MOOD AND ACTIVITY CHOICE: COMPARISONS OF MOOD-MANAGEMENT ACROSS AFFECTIVE STATES

A Thesis

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by

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CHAPTER I (INTRODUCTION)

Recent literature shows that mood states influence a wide variety of processes and behaviors (see Isen, 1984, 1987 for reviews). In addition, a sizable portion of this literature posits motivations to manage one's mood state as responsible for the effects of mood on behavior and thoughts (Isen, 1987; Schaller & Cialdini, 1990; Zillmann, 1988). Evidence for these mood-management motivations, however, has been largely indirect and open to alternative explanations. One area of research greatly influenced by postulated mood-management motivations is that of mood and helping. For instance, motivation to maintain one's positive mood state has been hypothesized to increase helping behavior in positive moods (e.g. Isen & Simmonds, 1978). In support of the mood management view, a number of studies have shown that people in positive moods provide help for a shorter period of time than people in neutral moods when the helping task is unpleasant whereas people in positive moods help as long or longer when the task is pleasant (Forest, Clark, Mills, & Isen, 1979; Isen & Simmonds, 1978; Shaffer & Graziano, 1983).

Existing evidence supporting the mood-management view of helping in positive moods has been criticized and
reinterpreted by a number of researchers, however. Most notably, Shaller & Cialdini (1990) criticize these studies on grounds that mood states of the participants are changing as the helping task progresses. Thus, these authors note, people in positive moods are becoming neutral and may stop helping because they are no longer happy, not because they are trying to keep from losing their good mood. In addition, this effect would become stronger as the helping task becomes more unpleasant, not because of increased motivation to guard mood, but because happy people are losing their positive moods more quickly. Therefore, Schaller & Cialdini (1990) support the proposals of numerous researchers that increased helping in positive moods is due to increased liking of others, accessibility of prosocial thoughts, and equity concerns associated with feelings of privilege in positive mood states. For example, Rosenhan and his colleagues propose that positive moods encourage helping when induction of those moods focus the person on his or her own good fortune (Rosenhan, Salovey, & Hargis, 1981). According to this view, feeling happy from one's own good fortune also activates a desire to restore a sense of equity by giving time and resources to others. In addition, positive thoughts activated by the experience of good fortune may prime positive, potentially prosocial thoughts (Isen, Shalker, Clark, & Karp, 1978). These thoughts may make helping actions come to mind more than non-helping
actions so that helping behaviors are considered first and more often than non-helping behaviors when behavioral intentions are formed. As discussed in the sections that follow, similar alternatives exist for the empirical evidence of mood-management motives in negative moods.

In this thesis, I review literature in the areas of helping, risk taking, selective attention, and persuasion that can be explained in terms of mood-management motives; and I suggest that motivations to manage mood differ in magnitude across positive, neutral, and negative mood states. Finally, I present the results of two experiments designed to provide the most direct test of mood-management motives to date. Importantly, the design of these studies rules out the primary alternative interpretations, such as equity concerns activated by one's own good fortune (Rosenhan et al., 1981), or changes in mood before the dependent measures are complete (Schaller & Cialdini, 1990).
Conceptualizing Mood Management

Before preceding with the review of relevant literatures, it is important to note that mood-management motives have been postulated for both positive and negative mood states (e.g. Clark & Isen, 1982). Even so, statements and investigations of these motivations have primarily compared either positive or negative moods with neutral moods, without comparing positive and negative moods with one another. Recently, however, Schaller and Cialdini (1990) outlined a theoretical framework proposing that mood-management motives are greater for people in negative mood states than for people in positive moods. They liken mood-management motives to homeostatic drives, asserting that "just as hunger instigates the drive to eat, we propose that when one experiences a negative mood, it may dominate attention until the mood deficit is eliminated and a normal mood state is restored" (pp.281). Positive moods, in comparison, do not represent an "affective deficit", and thus are seen as engendering less concern over one's mood.

Much of the evidence for Schaller and Cialdini's view comes from studies of helping behavior. For instance, Baumann, Cialdini, and Kenrick (1981) found that sad subjects were less likely to engage in self-gratification if they had recently helped another than if they had not. In addition, happy subjects tended to engage in self-
gratification to the same extent regardless of whether they had recently helped another person. Cialdini and his colleagues take these results as support for negative moods fostering greater motivation to manage mood than positive moods. That is, gratification was only sought out in negative moods when the negative state had not been relieved through helping, but gratification was sought out in positive states regardless of whether people had recently helped. It seems, however, that one could draw the opposite conclusion. That is, happy subjects may be viewed as willing to engage in every possible mood-enhancing activity while sad subjects are less prone to do so. Evidence addressing this interpretation will be discussed in more detail in the sections that follow. Viewing mood-management motivations as stronger in positive moods than in neutral and negative moods provides a straightforward explanation for a considerable number of outcomes obtained in studies of mood and helping, as well as many additional areas of mood research.

In conceptualizing mood-management motives, it seems likely that the lack of valence in neutral moods would render affective experience less salient than in more extreme (valenced) states. This potential lack of mood-awareness may keep mood concerns from coming to the fore and keep them from driving behavior. In terms of salience of mood in experience, one might be tempted to posit that
positive and negative states would create comparable forces in driving behavior. To the extent that positive states are rewarding and sought after whereas negative states are punishing and avoided, the motivations associated with positive and negative moods would be to perpetuate the positive state and to eliminate the negative, respectively. The decisions and actions required to meet these goals, however, are very different.

To the extent that one is in a negative affective state, most activities available to the person will be of more positive valence than the current feeling state. With relatively few mood-damaging activities available, the hedonic outcome of one's choice of activity is not highly contingent on scrutiny of action alternatives. That is, the person's negative state may be relieved by engaging in almost any activity. Because of this, careful monitoring of one's negative states and actions chosen in those states need not take place (mood-management motivations are not particularly salient). In positive states, however, most of the activities available are likely to result in reduction of the positive experiences currently occurring. That is, in order to keep hedonic qualities of experience at high positive levels, one must choose carefully from the activities available to find an appropriate activity. Thus, in positive states, careful assessment of the hedonic qualities of both current experience and available
activities may be more necessary than in negative states. If this is so, monitoring of one's mood state and scrutiny of potential future activities may become more usual, more practiced, and more likely in positive as opposed to negative states. If mood-management motivations are more salient to people in positive moods than they are to people in neutral and negative moods, a number of predictions emerge.

For instance, people in positive moods should pay more attention than people in neutral and negative states to the hedonic quality of activities in making decisions about which activity to pursue. When possible, people in positive moods should choose hedonically positive activities and avoid hedonically negative activities to a greater extent than people in neutral or negative states. People in positive moods should also act in such a way as to protect their positive states. That is, when they cannot choose a positive activity, they should only participate in the "less pleasant" activity in such a way as to minimize damage to their mood. Thus, people in positive moods may not put a great deal of time or effort into an unpleasant activity, or they may attempt to make the activity into an enjoyable experience by using more positive thoughts and images to complete the activity than people in neutral or negative moods. Across a number of areas of current research, these predictions would apply as follows.
As noted above, people in positive moods should help more than people in neutral or negative moods if the helping is likely to be uplifting, but should help less if the helping is expected to disrupt mood. In risk-taking situations, people in positive moods should avoid large losses when losses are likely and seek maximum gains when gains are likely. In selective attention to information, people in positive moods should pay more attention than people in neutral and negative states to positive versus negative information (and, as a consequence remember that positive information better as well). In persuasion, people in positive moods should pay attention to uplifting messages but not to depressing messages to a greater extent than people in neutral and negative moods. In the following sections I summarize literature that addresses these predictions, and I comment on the plausibility of this and other interpretations of the data.
Helping Behavior

A large body of research documents the propensity of people in positive mood states to help more than people in neutral or non-manipulated mood states (e.g., Aderman, 1972; Batson, Coke, Chard, Smith, & Taliaferro, 1979; Cunningham, 1979; Isen, 1970; Isen & Levin, 1972; Isen, Clark, & Schwartz, 1976; Moore, Underwood, & Rosenhan, 1973). As mentioned above, to the extent that helping brings about rewards from the self or others, helping should serve mood-management motivations by perpetuating the positive mood state (see Note 1). Although negative mood states often increase helping (e.g., Cialdini, Darby, & Vincent, 1973; Donnerstein, Donnerstein, & Munger, 1975), they can also have the opposite effect (e.g., Moore, Underwood, & Rosenhan, 1973; Underwood, Berenson, Berenson, Cheng, Wilson, Kulik, Moore, & Wenzel, 1977) or no effect (e.g., Holloway, Tucker, & Hornstein, 1977; Isen, 1970).

Although one could interpret this lack of consistency between negative mood states and helping as a weaker mood-management motive in negative as opposed to positive states, a number of possible mechanisms underlying the disparate findings in negative mood states have been proposed. For instance, Rosenhan and his colleagues (Rosenhan, Salovey, Karylowksi, & Hargis, 1981; Thompson, Cowan, & Rosenhan, 1980) suggest that negative moods increase helping when
attention is directed toward the misfortunes of others but decrease helping when attention is self-focused. Such a relationship between negative mood and helping may be driven largely through concerns over equity between the helper and the recipient of help. That is, when a person is focused on the misfortunes of another, the person is likely to view himself or herself as possessing a relative surplus of resources. This inequity makes the person more likely to share time or resources with someone in need, thus restoring a sense of equity. Thompson et al. (1980) tested this relation between negative mood and helping by having subjects imagine that a close friend was dying of cancer. Half of the subjects were instructed to focus on the friend's feelings while the other half were instructed to focus on their own feelings. Only subjects focused on the feelings of the friend helped more than subjects in a neutral-mood control condition.

A related position locates the relationship between negative mood and helping in feelings of personal responsibility and objective self-awareness. According to this view, negative states can increase helping if (a) a person is made self-aware, usually through feelings of responsibility for the event eliciting the negative state, and (b) a personal standard that encourages helping is salient at the time (Gibbons & Wicklund, 1982). According to this view, self-awareness could also decrease helping if
the request for help is not salient, or if values related to prosocial behavior are not salient (see Carlson & Miller, 1987 for a review of negative mood and helping).

Mood-management motivations of people in positive and negative moods have also been studied in the helping literature (see Schaller & Cialdini, 1990, for a review). Meta-analyses have found evidence in support of mood-maintenance explanations of helping in positive moods (Carlson, Charlin, & Miller, 1988). That is, a significant partial correlation between pleasantness of the helping task and the degree to which positive mood increases helping over neutral mood (i.e. controlling for alternative forces such as focus of attention and enhanced social outlook) was found. Thus, as pleasantness of the helping task increases, the facilitative effects of positive mood on helping also increase (in relation to neutral mood). In addition, further meta-analyses have questioned the role of mood-management motives in negative-mood helping. Carlson & Miller (1987) and Miller & Carlson (1990) found no significant partial correlations between age of subjects, amount of sadness induced, or hedonic positivity of the helping task and amount of helping (all three of which are predicted by Cialdini's Negative State Relief model of helping, see Cialdini & Fultz, 1990). The same meta-analyses by Miller and his colleagues found consistent significant relationships between variables such as focus of
attention on others and amount of help, however. Even so, the findings of these analyses have been questioned by Cialdini and his colleagues (Cialdini & Fultz, 1990; Schaller & Cialdini, 1990). Furthermore, in discussing their motivational framework, Schaller and Cialdini (1990) cite a number of experiments in support of mood-management motives driving sad-mood helping behavior and dispute the mood-management interpretation of positive mood effects on helping.

**Helping and Negative Moods**

In an investigation of the effects of negative mood on helping, Cialdini, Darby, and Vincent (1973) created negative states in subjects by having them witness or commit a transgression (spilling what they believed to be computer data cards from a master's thesis). Subjects were either relieved from their negative state (by receiving an unexpected cash gift or a compliment concerning their performance on a task) or not relieved and then given the opportunity to help a fellow student make phone calls for a class project. A control condition involved only the helping request with no transgression or relief. Results showed that negative-mood/relief subjects did not help any more than controls whereas negative-mood/no relief subjects helped marginally more than controls and significantly more than negative-mood/relief subjects.
Also, Cialdini, Schaller, Houlihan, Arps, Fultz, and Beamann (1987, experiment 1) manipulated mood by having subjects take the perspective of a distressed other (sad mood) or watch the other objectively (neutral mood). Subjects in the sad mood either had their mood relieved (by receiving a dollar unexpectedly or being praised for their social abilities) or did not. Subjects were given the opportunity to help by taking the place of the distressed other. Results showed that subjects in the sad-mood/no relief condition helped more than the combination of sad-mood/relief and neutral-mood subjects. Sad-mood/no relief subjects were marginally more helpful than sad-mood/relief subjects alone.

Thus, consistent with mood-management motives in sad moods, these studies showed that neutralizing moods through relief interventions reduced helping to levels comparable to controls. Yet, such decreases in helping may not be indicative of mood management. The intervention meant to relieve the negative state may also have kept subjects from focusing their negative thoughts on the needs of others and may instead have focused attention on themselves which has also been shown to decrease helping (see Thompson et al., 1980). In addition, putting sad subjects in a neutral mood before the helping opportunity would tend to decrease helping even if helping were instigated by factors separate from mood-management motivations. For instance, if helping
in negative states were driven by differences in accessible thoughts pertaining to the misfortune of others, putting people in neutral moods before giving them an opportunity to help would potentially wipe out these differences even though mood-management motives were not active. Thus, neutralizing sad subjects does not seem to constitute strong evidence for mood-management motivations.

More compelling evidence of mood-management motives in sad moods comes from a second study by Cialdini et al. (1987). In this study, subjects heard about the plight of another student either while taking the perspective of the misfortunate student (sad mood) or while listening objectively (neutral mood). Subjects then ingested what they believed to be a drug that either would render their present mood state fixed or would have no effect on mood state. Sad subjects who believed the drug would not effect mood state helped more than neutral subjects or sad subjects who believed the drug would fix their mood. Such results are also consistent with mood-management in sad moods, although ingestion of a drug thought to fix mood states may once again distract subjects from the other in need of help and bring focus of attention toward the self.

Schaller and Cialdini (1988) used a similar paradigm to argue against a distraction explanation of earlier effects. Subjects were again put in sad moods by empathizing with a disadvantaged other and in neutral moods by listening to the
same description of the other in an objective manner. Subjects were also led to expect either no further events, a neutral event (a second excerpt from a "Bulletin Board" tape that had been two short, bland announcements earlier in the experimental session), or a sadness-cancelling event (a comedy tape from a well-known local comedian) after the helping opportunity. Sad subjects in the neutral-event and no-event expectancy conditions helped more than subjects in the remaining four conditions, although sad subjects in the no event condition failed to help more than neutral subjects in the no event condition. There was no difference in helping between the sad and neutral subjects in the sadness-cancelling event condition. Results are largely consistent with mood-motivations acting in sad moods. Yet, the expectation of the sadness-cancelling event in this study seems more capable of distracting subjects from the needs of others than the neutral event expectancy. The possible distraction in this study does differ from studies discussed above in that the current distraction does not seem as capable of focusing attention on oneself.

Thus, although mood-management motivations may be creating the results obtained, attributing these results to motivations encouraging repair of negative moods is not unambiguous. As we see in the next section, the research supplying evidence of mood-management in positive moods has
also been criticized, especially by Cialdini and his colleagues.

**Helping and Positive Mood**

In an initial demonstration of positive mood's effects on helping, Isen and Levin (1972, experiment 1) manipulated mood by either distributing cookies (positive mood) or not distributing cookies (neutral mood) to students studying in a library. Individuals were then asked to volunteer to act as a confederate in a psychology study where his or her role would be either to facilitate participants' performance on a creativity task or to distract and annoy participants as they attempted to perform the task. Results showed that subjects receiving cookies volunteered more time to facilitate participants' performance, but less time to distract participants, than those not receiving cookies. Although such results support greater mood-maintenance motivations in positive mood as opposed to neutral states, some researchers have also interpreted the results as increases in social interest (availability of prosocial thoughts) in positive moods that may be unrelated to mood-management concerns (e.g. see Cunningham, Shaffer, Barbee, Wolff, & Kelley, 1990).

Isen and Simmonds (1978) rigged telephone booths so that people either found a dime (positive mood) or did not (neutral mood). People in these positive or neutral moods
were then asked to help the experimenter by reading and rating statements from the positive or negative Velten mood manipulation (Velten, 1967). People in positive moods read more of the positive statements, but read fewer of the negative statements than people in neutral moods. Thus, subjects in positive mood states help more than controls when helping is uplifting, but help less than controls when helping is depressing.

As mentioned above, this study has been criticized on grounds that mood states are changing as people read the statements that comprise the dependent measure (Schaller & Cialdini, 1990). That is, people in positive moods became neutral as they read sad statements. Such an explanation may be plausible, but it also requires the assumption that neutral subjects become sad as they read the negative statements. According to Schaller and Cialdini's own framework (1990), such a change in mood should have engendered motives to improve mood which would have decreased reading of subsequent negative statements. This hypothesis makes the significant difference in number of negative statements read by initially positive and neutral subjects more difficult to explain. One could hypothesize, however, that mood-management motives are weak in negative moods, or that it would take more negative statements to move one from a neutral mood to a negative mood than from a positive mood to a neutral mood. In either case, the
results obtained may be partially due to mood states changing as statements are read. Such criticisms make it extremely important that mood-management motivations be shown in situations where little change in mood occurs during assessment of the dependent variable.

Additional evidence for mood management in positive mood states is provided by Yinon and Landau (1987). Yinon and Landau placed subjects in a positive mood by having them listen to a comedy clip. Subjects in the positive mood either expected to hear another clip from the same comedy group after filling out a questionnaire or did not. Control subjects received a neutral initial tape and had no expectancy of a tape after the questionnaire. Immediately following the mood questionnaire, the experimenter dropped a pile of papers and, after 15 seconds, recorded those subjects who offered assistance as "helpers" and those who did not as "non-helpers." Results showed that elated subjects with no expectancy offered more help than elated/expectancy subjects or controls. Yinon and Landau (1987) concluded that positive mood induces mood-management concerns. That is, they noted, subjects in a positive mood who expected another comedy tape could have their mood enhanced by the tape without having to help; and these subjects helped no more than controls.

Although these results could be interpreted in mood-management terms, there are also plausible alternatives that
do not involve mood-management. For instance, Shaller & Cialdini (1990) criticize this study because subjects who expected the second comedy tape also believed that the experiment was not finished whereas subjects who did not expect a second comedy tape thought that the experiment was finished. Thus, happy subjects believing that they were finished with the experiment may have felt more free to leave their seats and help than happy subjects who believed the experiment was still underway, regardless of mood-management concerns. Also, because there was no request for help in this study, subjects who expected a second tape may have been less likely to notice that an opportunity to help was presenting itself.

Once again, although mood-management motivations may be creating the results obtained for positive-mood subjects, attributing these results to motivations encouraging maintenance of existing positive moods has not gone without criticism. If mood-management motivations are responsible for positive as well as negative mood effects on helping, it is useful to examine evidence comparing the magnitude of possible mood-management motivations across positive and negative moods. A number of studies attempt to do just that.
Comparisons of Positive and Negative Moods in Helping

Isen (1970) conducted three studies comparing helping by people who either succeeded (positive mood) or failed (negative mood) a number of tests of perceptual-motor skills. In the first study, people who received success feedback donated more to a charitable fund than people who received failure feedback. In the second study, people who received success feedback were more helpful toward a confederate who dropped a book than were people who received failure feedback. The third study added a control condition where people estimated the difficulty of the perceptual-motor tasks but did not perform them. Results showed that people who received success feedback were more helpful toward a confederate who dropped a book than were controls or people who received failure feedback. Helping in the failure and control conditions did not differ. Thus, if happy people were helping in order to maintain positive feelings, this data provides evidence that mood-management motivations may be greater in positive moods than in neutral and negative moods. As noted above, however, such manipulations of negative mood may tend to focus thoughts on one's own misfortunes which decreases helping even without mood-management motives (Thompson et al., 1980).

Forest, Clark, Mills, and Isen, (1979) also created positive-, neutral-, and negative-mood groups. First, they gave subjects a placebo, informing subjects assigned to the
positive and negative mood conditions that the "drug" created positive moods in some people and negative moods in others. Subjects were then given false feedback via a "meter" of their physiological activity telling them that they were experiencing either a positive or negative state. Neutral subjects were not told of any mood-related "side effects" of the drug. After the mood induction, subjects were asked to help another experimenter by reading statements described as either pleasant and happy or gloomy and depressing [actually from the positive and negative versions of the Velten (1967) procedure]. Although subjects in positive, neutral, and negative moods read an equal number of pleasant statements, subjects in a positive mood read significantly fewer negative statements than subjects in neutral and negative moods.

In a conceptual replication, Shaffer and Graziano (1983) created happy, neutral, and sad moods in subjects by exposing subjects to one of three "overheard" conversations. Just after the confederates inducing mood left, an experimenter approached each subject and provided him or her with an opportunity to help by reading and rating either positive or negative Velten (1967) statements. Results showed that people in positive and negative moods read more of the positive statements and spent more time reading positive statements than people in neutral moods. People in positive and negative moods also tended to read fewer of the
negative statements and spend less time reading negative statements than people in neutral moods. Initial decisions to help or not help, however, were not affected by the anticipated positivity or negativity of the helping task.

This null effect makes the study more difficult to interpret because positive and negative moods did not elicit higher percentages of helping for either the positive or negative task. Thus, as noted by Carlson et al. (1988), the usual positive mood helping effect on decisions to help was not replicated. One can question whether subjects saw this helping activity as expected rather than optional in that 33 of the total 36 subjects in the study helped. It seems from the data on number of statements read that the difficulty in replicating the positive- and negative-mood helping effect on the decision to help or not was not due to problems manipulating mood. This lack of replication was more likely due to a ceiling effect on decisions to help a fellow undergraduate on an academic project.

It is important to note with this study, however, that the staged conversations induced positive and negative mood by focusing subjects on the good fortune and misfortune of others. According to theoretical positions regarding focus of attention and helping, this focus on others should discourage helping on the part of positive-mood subjects and encourage helping of negative-mood subjects (e.g., Rosenhan et al., 1981; Thompson et al., 1980). Thus, the equally
high levels of helping in positive and negative moods may actually be evidence of greater mood-management motives in positive as opposed to negative moods.

Weyant (1978) attempted to provide evidence concerning the role of costs and benefits of helping as they relate to mood states. He manipulated mood through constructing an anagram task that subjects would either succeed (positive mood), fail (negative mood), or rate the pronounceability of the scrambled words without attempting to solve them (neutral mood). Subjects were then asked to help collect donations for either a high-benefit (American Cancer Society) or low-benefit (Little League) organization through either high-cost (door-to-door solicitation) or low-cost means (sitting at a donation desk). Overall, happy subjects helped more often than sad or neutral subjects. In addition, although all happy subjects tended to help more than controls, the only sad subjects who helped more than controls were those asked to help in a high benefit/low cost situation. Also, sad subjects asked to help in a low benefit/high cost situation tended to help less than controls. These results were taken by Weyant and others to mean that people in negative states are engaging in a careful cost-benefit analysis of helping opportunities before they agree to help, whereas people in positive states are not. Of course, such a conclusion is entirely consistent with Schaller and Cialdini's (1990) assertion
that people in negative moods seek to manage their mood more than people in positive moods.

In the Weyant (1978) study, however, pretest subjects attributed benefit differences to the two organizations and attributed effort differences to the two methods of collection. It is not clear how these questions were asked, or whether these differences would translate into direct mood-enhancement or mood-threat associated with helping. It is certainly not clear why volunteering for the local Little League would be less mood-enhancing than volunteering for the American Cancer Society; and no evidence is provided that door-to-door collections were seen as more mood-threatening than collections at a desk. In addition, these perceptions may have differed across positive and negative mood states. Also, manipulation of mood through success or failure may have made sad subjects feel less competent than their happy counterparts. This difference in perceived self-efficacy may have made the high-effort activities seem more aversive and the low-benefit organization seem less likely to succeed for sad as opposed to happy subjects. Hence, the helping differences obtained may not have been due to differences in mood-management motivations, but in perceptions of the helping situation. It is also important to note that manipulating mood through success and failure may tend to focus attention on oneself, encouraging help in positive moods and discouraging help in negative moods.
Thus, results of the Weyant (1978) study are far from unambiguous, and provide little insight into the mechanisms relating mood states to helping.

As mentioned above, Baumann et al., (1981) manipulated mood by having subjects recall and reminisce about experiences that made them feel happy, neutral, or sad. Subjects were given an opportunity to help another person and then given an opportunity to engage in self-gratifying activities. This study found that sad subjects were less likely to engage in self-gratification if they had recently helped another than if they had not. In addition, happy subjects tended to engage in self-gratification to the same extent regardless of whether they had recently helped another person. This study was interpreted as equating helping with self-gratification for subjects in negative moods but not for subjects in positive moods, thus asserting that negative moods engender attempts at mood management while positive moods do not.

Such an assertion, though plausible, seems to be a logical leap from this data, especially since both helping and engaging in self-gratification serve the hypothesized motivations of positive-mood individuals to maintain or enhance that positive state. As mentioned earlier, one might interpret this data as finding that people in positive moods engage in every available mood-enhancing activity whereas people in negative moods do not. This
interpretation is consistent with the proposition that positive moods engender greater mood-management motivations than negative moods.

It should also be noted, however, that operation of mood-management motives hypothesized by the Negative State Relief (NSR) model and by mood-maintenance propositions for people in positive moods could create this pattern of data. That is, according to the NSR model, helping in the negative mood will repair the negative state and remove the reason to seek self-gratification. In the positive mood, however, people who help are still in a positive mood; so mood-management motives would still encourage people to self-gratify. Baumann et al. (1981) concluded that helping and self-gratification are not equivalent responses in positive moods, and thus that helping is not serving mood-management motives for happy people. Yet, because happy people who help are still happy, mood-management motives should continue to encourage self-gratification rather than discourage it. While the Baumann et al. (1981) study may be consistent with mood-management in negative states, the study seems consistent with mood-management in positive states as well.

Manucia, Baumann, and Cialdini, (1984) also attempted to directly compare mood-management in positive and negative mood states. In this study, subjects ingested what they thought was a drug that would either fix mood when the drug
took effect, or would not affect mood. Mood was manipulated by the same method as Baumann et al. (1981). Subjects reminisced about experiences that made them feel either happy, neutral, or sad. After the drug had supposedly taken effect, subjects were asked by a confederate to make a number of phone calls on behalf of a nonprofit blood organization. Sad/labile subjects volunteered to make more calls more than a combination of neutral mood and sad/fixed subjects although sad/labile subjects helped only marginally more than sad/fixed subjects. Happy/labile subjects did not differ from happy/fixed subjects in their level of helping, although as noted by Isen (1987), happy subjects also did not help more than the neutral controls. In addition, analyses on the percentage of subjects in each condition that volunteered to help failed to reach significance for any of the contrasts performed.

Manucia et al. interpreted their results as evidencing mood-management in sad moods but as providing evidence against mood-management in happy moods. Although one might question the meaning of conclusions regarding positive-mood subjects based on the failure to replicate the usual positive-mood helping effects, perhaps the logic of interpreting these results is more crucial. That is, Manucia et al. assume that mood-maintenance motivations require happy subjects to refuse to help when moods are to be fixed for a short time. This, however, is an act that
could make them feel worse when the drug wears off. Recall that subjects had been put in their current mood state by remembering a past experience so that current actions might be viewed in more long-term sense than would normally be the case. There is no reason to assume that mood-management concerns in positive moods should only concern immediate mood-related consequences, with no concern (indeed disdain) for mood-related experiences in the near future. In fact, helping by subjects in a positive mood regardless of whether the drug was to temporarily fix mood or not may be evidence that mood-management motives are especially strong rather than weak. Thus, it seems that claiming the absence of mood-management motives in positive mood states is premature. One might even raise the possibility that mood-management motives in sad moods are limited to the short term while mood-management motives in happy moods may extend across longer periods of time.

Addressing similar issues, Switzer (1989) created happy, neutral, and sad moods by having subjects remember and describe two happy, sad, or neutral events. Switzer then created expectations either that a positive experience (watching a comedy tape) was to occur in the immediate future or the following week. During a brief pause in the procedure (while the experimenter was locating a replacement cord for lab equipment), a confederate was admitted to the lab and asked the subject to make calls to established blood
donors. The measure of helping was the number of calls for which subjects volunteered. Results indicated that sad subjects helped more than controls only when they expected the positive event to be one week away. Happy subjects, in comparison, helped at high levels regardless of when the positive event was to occur. Switzer interprets this data as showing that sad subjects are more concerned with mood (helping only when no positive event will make them feel better in the near future) than happy subjects (helping regardless of when the positive event is to occur).

Switzer assumes that helping is rewarding; yet by his conclusions regarding this data, he takes actions counter to mood-management (refusal to help) as evidence of high levels of mood-management motivations. To the extent that volunteering to help will make people feel better in the future and refusing to help will not, it is not clear why subjects with extremely high levels of mood-management motivation are expected to refuse to help when a short-term mood-enhancing event is expected in the near future. Because volunteering to help will be rewarding in its own right, and later performance of helping will also be rewarding, it seems that choosing to help has utility for making moods more positive in both the short and long term—perhaps even greater utility than the comedy tape. Thus, this study may also be interpreted as happy people engaging in every mood-enhancing activity available while sad people
do not. The study may also show that mood-management takes greater priority for happy people, affecting activity preferences even across a more extended period of time than for sad people. Thus, Switzer's results also seem consistent with the possibility that people in positive moods are more carefully assessing the hedonic consequences of their actions (experiencing stronger mood-management motivations) than people in negative moods.

Schaller & Cialdini (1990) also cite O'Malley and Andrews (1983) as providing evidence that mood-management concerns are not important in positive moods. O'Malley and Andrews created happy, guilty, and neutral moods by asking subjects to think of and list past experiences that made them feel happy, guilty, or neutral. After the study was supposedly finished, subjects were approached by a confederate soliciting donors for an upcoming blood drive. Both happy and guilty moods increased helping as compared to neutral moods. Schaller & Cialdini (1990) cite this finding as evidence against the operation of mood-management in positive moods because donating blood is assumed to be an unpleasant task. If this is so, however, it is unclear why Schaller & Cialdini would not also interpret such findings as evidence against mood management in negative states. It also seems that thinking of past experiences that made one feel guilty might make equity or social reciprocity norms salient. Thus, guilty subjects may have helped because of
thoughts that made helping actions come to mind, not because of increased motivation to manage mood. Regardless, the O'Malley and Andrews (1983) study seems far from constituting clear evidence for or against mood-management across mood states.

Cunningham, Steinberg, and Grev (1980, experiment 1) also sought to compare motivations in subjects made to feel happy, neutral, and guilty. Subjects either found a dime in a phonebooth (happy mood), did not find a dime and were blamed for the breaking of a camera (guilt), or did not find a dime and were not blamed for a camera not working (neutral mood). Subjects then witnessed a confederate drop papers and either helped pick up the papers or did not. Subjects made to feel happy and guilty each helped more than neutral subjects, and were not different in their high amounts of helping. Thus, this study would be consistent with mood-management motivations existing, and being equally strong for both positive and negative moods. Results are also consistent, however, with the separate process hypothesis preferred by Cunningham and his colleagues. In this formulation, negative mood states engender personal hedonic concerns while positive moods foster social interest (Cunningham et al., 1990). Thus, Cunningham and his colleagues believe that the equal levels of helping for happy and guilty subjects do not reflect equal levels of mood-management motivation. Cunningham proposes instead
that guilty subjects help in order to relieve their negative hedonic experience while happy subjects help out of concern for others unrelated to any personal hedonic concerns (see Cunningham et al., 1990). Thus, at least some researchers interpret this data as consistent with Cialdini's framework, that mood-management motivations are stronger for negative moods than positive moods.

A second study by Cunningham et al. (1980) also sought to document separate motivations for helping in positive and negative moods. Mood manipulations were the same as experiment one above. The helping opportunity in this case, however, involved what Cunningham et al. (1980) termed either a positive request ("Would you give to the World Children's Fund to help keep the children smiling?") or a negative request ("Would you give to the World Children's Fund? You owe it to the children."). Planned chi-square comparisons showed that happy people were more likely to help than neutral and guilty people in response to the positive request. In response to the negative request, however, guilty people were more likely to help than neutral people whereas happy people were not more likely to help than neutral people.

Although helping certainly seems to be motivated differently in positive versus negative moods, it is difficult to tell how the social versus personal concerns hypothesized by Cunningham and his colleagues should have
mapped onto the positive and negative requests in this study. Though one might expect that "owing it to the children" would elicit comparable focus on social concerns as would "helping keep the children smiling", analyzing these results in terms of the social/personal concerns framework would necessitate viewing the negative request as catering to personal concerns while the positive request must cater to social concerns. Alternatively, it seems as plausible to suggest that giving aid to "help keep children smiling" might be quite rewarding whereas complying with the mandate that "you owe it to the children" may not be particularly rewarding. If this is the case, these data show that happy people help more than neutral or guilty people when helping is rewarding, but guilty people comply more to a mandate that is not rewarding.

More recently, Cunningham et al. (1990) attempted to present clear support for the separate process (social/personal concern) framework. Cunningham et al. manipulated mood by having subjects read either the elation, neutral, or depression cards from the Velten (1967) mood manipulation procedure. Subjects were then asked by a second experimenter to help pretest an anagram task described as either "fun, like working on a crossword puzzle" or "a little dull, like working on a crossword puzzle". In addition, subjects witnessed a confederate volunteer to help, either adding that "I think we should
both help; we have plenty of time before our next class" or "s/he may have some plans" invoking either social inducement to help or not. Results showed that both happy and sad subjects were more likely to volunteer than neutral subjects. In addition, although sad subjects helped more when they expected the task to be of high interest than when they expected the task to be of low interest, neutral and happy subjects were not affected by interest of the task. Also, although happy subjects helped more when socially induced to help than when not socially induced, neutral and sad subjects were not affected by social inducement.

If one were to view task interest as the only manipulation of possible reward from helping, one might be tempted to interpret this data as supporting mood-management motives only in negative moods. One might also view social versus asocial conditions as a powerful manipulation of reward value, however. That is, volunteering to help with high social inducement allows one to please not only the experimenter, but also the confederate. In the social inducement condition, the confederate seems to want the subject to participate with him or her. In conditions where the confederate volunteered without the subject ["Sure, I'll help. But (the subject) may have plans. Where do you want me?"] the subject may have felt unwanted and may have seen volunteering to help as uncomfortable. Thus, the increase of helping in positive mood states with high social
inducement may also be seen as evidence of mood-management motives in positive moods. Unfortunately, it is unclear how subjects perceived the task interest manipulation in this study. Although the interest manipulation is interpreted as manipulating expected reward from the task, it is not clear that this was done sufficiently. That is, "fun, like a crossword puzzle" may be seen as interesting and possibly engaging; but it is not clear that "fun, like a crossword puzzle" is seen as mood-enhancing. In comparison "dull, like a crossword puzzle" certainly seems uninteresting, but not necessarily mood-threatening. To the extent that this manipulation does not create clear differences in mood-enhancement/mood-threat but does create differences in other perceived qualities of the task, this renders inferences regarding mood-management motivations in response to this manipulation ambiguous. Once again, potential support for mood management exists for both positive and negative states. Yet, existence of these motivations and comparison of the magnitude of these motivations is impossible to verify based on the results of this study.

Finally, Aderman (1972) also has evidence addressing the questions at hand. Aderman manipulated mood by having subjects read either the elation or depression subset of statements from the Velten (1967) mood manipulation procedure. Subjects then engaged in two numbering tasks that they believed were either a favor to the experimenter
or a requirement of the experiment. When subjects believed the numbering tasks were a favor to the experimenter, elated subjects completed more of the numbering tasks than depressed subjects. When subjects believed the numbering tasks were required in the experiment, however, depressed subjects completed more of the numbering tasks than elated subjects. These findings fit well with the Cunningham et al. (1980) findings presented above. In that study, positive requests elicited more help from happy than guilty subjects while mandates to comply elicited more help from guilty than happy subjects. In the Aderman study, completing the numbering tasks may have been more rewarding as a favor to the experimenter than as a requirement in the study. If this was the case, elated subjects seem to be helping more than their depressed counterparts when the task is rewarding, but seem to be complying less than their depressed counterparts when the task is less rewarding. This pattern of data is certainly consistent with the proposition that mood-management motives are stronger in positive than in neutral and negative mood states.

Thus, in the literature on mood and helping, there are studies purportedly supporting mood-management motives in both positive and negative moods as opposed to neutral moods. There are also studies concluding that negative moods engender greater mood-management motivations than positive moods. This evidence is not unambiguous, however,
and evidence also exists that supports greater mood-management in positive rather than negative moods. Although the current mood and helping literature is quite mixed in its claims and results, additional support for the contention that positive moods elicit greater mood-management than negative moods can be found in the areas of risk-taking, selective attention, and persuasion. These lines of research will be discussed below, along with their implications for the relationship between mood state and mood-management motivations.
A line of research by Isen and her colleagues shows that positive moods, as compared to neutral moods, can have definite effects on decision-making tasks in situations of risk or uncertainty (Isen, Means, Patrick, & Nowicki, 1982). In these studies, positive affect has been induced in a number of ways and risk-taking choices have been measured on a variety of tasks.

For instance, Isen and Patrick (1983) created positive and neutral affect by giving subjects an unexpected McDonald's gift certificate or not. Then subjects played a game of roulette where they could win prizes or lose their experimental participation credit. The chance of winning was either low (17%), moderate (50%), or high (83%) representing high-, moderate-, and low-risk situations. Results showed that subjects who had received the gift certificate wagered more than control subjects when presented with a low-risk opportunity but wagered less than control subjects when presented with a high-risk opportunity. A second study by Isen and Patrick (1983) used the same manipulation of positive and neutral affect, but presented subjects with hypothetical dilemmas where a target could quit a present job in order to pursue a better opportunity. Chances of the target being hired for the new job were varied to create low-, moderate-, and high-risk
dilemmas. Subjects were then asked how likely they would be, if they were the target, to quit the target's present job and pursue the other job. In this case, subjects in a positive mood reported being more willing to quit the initial job than were control subjects. Because potential for actual loss to subjects was almost nonexistent for these hypothetical cases, results of the second study were seen as consistent with positive-mood subjects seeking gains in the low-risk condition of study one.

Following up these studies, Isen and Geva (1987) manipulated mood by either giving subjects a brightly colored bag of candy in appreciation for their participation or not. Subjects then participated in a game of roulette similar to that in Isen and Patrick (1983). Isen and Geva told subjects, however, that the amount of the bet had been predetermined as either all of the subject's experimental credit (high risk), half of the subject's credit (moderate risk), or one-tenth of the subject's credit (low risk). Subjects then provided the riskiest bet they would be willing to make by giving the lowest probability of winning necessary for them to bet. After this measure, subjects were asked to write down all of the thoughts they had related to the situation surrounding their risk choice. On the probability measure, subjects in a positive mood gave higher necessary probabilities of winning (were more risk-averse) than subjects in a neutral mood. There was also a
mood by risk level interaction such that subjects in a positive mood gave higher minimum probabilities of winning than neutral subjects when risk was high or moderate, but tended to give lower minimum probabilities when risk was low. In addition, thought listings paralleled the probability data. In high- and moderate-risk conditions, positive-mood subjects listed more thoughts than neutral-mood subjects about the potential loss involved. In the low-risk condition, however, subjects in a positive mood listed fewer loss-related thoughts than subjects in a neutral mood.

The finding that positive-mood subjects generated more loss-related thoughts than neutral-mood subjects in the high- and moderate-risk conditions may seem counter to findings such as Isen, Shalker, Clark, and Karp (1978) where positive-mood lead to greater accessibility of positive material. It should be noted, however, that the thought listing in the Isen and Geva (1987) study asked specifically for thoughts regarding the situation in which subjects had been placed. Thus, the results of the thought listing task reflect only the valence of thoughts toward a condition of relatively high risk that subjects had been placed in with no choice on their part, not the overall valence of their thoughts in general. Also, the thought listing task always followed the probability response so that positive-mood subjects who just gave a high probability of winning as
necessary for them to bet may have been justifying their risk-averse choice by pointing out the aversive qualities of losing their experimental credits.

Arkes, Herren, and Isen (1987) conducted two studies using the same mood-induction procedures as Isen and Geva (1987). In the first Arkes study, subjects in a positive versus a neutral mood provided the largest amount they would be willing to pay for each of 25 hypothetical lottery tickets. The tickets varied as to the amount to be won and the probability of winning. Results indicated that positive-mood subjects were willing to pay more than neutral-mood subjects at every level of prize to be awarded. Also, this tendency increased as the amount of the prize increased. Thus, subjects in a positive mood reported being more risky as the possible gain increased. Similarly, good-mood subjects reported being willing to pay more than controls at every probability of winning, and this tendency increased as the probability of winning increased. Thus, as gains became more probable, good-mood subjects were willing to pay more to get the prize.

In the second Arkes et al. study, subjects were again assigned to positive- versus neutral-mood conditions and received the bag of candy or did not. Subjects then saw 25 slides, each containing two pieces of information—the value of an item in dollars, and the probability that the item would be destroyed or stolen. Upon presentation of each
slide, subjects wrote down the largest amount they would be willing to pay for insurance against each of the losses described. In this case, where subjects were focused on losses and their severity, good-mood subjects were willing to pay more than controls for insurance against the losses. In addition, this tendency increased as the value of the item to be lost increased.

A third study by Arkes et al. (1987) simply manipulated mood and presented subjects with a vignette where they were to imagine being hungry and having a friend buy them a hamburger at an unfamiliar establishment. Subjects were asked to provide the largest amount they were willing to pay for the hamburger in order to show that the results from studies one and two were not simply a function of good-mood subjects being willing to pay more for any item. No differences were found for amount paid for the hamburger.

When taken together, studies of risk-taking generally support the notion of greater mood-management on part of positive-mood subjects as opposed to neutral subjects. People in positive mood states tend to seek potential gains when risk of loss is low (because the setting is hypothetical and focuses on gains or actual risk is low in magnitude) and tend to avoid potential loss when risk of loss seems high (because the setting stresses losses or actual risk is high in magnitude). These data, however, do not address the possible motivations associated with
negative moods, nor are explanations for mood effects that
do not posit mood-management motivations ruled out. For
instance, avoidance of risk versus seeking of gain may be a
function of the salience of losses versus gains in the
situation combined with mood state used as a judgmental
anchor. That is, salient gains may be perceived as more
desirable by positive-mood subjects than neutral-mood
subjects (see Forgas & Moylan, 1988). This could occur if
subjects use their current moods as anchors against which to
compare the desirability of potential gains (Sherif &
Hovland, 1961). That is, positive-mood subjects may seek
salient gains more than neutral-mood subjects because happy
people see the gains as better, not because the same gain is
desired more by happy people. Similarly, if mood is used as
an anchor for comparison, salient losses may be seen as
worse by subjects in a positive mood as opposed to a neutral
mood (see Gleicher, Baker, & Petty, 1989). It is important
to note that judgmental assimilation and contrast have also
been found for negative moods (Gleicher et al., 1989).
Thus, the current alternative explanation would not be as
applicable to a situation where differential seeking of
gains or avoidance of losses was evidenced for positive as
opposed to negative moods. Unfortunately, no risk-taking
studies to date have made such a comparison. It seems then,
that although researchers have interpreted the risk-taking
data as consistent with greater mood-management in good
moods as opposed to neutral moods, mood-management motivations are not absolutely necessary to account for the effects.
Selective Attention

Though work on the effects of mood on selective attention to potentially mood-altering information is sparse, a small group of studies shed light on the relative strength of mood-management motives across positive, neutral, and negative states.

For instance, Mischel, Ebbesen, and Zeiss (1973) exposed subjects to success, failure, or neutral experiences concerning performance on a test ostensibly measuring intellectual ability. During a break in the session, subjects were able to view personality information from an inventory they had filled out earlier. Subjects could view information regarding their best qualities (assets identified by the personality inventory), their worst qualities (liabilities identified by the inventory), or information regarding the next task they were to complete. When left to view the information, subjects also either expected to engage in another test of ability or not. When an additional ability test was expected, task feedback created no differences in attention to positive versus negative information. When no test was expected, however, success subjects spent more time looking at their assets and less time looking at their liabilities than did failure subjects or controls. Such data is directly consistent with positive moods engendering greater mood-management concerns
than neutral or negative moods. Unfortunately, we have no measure in this study of what kind of information each mood group looked at first.

Also, because the dependent measure is across time, this study is subject to the concerns raised above regarding helping studies where the helping task was reading mood-changing statements. It is possible in this study that moods changed as people looked at assets versus liabilities. Thus, although one can interpret this work as showing that positive moods involved greater mood concern, it could also be that people in negative moods looked at assets first, became neutral and, lacking mood concerns at that point, proceeded to focus on liabilities to be overcome in the future. Similarly, neutral subjects may have looked first at liabilities, became negative, and proceeded to then look at assets. In addition, because no checks of mood were included in this study, we cannot be sure that the success and failure feedback consistently created positive versus negative moods. Thus, although suggestive, results of the Mischel et al. (1973) study are not unambiguous.

In a similar study, Zillman, Hezel, and Medoff (1980) manipulated mood (positive, neutral, and negative) through performance feedback. Subjects viewed a series of slides of people forming ambiguous facial expressions. Subjects were to identify the emotion associated with each expression. The experimenter informed each subject that he or she did
well, average, or poorly, and the experimenter insulted subjects in the failure condition and praised subjects in the success condition. Subjects were then given an opportunity to choose and watch television comedies, game shows, or action dramas while their choices and viewing times were unobtrusively recorded. Because of changing moods across time watching the programs, the data most relevant to the hypothesis under consideration are the viewing times reported for the first 150-second segment of viewing time. During that time, people initially in a negative mood watched comedies for less time than either positive or neutral people. Though counter to their predictions, Zillmann et al. explained these differences in terms of the ridicule-laden nature of the comedy provided. Zillmann et al. reasoned that subjects in a negative mood would have consumed more comedy if the comedy had not been comprised so heavily of put-downs and insults. If subjects in negative moods avoided comedy because the ridicule made the comedy less rewarding, then people in positive moods may also have watched more comedy if it had not been ridicule-based. If this were so, then the pattern of results would mirror those of the Mischel et al. (1973) selective attention study above.

Data from a study by Forgas and Bower (1987) can also be seen as consistent with these results. In this study, subjects were given positive or negative feedback about a
bogus test of social adjustment and personality. Then, subjects participated in an unrelated study of person perception where they received evaluatively positive and negative pieces of information about a target person. Time reading the positive and negative pieces of information, and recognition and recall of this information were recorded. Results showed that people in positive moods took longer to read positive information than negative information whereas people in negative moods took longer to read negative as opposed to positive information. Also, recognition and recall of material mirrored selective attention times such that people in a positive mood recognized and recalled more positive information than negative information whereas people in a negative mood recalled and recognized more negative than positive information.

Forgas and Bower (1987) provide three reasons why these effects might occur. First, Forgas and Bower note that spreading activation of a dominant emotion increases the availability of mood-consistent material in memory and makes mood-congruent stimuli salient for learning (e.g. Bower, Gilligan, & Montiero, 1981). The rich availability of mood-related categories and large number of possible associations may then make people take longer to encode mood-consistent information into the enhanced associative base. Second, Forgas and Bower state that the affective tone of mood-consistent information intensifies the mood state whereas
mood-inconsistent information reduces intensity of the mood. Forgas and Bower go on to state that increased mood intensity may motivate people to give mood-consistent information greater attention and processing effort, although the basis for these motivations is not discussed. Finally, Forgas and Bower posit that mood-consistent material may be more likely than mood-inconsistent material to selectively remind one of past episodes from the past, leading to slow, deep processing of the mood-consistent stimuli. Again, the reasoning behind these explanations were not discussed.

Regardless of Forgas and Bowers' multiple interpretations, their data are certainly relevant to tests of mood-management. If one assumes that paying attention to positive information about another can help a person bring positive aspects of oneself to mind, paying more attention to positive than negative information in positive moods could be the result of mood-management motivations. Similarly, paying attention to negative information about another may bring negative aspects of oneself to mind. Thus, paying more attention to negative than positive information in negative moods would not seem to serve mood-management motivations. This data is not altogether clear, however, because paying attention to positive aspects of another can make one feel inadequate, and paying attention to negative information about another person could help make
people feel better about themselves. Importantly, although Forgas and Bower do not present each data point individually, they report that across several mood checks throughout the session there was little change from the original manipulated happy and sad states. This suggests that happy subjects were successfully extending their positive state through selective exposure to positive stimuli and thoughts, while sad subjects did not successfully alleviate their negative state because they were attending to information inconsistent with mood-management motivations.

Thus, although none of these studies are unambiguously supportive of stronger mood-management motivations in positive moods, the overall pattern of data is not inconsistent with the hypothesized interpretation.
Mood-management motivations also seem capable of influencing when people in various mood states will engage in effortful processing of information. A group of studies related to mood influences on processing assume that extensive processing itself can be potentially threatening to mood. Thus, in cases where the amount of information is overwhelming, people in positive moods are expected to simplify processing.

**Cognitive Processing**

Isen and Means (1983) investigated decision-making strategies associated with extensive information. In this study, subjects were either given success feedback on a number of perceptual-motor tasks (positive affect) or asked to estimate how difficult the tasks would be for average college students (neutral affect). Subjects were then given information concerning six fictitious cars, one of which they were to "buy" based on the qualities of the cars provided. The information covered nine categories within which each car was given a rank between 1 (best of all) and 6 (worst of all). Subjects could look at the information in any order and as many times as they liked. Subjects were also encouraged to "speak aloud" as they analyzed the information and made their decision. Because the
information was so extensive, and because each car was given identical average rankings so that no one car would be clearly better than the rest, the task was viewed as cognitively straining for anyone that tried to deal with all of the information. Because this cognitive strain was seen as potentially threatening to subjects' positive mood states, Isen and Means expected subjects in a positive mood to be less inclined to take all of the information into account, to work with less information, or to work with larger units of information than subjects in a neutral mood. Isen and Means believed these less-straining strategies of cognitive processing would be employed in service of maintaining a positive mood.

After deciding on a car, subjects ranked the dimensions of information in terms of importance to their decision. Results showed that good-mood subjects completed the task faster, used fewer pieces of information, and returned to information already considered fewer times than controls. These results were interpreted as greater efficiency for positive-mood subjects because their final car choices were not significantly different from controls, and their decisions matched the subjective utility of their dimension-importance ratings (dimension importance times rank on that dimension) as well as controls.

A number of additional lines of research report findings that are consistent with positive moods leading to
simplified processing of information (see Sinclair & Mark, in press, for a review of findings regarding mood states and processing in categorization, social justice judgments, person perception, and judgmental accuracy). Various frameworks other than mood-management have been proposed to account for these effects (such as affect as information, Schwarz, 1990; and differential cognitive capacity across mood states, Mackie & Worth, 1989). Yet, for these areas of research and the closely related area of persuasion, application of the hypothesized mood-management motivations (Wegener, Petty, & Richman, 1991) seem better able to account for the overall data.³
Kuykendall and Keating (1990) had subjects read articles to create positive, neutral, and negative moods. Subjects then read strong (compelling) or weak (specious) statements supporting institution of senior comprehensive exams as a requirement for graduation at the subjects' university. In the persuasion literature, conditions where people are more persuaded by strong (compelling) arguments than by weak (specious) arguments are said to foster careful elaboration (processing) of message content. Thus, the extent of differentiation between strong and weak arguments is taken as an index of cognitive processing (see Petty & Cacioppo, 1986, for a discussion of the strong/weak arguments manipulation). In the Kuykendall and Keating study, subjects in neutral and negative moods were persuaded more by strong than by weak statements (i.e., processed the messages carefully), but subjects in a positive mood were equally persuaded by strong or weak statements (i.e., did not process the messages carefully). Thus, subjects in a positive mood seemed to avoid message processing whereas subjects in neutral and negative moods did not. To the extent that thinking about the institution of senior comprehensive exams is capable of making students feel badly, this pattern of data conforms well to the proposition
that mood-management motivations are greater in positive moods than in neutral and negative moods.

In one of the first studies of mood and processing of persuasive communications, Worth and Mackie (1987) created positive and neutral mood states by either giving subjects two dollars from a fictitious lottery drawing or not. Subjects then read a pro-attitudinal or counter-attitudinal persuasive communication on the topic of acid rain. The message was presented to subjects only long enough to read through the communication once, and the message was composed of either strong or weak arguments. In addition, the communication was attributed to either an expert or nonexpert source. Results for subjects receiving the counter-attitudinal message showed that people in neutral moods were more persuaded by strong than weak arguments, whereas people in positive moods were equally persuaded by strong and weak arguments. Also, neutral subjects tended to be less affected by the status of the source than were positive subjects. Although the interaction between mood, argument quality, and attitudinal position did not reach significance, the pattern of results for subjects receiving the pro-attitudinal message showed no differentiation of strong versus weak arguments for positive or neutral subjects.

Mackie and Worth (1989) conducted two more studies that expanded on their 1987 efforts. In the first study,
positive and neutral moods were created using the same procedure as Worth and Mackie (1987). Subjects were then presented with a counter-attitudinal strong or weak version of the acid rain message for either a limited or unlimited amount of time. In the limited time condition, people in a neutral mood were more persuaded by strong than weak arguments, whereas people in a positive mood were equally persuaded by strong and weak arguments. In unlimited time conditions, however, people in both positive and neutral moods were more persuaded by strong than weak arguments. In unlimited time conditions people in a positive mood took approximately ten seconds longer to read the communication than did people in a neutral mood.

The second study by Mackie and Worth (1989) followed the same procedures as study one, but used videotapes as a manipulation of positive and neutral moods and used gun control as the message topic. Source expertise was also manipulated. In this study, the attitudinal results mirrored those of study one. Subjects in a neutral mood were more persuaded by strong than weak arguments in both the limited and unlimited time conditions. Subjects in a positive mood were more persuaded by strong than weak arguments when time was unlimited but not when time was limited. In addition, happy subjects were more persuaded by the expert source than the non-expert source when time was limited but not when time was unlimited, and neutral
subjects were not differentially persuaded by the expert versus non-expert source.

Taken together, these studies were interpreted by Mackie and Worth as supporting a cognitive capacity view of mood effects on message processing. Positive mood was viewed as decreasing capacity for effortful processing as opposed to neutral moods (see Mackie & Worth, 1989 for a discussion). According to Mackie and Worth, in limited time situations, positive-mood subjects were unable to effortfully process the communication. Yet, when given unlimited time in which to do so, positive-mood subjects were just as motivated to process the message and did so to the same extent as neutral subjects; it just took subjects in a positive mood longer to process the message in order to overcome their ability deficit. One might challenge these results on grounds that the manipulations of mood created differential distraction across positive and neutral mood states due to aspects of the manipulations other than mood per se in some of the studies (e.g., greater surprise at winning money in a lottery). There also seems, however, to be a motivation-based explanation for these effects.

If people in positive moods are more motivated to manage their mood states than are people in neutral moods, it follows that people in positive moods would be more cautious before submerging themselves in a message that may strip them of their good mood (i.e., messages on acid rain
or gun control). If people in positive moods hesitated before beginning to read the message or thought about what put them in a good mood as they began reading in an attempt to keep the good mood, this would explain the limited time pattern of effects. If people in positive moods discovered along the way that the messages did not directly involve the negative images that could be tied to the topics at hand, there was no reason for people in positive moods not to take additional time and make up for their early caution regarding the message. Thus, in unlimited time conditions, mood-management motivations may have created both the attitude and time effects. Of course it is possible that capacity differences exist between positive and neutral moods. It is important to note, however, that such differences may be limited to very short time periods or else processing differences would have emerged in the unlimited time conditions above.

In addition, the straight capacity interpretation has trouble accounting for the results of the Kuykendall and Keating (1990) study above. That is, Kuykendall and Keating were using what could be considered an engaging topic, were asking subjects to put effort into the processing of the arguments, and were giving subjects unlimited time in which to do so. For the results to be consistent with Mackie and Worth's, it seems that subjects in all three mood states
would have had to process message content in those unlimited-time conditions.

Bless, Bohner, Schwarz, and Strack (1990) also conducted a pair of studies relevant to mood-management in persuasion. Bless et al. had subjects re-live either happy or sad experiences from their lives and then presented subjects with a message announcing a fee increase to take place the following fall at the subjects' university. The message justified this fee increase with either strong or weak arguments. When this study was presented to subjects as a study of language use, results showed that sad subjects were more persuaded by strong than weak arguments while happy subjects were not. When subjects in the study were asked to focus their attention on scrutinizing the quality of the arguments presented, however, subjects in both positive and negative moods were more persuaded by strong than weak arguments. This pattern of results is important because it shows that people in positive moods can carefully process message content if they are motivated to do so. Such a result is cannot be derived from the cognitive capacity view.

A second study using the same mood manipulation and same messages replicated the basic mood by argument quality interaction. Whereas sad subjects were more persuaded by strong than weak arguments, happy subjects were equally persuaded by both. In this second study, the basic effect
was wiped out when subjects were distracted by having to do math problems while listening to the message. In these conditions, neither happy nor sad subjects were differentially persuaded by strong versus weak arguments.

The high-threat content of the messages employed in the Bless et al. (1990) studies makes these studies directly relevant to mood-management concerns (i.e., a fee increase of comparable magnitude a few years previous at the subjects' university had caused student riots). In this situation of high threat to mood, we see a general avoidance of careful thought regarding the topic on part of happy subjects. We see no such avoidance, however, on part of sad subjects. Bless et al. interpret these results in terms of the affect-as-information framework (see Schwarz, 1990). In this view, positive moods tell the person that he or she is safe, and that no assessment of the environment is necessary. Negative moods, on the other hand, inform the person that some problem exists, and that careful assessment of his or her situation is warranted. Although this notion seems capable of explaining the results reported thus far, such a framework predicts that positive moods will foster low levels of processing in comparison to less positive mood states. The cognitive capacity view of mood effects on message processing makes similar predictions regarding the effects of positive moods.
The cognitive capacity and affect-as-information frameworks, however, cannot explain results of studies using messages that are less threatening to mood. For instance, Mathur and Chattopadhyay (1991) had subjects watch videotapes that had been pretested to induce happy and sad moods. Subjects then watched two short advertisements (for McDonalds gift certificates and for life insurance from Mutual of New York). After this, subjects wrote down all the thoughts that had crossed their minds while watching the advertisements and recalled as much of the messages as possible. Results showed that, for both advertisements, happy subjects generated more commercial-related thoughts and recalled more of the message than sad subjects. Mathur and Chattopadhyay interpreted these results as greater processing of the ads in happy as opposed to sad mood. Although one cannot discern the exact qualities of the advertisements used, the ads are surely less mood-threatening than the fee increase or senior comprehensive exam messages used by Bless et al. (1990) and Kuykendall and Keating (1990). Thus, when messages are mood-threatening, positive-mood people may be avoiding thinking about them more than people in neutral or negative moods. When messages are less mood-threatening, however, people in positive moods may not avoid processing in relation to people in neutral or negative moods.
We find additional support for this notion in a study by Wegener, Petty, and Richman (1991). In this study, subjects listened to music that had been pretested to induce either positive or neutral mood states. Then they listened to a strong or weak message supporting the improvement of foster care programs (by changing current programs to be more like a fictitious top-notch program). People in positive moods were more persuaded by strong than weak arguments while people in neutral moods were not. Happy subjects also recalled more of the arguments than neutral subjects. Thus, once again these results seem incompatible with the cognitive capacity and affect-as-information frameworks. Organizing the data according to the mood-threat of the message as well as the mood of the recipient seems more capable of explaining the patterns of results obtained. In general, it seems, positive-mood individuals avoid mood-threatening messages more than neutral- and negative-mood individuals, but do not avoid messages more than neutral- and negative-mood people when the messages are not threatening.
Summary

In sum, hypothesizing stronger mood-management motivations in positive as opposed to neutral and negative moods seems capable of organizing a large body of data across a number of domains of research. Unfortunately, data are lacking that unambiguously demonstrate stronger mood-management tendencies in positive moods. Most data to date can be interpreted in alternative ways (such as increases in social interest, Cunningham et al., 1990; or changes in mood before dependent measures are complete, Schaller & Cialdini, 1990), although such conceptions do not seem to offer alternatives that organize the amount of data covered by the hypothesized mood-management motives. The current study seeks to provide unambiguous support for the hypothesized mood-management motives.
 CHAPTER II (EXPERIMENT ONE)

In order to provide unambiguous evidence of stronger mood-management motives in positive moods, a study would need to avoid the primary alternative explanations for past mood-management results. First, the impact of mood should be on choice of activities, rather than on performance of activities over time. Thus, mood should not be changing before the dependent measures are complete. Second, the choice of activities should be for one's own action and for one's own benefit rather than for a group or to benefit a group. Thus, choices of people in positive mood states cannot be attributed to increases in social interest. In addition, equity concerns that may drive focus of attention effects should not have as much of an impact if choices are only for one's own benefit with no opportunity to make choices for others. Although such procedures vary from traditional mood and helping paradigms, measuring mood effects on one's personal activity choices seems capable of more fully illuminating the basic mood-management processes that may act in helping situations. Also, personal activity choices provide a strong test of the pattern of mood-management motives proposed in this paper, especially given that recent helping research reports greater effects of
personal concern in negative states as opposed to positive states (Cunningham et al., 1990).

For years, measuring personal choice has been the goal of paradigms used to study selective exposure to consonant versus dissonant information in the dissonance framework (see Freedman & Sears, 1965; Frey, 1986 for reviews). For instance, Brock (1965) studied selective exposure of smokers and non-smokers to information supporting or refuting the link between smoking and cancer. To do so, Brock had subjects rank order their interest in reading a number of articles including a pro-smoking and an anti-smoking report. Brock also either told subjects that they would have to read the article they ranked first or did not. Results showed that smokers sought out the article questioning the link between smoking and cancer more than non-smokers, but only when they believed they would have to read their top choice.

In another typical selective exposure design, Mills, Aronson, & Robinson (1959) asked students to whether they preferred to take essay or multiple-choice exams. Students were then given a list of eight article titles, four of which implied that the student would actually perform better on the type of exam not chosen, and four of which implied that the student would perform better on the type of exam he or she had chosen. Students were then asked to rank the articles in order of interest in reading them. Selectivity
was tested by summing the ranks of the supportive versus nonsupportive articles.

The choice paradigm presents a number of advantages and disadvantages for our purposes. This type of choice situation is directly applicable in that mood-management motives are hypothesized to direct people toward choosing particular activities over alternative activities. These basic choices are actually present in each of the broad areas of research reviewed above. People cannot both help and not help, nor can they take and avoid risks, or attend to positive and negative information about themselves simultaneously. In each situation, subjects have chosen to pursue one alternative in lieu of the other. Unfortunately, the reasons for these choices have not always been clear, and the same is true in the selective exposure paradigm above.

One difficulty in applying the selective exposure techniques to choices of mood-enhancing versus mood-threatening stimuli lies in the form of such stimuli. For instance, using titles of articles to be read can produce problems of confounding qualities of the stimuli. In the selective exposure literature, titles of articles to be chosen were supposed to vary only on the dimension of supportive versus nonsupportive information. Unfortunately, in many cases the titles seemed to vary on other dimensions as well. For instance, Frey (1986) noted that qualities
such as how useful the articles would be for an upcoming activity, or how convincing the articles seemed likely to be, were often confounded with how supportive the articles were intended to be.

Confounding any of a number of qualities with the pleasantness of activities in our mood-management study (e.g., interest, utility, or excitement associated with the activities) would seriously damage the conclusions we could draw. Such confounds may even have found their way into some of the studies on mood reviewed above. For instance, in the Forgas and Bower (1987) study, the negative and positive information about the target person may have varied in ways other than positivity. For instance, the positive or negative information may have been more novel or interesting than the other information. Thus, if people in positive or negative moods were paying attention to the novelty or interest level of the information more than people in the opposite mood, the results of this study could be created by forces very different than those used by the authors to explain the results. This would be especially important if people in various mood states are found to consistently pay attention to different qualities of experience. Although little research has directly addressed such possibilities, paying attention to qualitatively different aspects of helping opportunities is at the heart of the separate-processes view of helping (Cunningham et
al., 1990), and is evident in the Schaller & Cialdini (1990) view of helping as instrumental in negative moods and concomitant in positive moods. Thus, in order to be confident of our conclusions, we would want to know exactly how stimuli differ on dimensions other than pleasantness.

Another potential problem with using stimuli such as titles is that images activated by the titles have the potential to change moods (just as imagining positive, neutral, and negative events are often used as mood inductions). Whenever subjects encounter a title in hedonic contrast with his or her current mood state, that mood state would be likely to shift at least slightly as images associated with the title are called to mind.

In order to avoid these pitfalls of image-laden stimuli, subjects in the two studies to follow were presented with stimuli containing no titles, only numeric information representing three qualities of the stimuli to be chosen. For instance, rather than giving a title of a comedy show where images of the comic and notions of the jokes involved could change the person's mood before any assessments of activity preferences are recorded, subjects received "Tape A" with a "happiness" rating of 9 on a 10-point scale, an "agreeableness" rating of 2, and an "interest" rating of 8. Thus, subjects were given clear information that a particular choice would make them happy, but no particular images were likely to be automatically
activated by seeing the ratings of the three qualities. Because of this, moods were not as likely to be affected before dependent measures were collected. In this way, we were also able to systematically vary (and thus equate) the qualities of stimuli on dimensions other than how the activity would make the person feel. Given that stimuli varied on a number of qualities, the likelihood that people would attempt to conjure images of each tape also seems quite low. Also, presenting stimuli that varied on more than one dimension made the choice situation fairly complex. Thus, if subjects in any mood state are not particularly inclined to use information as to affective quality in making activity decisions, those subjects would not be artificially inclined to do so by having only affective information available for use.
Experiment One Overview

In order to induce an initial mood state, small groups of subjects were randomly assigned to watch either a happy, neutral, or sad videotape. Then subjects were given information describing eight tapes that they could choose to watch later in the session. These tapes varied on three dimensions, with numeric values representing every combination of high and low ratings on each dimension. The three dimensions included the crucial dimension of how watching the target tape would affect subjects' moods, along with dimensions taken from past research and theorizing in the area of selective exposure. That is, the alternative dimensions included agreeableness and usefulness, that were discussed by Frey (1986) as important influences in selective exposure to persuasive information, and interest and excitement that approximate the dimension of engagement/absorption discussed by Zillmann (1988) as determinants of entertainment consumption. Subjects ranked the eight tapes from 1 (want most to watch) to 8 (want least to watch). Subjects then were given a second list of eight tapes varying on different dimensions and were asked to rank them in a similar manner.

If happy subjects possess stronger mood-management motivations than neutral or sad subjects, then happy subjects should choose tapes high on the "happy" dimension
to a greater extent than neutral or sad subjects. That is, subjects in a positive mood should base their choices of subsequent activities on how the activities will make them feel more than subjects in a neutral or negative mood. If sad subjects possess stronger mood-management motivations, as suggested by Cialdini and his colleagues, then sad subjects should choose tapes high on the "happy" dimension to a greater extent than happy or neutral subjects--sad subjects should base their choices of activities on how the activities make them feel more than neutral or positive subjects. If both happy and sad subjects experience equally high motivation to manage mood, then each group should choose tapes based on the affective quality of the tapes to a greater extent than neutral subjects. Based on the review of literature summarized above, from a number of areas relevant to mood-management motives, it was predicted that subjects in a positive mood would choose tapes according to how much the tapes would make them happy to a greater extent than neutral or negative subjects.
Method

Subjects

One hundred twelve undergraduate psychology students participated in partial fulfillment of a course requirement. Subjects participated in groups of 3 to 9, with each group randomly assigned to one of the three mood conditions.

Procedures

Subjects were greeted by the experimenter who went on to introduce the session as a study on "Media Preferences" (see Appendix A for a script of the experimenter instructions for the entire study). Subjects were seated at tables that had partitions attached to them so that subjects were visually isolated from one another. All subjects were seated facing a large monitor, with no one in front or behind them. Subjects were told that they would first provide their perceptions of a videotape that had already been prepared for their viewing. Before subjects watched the initial tape, the experimenter described the form of the ranking task to be used in choosing tapes for "part two" of the session. At the conclusion of this description, subjects were told, "After you make these rankings, you will go to another room in this building where you will each be able to watch tapes based on your personal rankings."
At this point, subjects watched and rated one of the videotapes designed to induce either a positive, neutral, or negative mood. In the positive-mood condition, subjects watched a comedy clip taken from the television show *Late Night with David Letterman*. This clip included a "top ten list" of the best qualities of New York in the summertime, as well as a series of three stunts from the segment called "stupid human tricks." Neutral-mood subjects watched a segment from *Wild, Wild, World of Animals* about the social behavior of lions. In this clip, the activities and observations of an lion researcher were presented and narrated by William Conrad. Topics of note included how specific lions were identified and tracked, and how lion prides are organized and function. Subjects in the negative-mood condition viewed a clip from *You Don't Have to Die*—a Home Box Office special about a child with cancer who wrote a book about the disease. This clip was comprised primarily of interviews with the child and his parents in which they discussed the period of time when the child was diagnosed and treated for the disease. Each of the tapes was approximately twelve minutes in length. The positive and neutral tapes were developed and used by Smith (1990). The negative tape was recorded for this study.

After watching one of the tapes, subjects completed measures related to their experience with the tape, including three semantic differential scales of how
happy/sad, pleasant/unpleasant, and good/bad the tape made them feel (with "1" representing positive qualities and "10" representing negative qualities), and an assessment of how interesting/uninteresting subjects found the tape (see Appendix A for the post-tape questionnaire).

After rating the initial tape, subjects engaged in the ranking task. The task presented eight target tapes (see Appendix A). As noted, subjects believed they would watch a subset of the tapes later in the session. Each subject also believed the tapes he or she would watch would be determined by his or her ranking of the tapes. Subjects ranked the target tapes from the tape he or she wanted to watch most (ranking number 1) through that tape he or she wanted to watch least (ranking number 8).

The rankings were to be based on information given to subjects about each of the target tapes. Subjects were told that the eight target tapes had been rated by a large number of college students (see Appendix A). The average ratings of those past students were being presented on three dimensions: how generally AGREABLE the tape was to students, how HAPPY the tape made students feel, and how INTERESTING the tape was to students. The information on each dimension was presented numerically on a "1=not at all" to "10=very much" scale. Each target tape was presented as having either a high average rating (approximately 8 to 9) or a low average rating (approximately 2) on each dimension.
so that the eight tapes included every possible combination of high versus low qualities on each of the three dimensions. All subjects received the target tapes in the same random order.

This ranking task was followed by a conceptually identical ranking task where the three dimensions described above were replaced by: how USEFUL the tape was for students, how HAPPY the tape made students feel, and how EXCITING/ACTION-PACKED the tape was. Once again, all subjects received target tapes in the same random order. This order was different from the first task and the numerical information used to represent high and low levels on each dimension was altered slightly from the first task (see Appendix A). At the completion of this task, subjects were thoroughly debriefed and thanked for their participation.
Results

Manipulation Checks

The three semantic differentials concerning how the mood-induction tape made subjects feel were summed to create a manipulation check on mood. A one-way ANOVA showed that the manipulation of mood was successful \( F(2,109)=230, p<.0001 \). Duncan Multiple range tests showed that positive-mood subjects felt better \( (M=4.89) \) than neutral-mood subjects \( (M=10.48) \), who in turn felt better than negative-mood subjects \( (M=21.72, ps<.05) \). Subjects also found all three tapes quite interesting. The one-way ANOVA showed that there was a significant difference in interest among the tapes, however \( F(2,109)=3.85, p<.03 \). The happy tape was seen as more interesting \( (M=1.5) \) than either the neutral \( (M=2.2) \) or negative tape \( (M=2.1, ps<.05) \). Interest of the neutral and negative tapes did not differ.

Tape Rankings

On each of the dependent measures to be discussed, two sets of analyses were performed. In the first analysis, the ranks of the four target tapes presented as high on the dimension of interest were summed to form an index of the extent to which subjects used the dimension in choosing their subsequent activities. This summed rank is then submitted to a one-way ANOVA with mood as the between-
subjects factor. Because qualities of the eight target tapes represented every combination of high versus low levels of the three dimensions of information, the sum of ranks for the four target tapes high on a dimension includes two tapes that are high on each of the other two dimensions and two tapes that are low on each of the other two dimensions. Thus, differences found in how much subjects of varying moods use a dimension cannot be due to that dimension being confounded with the values of another dimension of information. In addition, the summed rank of tapes low on a dimension are simply the difference between the total sum of ranks and the summed rank of tapes high on the dimension. Because of this, the summed rank of tapes high on the dimension is an adequate representation of the degree to which subjects in a given mood used the dimension to determine their rankings of subsequent tapes.

The target tapes presented as high (or low) on a dimension were not represented by equal ratings on that dimension. That is, the supposed average rating given the tape by past college students was not identical for all target tapes presented as high (or low) on the given dimension (see Appendix A). Because of this, it may be that a more sensitive measure of use of a dimension in choices of activities would be a measure of association between the ranks of the target tapes along the dimension of interest and the ranks of the target tapes provided by subjects.
Thus, a second analysis of the data calculated the Spearman Rank-Order Correlation between the ranks provided by each subject and the ranks that would have been provided if the subject were using each of the dimensions of information. That is, a within-subject variable was created that represented the association between each of the three dimensions of information and the subject ranks of the target tapes. These correlations were then submitted to a 3 (Mood) X 3 (Dimension) mixed-design ANOVA with mood as the between-subjects factor and dimension as the within-subject factor.

Analyses of Summed Ranks

Analysis of "Happy" Dimension

Of primary interest is the extent to which subjects in positive, neutral, and negative mood states used information about how the target tapes would affect mood to make choices of which tapes to watch. In order to test this, the ranks of the four target tapes presented as high on the "happy" dimension were summed and submitted to a one-way ANOVA with mood as the between-subject factor.

The mood manipulation significantly affected the extent to which subjects based their choices of target tapes on how the tapes would make them feel \( [F(2,109)=6.75, p<.002; \text{ see Table 1}] \). Simple effects tests showed that positive-mood
subjects preferred "happy" tapes ($M=12.71$) more than neutral-mood subjects [$M=15.00$, $F(1,69)=8.95$, $p<.005$]. Positive-mood subjects also preferred "happy" tapes ($M=12.71$) more than negative-mood subjects [$M=15.15$, $F(1,77)=10.84$, $p<.001$]. Neutral- and negative-mood subjects did not differ in how favorably they ranked the four "happy" tapes [$F(1,72)=.04$, n.s]. Thus, as predicted, subjects in a positive mood used the potential mood effect of the target tapes as a basis for their action preferences to a greater extent than did subjects in neutral or negative moods.

We find robust support for the hypothesized pattern of mood-management motives when we inspect the data from the second task (see Table 2). Once again, the ranks of the four target tapes presented as high on the "happy" dimension were summed. The one-way ANOVA again showed that the mood manipulation successfully affected the reliance of subjects on "happiness" information for choosing their tapes [$F(2,104)=6.01$, $p<.004$]. Simple effects tests showed that positive-mood subjects again preferred "happy" tapes ($M=12.71$) more than neutral-mood subjects [$M=15.19$, $F(1,67)=8.51$, $p<.005$]. Positive-mood subjects also preferred "happy" tapes ($M=12.71$) more than negative-mood subjects [$M=14.74$, $F(1,74)=8.40$, $p<.005$]. Neutral- and negative-mood subjects did not differ in how favorably they ranked the four "happy" tapes [$F(1,67)=.36$, n.s]. Thus,
the predicted pattern of mood-management motivations also seems to be durable across the tasks.

Analysis of Alternative Dimensions

One natural question arises in relation to these findings. Is this relative lack of attention to mood-based information on the part of people in neutral and negative moods representative of a general lack of attention to any of the qualities of the target tapes, or do people in neutral and negative moods find alternative dimensions of the target tapes more important? Although not of primary interest to this study, some dimensions of experience may be more important than effects on mood to people in neutral and negative states. This would be an important piece of information to discover, if this is so. People are certainly limited in the number of dimensions of experience they can consider when making choices of which activities to pursue. To the extent that people in neutral and negative states attend to dimensions not directly concerned with how activities will affect mood, perceptions of how the activities will affect mood have less chance of driving their behavioral decisions.

For the first task, when we look at the summed ranks of those tapes presented as high on the interest and agreeable dimensions respectively (see Table 1), we see that the agreeable dimension seems unlikely to have driven the tape
choices for any of the mood groups. Because the summed
ranks of "agreeable" tapes are higher (less preferred) than
that of "interesting" or "happy" tapes for each mood group,
it seems unlikely that any decision to "not particularly
seek or avoid agreeable tapes" would have affected choices
along the other two dimensions. The interest dimension,
however, seems to have differentially affected the choices
of subjects in neutral and negative moods as opposed to
positive-mood subjects.

When the ranks are summed for the four "high-interest"
tapes, we find that the mood manipulation significantly
affected the extent to which "interesting" tapes were
preferred \[F(2,109)=5.05, p<.008\] (see Table 1). Simple
effects tests show that negative-mood subjects preferred
"interesting" tapes \(M=12.27\) more than positive-mood
subjects \(M=14.37; F(1,77)=10.23, p<.002\) and neutral-mood
subjects also preferred "interesting" tapes \(M=12.70\) more
than positive-mood subjects \(M=14.37; F(1,77)=4.96, p<.03\).
The neutral- and negative-mood subjects did not differ in
their preference for "interesting" tapes \(F(1,72)=.34,
n.s.\).

We find similar results for the "useful" and "exciting"
dimensions on the second task. The high (non-preferred)
ranks for the usefulness dimension across all mood states
shows that the dimension does not seem to have affected
rankings along the other dimensions for any of the mood
groups. The excitement dimension, however, seems to have been important for subjects in neutral and negative moods.

When the ranks are summed for the four "high-excitement" tapes, the manipulation of mood is found to affect subjects' reliance on the excitement dimension for making their choices \[F(2,104)=6.01, p<.004\]. Negative-mood subjects preferred "exciting" tapes \((M=13.11)\) more than positive-mood subjects \((M=14.74, F(1,74)=3.96, p<.05)\) and neutral-mood subjects also preferred "exciting" tapes \((M=12.84)\) more than positive-mood subjects \((M=14.74; F(1,67)=5.33, p<.03)\). Neutral- and negative-mood subjects did not differ in their preference for "exciting" tapes \([F(1,67)=.09, n.s.]\)(see Table 2; also see Appendix C for the ranks of each target tape across mood states).

**Analysis of Associations Between Dimensions and Ranks**

Once again, of primary interest is the extent to which subjects in positive, neutral, and negative moods used information about how the target tapes would affect mood to make choices of which tapes to watch. Spearman Rank-Order Correlation Coefficients between the rankings that each subject gave to the target tapes and the rankings that would be expected based on use of each of the dimensions of information were calculated for each subject. Greater mood-management motivation in positive as opposed to neutral and
negative moods would be supported if the average correlation between subject rankings and rankings according to the "happy" dimension are higher for subjects in positive as opposed to neutral and negative moods. The results of these calculations were submitted to a 3 (Mood) X 3 (Dimension) mixed-design ANOVA with mood as the between-subjects factor and dimension as the within-subject factor.

On the first ranking task, there was a mood by dimension interaction \( F(4,218)=8.79, p<.0001 \) (see Table 3). Duncan's Multiple Range tests showed that the "happy" dimension was more closely associated with the rankings of happy subjects (\( M=.588 \)) than with the rankings of neutral subjects (\( M=.292 \)) or sad subjects (\( M=.299; p<.05 \)). The association between the "happy" dimension and the rankings of neutral versus sad subjects did not differ. In contrast, Duncan tests showed that the association between the "interest" dimension and rankings by happy subjects (\( M=.238 \)) was significantly lower than the association between the "interest" dimension and rankings by neutral subjects (\( M=.519 \)) or sad subjects (\( M=.546; p<.05 \)). The association between the "interest" dimension and rankings by neutral and sad subjects did not differ. Associations between the "agreeable" dimension and subjects' ranks were generally lower than those of the other dimensions. Because of this, it seems unlikely that action choices were driven by adherence to the "agreeable" dimension. Even so, Duncan
tests showed that there was a difference in average
associations between the "agreeable" dimension and rankings
of subjects in positive moods (M=.241) as opposed to
subjects in neutral moods (M=.383). Subjects in negative
moods (M=.339) did not differ from subjects in either
positive or neutral moods.

In the second task, we find robust support for the
hypothesized use of "happiness" information in making
activity choices. As on the first ranking task, there was a
mood by dimension interaction [F(4,208)=4.54, p<.0015](see
Table 4). Duncan's Multiple Range tests showed that the
"happy" dimension was more closely associated with the
rankings of happy subjects (M=.495) than with the rankings
of neutral subjects (M=.180) or sad subjects (M=.281;
p<.05). The association between the "happy" dimension and
the rankings of neutral versus sad subjects did not differ.
In contrast, Duncan tests showed that the association
between the "excitement" dimension and rankings by happy
subjects (M=.241) was significantly lower than the
association between the "excitement" dimension and rankings
by neutral subjects (M=.482) or sad subjects (M=.440;
p<.05). The association between the "excitement" dimension
and rankings by neutral and sad subjects did not differ.
There were no differences across mood states on the
associations between the "useful" dimension and subjects' ranks.
### TABLE 1: Mean Summed Ranks of Agreeable, Happy, and Interesting Tapes, Experiment 1, Task 1

<table>
<thead>
<tr>
<th>MOOD</th>
<th>AGREEABLE</th>
<th>HAPPY</th>
<th>INTERESTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE  (n=38)</td>
<td>17.16 (sd=2.46)</td>
<td>12.71 (sd=3.30)</td>
<td>14.37 (sd=2.93)</td>
</tr>
<tr>
<td>NEUTRAL   (n=33)</td>
<td>15.70 (sd=2.42)</td>
<td>15.00 (sd=3.12)</td>
<td>12.70 (sd=3.40)</td>
</tr>
<tr>
<td>NEGATIVE  (n=41)</td>
<td>16.20 (sd=2.66)</td>
<td>15.15 (sd=3.28)</td>
<td>12.27 (sd=2.91)</td>
</tr>
</tbody>
</table>

### TABLE 2: Mean Summed Ranks of Useful, Happy, and Exciting Tapes, Experiment 1, Task 2

<table>
<thead>
<tr>
<th>MOOD</th>
<th>USEFUL</th>
<th>HAPPY</th>
<th>EXCITING</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE  (n=38)</td>
<td>16.29 (sd=2.65)</td>
<td>12.71 (sd=3.41)</td>
<td>14.74 (sd=3.41)</td>
</tr>
<tr>
<td>NEUTRAL   (n=31)</td>
<td>16.39 (sd=3.47)</td>
<td>15.19 (sd=3.65)</td>
<td>12.84 (sd=3.38)</td>
</tr>
<tr>
<td>NEGATIVE  (n=38)</td>
<td>15.55 (sd=2.90)</td>
<td>14.74 (sd=2.64)</td>
<td>13.11 (sd=3.73)</td>
</tr>
</tbody>
</table>
TABLE 3: Mean Spearman Correlations Between Subject Rankings and Dimensional Information, Experiment 1, Task 1

<table>
<thead>
<tr>
<th>MOOD</th>
<th>DIMENSION</th>
<th>AGREEABLE</th>
<th>HAPPY</th>
<th>INTERESTING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POSITIVE</td>
<td>(n=38)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sd=.233)</td>
<td>.241</td>
<td>.588</td>
<td>.238</td>
</tr>
<tr>
<td></td>
<td>NEUTRAL</td>
<td>(n=33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sd=.267)</td>
<td>.383</td>
<td>.292</td>
<td>.351</td>
</tr>
<tr>
<td></td>
<td>NEGATIVE</td>
<td>(n=41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sd=.259)</td>
<td>.339</td>
<td>.299</td>
<td>.344</td>
</tr>
</tbody>
</table>

TABLE 4: Mean Spearman Correlations Between Subject Rankings and Dimensional Information, Experiment 1, Task 2

<table>
<thead>
<tr>
<th>MOOD</th>
<th>DIMENSION</th>
<th>USEFUL</th>
<th>HAPPY</th>
<th>EXCITING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POSITIVE</td>
<td>(n=38)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sd=.270)</td>
<td>.104</td>
<td>.495</td>
<td>.241</td>
</tr>
<tr>
<td></td>
<td>NEUTRAL</td>
<td>(n=31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sd=.348)</td>
<td>.174</td>
<td>.180</td>
<td>.482</td>
</tr>
<tr>
<td></td>
<td>NEGATIVE</td>
<td>(n=38)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(sd=.284)</td>
<td>.228</td>
<td>.281</td>
<td>.440</td>
</tr>
</tbody>
</table>
Discussion

Consistent with the review of literature above, people in positive mood states based their behavioral decisions on information about how those activities affect moods more than people in neutral and negative moods. In addition, this effect occurred across alternative dimensions of information available at the time of the decision. These results are also consistent with the recent meta-analyses by Miller and his colleagues (Carlson & Miller, 1987; Carlson, Charlin & Miller, 1988; Miller & Carlson, 1990). As discussed above, Miller and his colleagues found support for mood-management in positive-mood helping, but failed to support the operation of mood-management motives in negative moods. Instead, models of negative-mood helping that included focusing on aspects of the situation other than management of moods were supported (e.g., focus of attention, Rosenhan et al., 1981; and responsibility, Rogers et al., 1982).

Although people in negative moods used the dimensions of information in the same way as people in neutral moods in this study, this does not mean that negative and neutral moods would lead to the same behavioral outcomes if the choice of activities were helping-related, for instance. It is important to note that many of the aspects of a helping situation in negative moods (e.g., perceived inequities or
misfortunes regarding victims to be helped, or perceived responsibility for another's misfortunes) may not be present when people are in neutral moods. In this study, however, such differences were not present in the target objects, leading to the similar activity choices in neutral and negative moods.

Unfortunately, based on this study alone, one could argue that the effects obtained were not due to mood states at all. Differences in the mood-manipulation tapes other than induced mood may be responsible. Although all three tapes were rated as highly interesting, there were differences such that the positive tape was seen as more interesting than the neutral or negative tape. Because of this, one might argue that happy subjects had less reason to seek out activities that were highly interesting, having just experienced an activity more interesting than that experienced by either neutral or sad subjects. Similarly, one could argue that neutral and sad subjects became more focused on interest because the tape they saw wasn’t interesting enough. This may have kept them from using the "happiness" dimension as much as they might have if they had seen a more interesting mood-induction tape. Because all the tapes were seen as quite interesting (less than 2.2 on a 10-point scale), this interpretation seems unlikely, but it cannot be ruled out based on this study alone.
Another possible non-mood explanation concerns subjects' expectations about future tapes based on the mood-manipulation tape. Subjects had presumably enjoyed the tapes they watched as the mood manipulation, at least all three tapes had been rated as very interesting. Because subjects were choosing tapes just after watching a tape, subjects may have felt most confident that they would enjoy the next tapes if they chose tapes with similar qualities to the tape they just watched. After all, they didn't know exactly what to expect from tapes that were markedly different from the tapes they had just watched. Thus, subjects may have used the most salient quality of each of the manipulation tapes as a guide for their next choices. Of course, such an explanation assumes that the "happy" qualities are most salient for the positive tape while the "interesting" qualities are most salient for the neutral and negative tapes. This seems unlikely given the effective manipulation of sadness with the negative tape, but such an explanation also cannot be ruled out for this first study.

A final possible criticism of study one relates to the experimental situation as a whole. Because subjects were run in groups, and the experimenter was aware of the mood condition of each group, some difference in treatment of subjects by the experimenter might have affected the use of dimensions by subjects in the various mood states. Although experimenter contact with subjects was minimal and the way
that experimenter behaviors would affect dimension usage is not clear, subtle experimenter biases provide a third possible interpretation of the results of study one.

Thus, although the results of study one were as expected and were consistent with research relevant to the question at hand, a number of possible alternative explanations exist. One could be more confident in the results of study one if people in a positive mood were shown to seek out happy activities more than neutral- or negative-mood people even if different mood manipulations were used (especially if the pattern of interest in the mood-induction was markedly different from that of the first study) and if experimenters were blind to mood conditions of individual subjects.
CHAPTER III (EXPERIMENT TWO)

In order to address the possible alternative explanations of study one, two primary changes were made in the second study. Moods were manipulated through the reading of articles and subjects were individually assigned to mood conditions in such a way that experimenters were not aware of subjects' moods.

Inducing moods through the reading of short articles addressed a number of the alternative explanations for study one. First, the mood-manipulation constituted a drastically different context than the videotapes subjects were to choose for "part two" of the session. Using these materials that crossed modalities between the manipulation and choice phases makes it much less likely that subjects expected qualities of the chosen activities to directly match qualities of the initial activity. In addition, the manipulation articles used in this study were such that they differed markedly in interest from the manipulation tapes used in study one.

Although the articles used in the study were effective at inducing the desired mood states, they were largely less interesting than the videotapes used in study one. More importantly, although there were still differences in the
rated interest of the articles among positive, neutral, and negative conditions, the pattern of interest ratings were quite different than that of study one. Pretest subjects had rated these articles on interest and viewed the sad article as more interesting than the neutral or positive articles which did not differ from one another. As presented below, this pattern of ratings was also obtained from the subjects in this study. Because of this, if differences in interest of the mood-induction caused the differences in activity choice, one would expect a different pattern in this study. Specifically, based on the ratings of interest, one would expect the neutral and positive subjects in the following study to make similar choices that would differ from those of negative subjects. If that does not occur, one can be more confident that choice differences are not being created by interest levels associated with the mood induction.

Also, in this study, subjects were each assigned to mood-induction articles by an experimenter other than the experimenter who ran the session. Because of this, and because all mood conditions were represented in each group, differential treatment of subjects in various mood states is not a plausible interpretation of results of the present study.

The final change in procedure for study two was that each subject only completed one ranking task. This task
either employed the dimensions used in the first task of study one, or the dimensions used in the second task of study one. Thus, group of dimensions used as labels was manipulated as a between-subject variable rather than being represented by multiple ranking tasks.

**Study Overview**

Subjects were randomly assigned to read an article that induced either a positive, neutral, or negative mood. Subjects then completed a single ranking task that was similar to those in study one.
Method

Subjects

One hundred thirty-one undergraduate psychology students participated in partial fulfillment of a course requirement. Subjects participated in groups of 3 to 9, with each subject randomly assigned to one of the six conditions of the 3 (Mood: positive, neutral, or negative) X 2 (Group of dimensions: agreeable-happy-interesting, or useful-happy-exciting) design.

Procedures

Subjects were greeted by the experimenter who went on to introduce the session as a study on "Imagery" (see Appendix B for a complete script of experimenter instructions). Subjects were first asked to imagine themselves as one of the characters involved in an article that had been "recently published" (see Appendix B for the text of all three articles). The positive article, Meeting Them More Than Halfway, described a cheerful dinner where old friends were reunited (Green, 1984). The neutral article, Chicago Bounces Back, described the revitalization of Chicago (McCormick, 1986), while the negative article Cameroon's Valley of Death was an account of a natural catastrophe that killed many people (Cooper & Marshall, 1986). These articles were used in prior research by
Kuykendall (1987). After reading one of the articles, subjects completed measures related to their experience with the article, including three semantic differential scales of how good/bad, pleasant/unpleasant, and positive/negative imagining themselves in the article made them feel (with "1" representing positive qualities and "9" representing negative qualities), and an assessment of how interesting/uninteresting subjects found the article (see Appendix B for the post-article questionnaire). The three semantic differential scales addressing how the articles made subjects feel were summed to create a manipulation check on mood.

After providing these responses, subjects were directed to proceed with the next folder of activities that introduced the ranking task (see Appendix B for materials). The instructions on this page told subjects that they were to choose the materials for subsequent imagination tasks. Choices were to be from a list of potential videotapes whose qualities had been rated by past students, as in study one. Subjects received one of two possible lists of tapes. The lists were identical, except in the dimensions of information presented (see Appendix B). One of the lists presented dimensions of how generally AGREEABLE the tape was to students, how HAPPY the tape made students feel, and how INTERESTING the tape was to students. The other list presented the same tapes and numerical information, but
tapes described as "agreeable" in the first list were labeled in terms of how USEFUL the tape was for students. The "happy" tapes from the first list were also the "happy" tapes in the second list; and the "interesting" tapes from the first list were labeled in terms of how EXCITING/ACTION-PACKED the tape was in the second list. As in study one, each target tape was presented as having either a high average rating (approximately 8 to 9) or a low average rating (approximately 2) on each dimension so that the eight tapes included every possible combination of high versus low qualities on each of the three dimensions. The grid of numerical information about the dimensions was identical to the grid for the first task in study one; the only difference between the two lists employed in this study was the group of three dimensions labeling the numerical information (see Appendix B). At the completion of this task, subjects were thoroughly debriefed and thanked for their participation.
Results

Manipulation Checks

The three semantic differentials concerning how the article made subjects feel were summed to create a manipulation check on mood. A two-way ANOVA showed that the manipulation of mood was successful \( F(2,125)=108, p<.0001 \). Duncan tests showed that positive-mood subjects felt better \( (M=7.84) \) than neutral-mood subjects \( (M=14.56) \), who in turn felt better than negative-mood subjects \( (M=21.89, p<.05) \). Ratings of article interest also showed that the mood-induction articles differed in their level of interest \( F(1,126)=9.37, p<.0002 \). Duncan tests showed that the negative-mood article was viewed as significantly more interesting \( (M=2.60) \) than the neutral article \( (M=4.57) \) or positive article \( (M=4.07, p<.05) \). The interest ratings of the neutral and positive articles did not differ.

Tape Rankings

As in study one, two sets of analyses were performed. In the first analysis, the ranks of the four target tapes presented as high on the dimension of interest were summed to form an index of the extent to which subjects used the dimension in choosing their subsequent activities. This summed rank was then submitted to a 3 (Mood) X 2 (group of dimensions) between-subjects ANOVA. The second analysis of
the data calculated the Spearman Rank-Order Correlation between the ranks provided by each subject and the ranks that would have been provided if the subject were using each of the dimensions of information exclusively in ranking the tapes. That is, a within-subject variable was created that represented the association between each of the three dimensions of information and the subject ranks of the target tapes. These correlations were then submitted to a 3 (Mood) X 2 (Group of dimensions) X 3 (Dimension) mixed-design ANOVA with mood and group of dimensions as the between-subjects factors and dimension as the within-subject factor.

Analyses of Summed Ranks

Analysis of "Happy" Dimension

Of primary interest is the extent to which subjects in positive, neutral, and negative mood states used information about how the target tapes would affect mood to make choices of which tapes to watch. The ranks of the four target tapes presented as high on the "happy" dimension were summed and submitted to a two-way ANOVA with mood and group of dimensions as the between-subject factors.

The mood manipulation significantly affected the extent to which subjects based their choices of target tapes on how the tapes would make them feel \(F(2,125)=7.66, p<.0007;\) see
Table 5. Simple effects tests showed that positive-mood subjects preferred "happy" tapes ($M=12.34$) more than neutral-mood subjects [$M=13.90$, $F(1,82)=7.43$, $p<.008$]. Positive-mood subjects also preferred "happy" tapes ($M=12.34$) more than negative-mood subjects [$M=14.80$, $F(1,81)=15.06$, $p<.0002$]. Neutral- and negative-mood subjects did not differ in how favorably they ranked the four "happy" tapes [$F(1,82)=1.57$, $p>.2$]. Thus, as predicted, and replicating experiment one, subjects in a positive mood used the potential mood effect of the target tapes as a basis for their action preferences to a greater extent than did subjects in neutral or negative moods, regardless of the group of dimensions presented in the task. Dimension group did have an overall impact on the choice of happy tapes, as shown by a main effect of group of dimensions [$F(2,125)=8.34$, $p<.005$]. Although not of theoretical interest, this effect shows that "happy" tapes were preferred when the dimensions were useful-happy-exciting ($M=12.90$) more than when the dimensions were agreeable-happy-interesting ($M=14.39$), regardless of mood state. The interaction between mood and group of dimensions did not reach significance [$F(2,125)=1.24$, $p>.3$].

Analyses of Alternative Dimensions

The mood manipulation had no effect on choice of interesting/exciting tapes [$F(2,125)<1$, n.s.], although the
main effect of dimension group showed that tapes were preferred more when described as interesting \((M=13.3)\) rather than exciting \((M=14.51; F(1,125)=4.16, p<.05)\). The interaction between mood and dimension group did not reach significance \([F(2,125)<1, \text{n.s.}]\). The mood manipulation also had no effect on choice of useful or agreeable tapes \([F(2,125)<1, \text{n.s.}]\), although the main effect of dimension group showed that tapes described as useful were preferred more \((M=15.43)\) than the same tapes described as agreeable \([M=16.5; F(1,125)=4.54, p<.04]\). The interaction between mood and dimension group did not reach significance \([F(2,125)<1, \text{n.s.}]\) (see Table 5; also see Appendix C for the ranks of each target tape across mood states).

**Analysis of Associations Between Dimensions and Ranks**

Once again, of primary interest is the extent to which subjects in positive, neutral, and negative moods used information about how the target tapes would affect mood to make choices of which tapes to watch. Spearman Rank-Order Correlation Coefficients between the rankings that each subject gave to the target tapes and the rankings that would be expected based on exclusive use of each of the dimensions of information were calculated for each subject. Greater mood-management motivation in positive as opposed to neutral and negative moods is supported if the average correlation
between subject rankings and rankings according to the "happy" dimension are higher for subjects in positive as opposed to neutral and negative moods. The results of these calculations were submitted to a 3 (Mood) X 2 (Group of Dimensions) X 3 (Dimension) mixed-design ANOVA with mood and group of dimension as the between-subjects factors and dimension as the within-subject factor.

Results showed that there was a mood by dimension interaction [$F(4,250)=2.96, p<.02$] (see Table 6). Duncan's Multiple Range tests showed that the "happy" dimension was more closely associated with the rankings of happy subjects ($M=.578$) than with the rankings of neutral subjects ($M=.431$) or sad subjects ($M=.328; ps<.05$). The association between the "happy" dimension and the rankings of neutral versus sad subjects did not differ. In contrast, Duncan tests showed that the association between the "interest/excitement" dimension and rankings did not differ across moods. There was also no mood-based difference in the association between the "agreeableness/usefulness" dimension and subject rankings of target tapes.

Of little theoretical importance, there was a main effect of dimension [$F(2,250)=2.96, p<.05$]. That is, the association between subject rankings and the "happiness" dimension was higher overall ($M=.447$) than the association between subject rankings and the "interest/excitement" dimension ($M=.351$) or the "agreeableness/usefulness"
dimension (M=.348). Also, there was a significant group of dimensions by dimension interaction [F(2,250)=5.21, p<.01]. That is, Duncan tests reveal that, regardless of mood state, the association between the "happy" dimension and subject rankings was stronger when the group of dimensions was useful-happy-exciting (M=.517) than when the group of dimensions was agreeable-happy-interesting (M=.381; p<.05). The associations between the alternative dimensions and subject rankings did not differ between the two groups of dimensions presented.
TABLE 5: Mean Summed Ranks of Agreeable/Useful, Happy, and Interesting/Exciting Tapes, Experiment 2

<table>
<thead>
<tr>
<th>MOOD</th>
<th>AGREEABLE/</th>
<th>INTERESTING/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USEFUL</td>
<td>HAPPY</td>
</tr>
<tr>
<td>POSITIVE (n=44)</td>
<td>15.86 (sd=2.61)</td>
<td>12.34 (sd=2.51)</td>
</tr>
<tr>
<td>NEUTRAL (n=44)</td>
<td>16.34 (sd=3.65)</td>
<td>13.90 (sd=3.13)</td>
</tr>
<tr>
<td>NEGATIVE (n=43)</td>
<td>15.77 (sd=2.49)</td>
<td>14.80 (sd=3.37)</td>
</tr>
</tbody>
</table>

TABLE 6: Mean Spearman Correlations Between Subject Rankings and Dimensional Information, Experiment 2

<table>
<thead>
<tr>
<th>MOOD</th>
<th>AGREEABLE/</th>
<th>INTERESTING/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USEFUL</td>
<td>HAPPY</td>
</tr>
<tr>
<td>POSITIVE (n=44)</td>
<td>.360 (sd=.257)</td>
<td>.578 (sd=.288)</td>
</tr>
<tr>
<td>NEUTRAL (n=44)</td>
<td>.307 (sd=.404)</td>
<td>.431 (sd=.337)</td>
</tr>
<tr>
<td>NEGATIVE (n=43)</td>
<td>.377 (sd=.252)</td>
<td>.328 (sd=.384)</td>
</tr>
</tbody>
</table>
Discussion

Thus, the results of experiment two provide consistent support for the proposition that people in positive moods are more concerned about the hedonic consequences of subsequent activities than are people in neutral or negative moods. In addition, this pattern of effects cannot be explained by aspects of the experimental situation unrelated to mood. Also, the choice task is for experiences with very different qualities than those of the mood-induction (i.e., watching and listening to a tape versus reading an article). Thus, it seems unlikely that subjects would make their choices for later activities based on an assumption that the qualities of those later activities would mirror those of the mood-induction. Also, subjects rated the mood-induction articles in study two as having very different interest characteristics as compared to the videotape manipulation in study one. This also makes it unlikely that qualities of the mood-induction other than the mood produced are creating choice differences. The results of experiment two are also immune to criticisms of possible experimenter bias. Because subjects were assigned to conditions by someone other than the experimenter, and because all mood conditions were represented in every session, subtle differences in treatment of subjects across conditions is impossible.
CHAPTER IV (CONCLUSION)

The results from both studies provide strong evidence that people in positive moods are concerned with maintaining their positive states. Also, in both studies, people in positive states managed that state to a greater degree than people in neutral or negative states. That is, subjects who watched or read uplifting materials consistently formed preferences for subsequent activities based on the affective quality of those activities to a greater extent than subjects who watched or read neutral or negative material. These patterns occurred across varied mood manipulations and alternative dimensions of information available to guide choices.

The pattern of results obtained in the present studies is consistent with recent meta-analyses of the mood and helping literature (Carlson et al., 1988; Carlson & Miller, 1987; Miller & Carlson, 1990). The results of the present studies and of these meta-analyses, however, seem to directly conflict with portions of the Negative State Relief (NSR) model of helping (Cialdini et al., 1973; Cialdini & Fultz, 1988) and with the integration of positive mood into the NSR framework (Schaller & Cialdini, 1990). Schaller and Cialdini (1990) strongly assert that sad people are
concerned with the hedonic consequences of activities and that happy people are not. That is, they state that:

"the helping responses offered by saddened persons will be dependent upon consideration of factors that affect the hedonic consequences of helping. The helping responses offered by elated persons will be less dependent upon carefully considered hedonic considerations. (pg. 267)"

It seems clear from the present data, however, that such a strong statement is premature and potentially incorrect. In fact, results from the two studies presented here are consistent with a conclusion opposite to that of Schaller and Cialdini--that positive moods may engender greater concern than neutral or negative moods regarding the hedonic consequences of chosen activities. Because of this, one is forced to scrutinize the evidence Schaller and Cialdini cite as support for their framework more closely, and to take the alternative explanations offered by recent meta-analyses more seriously than one might without the present experiments.

It is important to note that many of the studies cited in support of the Cialdini framework are ambiguous in their results. As discussed in the introduction, many of the studies cited as refuting mood-management in positive moods are actually consistent with positive mood management. Recall, for instance, that the Baumann et al. (1981) found equally high self-gratification for happy subjects whether or not they had recently helped someone. Cialdini and his
colleagues take this to mean that self-gratification and helping are not equivalent responses. This is then cited as evidence that positive-mood helping is not engaged in for the purpose of enhancing mood. Such an interpretation is no more plausible, however, than stating that happy people in this study are still happy regardless of whether they have recently helped someone. Mood-management motivations in this situation would then predict that self-gratification should occur for anyone that is happy, regardless of whether the happiness from the mood-induction has been bolstered by a helping act or not. Thus, because of the possible reinterpretation of many of the studies supporting a negative mood management framework, and because of the clear results from the present experiments, a strong statement of sad people managing moods more than happy people seems misguided.

This is not to say that people in negative moods are never concerned with managing their moods, or that actions on the part of people in positive moods are always driven by mood-management. Certainly some of the situations that elicit negative states also make affective experience, and motivations to manage that experience, salient. This may especially be the case when people are asked to imagine the last time they felt sadness, or anger, or when experimental subjects are told that a particular situation is being
studied because the situation brings about a particular mood state.

It is interesting to note that both of the present studies made a technique for managing mood very apparent to subjects. That is, by explicitly labelling one of the dimensions of information "how HAPPY it makes students," it was relatively easy for subjects to manage mood if they wanted to do so. Because of the ease of accessing a technique for managing mood, it seems that the major determinant of whether subjects used this "happiness" information must be the extent to which they were concerned with maintaining or enhancing the affective state they were experiencing at the time.

Of course, there will also be forces other than mood management that influence the actions of people in positive moods. For instance, in the Bless et al. (1990) study discussed above, when subjects in a positive mood were instructed to evaluate the arguments in the message, they did so as much as subjects in a negative mood, even though the message contained arguments that would presumably strip them of their positive state. That is, a goal external to the mood state (i.e. instructions by the experimenter) was capable of overriding the initial tendency of happy people to avoid thought about the depressing message. Thus, although the mood-management motives demonstrated in the present studies may guide behaviors of happy people in some
instances, there will certainly be instances in which alternative forces guide behavior more than mood-management.

The current proposal of greater mood-management in positive as opposed to neutral and negative states differs from current frameworks in important ways. For instance, many current views of mood effects on cognition and behavior posit that negative moods differ more markedly from positive and neutral moods than positive and neutral moods differ from each other. For instance, in the affect-as-information framework (Schwarz, 1990), negative states signal the person that the environment is problematic and that careful assessment of the environment is necessary. Positive states, on the other hand, signal safety and no need for scrutiny of the environment. With this in mind, neutral moods do not signal problems in the environment, and do not necessitate any special attention to the environment. Thus, neutral mood is similar to positive moods in that no need for increases in processing are instigated by the state. This type of relationship is also evident in Taylor's (1991) recent work with the mobilization-minimization hypothesis. In this frame, the basic notion is that negative events elicit a mobilization of activity across physiological, cognitive, and behavior levels. Mobilization takes place in order to prepare the person to deal with the threat of the negative event, and thus to take action to minimize the impact of the negative event. According to this analysis,
no need exists to protect oneself from neutral or positive events, and thus neutral or positive events elicit no mobilization or minimization process.

The current view of mood management across mood states, however, differs from these frameworks in that differences lie between positive and neutral moods, with neutral and negative moods acting similarly. As discussed above, because affective state does not differ from what is normally experienced, neutral states are not likely to make affective experience and mood-management concerns particularly salient. In addition, because people in negative states can at least partially alleviate that state by engaging in almost any activity available, contingency between choice of activity and affect management may not be particularly available in negative states. In positive states, however, one can only maintain the positivity of the feeling by carefully choosing from the available alternatives. Thus, assessment of hedonic consequences of actions may be associated more with positive as opposed to neutral and negative states.

The two studies reported in this thesis used sadness as negative mood. Sadness was chosen in part because the majority of work studying mood effects has focused on happiness versus sadness, rather than using alternative negative states such as anger, fear, or guilt. Although many mood-management effects may be attributed to simple
valence of affective states (i.e., positive versus negative), it is important to note that differing moods of the same valence may foster very different motivational states. For instance, anger may motivate the person to approach and confront the object or situation that brought about the anger whereas fear may motivate the person to avoid the object or situation that brought about the guilt. In these cases, approach on the part of the angry person and avoidance on the part of the fearful person may both serve mood-management motives. This may be the case although both states and both objects seem to be negative in valence.

Just as anger and fear may motivate differing actions in service of mood-management, it may be also that sadness motivates very different techniques than happiness when seeking to manage mood. For instance, it may be that sad people would not seek happy material to relieve the negative state, but would seek activities that are engaging so that they can be distracted from what made them feel sad. This type of strategy might become apparent in the present paradigm through reliance on choosing "interesting" activities. Although sad subjects chose interesting activities more than happy subjects in the first study presented above, this pattern is not obtained in study two. In addition, sad subjects never chose interesting activities more than neutral subjects. Thus, neither of the two studies in this thesis seem to provide support for the
possibility that sad subjects are managing mood through attempts at distracting themselves from their sadness. In order to entertain the possibility that sad subjects are using the interest dimension to manage mood, one might assume that sad subjects do not particularly notice the "happy" dimension as they search for engaging activities that will distract them. In such a case, making choices through use of the interest dimension may be serving mood-management motives. If sad subjects do notice the "happy" dimension but ignore it, then explanation of choice of interesting activities cannot be as readily explained in mood-management terms. That is, if sad subjects do not care if an activity is sad as long as it is interesting, then choice of interesting activities may or may not be in service of mood-management. Sad subjects using interesting activities to distract them from their sadness still seems intuitively plausible, but is not unambiguously supported in either of the present studies.

As an initial attempt, the two studies in this thesis question prevailing views on mood-management based on valence. In addition, as we learn more about the role of valence in the basic processes of mood-management, future research should also investigate the possible differences in mood-management motivations (and the differing actions that may serve such motives) across affective states of the same valence.
Implications for Future Research

The pattern of mood-management motives found in the Miller meta-analyses and demonstrated in the present studies provide us with a number of avenues for future research.

Mood and Helping

The existence and relative strength of mood-management motives across mood states has been an important topic of research for some time in the mood and helping literature. We see from the recent Schaller and Cialdini (1990) chapter and from the research reviewed above, however, that much of the research in the area is ambiguous in the conclusions that can be drawn regarding these motivations. The present pair of studies was designed to control many of the ambiguities involved in past investigations of mood-management in helping. In doing so, clear patterns of mood-management motives have emerged. These studies lead one to question the strongest statements of Cialdini and his colleagues regarding the prominence of mood-management in negative states and lack of mood-management in positive states.

Because of this, design and interpretation of future mood and helping studies should pay careful attention to the many alternative forces active in the mood-manipulation itself as well as the helping opportunity. It should be
noted, however, that the present demonstrations of mood-management do not involve helping situations. Thus, based on the present research, one cannot make a statement that happy people help in order to manage mood while sad people do so to a lesser degree or not at all. Future research must address such possibilities.

In doing so, future studies on mood and helping should be sensitive to changes in moods that take place during the experimental session, and to the relationship between helper and target of help (especially regarding equity concerns related to focus of attention in the mood state). For instance, a helping experiment that improves on past paradigms might provide multiple methods by which to help a person or group, with the methods of helping varying in pleasantness. A similar situation might be created by having multiple people in need of help, each in need of actions on the part of helpers that vary in pleasantness. In either case, the dependent measure should be brief enough that moods cannot be changing before the dependent measures are complete. For this purpose, choices of helping activities or performance of very brief activities might be used.

Mood and Processing of Persuasive Communications

As discussed above, the pattern of mood-management motives obtained in the present studies also seem capable of
organizing the results of many of the studies on mood and message processing. Presently, however, there exists no clear empirical demonstration of mood-management motives determining amount of message processing. That is, no published study has manipulated the pleasantness of message content in order to demonstrate differential processing of message content. According to the pattern of results from the present studies, we might expect that people in positive moods would seek out messages with uplifting content, but would avoid messages with depressing content. This would make message processing by happy people more likely for messages with uplifting content as opposed to depressing content. In comparison, message processing by people in neutral and negative moods would not be expected to differ as markedly between messages with uplifting and depressing content.

Such a result would be consistent with the published literature. The relative processing deficit in positive moods with a depressing message would be consistent with the cognitive capacity (Mackie & Worth, 1989) and affect-as-information (Schwarz, 1990) models of mood and persuasion. Both the cognitive capacity and affect-as-information models, predict that people in positive moods would always tend to process messages less than people in neutral or negative moods, however, although the affect-as-information model allows some motivation external to the mood state to
instigate processing in positive moods. If such a goal is present, the effects of mood may be diminished such that people in all moods process equally, but no predictions of reversals can be generated from these models. The current perspective provides insight into when people in positive states might process a message more than people in neutral or negative states, however. As noted above, happy people should be most likely to process uplifting messages.

Mood and Selective Attention

On a more basic level than helping or persuasion processes, there is still much to learn about the nature of motivations tied to mood states. Many of the same concerns related to helping paradigms are relevant to selective attention as well. As discussed in the introduction, investigations of mood and selective attention have primarily used exposure times as a dependent variable. Exposure time may work well when investigating selective exposure to messages consonant versus dissonant with one's attitude. With mood as a basis for selective exposure, however, exposure to valenced stimuli over any period of time changes the mood state. This makes dependent measures that can be collected in a brief period of time, with no interim change in mood, very important.

Although the present studies provide clear support that the hedonic quality of activities impact choices of happy
people more than neutral or sad people, the range of relevant hedonic qualities is not yet fully understood. For example, although people in negative states in the present studies probably interpreted a "not at all" rating on the dimension of "Makes Students Happy" as making students sad, people in positive states may have interpreted the rating differently. That is, an absence of happiness may be interpreted as neutral when in a happy mood, but may tend to be interpreted as sad when in a sad mood. If this were the case, people in positive moods may be considering a more narrow range of possible hedonic values associated with the target tapes than people in sad moods. Such a situation, however, would seem only to work against the pattern of results observed. That is, people in positive moods may be differentiating their choices of activities between only neutral and happy activities whereas people in negative moods may not be differentiating between activities even though they interpret them as ranging from happy to sad. Perspective theory (Upshaw & Ostrom, 1970), however, might predict that subjects in a negative mood would interpret "happy" as referring to a tape that is less happy than the same tape as considered by subjects a positive mood. That is, because happy subjects have recently experienced happy events, their perspective extends farther toward the positive end of the happy/sad continuum, whereas sad subjects have recently experienced sad events and their
perspective may extend farther toward the negative end of the continuum. As long as the range of values considered by happy versus sad subjects is not different, shifting perspectives toward one end of the happy/sad continuum does not seem to threaten the pattern of results obtained. That is, to the extent that happy people consider happy tapes to be more positive, mood-management motives should direct them to seek those tapes. Similarly, to the extent that sad people consider "not happy" tapes to be more negative, mood-management motives should direct them to avoid those tapes, if such mood-management motives are operating.

The possibility of these differential interpretations brings up an important aspect of many applications of mood management principles. That is, most applications of mood-management explanations for the behavior of happy people involve the avoidance of unpleasant alternatives. This is evident in the discussions of research in each of the areas above. For instance, happy people not only seek gains but also avoid losses in risk-taking paradigms. Happy people are also hypothesized to seek positive information and avoid negative information. Also as mentioned, however, many of the results of past studies in these paradigms are open to alternative interpretations. Given that the present studies demonstrate only that people in positive moods use the hedonic information more than subjects in neutral or negative moods, future research might more thoroughly
investigate the choices of activities on the negative end of the hedonic continuum. It may be that people in positive moods actively minimize damage to moods by choosing neutral over negative activities when those are the only possible choices. It may be, however, that any activity seen as clearly less positive than the current mood state will be seen as damaging to mood in an equal fashion. A clear demonstration of avoidance of negative as opposed to neutral activities on the part of happy people remains to be shown, and would require responses to a negative activity without a range of alternatives varying in their hedonic qualities.
Summary

One of the basic forces tied to the influence of mood states on thoughts and behavior is the management of affective experience. Happy, neutral, and sad subjects in two experiments were asked to choose future activities from alternatives varying on dimensions including affective quality. The choices of these subjects create a direct index of the relative importance of affective qualities of future experience. In both experiments, happy subjects based their preferences for future activities on how the activities would influence mood to a greater extent than neutral or sad subjects. This pattern of mood-management motivations is consistent with evidence of mood effects on helping, risk-taking, selective attention, and persuasion. In addition, existence of this pattern of mood-management motives carries with it implications for the design of future research, and makes new predictions not easily handled by current models of mood and cognitive processing.
REFERENCES


1. Analyses of mood-management motives in the helping literature depend on the assumption that helping is generally a rewarding, mood-elevating experience. The rewarding, self-reinforcing, qualities of helping have been documented by Weiss and his colleagues (Weiss, Boyer, Lombardo, & Stitch, 1973; Weiss, Buchanan, Alstatt, & Lombardo, 1971). In addition, direct evidence that helping elevates moods has been shown for subjects varying in their initial mood states (Millar, Millar, & Tesser, 1988).

2. Although this study was not explicitly conducted to investigate mood effects, the use of success and failure feedback to create positive and negative moods is widespread, and has been shown to be a generally effective manipulation of mood (see Weyant, 1978).

3. As discussed in the review of mood and persuasion, the cognitive capacity view (Mackie & Worth, 1989) proposes that positive moods limit capacity as opposed to neutral moods. Thus, this view predicts that positive moods should lead to simplified processing when compared to neutral moods, unless
happy people are given extra time to process information (see Mackie & Worth, 1989). The feelings-as-information (Schwarz, 1990) model also predicts that positive moods will lead to simplified processing. In this model, however, the explanation of this lack of effort in positive mood is based in motivation rather than cognitive capacity. That is, positive moods are seen as telling the person that the world is safe, and that no careful assessment of the person's environment is necessary. Thus, although motivating forces external to the mood state can instigate processing on the part of happy people, the motivational impact of positive moods is hypothesized to decrease processing.

Although many studies have been interpreted as evidencing simplified processing in positive moods, positive moods have also been shown to enhance creative problem-solving (Isen, Daubman, & Nowicki, 1987) and generation of similarities or differences between groups (Murray, Sujan, Hirt, & Sujan, 1990). The processing tasks where clear enhancement of processing has occurred for happy people have largely been more positive in nature than those tasks where clear deficits have been found. Because the cognitive capacity and feelings-as-information frameworks predict no instance where a positive-mood enhancement effect might occur, they seem poorly suited to organizing the mood and processing results. The application of mood-management motives proposed in the present paper, however, makes clear
predictions of when processing enhancement could take place. As discussed in the section on mood and persuasion, to the extent that pleasantness of processing task seems to covary with amount of processing in positive moods, applying the hypothesized mood-management motivations to mood and processing seems better able to organize the literature.

4. Five subjects failed to complete the second ranking task, and thus were not included in the analyses. No more than two of these subjects came from any of the three mood conditions.

5. The present results could be interpreted within the framework put forth by Schaller and Cialdini (1990) as people in negative moods seeking activity because of being in a "low arousal" state. It's not clear that Cialdini and his colleagues would want to support such an interpretation, however, especially since the thrust of the Negative State Relief model of helping is predicated on helping as an act of mood-management in negative moods, not simply of activity-seeking.
APPENDIX A

(EXPERIMENT ONE)
Experimenter Instructions
Hello, my name is ______________. I'll be running the session today. This study is investigating the preferences of people for material presented through various media.

You may, depending on the session, see various videotapes and be asked to rate them on a number of qualities. You will also be asked at times to make rankings of which tapes you prefer to see later in the session. When you make those rankings, they should be in the following form.

(GET OUT BLANK RANKING FORM)

For instance, if you have eight tapes to rank, rank the tape you want to see most as number one, then the tape you would like to see next most as number two...and so on until you get to the tape that you want to see least, which would be number eight. Does anyone have any questions? These rankings will occur at the start of part two in the session. After you make these rankings, you will go to another room in this building where you will each be able to watch tapes based on your personal rankings.

Now. The first part of the session includes watching a videotape that we already have prepared and rating it on a number of qualities. So, if you would, please keep the folders in front of you closed until after the video clip is finished. At that point, we will do the ratings in folder number one.

SHOW VIDEO

OK. Now please open folder one and do the ratings there.

OK. Now, here is the ratings sheet to be used for part two of the session. Please write only on this, not on the sheets in the folder. Please read the instructions on this sheet and fill out the rankings as quickly, but accurately, as you can.
POST-TAPE QUESTIONNAIRE
Please respond to each of the following statements or questions by placing an "x" on each scale above the number that best represents your opinion.

1. The program clip kept my attention.

1 2 3 4 5 6 7 8 9 10
Completely Not at all

2. The clip from this program was:

A) 1 2 3 4 5 6 7 8 9 10
Interesting Uninteresting

B) 1 2 3 4 5 6 7 8 9 10
Humorous Serious

3. The clip from this program made me feel:

A) 1 2 3 4 5 6 7 8 9 10
Sad Happy

B) 1 2 3 4 5 6 7 8 9 10
Unpleasant Pleasant

C) 1 2 3 4 5 6 7 8 9 10
Bad Good

4. I have seen this clip before. (Circle one)

Yes No Unsure If yes, where?__________
CHOICE INFORMATION SHEET (TASK 1)
Sometimes people choose things to watch based only on what other people tell them. The tapes below have been viewed by a large number of college students, and their average ratings of the tapes are presented here for you to use in choosing tapes for the next part of the session. Please use your rating sheet to rank the following short videotapes in terms of how much you want to watch them.

### QUALITIES OF THE TAPES

(1=not at all, 10=very much)

<table>
<thead>
<tr>
<th>TAPES</th>
<th>Students AGREE with</th>
<th>Makes Students HAPPY</th>
<th>INTERESTING to Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape A</td>
<td>8.4</td>
<td>8.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Tape B</td>
<td>8.1</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Tape C</td>
<td>2.9</td>
<td>9.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Tape D</td>
<td>2.3</td>
<td>1.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Tape E</td>
<td>2.6</td>
<td>2.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Tape F</td>
<td>7.8</td>
<td>8.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Tape G</td>
<td>2.5</td>
<td>9.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Tape H</td>
<td>8.6</td>
<td>2.0</td>
<td>8.7</td>
</tr>
</tbody>
</table>

1=not at all, 10=very much

Please use this information for the rankings on page one.
RANKING SHEET (TASK 1)
For the next part of the session, you will be choosing between a number of short tapes and ranking them for which you prefer to watch. You will then see a number of the tapes based on your rankings.

There won't be time to watch all of the tapes, so rank them for which tapes you would like to watch first.

Look at the first sheet in folder two.

Make rankings from 1 through 8 with:
1 = Most want to watch
8 = Least want to watch

TAPES A - H

Want to watch most 1.
2.
3.
4.
5.
6.
7.

Want to watch least 8.

When you finish these rankings, go to page two in this packet.
CHOICE INFORMATION SHEET (TASK 2)
QUALITIES OF THE TAPES

(1=not at all, 10=very much)

<table>
<thead>
<tr>
<th>TAPES</th>
<th>Useful to Students</th>
<th>Makes Students HAPPY</th>
<th>EXCITING/ACTION PACKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape I</td>
<td>2.1</td>
<td>8.7</td>
<td>8.3</td>
</tr>
<tr>
<td>Tape J</td>
<td>2.5</td>
<td>1.9</td>
<td>8.2</td>
</tr>
<tr>
<td>Tape K</td>
<td>8.0</td>
<td>9.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Tape L</td>
<td>2.6</td>
<td>1.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Tape M</td>
<td>7.9</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Tape N</td>
<td>8.6</td>
<td>8.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Tape O</td>
<td>2.4</td>
<td>9.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Tape P</td>
<td>8.5</td>
<td>2.0</td>
<td>8.5</td>
</tr>
</tbody>
</table>

1=not at all, 10=very much

Please use this information for the rankings on page two.
RANKING SHEET (TASK 2)
Please do similar rankings for the tapes listed on page two in the information folder. Depending on the session, the tapes you actually see in part two may come from this list, rather from list one.

Look at the second sheet in folder two.

Make rankings from 1 through 8 with:

1 = Most want to watch
8 = Least want to watch

TAPES I - P

Want to watch most

1.
2.
3.
4.
5.
6.
7.

Want to watch least

8.

When you finish these rankings, please sit quietly until everyone is finished with their rankings.
APPENDIX B

(EXPERIMENT TWO)
Experimenter Instructions
Hello, my name is ______________. I'll be running the session today. We have a number of things to accomplish this period. Each is related to a central study of how different situations and different people can make imagery affect a number of processes (including the formation of preferences for activities and the ability to perform multiple tasks at one time).

Hopefully the activities we have for studying all this will make sense to you as we go through...if you are able to pay as much attention as possible to the descriptions of each activity, things should be clear enough.

The first activity we have directly involves the process of imagining yourself in another place. The place is within a short article that you will read. As you read the article, try to imagine everything that the article describes. Put yourself in the setting. Vividly imagine being one of the people involved.

After you've read the article, please turn the article face down on the table, and I'll give you response sheets so you can provide some short responses regarding the imagery of the article and your experience with it. If you would, please open folder number one in front of you, and read the article.

HAND OUT RESPONSE SHEETS AS THEY FINISH. BOTTOM OF RESPONSE SHEET TELLS THEM TO OPEN FOLDER TWO AND READ THE INSTRUCTIONS THERE.

WHEN EVERYONE IS FINISHED, COLLECT FOLDERS, DEBRIEF SUBJECTS.
MOOD-INDUCTION ARTICLES

(POSITIVE, NEUTRAL, NEGATIVE)
MEETING THEM MORE THAN HALFWAY

There is absolutely no news in this story. But if you are getting a little tired of reading about warfare, crime, and meanness, you might want to give it a try anyway.

George and Thelma Washburn, of suburban Hinsdale, met a couple Von and Lois Cook, of Mishawaka, Indiana, some years ago. Although they live a fairly long way from each other, the Washburns and the Cooks like to get together a couple of times a year, just to say hello.

This summer they decided it might be nice if they had dinner together. So they compromised. They selected a town midway between—the town of Valparaiso, Indiana—and they agreed to meet there for a Sunday dinner.

They asked around, and someone recommended a Valparaiso restaurant called the White House. The food was supposed to be good.

On the appointed day, George and Thelma Washburn drove to the restaurant, a beautiful old house. The Cooks were waiting for them in the parking lot.

"You're not going to believe what happened," Von Cook said as the Washburns got out of their own car.

The Cooks had gone into the restaurant, only to be told that it was closed for the day. Usually the White House is open Sundays and closed Mondays—but this particular week, it was closed on Sunday because the owners were having a private family party. The party was due to start in a few hours, and the guests would be arriving.

So the Washburns and the Cooks went into the restaurant. The owners—twin brothers, Harry and Paul Pappas—led them to the cocktail lounge and insisted that they have a complimentary drink.

"We feel so bad," Harry Pappas said, "we want you to stay for the party. We want you to be our guests. We insist."

Harry Pappas pulled the Washburns and Cooks aside.

"I know you probably don't feel comfortable with a bunch of strangers," he said. "Nobody does. So just mingle if you wish—but I'm going to set you up your own table out on the terrace, where you can visit with each other like you planned in the first place."

The Pappas brothers moved a table out onto the back terrace. There were plants out there, and a big yard and a fish pond. The Pappas brothers said that the buffet was inside, in one of the big rooms;
the Washburns and the Cooks were to eat as much as they wanted. There would be no charge.

And so the party started. The Washburns and the Cooks were overwhelmed; they knew no one here, and all of the sudden they were joining people at the lavish buffet table. They helped themselves and went to their private table on the terrace.

As they relived old times together, guests from the party came out to introduce themselves and welcome them. The Pappas brothers came out, too; they told the story of the White House restaurant—how it had been the family house for years, and how four years ago the brothers had decided to make it into a restaurant.

When the Washburns and the Cooks had finished their meal and their conversation, they walked back into the house. The party was still in progress.

Mrs. Washburn didn't know what to say; she couldn't believe that they had been taken in just as if they had been invited. So she stood in the middle of the room full of strangers and said: "Thank you all. I just hope you had as nice a time today as we did."

The people in the room started to say goodbye to them, and the Pappas brothers got up to show them the front door.

"Get home safe," Harry Pappas said.

So the Washburns drove toward Hinsdale, and the Cooks drove toward Mishawaka. Mrs. Washburn thought to herself: All you hear about is unfriendliness and nastiness; people are supposed to distrust each other and keep to themselves in a cocoon of self-protection. Once in a while, in a small restaurant off the main highway, you see the other side.
Chicago Bounces Back

From Chicago's three world-renowned skyscrapers you could view a metropolis humbled. The culprits were familiar-idle smokestacks, disappearing jobs. The pratfalls were embarrassing: had the imperial reign of Richard Daley endured, it was said, the factories of Mid-America's proud capital would never have departed for immature cities of the sun belt. But the mayor died in 1976, and the bloodletting intensified. The new byword was atrophy.

But the final bell never sounded, and today Chicago is muscling its way back from the brink. Chicago's core—a broadly defined, 1,000-block expanse—boasts $6.8 billion worth of construction and renovation since 1979, with another $7.5 billion already announced. Housing projects to hold fresh swarms of urban immigrants suddenly ring a once lonely downtown. Upscale retailers now jostle for what was recently fringe warehouse space. And, after years of stagnation, the number of city-center jobs is growing.

Not since the great fire of 1871 has Chicago braved such an overhaul. Some companies still are leaving, often for such suburban venues as Silicon Prairie, a high-tech corridor to the west. But for all the expansionist energy of a metro area that sprawls from Wisconsin to Indiana, downtown Chicago also stands rejuvenated. Half the city's office space has been created in the last seven years.

Much of Chicago's rebirth is occurring in the same industrial tracts once crippled by the demise of railroading and heavy manufacturing. Unlike New York and San Francisco, where high density renders growth ferociously controversial, the heart of the nation's third largest city is flanked by vacant and underused properties. Chicago's resulting low rate of gentrification—the primordial eviction of the poor to make room for the rich—means fewer clashes than in other U.S. cities. Not that change is always tidy: a downtown soup kitchen in the path of progress recently lost its lease. And outside Presidential Towers, four new monoliths holding 2,346 pricey apartments, ousted skid-row denizens wryly curse enclosed walkways between the towers as "honkey tubes".

Will Chicago, like Houston before it, learn that a boon too often begets a bust? Already there are murmurs that lagging office-occupancy rates, coupled with coming changes in the nation's tax laws, will depress construction after 1988. There are also recurrent strains of a familiar rustbelt lament: all the new office buildings, restaurants and boutiques haven't replaced the 240,000 blue-collar jobs that Chicago lost since 1970.

But the sons and daughters of those workers are sharing in their city's revival. Three years ago just four parishioners lived within
Old St. Patrick's Parish on Chicago's near west side. The roster has since swollen to 450, and St. Patrick's, which has welcomed immigrants since 1846, is only beginning to absorb eager new arrivals. Most are young and, if they remain, the fodder for still more in-city development. Chicago, freed of its funk, is again living the credo its visionary urban planner, Daniel Burnham, sounded at the turn of the century: make no little plans.
Cameroon's Valley of Death

The patients looked like survivors of chemical warfare. More than 260 were cramped in a tiny, ill-equipped hospital in Wum, a small town near Lake Nios in Cameroon. Some patients had scars on their lungs. Others had paralyzed limbs. One woman had miscarried; another had delivered a stillborn fetus. "We've had one death from pneumonia, or maybe a pulmonary edema—it's hard to tell," said Dr. Christopher Pisch, the town's chief medical officer. "And they're still coming in." Six days after a cloud of lethal volcanic gas swept down the valley around Nios, hundreds of burned and blistered survivors were waiting for help. And they were the lucky ones: more than 1,700 people were dead.

NO WARNING: Some of the victims died instantly. "All people heard was the explosion," said Cameroon's President Paul Biya. "They didn't know that toxic gas had been expelled, and it killed them while they were asleep." Francis Fang, a 36-year-old farmer in the village of Cha, was in bed. "My wife dropped on the ground, vomiting blood," he said. "The children were burning and screaming. My wife was dead. I picked up my girls and started to walk toward the hospital. There were dead people everywhere on the road—so many that I was stepping on them.

Following the catastrophe, Maj. Victor Ngengue directed the Army's relief efforts in Subum, a village that lost half of its 600 inhabitants. The stench of decomposing flesh covered the village. "We have to keep people out of here," Ngengue said. "The animals' bodies have contaminated the water supply." Jongi Zong stood in an adobe house nearby. He had come to Subum from a neighboring village that escaped the toxic fumes to bury his brother and sister-in-law in one grave and the couple's seven children in another. "It was so sudden," he said. "Now they are all gone."

FLY IN: "We need international assistance to cope with this situation," President Biya said. "We need tents, blankets and drugs." More than a dozen countries answered the call. Prime minister Shimon Peres, visiting Cameroon to mark the resumption of diplomatic relations between Cameroon and Israel, brought a 17-member medical team. The U.S. Agency for International Development said the United States would fly in 15 tons of emergency supplies, including tents for displaced families. But the Cameroon Army, with only a few transport planes, had a hard time handling the influx of supplies. Said one Western diplomat in Cameroon: "The government never faced anything on this scale before."

The most immediate concern was to bury the dead. Fearing that contamination from rotting human and animal corpses could trigger an epidemic, hundreds of Cameroon soldiers dug mass graves. By the end
of the week most of the human victims had been buried, but thousands of cattle and other animal carcasses lay scattered across the valley. Despite the tragedy, only a few villagers talked about moving away. Most will probably stay on to tend their family farms—and their family graves.
POST-ARTICLE QUESTIONNAIRE
Article Response Sheet

Please respond to every scale presented.

1. I was able to imagine myself in the situations described in the article.

   not at all 1 2 3 4 5 6 7 8 9 completely

2. As I thought of the situations in the article, I constructed images of what the people and/or places looked like:

   never 1 2 3 4 5 6 7 8 9 very often

3. Imagining myself "in" the article made me feel:

   (please respond to all three scales)

   bad 1 2 3 4 5 6 7 8 9 good

   unpleasant 1 2 3 4 5 6 7 8 9 pleasant

   negative 1 2 3 4 5 6 7 8 9 positive

4. The most vivid picture I took from this article was:

   (please respond with one sentence in the space below)

5. Imagining myself "in" the article was:

   uninteresting 1 2 3 4 5 6 7 8 9 interesting

When finished, open folder two. Read page one and provide rankings on page two.
CHOICE INFORMATION SHEETS
In the first imagination activity, we had an article ready for you. For the next imagination activity, you will choose from a number of videotapes available to be seen. More specifically, we would like for you to rank the videotapes described below according to how much you would like to watch each of them later in the session.

In order to help you choose which tapes you would like to see, we compiled ratings of those tapes from a large number of college students who watched the tapes last summer. The average ratings of those tapes are presented below.

Please use the information below to rank-order the tapes from the tape you want to see most (rank of 1) to the tape you want to see least (rank of 8). Please provide your rankings on the ranking sheet provided in this packet.

### QUALITIES OF THE TAPES

(1=not at all, 10=very much)

<table>
<thead>
<tr>
<th>TAPES</th>
<th>Students AGREES with</th>
<th>Makes Students HAPPY</th>
<th>INTERESTING to Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape A</td>
<td>8.4</td>
<td>8.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Tape B</td>
<td>8.1</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Tape C</td>
<td>2.9</td>
<td>9.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Tape D</td>
<td>2.3</td>
<td>1.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Tape E</td>
<td>2.6</td>
<td>2.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Tape F</td>
<td>7.8</td>
<td>8.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Tape G</td>
<td>2.5</td>
<td>9.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Tape H</td>
<td>8.6</td>
<td>2.0</td>
<td>8.7</td>
</tr>
</tbody>
</table>

1=not at all, 10=very much

Please use this information for the rankings on the ranking sheet provided in this folder.
In the first imagination activity, we had an article ready for you. For the next imagination activity, you will choose from a number of videotapes available to be seen. More specifically, we would like for you to rank the videotapes described below according to how much you would like to watch each of them later in the session.

In order to help you choose which tapes you would like to see, we compiled ratings of those tapes from a large number of college students who watched the tapes last summer. The average ratings of those tapes are presented below.

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QUALITIES OF THE TAPES
(1=not at all, 10=very much)

<table>
<thead>
<tr>
<th>TAPES</th>
<th>USEFUL to Students</th>
<th>Makes Students HAPPY</th>
<th>EXCITING/ACTION PACKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape A</td>
<td>8.4</td>
<td>8.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Tape B</td>
<td>8.1</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Tape C</td>
<td>2.9</td>
<td>9.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Tape D</td>
<td>2.3</td>
<td>1.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Tape E</td>
<td>2.6</td>
<td>2.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Tape F</td>
<td>7.8</td>
<td>8.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Tape G</td>
<td>2.5</td>
<td>9.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Tape H</td>
<td>8.6</td>
<td>2.0</td>
<td>8.7</td>
</tr>
</tbody>
</table>

1=not at all, 10=very much

Please use this information for the rankings on the ranking sheet provided in this folder.
RANKING SHEET
Please give us a ranking of each of the tapes in terms of which tapes you would like to watch first.

Make rankings from 1 through 8 with:

1 = Most want to watch
8 = Least want to watch

(use each number only once)

<table>
<thead>
<tr>
<th>RANK (1-8)</th>
<th>TAPE</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When finished with your rankings, please close this folder and wait until everyone else is finished with their rankings.
Ranks of Individual Target Tapes

(Experiment One)
Mean Ranks of Target Tapes

Experiment 1, Task 1

**MOOD**

<table>
<thead>
<tr>
<th>TAPES</th>
<th>POSITIVE</th>
<th>NEUTRAL</th>
<th>NEGATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3.63 (sd=1.67)</td>
<td>4.24 (sd=1.58)</td>
<td>4.65 (sd=1.67)</td>
</tr>
<tr>
<td>B</td>
<td>6.39 (sd=1.05)</td>
<td>6.42 (sd=1.17)</td>
<td>6.37 (sd=1.26)</td>
</tr>
<tr>
<td>C</td>
<td>2.21 (sd=1.57)</td>
<td>3.09 (sd=1.47)</td>
<td>2.66 (sd=1.61)</td>
</tr>
<tr>
<td>D</td>
<td>7.56 (sd=1.33)</td>
<td>7.21 (sd=1.60)</td>
<td>7.10 (sd=1.48)</td>
</tr>
<tr>
<td>E</td>
<td>5.03 (sd=1.38)</td>
<td>4.58 (sd=1.44)</td>
<td>4.44 (sd=1.61)</td>
</tr>
<tr>
<td>F</td>
<td>2.84 (sd=1.73)</td>
<td>2.24 (sd=1.84)</td>
<td>2.21 (sd=1.31)</td>
</tr>
<tr>
<td>G</td>
<td>4.03 (sd=2.02)</td>
<td>5.42 (sd=2.03)</td>
<td>5.60 (sd=2.10)</td>
</tr>
<tr>
<td>H</td>
<td>4.29 (sd=1.74)</td>
<td>2.79 (sd=1.58)</td>
<td>2.95 (sd=1.45)</td>
</tr>
</tbody>
</table>
Mean Ranks of Target Tapes

Experiment 1, Task 2

MOOD

<table>
<thead>
<tr>
<th>TAPES</th>
<th>POSITIVE</th>
<th>NEUTRAL</th>
<th>NEGATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>2.66 (sd=1.48)</td>
<td>2.74 (sd=1.75)</td>
<td>2.97 (sd=1.84)</td>
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<tr>
<td>J</td>
<td>5.45 (sd=1.69)</td>
<td>4.55 (sd=1.69)</td>
<td>4.92 (sd=1.67)</td>
</tr>
<tr>
<td>K</td>
<td>3.32 (sd=1.71)</td>
<td>4.29 (sd=1.95)</td>
<td>3.97 (sd=1.73)</td>
</tr>
<tr>
<td>L</td>
<td>7.42 (sd=1.43)</td>
<td>6.83 (sd=1.63)</td>
<td>7.39 (sd=1.13)</td>
</tr>
<tr>
<td>M</td>
<td>6.34 (sd=1.34)</td>
<td>6.54 (sd=1.39)</td>
<td>6.37 (sd=1.46)</td>
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<tr>
<td>N</td>
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<td>2.68 (sd=1.74)</td>
<td>2.63 (sd=1.20)</td>
</tr>
<tr>
<td>O</td>
<td>4.18 (sd=1.91)</td>
<td>5.48 (sd=1.65)</td>
<td>5.16 (sd=1.73)</td>
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<tr>
<td>P</td>
<td>4.08 (sd=1.81)</td>
<td>2.87 (sd=1.71)</td>
<td>2.58 (sd=1.81)</td>
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</table>
## Mean Ranks of Target Tapes

### Experiment 2

#### MOOD

<table>
<thead>
<tr>
<th>TAPES</th>
<th>POSITIVE</th>
<th>NEUTRAL</th>
<th>NEGATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3.11</td>
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</tr>
<tr>
<td></td>
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<td>(sd=1.53)</td>
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<tr>
<td>B</td>
<td>6.32</td>
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<td>6.09</td>
</tr>
<tr>
<td></td>
<td>(sd=1.12)</td>
<td>(sd=1.57)</td>
<td>(sd=1.44)</td>
</tr>
<tr>
<td>C</td>
<td>2.43</td>
<td>2.64</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>(sd=1.37)</td>
<td>(sd=1.61)</td>
<td>(sd=1.67)</td>
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<td>D</td>
<td>7.82</td>
<td>7.19</td>
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</tr>
<tr>
<td></td>
<td>(sd=0.58)</td>
<td>(sd=1.72)</td>
<td>(sd=1.28)</td>
</tr>
<tr>
<td>E</td>
<td>5.43</td>
<td>4.92</td>
<td>4.84</td>
</tr>
<tr>
<td></td>
<td>(sd=1.47)</td>
<td>(sd=1.61)</td>
<td>(sd=1.70)</td>
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<tr>
<td>F</td>
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<td>2.56</td>
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<tr>
<td></td>
<td>(sd=1.58)</td>
<td>(sd=1.73)</td>
<td>(sd=1.68)</td>
</tr>
<tr>
<td>G</td>
<td>4.45</td>
<td>4.91</td>
<td>5.06</td>
</tr>
<tr>
<td></td>
<td>(sd=1.76)</td>
<td>(sd=1.81)</td>
<td>(sd=2.16)</td>
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<tr>
<td>H</td>
<td>4.09</td>
<td>3.83</td>
<td>2.96</td>
</tr>
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<td></td>
<td>(sd=1.72)</td>
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