The Impact of Mood on Message Formulation: A Study of Emotion and Message Design Logic

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This study explores mood effects on message construction and message design logic. Previous research has demonstrated that mood affects memory, cognitive processing, message retrieval, and message construction. Since these cognitive processes are fundamental to the construction of messages, mood should affect the design of messages. Consequently, mood should affect message design logic. This study examined O'Keefe's research on message construction and found her study neglected the influence of mood on message design logic. An experimental study is reported which tests this hypothesis. Results suggest that mood and message design are indeed associated.

Petty and Cacioppo's (1986) elaboration likelihood model (ELM) postulates that individual and situational factors affect individual choice of a central route or a peripheral route to process an incoming message. Acknowledging a participant's "appraisal" of an input event as a cognitive modifier capable of affecting behavior, researchers have attempted to test the possible additional or supplantive role of the research participant's "mood." "Mood" has been distinguished from emotion by Ekman (1984): mood is of a longer duration with less immediacy and intensity than an "emotion," such as anger or fear. Additionally, mood is distinguished from mood disorders — such as depression or bipolar disorder in which the participant's affective state is chronic and severe enough to interfere with the person's daily functioning. Thus, "mood" is treated as a relatively transitory affective state (good, neutral, or bad) that is situation-dependent.

While examining behaviors and cognitive capacities (i.e., memory and "helpfulness"), mood studies have largely ignored the potential effects of mood on communication strategies or message construction. Communicative competence (effective strategies and construction) has been studied as a "trait" (O'Keefe & Delia, 1982, cited in Zorn, 1991) or as a situationally defined "state" (Cupach & Spitzberg, 1983). O'Keefe (1988), in particular, advocates that cognitive reasoning indicated by message construction strategies reflects a subjective, internally consistent sense of what elements are task relevant. Cegala (1984) proposed that both views may be correct; that "competent communication is likely a function of dispositional tendencies...normative situational factors...and interaction" (p. 320).

O'Keefe (1988) has suggested that people systematically generate and process messages; that, as individuals develop cognitively, they secure certain communication-consulting concepts, different patterns of message organization, and different modes of message interpretation. Thus, cognitive processing and message effects may be due in part to devel-
opmental capacity. However, O'Keefe has not considered the situational effects of mood that may mediate, alter, or interrupt cognitive response. For example, Schwarz, Bless, and Bohnen (1991) found that research participants in a good mood seemed to utilize central processing less than did those in a bad mood. They proposed that people in a good mood are less critical of the persuasive message and as a result, process information using peripheral cues. When in a bad mood, people are more likely to process the information critically and utilize central route processing. Consequently, they concluded that mood affects how people cognitively construct (encode) and interpret messages.

The present study addresses the issue of mood and its possible effect on message construction as defined by O'Keefe’s Message Design Logic (MDL). First, some “mood” studies are described. Next, the tenets of Message Design Logic are examined. Finally an experiment conducted to test the effects (if any) of mood on subjects’ message construction categorized by O'Keefe”s MDL (1988) is reported.

MOOD EFFECTS ON COGNITIVE PROCESSING, MEMORY AND BEHAVIOR

A review of a chronological sampling of previous “mood” studies bears out the effect of mood on cognitive processing. Tversky and Kahneman (1973) found that happy or sad events might change a mood and increase the availability of similar events in memory. Weingartner, Miller, and Murphy (1977) observed that research participants in a bad mood were less able to retrieve information. Isen, Shalker, Clark, and Karp (1978) reported that a person in a good mood was more likely to retrieve positive than negative material, and that this good mood “enhancement” had a direct effect on the decision making process (measured as a rating of their automobile’s performance) and memory (recall of words).

Bower (1981) found similar results to Isen et al. (1978). Volunteer participants recorded and rated personal emotional events (pleasant or unpleasant) in a daily diary for seven consecutive days; after a one week interval it was hypnotized that half of the participants would be in a bad (50%) mood and half were hypothesized to be in a good mood. It was found that pleasant mood participants recorded a greater percentage of their pleasant events (92%) as compared to their unpleasant events (55%) and conversely, unpleasant mood participants recalled a higher percentage of unpleasant experiences. The authors concluded that mood served as a fundamental component in how people chose and processed thought and may have dictated the type of message that a person designed.

Schwarz and Clore (1983) manipulated “mood” by asking participants to provide a vivid description of an unpleasant or pleasant life event while placed in a soundproof room. Half were led to believe that the soundproof room was a detriment, the others were told it was a plus. A third group was not given any description of the room’s qualities. Participants describing an unpleasant life event reported feeling less happy and less good than those describing a pleasant event. Happy participants processed the situation peripherally and externally, attributing their mood to outside factors, such as room pleasantness. On the other hand, unhappy participants processed the situation centrally. They attributed their mood to factors other than the room manipulation — namely themselves — indicating that they had some degree of control of influencing situational factors. Participants in unpleasant affective states were more likely to search for and use information to explain their state than those in a good or neutral state. This suggests individual reliance is greater on cognitive processes than “feeling states when in a bad mood.” Schwarz and Clore (1983) concluded that people are motivated to attribute negative moods to situational circumstances, while positive people are more content with their good feelings.

Worth and Mackie’s (1987) research, while not distinguishing between motivational factors influencing mood state and how present cognitive state affect mood, found that those experiencing a positive mood processed messages less systematically. In later research, they (Mackie & Worth, 1989) reported that persons experiencing “a positive mood exhibit little systematic processing of complex information and an increased reliance of rapid, less effortful judgment heuristics” (p. 27). The later study manipulated participants’ mood as good (small lottery winners), bad (small lottery losers), and neutral (neither winners nor losers) and their respective ability to analyze persuasive messages about acid rain and subsequent counterattitudinal messages. Participants in positive mood-limited exposure were unable to recall nearly as many arguments as their counterparts. They concluded that mood affects cognitive process capacity, and that positive mood seems to serve the function of a rewarding state, resulting in less extensive cognitive processing that might di-
rectly affect construction of messages.

Research conducted by Schwarz (1990) revealed that mood distracted message processing. Specifically, he found that persons in a good mood were not as likely to engage in extensive processing compared to persons in a bad mood. Schwarz, Bless, and Bohner (1991) suggested that mood can affect the design of messages to achieve set goals. While designing a message, an individual’s cognitive processing reflects the psychological state that is mirrored in the felt emotion.

In addition to cognitive processes and memory, mood may also influence behavior. Isen, Clark, and Schwarz (1976) found that participants induced into a “good mood” (via a free gift) followed through on helpful behavior to a stranger significantly more often than those whose moods were not manipulated. They called at earlier intervals (1, 4, 7 minutes) and were much more likely to offer help than those called after longer intervals (10, 13, 16 minutes), indicating that mood state loses strength over time. But, overall, people who were given a free sample were more helpful by behaving heuristically from good feelings than those who were not who behaved more cognitively.

MESSAGE DESIGN LOGIC

Constructivists believe that communication is both a social and psychological phenomenon. It is social because of the interactive dynamics of communicating and psychological because of the process in which actions of self and others are measured while engaging in the dynamic process (O’Keefe & Delia, 1988, cited in Zorn, 1991). “[C]onstructivism posits that the development of an abstract, differentiated, and organized system of interpersonal constructs is fundamental to competent communication (Zorn, 1991, p. 183). This leads to a systematic approach to message construction.

Message Construction

Burleson (1987) holds that well developed systems of interpersonal constructs may allow for more complex, abstract, and psychologically centered ways of communicating, thus enabling the development of message strategies that are adapted to the particular listener (cited in Zorn, 1991). “Well developed construct systems may also enable the communicator to be more sensitive to the interpersonal aspects of situations...to define situations in more complex ways and [to] develop message strategies that address multiple aims and obstacles” (O’Keefe & Delia, 1982, cited in Zorn, 1991, p. 183).

O’Keefe’s (1988) MDL provides an alternative explanation to the why and how humans attempt to participate in communication that differs from traditional rational (conventional rule following) design by arguing that humans sometimes fail to adopt coherent rational behavior based on the goals and situation. O’Keefe (1988) argues that relationships between messages and their goals may be affected by the speaker’s implicit definition of communication. A person who views communication in one way would construct and interpret messages differently from a person who conceptualizes communication in another. As people acquire communication competence through the progressive development of communication skills, they appear to have distinct patterns of organizing and interpreting messages. “Individuals might have systematically reflected in fundamentally different ways of constructing and interpreting messages” (O’Keefe, 1988, p. 80). More specifically, O’Keefe suggests that there are three distinct patterns people follow when organizing their knowledge: expressive design logic, conventional design logic, and rhetorical design logic. (O’Keefe also describes three methods for managing and pursuing goal sets of all types, but this classification was not of concern to the present study).

Expressive Design Logic. Expressive design logic is a pattern of message construction in which “language is a medium for expressing thoughts and feelings” (p. 84) with little attention paid to context. It is “subjective and associative” and often filled with pragmatically pointless content” (p. 85). “Users fail to appreciate that in communication, the process of expression can be made to serve other goals” (p. 84).

Conventional Design Logic. Conventional design logic is a pattern of construction in which “communication is a game played cooperatively, according to socially conventional rules and procedures” with “action meaning context-determined” (p. 86). It is intersubjective and rule-focused. “[U]sers” are concerned with social effects more than their own thoughts” (p. 86).

Rhetorical Design Logic. Rhetorical design logic is a pattern of construction in which “communication is the creation and negotiation of social selves and situations” (p. 87). It is intersubjective and style centered, with explicit context defining clauses
and phrases” (p. 85). Persons who employ rhetorical design logic “treat meaning as a matter of dramaturgical enactment and social negotiation” (p. 87).

Tests of MDL. To test these hypotheses, O’Keefe (1988) asked 97 undergraduates to write a message in regard to how they would address other persons in a regulative situation. In one situation, they were told to imagine themselves in a small group where a group member named “Ron” was consistently not following through on the group’s assigned project. Participants were asked to “design” an exact message of what they would say to Ron.

As a result of this study, O’Keefe concluded that an individual’s goals and type of design logic employed can be separated. Additionally, the type of message design might exist prior to a situation, perhaps being an inherent feature of an individual. A second major conclusion by O’Keefe was that message design logistics differ; there appears to be no one logical way to conceptualize communication. O’Keefe also concluded that persons may have certain knowledge structures, but are inhibited from using them because of situational factors.

RATIONALE AND HYPOTHESIS

These studies suggest that mood, cognitive processing, and message design logic are associated. Specifically, cognitive processing, cognitive capacity, and the communicator’s goals may be enhanced, detracted, or derailed by mood. Clearly, mood is more than an outside interaction effect. Instead, it appears to be a main effect on the capacity to evaluate information. O’Keefe (1988) explains that the situation is another dominant factor influencing message construction. However, Isen et al. (1978) found that mood factors instead of situation factors may affect message construction. Plausibly, a person’s creation of message design state is not based solely on the situation, but may be in part the result of his or her emotional state.

According to Bower (1981), mood, which serves as a major factor in knowledge accessibility of memory, is juxtaposed on mood state, which implies, as do other studies, that message design may be subject to mood or other situational variables. In addition to research demonstrating that mood affects fixed cognitive processing, other studies (e.g., Mackie & Worth, 1989) suggest that mood affects cognitive capacity which, in turn may affect message design. Cognitive capacity might be another situational influence that directs or impedes message design.

After reviewing and examining the mood effects literature and O’Keefe’s message construction literature, it is plausible to conclude that: (1) mood affects cognitive processing, (2) mood may affect cognitive capacity, inhibiting cognitive construction abilities, and, thus, (3) mood may affect type of message design logic chosen. That is, a person’s choice of conventional and expressive message design versus rhetorical design is not due to lack of natural development. Instead, as has been suggested by previous research, positive mood might inhibit persons from retrieving the more complex rhetorical design knowledge, resulting in utilization of the less cognitively taxing expressive or conventional design. Thus, it is hypothesized that:

**H1:** Participants in a negative mood will use significantly more rhetorical design logic in constructing messages in response to a hypothetical regulative situation.

Methodology

Participants

Two classes of adult education undergraduates at a southeastern university were asked to participate in this study. Forty-seven students participated. The ages ranged from 20 – 49 years for females (X = 33.5), and from 23 – 59 years for males (X = 35.9).

Mood Inducement:

Mood was induced using Schwarz, Bless, and Bohner’s (1991) procedure. Participants were given a form asking them (within 10 minutes) to write a vivid report of a recent unpleasant life event or a vivid report of a recent pleasant life event. They were then asked to “rate their mood” on a Likert-type scale from 1 (very bad mood) to 9 (very good mood) by responding to the question: “How do you feel right now at this very moment?”

Regulative Message Design Construction

Following the mood inducement and mood rating exercise, participants were asked to complete a writing task in which they wrote a response to a hypothetical situation. O’Keefe’s (1988) regulative scenario about a person who fails to live up to his or her group obligations was chosen, because it was considered relevant for university students who are often asked to do group projects. It was believed that
this particular scenario would seem the most realistic of the three that O'Keefe used in her study. The scenario was modified so that the generic name “Pat” was used, and all gender references were deleted to minimize gender bias. The MDL task asks that participants write what they would say to Pat, whose apparent inattentiveness and inadequate performance has jeopardized the group’s project for a class (See Appendix A).

Coding of Data

Participant messages were categorized according to O'Keefe's (1988) message design logic categories. To ensure intercoder reliability, the coders went through extensive coder training and practice on other messages written in response to the same scenario by a different group of subjects. Three coders independently categorized the data and produced identical results for 44 of the 47 participant’s responses, resulting in 94 percent agreement. Disagreements over the three other responses were resolved by a discussion and subsequent consensus.

RESULTS

Mood Induction Results

Participants were asked to write about either pleasant life events (n = 23) or unpleasant life events (n = 24). Participants completed a self-report nine-point Likert-type scale. Participants who reported a 1 to 4 on the scale were considered to be in a negative mood, those who reported 5 were considered to be reporting a “neutral” mood, while those who reported 6 to 9 were considered to be in a positive mood. Participants who were induced into a positive mood (pleasant event) reported a significantly higher and better feeling state (X̄ = 6.44) than the those who were induced into a negative mood (unpleasant event) (X̄ = 4.58) (t = 3.7, p < .05).

Message Design Logic

Participant responses encompassed all three categories of O'Keefe's (1988) categorization. Nineteen used expressive designs, 24 used conventional design, and 4 used rhetorical designs.

Hypothesis test

Considering this was an exploratory study several statistical tests were performed. First, a Chi Square analysis, using the two groups of positive and negative mood affect as the independent variable was conducted. Mood was measured on a continuum of 1 (very bad mood) to 9 (very good mood); 19 participants (40%) reported using expressive design with a mean mood score of 5.57 (σ = 2.03). Twenty-four participants (51%) reported using conventional design logic, with a mean mood score of 6.08 (σ = 1.58), and 4 (9%) participants reported using rhetorical design logic, with a mean score of 3.0 (σ = 1.63). The analysis showed that a relationship between mood and MDL may exist (χ² = 21.33; p < .10).

The Chi Square results provided reason to conduct a secondary and exploratory One-way ANOVA. Even though the logic of this analysis runs contrary to the hypothesis and design, it allows this research to examine if a possible relationship between mood and message design logic existed. The results from the One-way ANOVA indicated that such a relationship did exist and that message design logic groups differed in mood (F = 5.11; df = 2,40; p < .05). A Duncan’s multiple range test indicated that the participants using expressive design logic (X̄ = 5.58) and those using conventional design logic (X̄ = 6.08) were in significantly better moods than those using rhetorical design (X̄ = 3.00). These results suggest that participants in good moods were more likely to use expressive and conventional design logic, while those in bad moods were more likely to engage in rhetorical design.

DISCUSSION

The results of the Chi Square analysis were not significant and so it cannot be argued that there is a causal connection between mood and MDL. There are at least two major reasons for these nonsignificant results. First, the mood induction was not strong enough. In this research, of all of the mood inducements, positive mood was most easily manipulated with 70 percent of those induced reporting being in a “good” mood. Much like Schwarz and Clores’s (1983) research, negative mood induction was not easy to achieve. Secondly, the small number of participants likely contributed to the weak results. However, the results of the Chi Square analysis were suggestive and warranted an exploratory ANOVA.

In this exploratory study the One-way ANOVA provided partial support for the hypothesis that people using different message design logic differ in mood. Follow-up tests indicated that participants using rhetorical design logic were in a worse mood
than subjects using either expressive or conventional design logic. It seems less than probable that all persons who use rhetorical design logic are of a negative mood trait. However, the present research suggests that mood is susceptible to extrinsic influences and subsequently so is the process of message production.

O'Keefe (1988) argued that individuals cognitively construct their messages based on how they implicitly conceptualize or define communication. In that view, she considered cognitive ‘‘traits,’’ particularly as they related to message construction, not to be subject to manipulation. Related literature has stated that mood apparently does affect the amount of processing that individuals will devote to message content (e.g., Teasdale & Fogarty, 1979). For example, Isen (1984) concluded that good mood participants exhibited little processing of more complex information and relied on quicker and less taxing heuristics. Other studies have echoed these results. Mackie and Worth (1989) reported that positive mood participants use little systematic processing. Schwarz, Bless and Bohner (1991) reported that participants in a good mood did not process complex requests and were more vulnerable to solicitation. Conversely, other studies, such as Bless, Bohner, Schwarz, and Strack (1990), report that participants in a bad mood were more likely to elaborate on the content of the message as compared to those who were in a good mood. It seems that the range of cognitive processing may be more directly related to “state” or situational circumstances and subsequently be affected by manipulation, particularly mood manipulation. As argued by Petty and Cacioppo’s (1986) Elaboration Likelihood theory, a continuum of individual and situational factors may affect the processing of messages. The present study’s results suggest that one of the factors affecting message production may be mood. Specifically, mood could be a variable that affects O’Keefe’s proposed stable communication design logic.

Consistent with a growing body of literature (c.f., Lazarus, 1982; Lloyd & Lishman, 1975; Schwarz, Bless, & Bohner, 1991), the present study’s results suggest that mood state may have an indelible impact on an individual’s cognitive processing. As Schwarz, Bless, and Bohner (1991) point out, a certain emotional state may suggest to an individual the nature of the current psychological situation. For persons in a positive state — such as a good mood—little effort in constructing messages is warranted, as long as perceived homeostasis is intact. On the other hand, a person in a bad mood is apt to judge psychological imbalance as a threat, warranting more complex message production as a means of counter-balance readiness. Mood, then, appears to serve the function of informing the individual of how to psychologically prepare for a situation (Higgins, 1987) and possibly inform the individual how to design messages. This exploratory study presents evidence that is consistent with this claim. For persons in a good mood, the confrontation with Pat (situation) was probably perceived as less psychologically threatening, thus less complex messages were constructed. For persons in a bad mood, the mood seemed to serve as the impetus to design a more complex message when addressing Pat (situation).

Consistent with theoretical explanations of emotion and psychological situations, empirical evidence demonstrated that persons in a bad mood did create more theoretically designed messages. This seems to substantiate theoretical suggestions that mood may excite the accessibility of a diverse body of procedural knowledge in order to address potential solutions to these problematic circumstances. Schwarz et al. (1991) point out that “it would be highly adaptive if negative feelings increased the accessibility of procedural knowledge that is adequate for handling negative situations” (p. 193).

Contrary to O’Keefe’s belief that certain message design logics are stable, the present research is consistent with other theoretically-backed explanations, that mood has an effect on the designing and production of messages. O’Keefe argues that as individuals, we have implicit definitions of communication which are stable and possibly developmentally constrained. Previous observations have indicated at least three inconsistencies inherent in O’Keefe’s reasoning. First, an individual’s mood affects communication behavior and cognition. Weingartner, Miller, and Murphy (1977) concluded that mood clearly affected cognitive tasks procedurally and qualitatively. O’Keefe’s MDL doesn’t account for “state” or manipulative specific influences on cognitive processing.

Second, O’Keefe argues that one’s cognitive construction ability varies, and that this can be measured by correlating message design and “appropriate” functionalism. O’Keefe (1988) argues that a person may “fail to adapt and pursue goals that are intrinsically relevant to a situation” (p. 82). However, as the mood-related literature points out, O’Keefe’s conceptualization of motives for message construction
ignore the extrinsic influence of an individual's affective state. In the present study, the cognitive choices selected in designing the most appropriate or complex message may have been the influence of the subject's mood just as likely as cognitive abilities.

Third, mood research shows that negative mood influences a person's use of more cognitive processes. However, O'Keefe's theory suggests that "all message producers select from the same range of communication options because the foundation from which they all reason is the socially constructed objective of preserving face" (p. 82). O'Keefe's theory may be correct in that individuals operate from similar ranges of options, but her theory falls short in explaining the extrinsic factors influencing the selection process. Schwarz and Clore's (1983) findings suggest that the process of selecting appropriate messages or explanations may be a result of mood state. Additional mood research (Mackie & Worth, 1989; Isen, Clark & Schwarz, 1976) verifies this concern.

The findings of the present study support the claim that cognitive processing and a particular message design is not necessarily or exhaustively explained through developmental cognitive based theory. In fact, future explorations of message construction must consider other situational extrinsic factors like mood.

Mood induction and number of research participants were two limitations of the present study. Much more attention must be given to mood manipulation in order to realize greater mood differences which might yield clearer and larger effects on MDL. Second, the present study utilized about half the number of participants that O'Keefe used. As a result, some statistical findings were inconclusive.

Future research on message design logic should focus on the number of messages constructed as a way to examine cognitive complexity and its relation to message design. Burleson, Applegate, and Neuwirth (1981) suggest that research on cognitive complexity in relation to loquacity is perhaps connected to "subjects propensity to talk" (p. 214). They argued that cognitively complex individuals form substantially more organized impressions (constructs) of others than do their less complex counterparts. In one of their studies participants who wrote a "Disliked Peer Description" used more total words and had more "words per construct," than those writing about a "Liked Peer" and about an "automobile" they had owned. It is possible that a "bad mood" is developed as the participant addresses an assignment to write about a disliked person. The findings in the present exploratory study are both interesting and suggestive, and therefore warrant further research examining whether mood affects construction.

References


Appendix A

Last four digits of your social security number: ___ ___ ___ ___

Gender: ___

Age: ___

Please read the following scene, then write exactly what you would say to Pat. Use specific messages rather than a general description of what you would say.

Imagine that you have been assigned to a group project in one of your classes. Your final grade depends a lot on how well the group project turns out. Each student will receive two grades: 1) a "group grade" on the overall quality of the project, and 2) an individual grade based on each person's contribution to group effort.

The instructor has made YOU the leader of your group. Your duties as the leader include telling the instructor what grade you think each individual in the group deserves based on her or his individual contribution.

One group member named Pat has been causing some problems. Pat seldom arrives at group meetings on time and has entirely skipped one meeting without any advance notion. When Pat missed the meeting two other group members wanted you to have the instructor remove Pat from the group, but a third member persuaded the group to give Pat another chance.

At the next meeting Pat was late. Pat apologized for missing the last meeting and mentioned something about family problems. Pat volunteered to do all the background research for a major portion of the project because of having special interest in that part of the project.

The group project is due next week. The group plans to put together the final draft of its report at a meeting tomorrow afternoon. Pat calls you today to say that the background research is not done and that the research won't be finished before the meeting. Pat asks for more time.

WRITE EXACTLY WHAT WOULD YOU SAY TO PAT