reynolds, 1990), which will consequently reduce predictability in initial interaction.

Holmes and Rempel (1989) indicate that the state of uncertainty becomes increasingly dissonant with individuals' behavioral orientation. By attempting to reduce uncertainty, an individual can increase predictive certainty about the other's future behavior, as well as certainty about the self in the situation. The ability to verify others' behavior alleviates the anxiety and vulnerability from the high uncertainty (Gudykunst, 1985). As a result, the reduction of uncertainty is associated with a positive outcome of the initial interaction by lessening the negative affect caused by uncertainty toward both the other and self. If individuals are unable to "get to know" each other, the possibility they will develop a more enduring relationship is reduced (Berger & Calabrese, 1975). In general, high uncertainty about acquaintanceship is associated with relatively negative views of initial interaction, increased avoidance of initial conversation sequences, and relative inability to manage acquaintanceship episodes successfully

(Douglas, 1991).

Berger's URT posits that interpersonal relationships develop as individuals reduce uncertainty about each other (Berger, 1979; Berger & Calabrese, 1975). It focuses on the initial phase of interaction between strangers by suggesting that when strangers meet, the primary motivation is to reduce uncertainty. Since people find such a state of uncertainty uncomfortable, they try to increase predictability of the behaviors of themselves and others (Berger & Calabrese, 1975). Berger and Calabrese (1975) originally propose the first axiom:

Axiom 1: Given the high level of uncertainty present at the onset of the entry phase, as the amount of verbal communication between strangers increases, the level of uncertainty for each interactant in the relationship will decrease. As uncertainty is further reduced, the amount of verbal communication will increase.

The basic notion of the URT is that as an individual receives information about the stranger, information simply builds up, and eventually it will replace uncertainty. The amount of verbal communication can be inferred as the amount of information shared during the interaction. As stated in the first Axiom, URT does not point out the type of information shared in interaction. It rather assumes that only the quantity of information determines one's uncertainty level: the more information shared, the more uncertainty is reduced, regardless of the valence of information.

Sunnafrank, however, argues that URT has a limited perspective of human interaction (1986). He points out the lack of empirical support for URT as one of the methodological flaws. His argument also highlights a logical flaw of URT that human communication is not limited to reducing uncertainty and maximizing predictability, but also attempts to maximize relational outcomes. In order to supplement the deficit of URT, he proposes POV, which suggests that individuals seek to maximize their relational outcomes by minimizing costs and maximizing rewards. Sunnafrank indicates that a major determinant of one's reduction of uncertainty is the extent to which one perceives the forecasted relational outcome to be positive. Two basic assumptions of POV propose that (a) when individuals interact for the first time, communication is directed at reducing uncertainty in order to determine likely outcome-values for the relational future, and (b) communication occurs in a way predicted to result in the most positive outcomes (Sunnafrank 1986, 1988). As a result, he suggests the first proposition:

Proposition 1: During the beginning stage of initial interactions, both the amount of verbal communication and uncertainty reduction increase. Further increases in amount of verbal communication occur when uncertainty reduction results in positive predicted outcome values, whereas decreases in the amount of verbal communication follow from negative predicted outcome values.

At the same time, POV proposes that negative information will result in an expected negative outcome, and subsequently, it will decrease the amount of verbal communication. Nonetheless, POV tends to hold an ambiguous position in terms of the level of uncertainty as a result of having negative outcome value. Therefore, by making an assumption that uncertainty will be reduced to a certain threshold in the initial interaction, after that threshold it depends upon the predicted outcome value to reduce uncertainty.

The Relationship between Uncertainty Reduction and Information

Negative information of other individuals is perceived to be non-normative and deviant (Kellermann, 1989). Deviance is often defined as unpredictability (Berger & Calabrese, 1975; Kellermann & Reynolds, 1990), in turn, this unpredictability must increase the uncertainty level. As Berger and colleagues (1976) suggest, perceived deviance affects individuals' uncertainty

about others, including their ability to predict and explain behavior in initial interactions. According to Planalp and Honeycutt (1985), events that increase uncertainty in intimate relationships are usually viewed as deviant. The events participants reported as deviant could be defined as behavior that violated expectations or social norms. Their finding is consistent with Kellermann and Reynolds' (1990) that deviance yields a moderate positive relationship with the uncertainty level. The findings on the relationship between deviance and uncertainty level suggest that not only the amount of information, but also the valence of information (i.e. positive information vs. negative information) plays a critical role in determining the uncertainty level. Thus, negative information about the target person presented in an initial interaction will increase the uncertainty level since the negative information is viewed as deviant and non-normative.

Three different rival hypotheses will be tested in this research. URT describes that when no information is given to the individuals during dyadic communication, the uncertainty level would be the highest, but the valence of information is not significant (uncertainty level: positive information = negative information < no information). In other words, as long as the same quantity of information is given to the individuals, the positive information group will not differ from the negative information group in terms of uncertainty level. POV is similar except that the negative information will reduce more uncertainty than no information, yet less uncertainty than positive information (uncertainty level: positive information < negative information < no information).

In this paper, the alternative hypothesis will propose that when negative information is perceived as negative, the uncertainty level will increase more than if no information is given. When people receive a piece of negative information about another person, the negative information will be perceived as non-normative and deviant (i.e. "Habitually stealing money from acquaintances is such an unusual behavior."). Due to the diagnostic characteristics of the negativity effect, people will be more likely to believe that the negative characteristic is a true personality trait (i.e. "He/she must have such a personality."). Then, it will arouse a precaution that this person might harm them (i.e. "He/she might steal my money someday."), thus uncertainty level about this person will increase. Negative information will exhibit the highest level of uncertainty, while positive information will exhibit the lowest level of uncertainty (uncertainty level: positive information < no information < negative information).

Method

Participants

One hundred and sixty seven students enrolled in an entry-level communication course at a large Midwestern university earned course credits for participating in this survey study. Participants were 67 males and 100 females. Participants ranged in age from 18 years to 38 years ($M = 20.28$, $SD = 2.27$). Fifty-nine, fifty-three, and fifty-five participants were randomly assigned to the positive information, negative information, and no information group respectively. Participation was voluntary.

Procedure

All students who wished to participate signed the consent form before beginning the experiment. Participants were placed into a hypothetical situation, which was they were set up for a blind date. After reading the introduction about their date, participants were given stimulus material. Then they were asked to fill out a revised Clatterbuck's CLUE7 scale. The manipulation check on the valence of the behavior of the hypothetical blind date partner was measured briefly afterward.

Measurement

In order to manipulate the independent variable of valence of information, different hypothetical scenarios were created in order to ensure the external validity of the study. The stimulus asked participants to rate a person who has a potential to be their blind date partner. The stimulus included a hypothetical situation, where a friend has been set up on a blind date for participants. Basic demographic information (i.e., name and age) was given in all of the scenarios as an introduction.

The valence of information was manipulated as information coming from a third person (i.e. roommate). During initial interactions between strangers, revealing negative information about the self violates the norms of social appropriateness and politeness in conversational structures, which would be a potential confound. This study assumes that people would generally behave typically and positively, due to impression management (e.g., Tedeschi, 1981) and politeness concerns (e.g., Brown & Levinson, 1978). By employing the hypothetical situation stimulus, where the information is presented by a third person, the potential confounds can be minimized.

The dependent variable was measured using a slight variation of the CLUE7 (Clatterbuck, 1979). The variation is made by Kellermann and Reynolds (1990), in that the eighth item (i.e., How well do you think you understand the person?) was included. Clatterbuck's CLUE7 scale has been employed in nearly all uncertainty research, since it is a fairly reliable measure throughout the studies (alpha ranged from .87 to .91). Participants indicated their feelings on a series of 7-point bipolar scales.

Results

Prior to testing the hypotheses, confirmatory factor analyses (CFA) (Hunter & Gerbing, 1982) were used to test the validity of the factor structure of the items and to assess the reliability of the measures. The result of CFA suggested all items of the CLUE7 should be retained. The CLUE7 scale is a unidimensional construct that was internally consistent, and the alpha reliability for this study was .87.

A manipulation check for the independent variable was conducted to see how the participants actually perceived the valence of information. A five-item scale ($\alpha = .88$) was used to measure how these participants perceived the potential blind date's behavior in terms of its valence. An ANOVA was conducted, and a significant main effect was found for the valence of information on the manipulation check, $F(2, 166) = 97.94, p < .001, \eta^2 = .54$. In order to be more specific, an ANOVA with weighted contrast coefficients was also conducted to compare each group. Participants in the positive information group ($M = 5.27, SD = .85$) perceived the potential blind date's behavior (i.e. helping others) was significantly more positive than participants in the no information group ($M = 4.25, SD = .60$), $t(164) = 7.22, p < .001$. Similarly, participants in the negative information group ($M = 3.22, SD = .84$) perceived the potential blind date's behavior (i.e. cheating on exams) significantly more negative than participants in the control group, $t(164) = -6.72, p < .001$. Therefore, it can be concluded that the manipulation for the stimulus was successful.

Participants' uncertainty level after reading different valence of information was examined. The results indicated that participants in the positive information group reported the lowest level of uncertainty ($M = 4.15, SD = .87$). The participants in the negative information group reported the second lowest level of uncertainty ($M = 3.42, SD = .87$), and the participants in the control group reported the highest level of uncertainty ($M = 3.11, SD = 1.08$). The simple oneway ANOVA indicated that these groups were significantly different from each other, $F(2,$

166) = 18.31, $p < .001$, $\eta^2 = .19$. The oneway ANOVA with weighted contrast coefficients indicated that the mean difference between the positive information group and the negative information was significantly different from each other, $t(164) = 4.09$, $p < .001$. However, the mean difference between the negative information group and the control group was not significantly different from each other, $t(164) = 1.70$, *n.s.*

Participants' uncertainty level after reading different valence of information was also submitted to a single sample t-test. In the positive information group, the mean uncertainty reduction level toward the hypothetical blind date partner of 4.15 ($SD = .87$) was not significantly higher than the hypothesized population mean of 4 (the midpoint of the scale), $t(58) = 1.33$, *n.s.*, two-tailed. However, participants in the negative information group reduced significantly less uncertainty when comparing with the midpoint of the scale, $M = 3.42$, $SD = .87$, $t(52) = -4.84$, $p < .001$. Participants who received no information about the potential blind date partner also reported significantly less uncertainty reduction level when comparing with the midpoint of the scale, $M = 3.11$, $SD = 1.08$, $t(54) = -6.12$, $p < .001$.

The results imply that the participants in the positive information group had significantly less uncertainty toward the potential blind date partner than participants in the negative information group. While the pattern of mean difference among these three groups supported POV (uncertainty level: positive information < negative information < no information), the difference between the negative information group and the control group was not statistically significant. Therefore, the actual data suggested that participants in negative information and no information groups were not different in terms of uncertainty reduction (uncertainty level: positive information < negative information = no information).

Discussion

The leading purposes of this investigation were (a) to explore how information valences influence observers' uncertainty state in initial interactions, and (b) to integrate the negativity effect and uncertainty reduction in initial interactions. The findings suggested that the function of information valence is strongly confirmed with the data. The role of information valence on uncertainty reduction is noteworthy in that positive information significantly produces less uncertainty than when negative information or no information is given.

URT assumed that the same quantity of information would reduce the same amount of uncertainty regardless of the valence of information. URT does not predict differences for the valence of information (i.e. positive information and negative information), but only differentiates the quantity of information (i.e. information and a lack of information). The data failed to support the URT since the oneway ANOVA results indicated that statistically significant mean differences were found between positive information and negative information group, $t(164) = 4.09$, $p < .001$. This shows that URT overlooks the effect of information valence.

In terms of information valence, POV and the alternative explanation, which was proposed by this research, were confirmed by the data. Both hypotheses correctly predicted that the participants in the positive information group would significantly reduce the level of uncertainty compared to participants in the negative information group.

The result indicated that there was a significant mean difference between the positive information and negative information groups, although the mean difference between the negative information group and the control group was not statistically different. The pattern of mean difference was most similar with what POV hypothesized (uncertainty level: positive information < negative information < no information). The current study showed that the uncertainty level was highest in both negative information and no information groups, while positive information

significantly reduced one's uncertainty level (uncertainty level: positive information < negative information = no information). Therefore, the data did not fully support the relationship between the negativity effect and uncertainty reduction.

One of the reasons why no significant difference was found between the negative information and control groups is that there was no clear distinction between different types of uncertainty. In Douglas's (1990) research on uncertainty, he differentiates specific uncertainty from general uncertainty. General uncertainty is also called global uncertainty, which is usually measured by the CLUE7 scale (Clatterbuck, 1979). For specific relational domains, Douglas develops the special measure for his study, which is concerned about the relational context between one and his/her partner. However, the current research was only concerned with global uncertainty even though it is necessary to consider both dimensions of uncertainty. In order to have a substantial evidence for the negativity effect, these two different sub-constructs of uncertainty should have been differentiated. The specific domain of uncertainty should be measured, since the negativity effect tends to be directly related to one's relational uncertainty rather than global uncertainty.

Even though the negativity effect was not supported in this research, the negativity effect should not be overlooked. Out of curiosity, the perception of the negative information was analyzed as a post hoc. The result showed that there was a significant mean difference among three groups in terms of the perceived liking of a potential blind date's behavior, $F(2, 166) = 87.21, p < .001$. The pattern of mean difference for liking found participants who received positive information scored highest while participants who received negative information scored lowest. One item measure of whether the participants would date the potential blind date partner was also asked at the end of the questionnaire. A seven-point Likert scale (1: no and 7: yes) was used to see how the negative information affected the willingness to have future interaction with the target person. A significant main effect was reported in that three groups are significantly different in terms of the mean, $F(2, 166) = 22.00, p < .001$. The pattern of the mean is that the positive information has the highest mean ($M = 4.72, SD = 1.23$), the control group reported the second highest mean ($M = 3.96, SD = 1.17$), and the negative group had the lowest mean ($M = 3.17, SD = 1.28$). The oneway ANOVA with weighted contrast coefficients reported that the mean for the positive information group is significantly greater than the control group, $t(162) = 6.63, p < .001$, as well as the negative group, $t(162) = 3.30, p < .001$.

Limitation and Future direction

There are several possibilities as to why the negativity effect was not supported in this investigation. The first issue is what kind of relationship the person is likely to have with the target person. A relationship with a blind date partner has relatively low relational importance compared to any other relationships. If individuals are not willing to meet the blind date partner, they can always stop having future interactions. Planalp and Honeycutt (1985) state:

“One gets the sense that information simply accumulates, displaces uncertainty, and forms an increasingly comprehensive and precise basis for predicting and explaining others. Yet the intuitive theories that guide interpersonal communication may sooner or later confront serious challenges that increase uncertainty, temporarily if not permanently.”

Planalp and Honeycutt (1985) explain that when the knowledge people use to predict and explain others' behavior brings interpersonal doubt, uncertainty may increase. This implies that the quantity of information is not the only factor to decrease uncertainty, but there are certain kinds of information that even increases the uncertainty level. In their study, the participants

196 Uncertainty Reduction and Information Valence

were asked to write an event where they learned some surprising information about their friend, spouse or romantic partner. Their findings indicate that relational intimacy is a strong motivator to reduce uncertainty. Receiving negative information about the close friends or romantic partner might have a greater effect in terms of uncertainty reduction than receiving negative information about the stranger that people may not need to meet in life. The future direction of this research will be to specify the incentive value of the target person. Berger (1979) indicates that people would be more motivated to reduce the uncertainty about others when others mediate rewards and punishments for them. It will look at the specific level of the incentive value and how participants will react to the valence of information.

References

- Allen, M., & Burrell, N. (2000). *The Negativity Effect in Political Advertising: A Meta-Analysis*. Unpublished manuscript, University of Wisconsin-Milwaukee.
- Anderson, N. H. (1965). Averaging versus adding as a stimulus - combination rule in impression formation. *Journal of Experimental Psychology*, *70*, 394-400.
- Berger, C. R. (1979). Beyond initial interaction: Uncertainty, understanding, and the development of interpersonal relationships. In H. Giles & R. N. St.Clair (Eds.), *Language and Social Psychology* (pp. 122-144).
- Berger, C. R. (1987). Communicating under uncertainty. In M. E. Roloff & G. R. Miller (Eds.), *Interpersonal Processes: New Directions in Communication Research* (Vol. 14, pp. 39-62). Newbury Park: Sage.
- Berger, C. R., & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a development theory of interpersonal communication. *Human Communication Research*, *1*(99-112).
- Berger, C. R., & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a development theory of interpersonal communication. *Human Communication Research*, *1*, 99-112.
- Berger, C. R., Gardner, R. R., Parks, M. L., Schulman, L. W., & Miller, J. R. (1976). Interpersonal epistemology and interpersonal communication In G. R. Miller (Ed.), *Explorations in interpersonal communication* (pp. 149-171). Beverly Hills, CA: Sage.
- Berger, C. R., Gardner, R. R., Parks, M. L., Schulman, L. W., & Miller, J. R. (1976). Interpersonal epistemology and interpersonal communication. In G. R. Miller (Ed.), *Explorations in Interpersonal Communication* (pp. 149-171). Beverly Hills, CA: Sage.
- Bolster, B. I., & Springbett, B. M. (1961). The reaction of interviewers to favorable and unfavorable information. *Journal of Applied Psychology*, *45*, 97-103.
- Brinbaum, M. H. (1973). Morality judgment: Test of an averaging model with differential weights. *Journal of Experimental Psychology*, *99*, 395-399.
- Brown, P., & Levinson, S. C. (1978). Universals in language usage: Politeness phenomena. In E. M. Goody (Ed.), *Questions and Politeness: Strategies in Social Interaction* (pp. 56-289). New York: Cambridge University Press.
- Clatterbuck, G. W. (1979). Attributional confidence and uncertainty in initial interaction. *Human Communication Research*, *4*, 147-157.
- Douglas, W. (1990). Uncertainty, Information-seeking, and liking during initial interaction. *Western Journal of Speech Communication*, *54*, 66-81.
- Fiske, S. T. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology*, *38*, 889-906.
- Gudykunst, W. B. (1985). The influence of cultural similarity, type of relationship, and self-monitoring on uncertainty reduction processes. *Communication Monographs*, *52*, 203-217.
- Hamilton, D. L., & Zanna, M. P. (1972). Differential weighting of favorable and unfavorable attributes in impression formation. *Journal of Experimental Research in Personality*, *6*, 204-212.
- Helson, H. (1964). *Adaptation-level theory*. New York: Harper.
- Holmes, J. G., & Rempel, J. K. (1989). Trust in close relationships. In C. Hendrick (Ed.), *Close relationships* (Vol. 10, pp. 187-219). Newbury Park, CA: Sage.
- Hunter, J., & Gerbing, D. (1982). Unidimensional measurement, second order factor analysis,

- and causal models. *Research in Organizational Behavior*, 4, 167-320.
- Kellermann, K. (1984). The negativity effect and its implications for initial interaction. *Communication Monographs*, 51, 37-55.
- Kellermann, K. (1989). The negativity effect in interaction: It's all in your point of view. *Human Communication Research*, 16, 147-183.
- Kellermann, K., & Reynolds, R. (1990). When ignorance is bliss: The role of motivation to reduce uncertainty in Uncertainty Reduction Theory. *Human Communication Research*, 17(1), 5-75.
- Klein, J. G. (1991). Negativity effects in impression formation: A test in the political arena. *Personality and Social Psychology Bulletin*, 17, 412-418.
- Klein, J. G. (1996). Negativity in impressions of presidential candidates revisited: The 1992 election. *Personality and Social Psychology Bulletin*, 22, 288-295.
- Lau, R. R. (1985). Two explanations for negativity effects in political person perception. *American Journal of Political Science*, 29, 119-138.
- Lupfer, M. B., Weeks, M., & Dupuis, S. (2000). How pervasive is the negativity bias in judgments based on character appraisal? *Personality and Social Psychology Bulletin*, 26(11), 1353-1366.
- Oden, G. C., & Anderson, N. H. (1971). Differential weighting in integration theory. *Journal of Experimental Psychology*, 89, 152-161.
- Planalp, S., & Honeycutt, J. M. (1985). Events that increase uncertainty in personal relationships. *Human Communication Research*, 11, 593-604.
- Reeder, G. D., & Coovert, M. D. (1986). Revising an impression of morality. *Social Cognition*, 4, 1-17.
- Richey, M. H., Koenigs, R. J., Richey, H. W., & Fortin, R. (1975). Negative salience in impressions of character: Effects of unequal proportions of positive and negative information. *The Journal of Social Psychology*, 97, 233-241.
- Richey, M. H., McClelland, L., & Shimkunas, A. M. (1967). Relative influence of positive and negative information in impression formation and persistence. *Journal of Personality and Social Psychology*, 6, 322-327.
- Sherif, M., & Sherif, C. W. (1967). Attitudes as the individual's own categories: The social judgment approach to attitude change. In C. W. Sherif & M. Sherif (Eds.), *Attitude, Ego Involvement, and Change* (pp. 105-139). New York: Wiley.
- Springbett, B. M. (1958). Factors affecting the final decision in the employment interview. *Canadian Journal of Psychology*, 12, 13-22.
- Sunnafrank, M. (1986). Predicted outcome value during initial interactions: A reformulation of uncertainty reduction theory. *Human Communication Research*, 13, 3-33.
- Tedeschi, J. T. E. (1981). *Impression management theory and social psychological research*. New York: Academic Press.
- Van der Pligt, J., & Eiser, J. R. (1980). Negativity and descriptive extremity in impression formation. *European Journal of Psychology*, 10, 415-419.
- Wyer, R. A. (1970). Information redundancy, inconsistency and novelty and their role in impression formation. *Journal of Experimental Social Psychology*, 6, 111-127.