Journal of Personality and Social Psychology
1985, Vol. 48, No. 3, 799-807

The Nature of Negative Thoughts in Depression

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We investigated the nature and content of the negative thoughts that accompany depression by examining thoughts about oneself and others during three cognitive tasks: imaging, recall, and inference. Mildly depressed and nondepressed subjects were asked to image, recall, and make inferences about a variety of events while thinking about themselves or another person. The events were sad or happy and either social or nonsocial in nature. The results suggest that the negativity in thought that accompanies depression is restricted to thoughts about oneself and does not extend to thoughts about others. The relation between negative thoughts and the depressive's view of self is discussed. It is proposed that depressives have a negative self-schema that makes the affective nature of their behavior particularly salient.

Negative perceptions and feelings about the self dominate the thoughts of the depressed. Recent theories (Abramson, Seligman, & Teasdale, 1978; Beck, 1967; Seligman, 1975) have focused on the relationship of these negative cognitions to depression and, more generally, on the interaction between mood and cognition (Bower, 1981; Isen, Shalker, Clark, & Karp, 1978). In these theories, cognitions assume a major role in maintaining a depressed mood. The depressed, in contrast to the nondepressed, perceive themselves negatively (e.g., Beck, 1967; Lewinsohn, Mischel, Chaplin, & Barton, 1980); accept more personal responsibility for failure (e.g., Kuiper, 1978; Seligman, Abramson, Semmel, & von Baeyer, 1979); and remember less positive and more negative information about themselves (e.g., Derry & Kuiper, 1981; Nelson & Craighead, 1977; Teasdale, Taylor, & Fogarty, 1980).

Beck's (1967) cognitive theory of depression provides a framework for these findings. Beck has proposed that maladaptive cognitive schemas are responsible for the self-derogating thought patterns of the depressed. Cognitive schemas guide the selection and interpretation of information from the environment. The cognitive schemas of the depressed are believed to consist of negative thoughts about the self, the world, and the future. Kuiper and his colleagues (Kuiper, Derry, & MacDonald, 1982; Kuiper, Olinger, & MacDonald, in press) have suggested that the negative schemas of the depressed are primarily negative self-schemas that consist of generalizations about one's own lack of worth, ability, or competence and the sad or unhappy feelings that accompany these thoughts. The views of both Beck and Kuiper suggest that the depressives' negative cognitive set determines which information is perceived, how it is interpreted, and how easily it will be recalled. There are, however, a wide variety of questions still to be answered about the specific nature and content of depressed thought.

The purpose of the present study is to inquire into the precise nature of the cognitive schemas of the depressed by analyzing the content and organization of the negative thoughts accompanying depression. The literature on depression suggests that the social experiences of the depressed are often quite negative in nature and hence accompanied by feelings of anxiety and withdrawal (cf. Coyne, 1976). We assume here that the negative schemas of the depressed are generated in large part as a consequence of observing and evaluating their behavior in these social events and situations. Moreover, we assume that these negative schemas have a pervasive impact on all aspects of thinking. To evaluate these assumptions, several straightforward empirical questions can be asked about the

This research was supported by National Science Foundation Grant BNS-8005749 to Hazel Markus.

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nature and content of depressed thought. First, is the negativity in depressives' thoughts confined to the self, or does it generalize to others as well? Second, are depressives' thoughts about social events and situations more negative, and perhaps less differentiated, than those characterizing the nondepressed? And, finally, what types of cognitive tasks or activities are most likely to reveal negativity in the thoughts of the depressed?

The three questions posed here are central to the relationship between thinking and depression and arise from several different sources. The first question concerning the relationship between thoughts about the self and others comes from Beck's (1967) suggestion that the depressed contrast themselves unfavorably with others. One implication of this view is that depressives' thoughts and inferences about themselves should be quite different from their thoughts and inferences about others. Some empirical work suggests, in fact, that although the depressed do not differ from the nondepressed in their thoughts about other people, the two groups do differ in their thoughts about themselves (Garber & Hollon, 1980; Kuiper et al., 1982; Lobitz & Post, 1979; Sweeney, Shaeffer, & Golin, 1982). This work, however, has focused primarily on depressives' expectations and attributions (with the exception of the Kuiper et al. study, which examined recall). The present study explores depressives' thoughts about themselves and others in a broad range of tasks to determine the generality of this finding.

The second question posed here arises from the finding that interpersonal or social skills are impaired during depression. The depressed are more likely to experience rejection in social situations (Hammen & Peters, 1978; Howes, & Hokanson, 1979), respond inappropriately to others (Hokanson, Sacco, Blumberg, & Landrum, 1980), and receive less pleasure and more discomfort from social interactions (Youngren & Lewinsohn, 1980). These findings suggest that the depressed may have somewhat fewer social interactions and that those in which they do engage will be relatively more negative. The nature of their social experiences is likely to be reflected in their thoughts about social situations in general.

Finally, the third question asked in this study attempts to determine the extent to which depression influences a range of cognitive activity. That is, will a bias toward negativity be evident throughout the cognitive continuum, or is it confined to certain types of cognitive activity? We thus examined depressed thought across a range of cognitive tasks that involved imaging, prediction, inference, and recall.

To investigate these three questions about the nature of the negative thoughts accompanying depression, mildly depressed and nondepressed students were presented with a variety of social situations and events and asked to form images, to recall, and to make inferences about the events. These events were sad or happy and either social or nonsocial in nature. While performing these cognitive tasks, some subjects were asked to focus on themselves, and other subjects were asked to focus on another person. Subjects were instructed to imagine either themselves or another person in each event and to rate how vividly they were able to imagine the event and the likelihood that the event would happen. To explore the impact of negativity during retrieval, subjects were tested for their recall of the events. The influence of negative thoughts on inferences was examined by having subjects estimate the likelihood of several possible interpretations of the events, ranging from positive to negative, either for themselves or for their friend.

Method

Subjects

Seventy-five female undergraduates participated in the study for course credit. Subjects were identified as depressed or nondepressed based on their Beck Depression Inventory scores (BDI; Beck, 1967). Subjects scoring 9 or greater on the BDI were classified as depressed, and subjects scoring 3 or less were classified as nondepressed. The final sample included 10 depressed in the self-referent condition, 9 depressed in the other-referent condition, 14 nondepressed in the self-referent condition, and 12 nondepressed in the other-referent condition.[1]

[1] The mean BDI scores for the self-referent and other-referent conditions, respectively, were 12.40 (SD = 2.5) and 12.89 (SD = 3.79) for the depressed and 2.14 (SD = 1.03) and 1.08 (SD = 1.16) for the nondepressed.

Stimuli

The stimuli consisted of 60 slides of sentences that described different events. The sentences included a wide range of events to ensure that all subjects would categorize some of the events as sad and some as happy. The subject's perception of the event as happy or sad was critical for our purposes. Therefore, the subject's rating of the event as happy or sad was used to determine the affective tone of the event. Some events that were likely to be perceived as neutral were included so that subjects were not thinking only about highly emotional events. The events also varied in whether they were social or nonsocial in nature. The event was classified as social if the target person interacted with or was directly affected by another person and nonsocial if another person was not directly implicated. Examples of the social and nonsocial sentences and the emotional state that we intended to describe are: (a) "Your professor praises your paper" (positive–social), (b) "You overhear someone saying you're selfish" (negative–social), (c) "A salesperson shows you a sale item" (neutral–social), (d) "You get a substantial raise in salary" (positive–nonsocial), (e) "A bee stings you" (negative–nonsocial), and (f) "You return a history book to the library" (neutral–nonsocial). The sentences were presented on slides in a randomized order. For the other-referent condition, these sentences and all other instructions and questions were reworded appropriately (e.g., "Her professor praises her paper").

Procedure

After completing the BDI, subjects viewed 60 sentences that described different events. Before viewing the slides, subjects were given either the self-referent or other-referent instructions. In the self-referent condition, subjects were asked to focus on themselves and imagine and make predictions about themselves in a variety of events. Later subjects recalled these events and made inferences about themselves from the events. In the other-referent condition, subjects were asked to describe a relatively new, same-sex friend and imagine and make predictions about their friend in a variety of events. Later subjects recalled these events and made inferences about their friend from the events.

Subjects were instructed to select a friend whom they had known for less than 4 months and who was not a best friend. Previous research suggests that the familiarity of a target influences the processing of information about oneself and others (Keenan & Bailett, 1980; Kuiper & Rogers, 1979). As the target becomes more familiar, the differences in processing information about oneself and others decrease. Therefore, we asked each subject to select an acquaintance, rather than a best friend, to ensure that the subject clearly distinguished between herself and her friend. After writing a brief description of their friend, subjects participated in the same tasks as in the self-referent condition, using their friend as the referent.

Imaging. For each event, subjects were instructed to try to "form a mental picture of yourself (your friend) in the event and visualize it as clearly as possible." The subjects viewed each sentence for 18 s while trying to picture the event. Following each sentence, they made three ratings about each event on a 9-point scale ranging from 0 to 8. Subjects rated the clarity of their mental picture (0 = *fuzzy*, 8 = *vivid*); made a judgment about the likelihood that the event would happen (0 = *unlikely*, 8 = *likely*); and indicated how they or their friend would feel if the event occurred (0 = *sad*, 8 = *happy*). The latter question was included to determine which sentences the subject perceived as sad or happy and was used subsequently to categorize the events as sad or happy for each subject. Subjects answered the questions in an 18-s interval between slides.

Free recall task. After a brief intervening task (completing a mood adjective checklist), subjects were given 5 min to recall as many of the events as possible. Subjects were instructed to try to reproduce the meaning of the original sentence.

Inference task. In a final questionnaire, subjects estimated the likelihood of several possible interpretations of each event either for themselves or for their friend. This questionnaire consisted of 30 of the original 60 events, including equal numbers of positive, negative, and neutral events and social and nonsocial events. For each event, four interpretations were listed. The interpretations ranged from positive to negative conclusions about the event and were either social or nonsocial in nature. For example, for the sentence "Your professor praises your paper," a positive interpretation was "Your paper is of superior quality, and your professor is truly impressed"; a negative interpretation was "Your papers generally are so poor that your professor is surprised that you've written an acceptable paper." Several filler interpretations that were not clearly positive or negative also were included to mask the purpose of the questionnaire (e.g., "Your professor praises every paper she or he reads").

The following instructions were provided to the subjects:

> Several of the events that you previously viewed on slides are listed below. Following each event, several possible causes or consequences of the event are given. Please rate how likely each option would be if the event happened to you (your friend). Use the numbers from 0 to 8 to rate each option, with 0 indicating that the option is not at all likely for you (your friend) and 8 indicating that the option is very likely for you (your friend). Evaluate each option independently; that is, do not consider your response to a previous option when rating the other options.

Results

Imaging

Subjects' responses to the mental picture and likelihood questions were stratified by subjects' ratings of whether the event would make them feel sad (ratings of 0, 1, or 2) or happy (ratings of 6, 7, or 8), and mean ratings for each event type were computed. An unweighted means analysis of variance for unequal n for the mental picture ratings was performed for depression, self–other condi-

tion, the event's affective tone, and whether the event was social or nonsocial.[2]

The analysis indicated the expected interaction among depression, self–other condition, and the event's affective tone, $F(1, 41) = 5.12$, $p < .03$. Also, the interactions between depression and self–other condition, $F(1, 41) = 3.76$, $p < .06$, and depression and the event's affective tone, $F(1, 41) = 2.78$, $p < .10$, approached significance. None of the main effects or interactions including the social content variable reached significance.[3]

On the basis of previous research, we expected the depressed, relative to the nondepressed, to evidence negativity in their thoughts about themselves but not in their thoughts about other people. Therefore, a series of planned comparisons was conducted to analyze the significant interaction for depression, self–other condition, and the event's affective tone. As shown in Figure 1, the depressed and nondepressed did differ in their reported mental pictures of events, but only in the condition in which subjects pictured sad events for themselves. Within the self-referent condition, the simple main effect of depression on ratings for sad events was significant, $t(41) = -2.75$, $p < .01$. In the self-referent condition, depressed subjects reported more vivid mental pictures than nondepressed subjects for the events that they considered sad. The mean ratings for sad events for depressed and nondepressed subjects in the other-referent condition did not differ and, in fact, displayed the opposite pattern. Depressed and nondepressed subjects also did not differ from each other in their ratings for happy events.[4]

The ratings of depressed subjects in the self-referent condition also were compared to the ratings of depressed subjects in the other-referent condition. Among depressed subjects, those who thought about themselves reported somewhat more vivid mental pictures than those who thought about another person for sad events, $t(41) = 2.16$, $p < .05$. We did not make any predictions about differences between nondepressed subjects in the self-referent versus other-referent conditions. It is interesting, however, that nondepressed subjects who thought about themselves reported somewhat less vivid mental pictures than those who thought about another person for sad events, although this difference was not significant by Newman-Keuls tests (Winer, 1971, pp. 215–218).

As shown in Figure 2, this pattern of results was repeated when subjects estimated the likelihood that sad or happy events would happen. As expected, the analysis revealed an interaction among depression, self-other condition, and the event's affective tone, $F(1, 41) = 5.18$, $p < .03$. Reliable interactions also were found between depression and self–

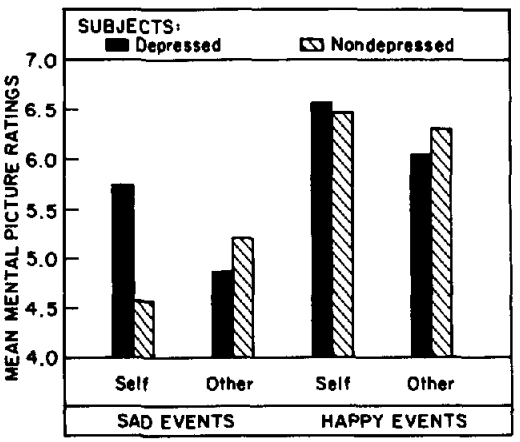

Figure 1. Mean mental picture ratings for Sad and Happy Events × Depression and Self–Other Condition.

[2] The total number of events rated as sad or happy did not differ by depression. The results of this study therefore should not be affected by the fact that more events were rated as happy than sad, $F(1, 41) = 117.28$, $p < .00001$. The mean total numbers of events rated as happy and sad, respectively, were 24.02 and 16.18.

[3] There was a marginally significant four-way interaction among depression, self–other condition, the event's affective tone, and the social nature of the event, $F(1, 41) = 2.92$, $p < .10$, that was uninterpretable.

[4] The simple main effect of a between-subjects factor (depression) was tested at single levels of a within-subject factor (event's affective tone) and a between-subjects factor (self–other condition). Therefore, the denominator of the t statistic for the contrasts is formed by pooling the between-subjects and within-subject mean square errors (Winer, 1971, pp. 544–552). The mean square error for the between subject comparison is given by $MS_e = 2\{[MS_{between} + (q - 1)MS_{within}]/nrq\}$, where n is the number of subjects within each condition, q is the number of levels of the affective tone variable, and r is the number of levels of the social variable. The error term for within-subject comparisons is given by $MS_e = 2MS_{within}/nr$. Because the cells contained unequal ns, the harmonic mean was used to compute the simple main effects (Winer, 1971, p. 216). All tests were two tailed.

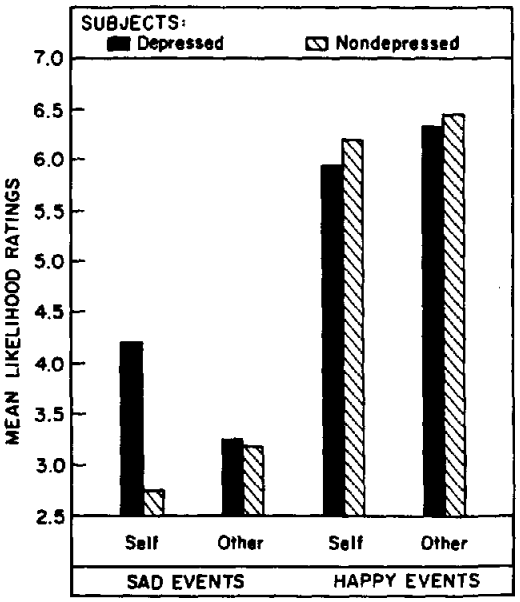

Figure 2. Mean likelihood ratings for Sad and Happy Events × Depression and Self–Other Condition.

other condition, $F(1, 41) = 5.91$, $p < .02$, and depression and the event's affective tone, $F(1, 41) = 6.36$, $p < .02$. There also was a marginally significant interaction between depression and the social nature of the event, $F(1, 41) = 3.29$, $p < .08$.

Differences between the depressed and nondepressed were evident only for estimates about sad events in the self-referent condition. Planned comparisons within the self-referent condition revealed that depressed subjects, relative to nondepressed subjects, reported that sad events were more likely, $t(41) = -4.11$, $p < .001$. Depressed and nondepressed subjects did not differ from each other when they were thinking about another person or when they were rating happy events.

Among depressed subjects, likelihood estimates for sad events were higher for depressed subjects in the self-referent condition than for depressed subjects in the other-referent condition, $t(41) = 2.97$, $p < .01$. For nondepressed subjects, however, the pattern was reversed: Estimates for sad events were somewhat lower in the self-referent condition than in the other-referent condition, although this latter difference was not significant.

With respect to the social nature of the events, depressed subjects estimated that nonsocial events were somewhat (but nonsignificantly) more likely to happen than did nondepressed subjects (Ms = 4.61 and 4.23, respectively), and the two groups did not differ in their estimates for social events (Ms = 4.44 and 4.45, respectively).

Inferences About Events

Figure 3 presents the means for the likelihood estimates for positive and negative interpretations of events. An analysis of variance with depression, self–other condition, affective tone of the interpretation (positive or negative), and whether the interpretation was social or nonsocial indicated a significant interaction between depression and affective tone, $F(1, 41) = 7.61$, $p < .009$, and the interaction between the three variables approached significance, $F(1, 41) = 2.63$, $p < .11$. No other effects that included the depression variable reached significance.

Although the interaction for depression, self–other condition, and the event's affective tone did not reach significance, several planned comparisons were performed to examine the predicted differences among experimental groups. Comparisons within the

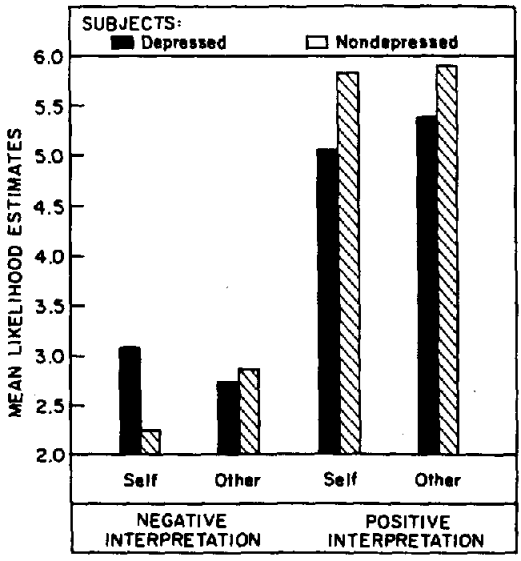

Figure 3. Mean likelihood estimates for Negative and Positive Interpretations of Events × Depression and Self–Other Condition.

self-referent condition revealed that depressed subjects, relative to the nondepressed, gave higher likelihood estimates for negative interpretations, $t(41) = 2.44$, $p < .02$, and lower likelihood estimates for positive interpretations, $t(41) = -2.44$, $p < .02$. Thus, depressed subjects who thought about themselves estimated that negative interpretations of events were more likely, just as they reported during imaging that negative events were more likely to happen and were easier to picture. In the inference task, however, the estimates of depressed subjects in the self-referent condition did not differ from the estimates of depressed subjects in the other-referent condition.

Free Recall

A sentence was scored as correctly recalled if the meaning of the recalled sentence or sentence fragment captured the meaning of the original sentence. In a first analysis, recall was computed as the percentage of sad events recalled of the total number of events each subject rated as sad and the percentage of happy events recalled of the total number of events each subject rated as happy. In this analysis, the depression variable did not significantly influence recall by itself or in interaction with any of the other variables. Analyzing the events with this type of idiographic approach, however, severely limits the number of events that can be included in the recall analysis. That is, the initial set of events is reduced to those events rated as sad or happy and then further reduced to the sad or happy events that are recalled. Thus, a second analysis also was performed that included all of the events that were recalled. In this analysis, it was necessary to use our classifications of the event's affective tone. In general, subjects' classifications of the events agreed with our classifications.

In the second analysis, recall was computed as the percentage recalled of the total number of events for each type of content. An analysis of variance including depression; self–other condition; the event's affective tone (positive, negative, or neutral); and social content indicated a reliable interaction between depression and social content, $F(1, 41) = 5.41$, $p < .03$. No other effects including the depression variable were significant.

Newman-Keuls tests (Winer, 1971, p. 528) revealed that nondepressed subjects recalled more social than nonsocial content (Ms = 0.37 and 0.27, respectively; $p < .05$) in contrast to the depressed, who recalled an approximately equal amount of social and nonsocial content (Ms = 0.31 and 0.30, respectively). Inspection of the means indicated that depressed subjects recalled less social content for positive events about themselves than the nondepressed (Ms = 0.52 and 0.64, respectively), but the overall interaction was not significant. And, the depressed and nondepressed did not differ in their recall for other kinds of events about themselves or in their recall for any events about another person.

Ignoring the depression variable, our findings are consistent with past research on self-reference (e.g., Keenan & Bailett, 1979; Rogers, Kuiper, & Kirker, 1977). As in these studies, the analysis revealed a main effect in which self-reference facilitated recall more than other-reference, $F(1, 41) = 5.38$, $p < .03$ (Ms = 0.34 and 0.29, respectively). In addition, recall for positive, negative, and neutral content decreased in that order, $F(2, 82) = 41.31$, $p < .00001$ (Ms = 0.41, 0.33, and 0.20, respectively).

Discussion

These results suggest that the negativity in thought that accompanies depression is restricted to thoughts about oneself and does not extend to thoughts about others. This pattern of results was clearly evidenced in subjects' reports of their mental pictures, in their likelihood predictions, and in their interpretations of events. For these tasks, the depressed, relative to the nondepressed, evidenced greater negativity in their thoughts about themselves. The depressed subject, for example, was better able than the nondepressed subject to picture someone saying that she was selfish. Moreover, the depressed subject believed that someone was likely to say that she was selfish and that this statement would be made because she was indeed selfish.

Depressed subjects in the self-referent condition also evidenced a nonsignificant tendency to recall fewer positive social events than nondepressed subjects in the self-referent condition. The depressed subject tended to

be less likely than the nondepressed subject to recall, for example, that someone said that she was attractive. Although this finding is consistent with the idea that the social experiences of the depressed are negative, the effect was not significant.

The social nature of the event did not differentially influence the responses of depressed and nondepressed subjects during imaging or predicting or for inferences. Social and nonsocial content were imaged equally well by the depressed and nondepressed. At retrieval, however, depression inhibited the recall of social events in general.

Our findings indicating that the negative thoughts associated with depression are confined to the self together with similar findings from previous studies (Garber & Hollon, 1980; Kuiper et al., 1982; Lobitz & Post, 1979; Sweeney et al., 1982) suggest that the depressed hold a negative schema about themselves. These findings allow us to refine Beck's (1967) theory by specifying more precisely the kind of negative cognitive schemas that accompany depression. The depressed appear to be characterized by a negative self-schema. This view is similar to that of Kuiper and his colleagues (Derry & Kuiper, 1981; Kuiper et al., 1982).

Self-schemas are theories about the self, derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences (Markus, 1977). Self-schemas are thought to develop as a result of attempts to organize, summarize, or explain one's social behavior. They are a reflection of the invariances that individuals have discovered in their own behavior, and they are used as a basis for future judgments, inferences, or predictions about the self. In previous research, self-schemas have been investigated with respect to particular behavioral domains such as independence, introversion, or masculinity (cf. Markus & Smith, 1981). In these studies, individuals were assumed to have attended to some regularity in their perceptions of their own behavioral outcomes and thereby to have developed schemas of themselves as independent, introverted, or masculine. The present findings suggest that depressives also have self-schemas, but of a somewhat different nature.

Depressives also must endeavor to categorize and explain their own social behavior, but for them it may be the affective nature of their behavior that is especially salient. As a result, they are sensitive to the negative or potential negative consequences of their behavior. Nondepressives also must evaluate their behavior for its affective consequences, but in addition they appear to organize their behavior according to particular content domains that are of concern to them. The result is a variety of self-schemas with which to process self-relevant behavior.

For the depressive, it may be that various types of behavior, perhaps quite different in content, are categorized together on the basis of the similar negative feelings about the self that the behaviors produce. Consequently, a negative affective category dominates the organization, interpretation, and prediction of one's behavior. An excessive reliance on negative affect in processing self-relevant information may be associated with the rigidity in thinking that Kovacs and Beck (1978) have found to characterize the thought processes of the depressed. Moreover, this focus on negative affect may lead to information processing in which the individual selectively attends to negativity in behavior and to the potential negative consequences of behavior. Negative information thus becomes particularly significant for the depressed.

These ideas about a negative self-schema are speculative and require further empirical elaboration, yet one finding from the present study offers some support for them. The nondepressed recalled more social than nonsocial events, whereas the depressed recalled an equal number of social and nonsocial events. This finding suggests that the nondepressed may use the social content of an event as a basis for categorizing and organizing their own behavior. Because social content usually is richer and more complex, it has the potential to activate relatively more categories during processing than nonsocial content. The nondepressed may encode the social information in more elaborate ways, which, in turn, produce a memory advantage for it. In contrast, because the depressed may focus on the affective consequences of their behavior in thinking about themselves, they may be insufficiently sensitive to other features, such

as the social nature of their behavior, that would allow for further differentiation.

The findings reported here indicate that the negativity associated with depression has the greatest impact on thoughts about the self and does not appear to influence thoughts about others. Only one member of the depressives' social world, however, was examined in the present study: a person with whom subjects were only slightly familiar. Depressives' thoughts about other people in their social world, such as significant others, remain to be explored. It may be that significant others are viewed as closer to the self, and perhaps as part of the self, and therefore may elicit thought patterns that are similar to those used in thinking about oneself. If negativity does impinge on any part of the depressive's social world other than the self, it is likely to emerge in thoughts about people such as parents, spouses, or best friends.

Because the depressed do not show negative biases, relative to the nondepressed, in processing information about an acquaintance, it is clear that they can image and retrieve positive information without impairment and make inferences about events without a negative bias. Thus, it is not merely the greater accessibility of negative information and the decreased accessibility of positive information that is driving processing differences between the depressed and nondepressed. Several theorists (Bower, 1981; Isen et al., 1978; Natale & Hantas, 1982) have argued that an emotional state can provide a mood-state-dependent context that enhances the accessibility of emotionally congruent thoughts and reduces the accessibility of emotionally incongruent thoughts. According to this view, depression should increase the accessibility of negative thoughts and decrease the accessibility of positive thoughts in all domains. If accessibility alone could account for the present findings, then we would expect similar processing patterns for oneself and others. Because the depressed and nondepressed differ only in their thoughts about themselves, the accessibility explanation may be conditional on whether the information is relevant to oneself. Apparently, self-reference plays an important role in producing negative biases in depression.

More generally, the role of self-reference in facilitating the processing of negative content and impairing the processing of positive content for depressives suggests that a self-schema can contribute uniquely to social perception. One possibility is that beliefs about the self can serve to exaggerate dissimilarities between oneself and others. In contrast to the single category that the depressed may use in thinking about the self, the depressed may be able to apply multiple categories in thinking about others. This asymmetry in the categorization of information about the self and others may serve to exaggerate the differences between oneself and others. Moreover, the perceived dissimilarities between the self and others may be instrumental in maintaining the depressive's negative view of self.

Our findings also suggest that depression influences thought in the same way during imaging, predicting, and interpreting sad and happy events. This finding extends the learned helplessness view that the depressed are characterized by a maladaptive attributional style (Abramson et al., 1978; Seligman et al., 1979). Our data suggest that the negativity associated with depression not only influences processing at the level of attributions but pervades other kinds of thought as well.

The failure of the present study to find clear retrieval differences between the depressed and nondepressed is surprising in view of previous studies that have found such differences (e.g., Derry & Kuiper, 1981). The effect of subjects' mood on retrieval may have been obscured because subjects were asked to elaborate on the stimulus sentence in a variety of ways (imaging, predicting, and thinking about oneself or another person). Thus many cues other than the subjects' mood may have been accessed, facilitating retrieval.

It should be noted that only one kind of information processing was examined. In the tasks used here, subjects were given a set of organized information; they were not allowed to select or organize the information themselves. Tasks in which depressed and nondepressed subjects can select and organize information from a wide array of data might reveal other differences. Also, the impact of

the social nature of events needs to be explored in a wider range of settings.

Finally, the differential influence of depression on the perception of oneself and others has significant implications for therapy if these findings also apply to the clinically depressed. If the depressed are capable of imaging, retrieving, and making inferences about events without a negative bias, then training them to evaluate themselves as they evaluate others may be useful in eradicating their negative view of self.

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Received June 27, 1983
Revision received November 2, 1983 ■