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Effects of Moods on Thoughts About Helping, Attraction and Information Acquisition

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Past research has demonstrated that positive moods increase helping, attraction toward others, and peoples' willingness to pick up a free brochure. Negative moods have been shown to have mixed effects on helping and to decrease attraction. It has been suggested by Isen (1975), that such effects are mediated by the impact of feelings on the accessibility of mood congruent thoughts. In an effort to find support for this suggestion, the present study tested the hypothesis that mood states would influence the production of mood congruent thoughts in response to situations in which helping, attraction toward another, or acquisition of information might take place. Subjects experienced a positive, negative, or no mood induction. Then they imagined themselves in situations in which helping was possible, in which they were meeting a blind date, and in which free brochures were being distributed. They gave free associations to each situation. Subjects who were induced to feel good had significantly more positive first affective associations to situations in which it was possible to help and to meeting a blind date than did subjects in the control or negative mood conditions. Subjects who were induced to feel bad had more negative first affective associations to all three situations than did other subjects, but these differences were not significant.

Recently, the idea that moods may result in similarly-toned material from memory becoming more accessible (Isen, 1975) has received considerable attention and support (e.g., Barlett and Santrock, 1979; Clark and Isen, 1982; Clark et al., forthcoming; Isen, et al., 1978; Isen and Simmonds, 1978; Natale and Hantas, 1982; Teasdale and Fogarty, 1979). Furthermore, this idea has been used (Clark and Isen, 1982; Isen, 1975; Isen, et al., 1976; Isen et al., 1978; Isen and Simmonds, 1978) as one explanation for why moods affect liking for others (e.g., Griffitt, 1970), helping (e.g., Isen and Levin, 1972) and approaching others for information (Batson, et al., 1979). For example, as applied to the often reported finding that positive moods increase helping, this explanation suggests that when a person who is feeling good comes across another in need of help, the positive consequences of helping, or the possibility of helping itself, are more accessible than usual. Consequently, they should come to mind more often than usual and the person may be more likely to help.

While existing studies *do* support the idea that mood cues similarly-toned material from memory, this effect has been demonstrated for affectively-toned *words*, (e.g., Isen et al., 1978, study 1), words embedded in a happy or sad story (Bartlett and Santrock, 1979) or experiences not necessarily related to the behaviors and judgments which social psychologists have found to be affected by moods (e.g., Teasdale and Fogarty, 1979). Furthermore, with a few exceptions (e.g., Murray, 1933; some studies briefly reported in Bower, 1981); most past studies have not shown that moods influence the *production* of similarly-toned associations to new situations. The purpose of the present study was, therefore, to demonstrate that moods may influence the *production* of thoughts associated with the types of situations in which social psychologists have previously established that moods affect behavior.

We examined the effects of moods on thoughts about situations in which helping, attraction or information acquisition were possible. We predicted that: (1) being in a positive mood would cause subjects' associations to these situations to be more positive than they would be if subjects were in no particular mood, and more tentatively, (2) that a negative mood might cause associations to these situations to be more negative than they would be if subjects were in no particular mood.

The second prediction was more tentative for two reasons. First, the amount of, and the interconnections between positive material in memory may be greater than the amount of, and interconnections between negative material in memory (Isen et al., 1978; Clark and

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Isen, 1982; Matlin and Stang, 1979). Thus, a positive mood may be more likely to cue positive material from memory than a negative mood is to cue negative material from memory. Further, in the case of negative moods, subjects may try *not* to dwell on negative feelings (Isen and Simmonds, 1978; Isen et al., 1978). In other words, they may use a conscious, "controlled" strategy (Clark and Isen, 1982) to override "automatic" processes which make similarly-toned material more accessible to a person experiencing a mood.

METHOD

Subjects. Subjects were 45 male and female students who were either paid three dollars or earned partial credit for a course requirement by participating. Each was randomly assigned to (1) a positive mood condition, (2) a negative mood condition, or (3) a neutral condition.

Procedure. Upon arrival each subject was reminded that there would be two brief, unrelated studies, as had been noted on the sign-up sheet. They were told that the person running the "first study" was not in her room but should be back shortly. The experimenter commented that while waiting, she might as well describe her own study on free associations.

The experimenter explained that subjects would be asked to imagine being in several situations and three examples were given. In the first example subjects were told to imagine themselves having just graduated from a university. The second example involved imagining themselves as a new student at a university, and the third involved imagining unexpected guests stopping by the subject's home. After each of the first two examples, the experimenter mentioned some thoughts and feelings a person might have. Half of the thoughts each subject heard were positive and half were negative. For instance, in connection with the first situation, the experimenter mentioned that a person might feel, ". . . proud of what you've accomplished," or ". . . nervous about the future." For the third example, the subject thought of his or her *own* reactions to "unexpected guests stopping by." After this, each subject was sent to do the "first" study.

A second experimenter conducted the "first" study. She said she was comparing the spatial and analytical abilities of current students to those of past students, and she administered three tests of these abilities.[1] In both mood conditions, she scored the subject's performance. Subjects in the positive group received scores in the ninety-fifth percentile, far above the average of previous students. They were also told they had done better than most of the other *current* subjects. Subjects in the negative mood group were told they had scored in the thirty-fifth percentile; far below the average of previous students. They were told that most other *current* students had done better.[2] Control subjects' tests were not scored and they received no feedback. Finally the experimenter said her study was over and directed the subject back to the first experimenter's room.

The first experimenter began her study immediately, telling the subject to close his/her eyes, to relax, and to respond to each situation to be described with whatever thoughts came to mind first. The experimenter then read the following descriptions, one at a time:[3]

> Imagine that you're walking along in a shopping mall. You're not carrying any packages but are just walking along by yourself. You stop to make a phone call and then continue walking down the mall. You notice that someone is slightly ahead of you and to one side. That person accidentally drops a manilla folder full of papers and they fall in your path.
>
> Imagine that a friend of yours has arranged a blind date for you. Now picture meeting this person at your friend's place. Imagine yourself and this date.
>
> Imagine you are in the student union building here. You've just used the telephone booth and are leaving. As you are leaving you notice a table. Attached to that table are two large cardboard signs. The first one reads, "Did you know?" in capital letters, and the second sign reads, "Pennsylvania awareness—Free Information." You also notice a stack of information sheets lying on the table.

[1] These tests are available from the first author.

[2] Subjects in the negative condition were not told they had scored in the 5th percentile since it was felt that such extremely low feedback would cause suspicion among college students.

[3] The situations were always presented in the same order. We recognized that the effect of the mood inductions might wear off over time and consequently have less impact on associations to situations presented early in the sequence. If this were to occur, then the lack of a mood effect on the second or third situation might be due to mood being unrelated to thoughts in these situations or to mood having dissipated. However, we chose to accept this possibility rather than risking weakened effects of the manipulations in *all* situations. Also, it should be noted that the first and third descriptions were accounts of situations which actually had occurred in studies by Isen and Levin, 1972; and Batson et al., 1979.

Table 1. Affective Content of First Associations as a Function of Mood and Situation

Situation	Mood			
	Success	No Feeback	Failure	Combined
Papers dropped	+1.17[a]	+.17[b]	−.03	+.43
Blind date	+.03[a]	−.50[b]	−.57	−.34
Free information	+.07	+.13	−.23	−.01
Combined	+.42[a]	−.07[b]	−.28	

Note: Means *within* a row with different superscripts differ significantly from one another.

After each situation, the experimenter asked for the subject's thoughts and feelings. Subjects' responses were recorded on tape. After the third situation the experimenter asked, "How would you describe your mood right now?" Finally, the experimenter said the study was over, and as she turned off the tape and collected her papers she casually said there was more to the study than she had explained so far. She asked if the subject had any idea of what it might be. No subject was suspicious, Afterwards, each subject was debriefed, paid or given credit and thanked.

Separate Mood Check Procedure. Induced moods may have dissipated prior to the mood check due to passage of time and/or the intervening tasks. Further, the surprise of the mood check may have altered subjects' ongoing moods. To obtain a superior check, additional subjects were given the "spatial and analytical skills" tests. Eight received negative feedback, nine, no feedback, and ten, positive feeback. Assignment to conditions was random. Immediately following the feedback, the subject was asked to participate in one more unrelated pre-test. A second experimenter, unaware of the feedback conditions, conducted the session. When the subject entered her office, she unobtrusively rated the subject's mood on a scale from −3 (very negative) to +3 (very positive) based on facial expression, posture, etc. Next, she said she would soon be conducting some studies on how various factors affected peoples' judgments of the predominant color in photographs as well as how those photographs made them feel, but that first, she had to pretest the pictures. Thus, she wanted the subject's ratings of the predominant color in the pictures as well as of how they made the subject feel. Of course, the experimenter said, she had to control for pre-test subjects' momentary moods and color preferences. So, at her request, each subject noted his or her mood on a scale from −3 (very negative) to +3 (very positive) and reported his or her favorite and least favorite colors. Finally, subjects responded to six pictures, were probed for suspicion and were debriefed. One subject, in the positive mood condition, was suspicious. His data were not included in any of the analyses.

RESULTS

Associations to Situations. The tapes were transcribed and subjects' protocols (prior to any prompt) were broken down into individual thoughts by one judge. The thoughts were independently rated by two additional judges who were unaware of the mood conditions. The ratings, ranging from −3 to +3, reflected the judges' subjective perceptions of the affective tone of each statement. Data from the first thirty-one subjects were rated by one pair of judges (correlation between ratings = .81). Data from the last fourteen subjects were rated by a second pair of judges (correlation between ratings = .80).[4] Judge's ratings of each association were averaged to obtain a single rating for each thought. Means of these ratings for the first association reflecting some affect to each situation are presented in Table 1. (Subjects who never had an affective association received a score of 0.) Affective ratings collapsed across situations are also presented. Looking at these collapsed scores first, it should be noted that these means fell in the predicted pattern. Associations in the positive condition were more positive than associations in the control condition which, in turn, were more positive than associations in the negative condition. Further, with only one exception, the means for this measure, in each of the three situations, fell in the predicted direction.[5]

A 3×3 (affect × situation) ANOVA on this data revealed the predicted main effect of affect ($F(2,42) = 4.20, p < .05$), as well as a main effect of situation ($F(2,84) = 6.85, p < .05$). The interaction was not significant. Planned comparisons of these means (using the interaction error term) collapsed across situations in-

[4] New judges were used for these subjects because the previous pair of judges graduated before all responses were transcribed. Also, it should be noted that the tape ran out before one positive subject's protocol was concluded. He was assigned the mean score for his condition for the third situation and mood check.

[5] The exception is that the mean first affective association in the Free information-No feedback condition was (nonsignificantly) higher than the mean in the Free information-Success condition.

dicated that first associations in the positive condition were significantly more positive than those in the control condition ($t(84) = 3.50, p < .05$), and that while first associations in the negative condition tended to be more negative than those in the control condition, this difference was not significant.

Planned comparisons were also performed comparing the positive with the control condition and the negative with the control condition for each situation. These comparisons indicated significant differences between associations in the positive and control conditions to both the "helping" ($t(84) = 7.14, p < .05$) and "blind date" situations ($t(84) = 3.81, p < .05$). No other effects were significant.[6]

Although subjects were instructed to give thoughts and feelings to the situations, many responded by mentioning specific actions they might take. Therefore, subjects' first affective associations were coded (by two judges who were unaware of conditions), for whether or not actions were mentioned. Their coding of these associations was in 100% agreement. Actions were mentioned frequently in connection with situations 1, (61%) and 3, (41%) and infrequently in connection with situation 2, (15%). Manipulation of moods did not have much impact on whether or not actions were mentioned, except in the case of subjects' first affective associations to the helping situation. In that situation, actions were mentioned more frequently by positive (85%) than by neutral (50%) or negative (45%) subjects, and as one might expect, given prior findings that positive moods increase helping, the action mentioned most was helping (77%, 50% and 45% of the time in the positive, neutral and negative conditions respectively).

Mood Checks. In the main study, subjects described their own moods verbally. These descriptions were rated by two judges who were unaware of mood conditions on scales from −3 (very negative) to +3 (very positive). Ratings were averaged and an ANOVA on the averaged mood ratings revealed no significant effect of mood on this measure. A low correlation between the two judges' ratings, +.38, suggests that low reliability of these ratings contributed to the lack of significant effects.

In the separate mood check study, the subjects rated their own moods on scales from −3 to +3 and an experimenter rated each subject's mood on a scale from −3 to +3. Self rating means were −.1, +.9, and +1.6 for the negative, neutral, and positive conditions respectively. An ANOVA on the self-ratings revealed a significant effect of mood condition ($F(2,23) = 6.31, p < .05$). Planned comparisons revealed that ratings from the negative condition were significantly lower than those from the neutral condition ($t(23) = 4.48, p < .05$) and that ratings from the positive mood condition were marginally significantly higher than those from the neutral condition ($t(23) = 4.48, p < .06$). The judge's mean ratings were −.4, −.4, and +.2 for the negative, neutral, and positive conditions respectively and an ANOVA on these scores revealed no significant effects.

DISCUSSION

Our separate mood check provided evidence for the effectiveness of our mood manipulations, and the results of the main study supported our hypotheses that positive moods increase peoples' positive associations to situations in which help is needed and to people whom they imagine they are just meeting. We acknowledge that when people are in actual social situations, less is left to the imagination than was the case in the present study. This study however, provides clearer support than has been available to date for the idea that people in positive moods may help and like others more *because* positively-toned thoughts about potential helping situations or other people are more likely to come to mind. These thoughts may affect decisions about whether to help or to judge another favorably, or they may directly make helping or favorable evaluations of the other more likely to come to mind. Our data on the frequency with which helping itself was mentioned by the positive subjects lends some tentative support to the latter idea. Of course, we still have no evidence that the cognitive changes observed in this study precede and cause, rather than simply accompany behavioral changes. A third mechanism could cause both the kinds of cognitive changes observed in this study and the behavioral changes observed by others.

The results do not provide support for the idea that Batson et al., (1979) found, that people in positive moods were more likely to pick up free brochures because positive thoughts about doing so were more likely to come to mind. Even so, we are hesitant to rule out such an interpretation for their results since the information-seeking situation was the last one presented and moods may have dissipated by then. Isen, et al., (1976) have shown that the effects of a positive mood induction may dissipate quickly and be gone in twenty minutes. Furthermore, this process may be accelerated by subjects thinking about new situations or by the surprise of being asked to report on their

[6] Means for the subjects' average affective ratings across all situations, as well as within each situation generally fell in the same pattern, but the differences between conditions were smaller. It may also be of interest to some readers to note that the affective tone of males' first and overall reactions to the situations did not differ from those of females.

mood. In addition, the idea that mood had dissipated before the third situation was presented fits with the finding that the mood manipulations failed to influence the mood check at the end of the study.

While subjects' associations in the negative mood condition tended to be more negative than associations in the neutral condition for all situations, they were not *significantly* lower. This may be considered surprising given that subjects' self-ratings following the negative manipulations did indicate that the feedback made them feel bad. However, after the failure feedback, our subjects may have immediately used a "controlled strategy" (Clark and Isen, 1982) to alleviate that state, perhaps by thinking of something else by reasoning that the task was not all that important, or by trying to think of the positive aspects of the situations presented to them. This explanation fits with the results of several other studies in which effects of positive but not of negative mood manipulations have been found (e.g., Bugenthal and Moore, 1979, for children in the third and fifth grade; Isen, 1970; Masters and Furman, 1976). It also suggests a plausible explanation for why the judge in the separate mood check study did not judge the negative mood subjects to be in worse moods than the neutral subjects. Still another way our subjects may have controlled their negative moods may have been to "put on a happy face" (Laird, 1974) and/or to have assumed a "positive" posture (Riskind and Gotay, forthcoming), thus making it difficult for the judge to detect the person's mood state.

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