

## **Depressive Future-Thinking: The Role of Valence and Specificity**

**Andrew K. MacLeod<sup>1</sup> and Mark L. Cropley**

*University of London*

---

*Two distinctions concerning types of depressive future-thinking were examined: anticipation of positive or negative experiences at a general or a specific level. Mildly depressed (dysphoric) and nondepressed (control) undergraduates estimated the general likelihood of a range of future positive and negative events and were also asked to provide a specific example of each event. Dysphoric subjects showed a greater belief in the likelihood of negative events but did not differ significantly from controls in their likelihood estimates for positive events. Compared with controls, dysphoric subjects were faster to provide specific examples of negative events relative to positive events. Correlational analyses revealed that future-thinking concerning negative events was primarily related to levels of depression whereas future-thinking concerning positive events was primarily related to levels of hopelessness. It is concluded that there are important distinctions to be drawn concerning types of future-thinking and that these distinctions may be differentially related to particular emotional disorders.*

---

**KEY WORDS:** dysphoria; future-thinking; specificity; valence.

A negative view of the future is widely assumed to play a central role in depression. Within the cognitive model of depression (Beck, Rush, Shaw, & Emery, 1979), depressed individuals are characterized by a cognitive triad consisting of a negative view of themselves, their world, and their future. The hopelessness theory of depression views hopelessness about the future as a proximal and sufficient cause of at least certain types of de-

<sup>1</sup>Address all correspondence to Andrew K. MacLeod, Royal Holloway, University of London, Egham Hill, Egham, Surrey, TW20 OEX, United Kingdom.

pression (Abramson, Metalsky, & Alloy, 1989). Melges and Bowlby (1969) saw depression as arising when there is a perceived inability to meet one's long-term goals. Brown and Harris (1978) suggested that loss events produce depression through engendering hopelessness about the future. Particular patterns of future-thinking are clearly seen to be an important part of depressive experience. How this future-thinking should be characterized is less clear. Greene (1989) has pointed out that a variety of terms have been used to describe depressive future-thinking, including hopelessness, negative expectancies, and pessimism, all used synonymously but possibly possessing quite different meanings. Research aimed at gaining a more detailed understanding of depressive future-thinking seems to be warranted.

The present study is an attempt to look at depressive future-thinking, employing two distinctions concerning types of future-thinking. The first distinction is between the anticipation of future positive events and the anticipation of future negative events; the second distinction is between future-thinking at a general level and future-thinking at a specific level. To take the first of these distinctions, expectancies for positive events have often been treated simply as the inverse of expectancies for negative events (e.g., Abramson et al., 1989), with depression assumed to be associated with a reduced expectation of future positive events and a heightened expectation of future negative events. A number of empirical studies have looked at positive and negative expectancies in depressed subjects. Typically, subjects are provided with a range of positive and negative, hypothetical, future self-relevant events and asked to estimate how likely they think those events are to happen to them on a subjective probability scale. Butler and Mathews (1983) found that, relative to controls, depressed patients judged negative events to be more likely to happen to them but did not differ on their subjective probability judgments for positive events. Similar findings have emerged from studies using mildly depressed, or dysphoric, students (e.g., Pietromonaco & Markus, 1985). Dunning and Story (1991) used a related methodology where subjects were asked to make yes/no judgments on the occurrence of a range of future events. Mildly depressed students estimated more negative events would happen to them but showed no difference from controls on estimates of the number of expected positive events. Although there have been studies which have found reductions in positive expectancies in dysphoric subjects (e.g., Pyszczynski, Holt, & Greenberg, 1987) the predominant finding is of depressed or dysphoric subjects differing from controls only in their relative overestimation of negative future events. The aforementioned studies have also generally found that the difference between groups is strongest when making judgments about the likelihood of events happening to self rather than to others.

MacLeod, Rose, and Williams (1993) have argued that reduced anticipation of positive events reflects levels of hopelessness specifically rather than levels of depression, and that reduced positive expectancies may be particularly important in suicidal experience. These authors asked parasuicide patients to provide future positive events (things they were looking forward to) and future negative events (things they were not looking forward to), both for the short-term future and long-term future. Relative to both general medical patients and community controls, the parasuicide subjects were less able to think of future positive events but showed no increase in the number of future negative events they were able to think of, and this was related to their levels of hopelessness rather than levels of depression.

One way to understand these data is that, whereas depression levels are related to an increased expectancy of negative events, levels of hopelessness are related to a reduced expectancy of positive events. However, as well as using a different population of subjects, the MacLeod et al. (1993) study differed from the other studies reported in the task subjects were required to perform. Providing subjects with a number of hypothetical future events and asking them to estimate the likelihood of those events presumably elicits a very generalized, global belief in the future, particularly given the complexity and uncertainty of such judgments combined with the relatively quick decision time involved. In contrast, asking subjects to provide events they are looking forward to or not looking forward to, as in the MacLeod et al. study, requires the generation of very specific, personalized items. This difference in tasks relates to the second distinction concerning whether subjects are required to make future judgments at a general level or at a specific level. Depression is assumed to be particularly associated with bias at a very general, global level. Depressed subjects are thought to overgeneralize from single, negative experiences (Beck et al., 1979), produce global attributions for negative events (Brewin, 1988), make global, all-encompassing, self-devaluative statements (Teasdale & Dent, 1987), and experience difficulty providing specific autobiographical memories (Williams & Scott, 1988). Underlying various cognitive therapy techniques, such as diary keeping and thought catching, also seems to be an assumption that depressive thinking operates mainly at the level of general beliefs and that some benefit is to be gained by moving a depressed individual toward operating at the level of specific examples (Williams, 1992).

To the extent that depression is associated with a bias<sup>2</sup> at a global level rather than a specific level, depressed subjects may show a greater

<sup>2</sup>The term *bias* is used only in a relative sense to describe a difference between mood disturbed and control subjects. The question of accuracy of judgments is very difficult to address, given

degree of general belief in the likelihood of negative events (as evidenced by subjective probability judgments) but not be able to provide specific examples of those events more easily than controls. In the case of positive events, there is less reason to think that depressed and nondepressed subjects should differ, either at the general or the specific level. However, one caveat to this conclusion is that if depressed and nondepressed subjects do differ on measures of positive future-thinking, following the findings of MacLeod et al. (1993), these differences will be the result of depressed subjects' levels of hopelessness rather than their levels of depression.

In order to address these issues, groups of mildly depressed and nondepressed subjects were selected on the basis of scores on the Beck Depression Inventory (BDI; Beck et al., 1979). Haaga and Solomon (1993) have suggested that use of the BDI in a nonclinical sample is warranted when the variables under study are expected to show a continuous relationship with level of symptoms. As discussed earlier, past research on subjective probability judgments of future events has produced similar patterns whether mildly depressed or clinically depressed samples have been compared with controls, indicating that the inclusion of mild to moderately depressed subjects is appropriate in the present study. However, as the mildly depressed subjects were not assessed for nosological depression, the recommendations of Kendall, Hollon, Beck, Hammen, and Ingram (1987) will be followed in referring to these subjects as dysphoric.

Subjects were asked to both assess the general likelihood of a number of positive and negative future experiences and provide specific examples of each of them. Subjects were given eight positive and eight negative future items, each stated at a general level ("You will be enthusiastic about things," "You won't handle problems well") and asked to estimate how likely each item was to happen. Subjects were then given the same items and asked to provide a specific example of each in the future ("Where you feel enthusiastic about something," "Where you don't handle a problem well"). How easily subjects were able to provide specific examples was measured by the time taken (latency) to provide an example.

Two main hypotheses were tested. First, relative to controls, it was predicted that dysphoric subjects would show higher subjective probability judgments for negative events but not for positive events. For latency to

---

the difficulty in establishing personalized base rates (Dunning & Story, 1991) and the self-fulfilling nature of expectancies (Campbell & Fairey, 1987), and is not the subject of this study.

think of specific events, it was predicted that there would be no difference between the groups on negative items or on positive items. In addition, correlational analyses were expected to reveal that differences between subjects on the measures for negative events would be due to levels of depression rather than levels of hopelessness, whereas any differences on measures for positive events would be due to hopelessness rather than depression.

## METHOD

### *Subjects*

Subjects were undergraduate students at Royal Holloway, University of London. Subjects were allocated to groups on the basis of their BDI scores (Beck et al., 1979). Various cutoff points have been used to identify depressed subjects ranging from 10 to 18 (Kendall et al., 1987). In the present study, a score of 14 or greater was taken as indicating mild levels of depression and subjects scoring within this range were allocated to the dysphoric group. Although falling short of Kendall et al.'s recommendations for fully symptomatic depression, a cutoff of 14 has been shown by Taylor and Klein (1989) to provide a higher concordance with interview-based qualitative assessments of recovery or nonrecovery from depression than either of the most commonly used cutoff scores of 10 and 16. To maintain maximum divergence between the groups, a score of 8 or below was adopted as the criterion for inclusion in the control group.

Subjects were recruited through personal invitation, mainly from student residences. The first 40 subjects who agreed to participate were tested. This resulted in an adequate number of subjects for the control group ( $n = 24$ ) but not for the dysphoric group ( $n = 6$ ). Subsequent subjects were first screened using the BDI and those scoring 14 or above were invited to participate in the study. A further 163 subjects were screened before a total of 20 subjects met criterion for inclusion in the dysphoric group. Overall, 54 subjects were tested. The mean age for the full sample was 19.4 years, range 18 to 27 years, and there were 34 women and 20 men. For the dysphoric group ( $n = 20$ ), the mean age was 19.4 years, ( $SD = 1.8$ , range 18 to 25), and there were 14 women and 6 men. The mean age for the control group ( $n = 24$ ) was 19.7 years, ( $SD = 2.4$ , range 18 to 27), and there were 14 women and 10 men. Subjects scoring in the 9 to 13 range on the BDI ( $n = 10$ ) were not included in group analyses but were included in the correlational analyses.

### *Materials*

**Questionnaires.** Levels of depression were assessed with the Beck Depression Inventory (Beck et al., 1979). The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) was administered to assess levels of hopelessness about the future. These measures have been subjected to research which has demonstrated adequate reliability and validity (Beck, Steer, & Garbin, 1988; Young, Halper, Clark, Scheftner, & Fawcett, 1992).

**Subjective Probability Task.** This task consisted of a list of 16 statements, each describing a general future event or experience. The 16 statements are shown in the Appendix. Eight of the statements referred to positive outcomes (e.g., "You will be enthusiastic about things") and eight referred to negative outcomes (e.g., "You will make an important mistake"). Two independent raters classified the statement as either positive or negative and produced 100% agreement with the experimenters' ratings. Each statement was accompanied by a 7-point rating scale where subjects had to estimate how likely they thought each item was to happen to them in the future, from *not at all likely to occur* (1) to *extremely likely to occur* (7). Subjects were instructed to circle the appropriate number in each case.

**Example Generation Task.** This task required subjects to generate a specific example for each of the same 16 statements. Some statements were slightly reworded to elicit a specific example (e.g., "You feel enthusiastic about something"). Statements were read out by the experimenter in a quasirandom order, where the only constraint was that positive and negative statements alternated. Each statement was preceded by instructions to "try to picture a specific situation in the future where, or give me an example in the future where . . ." Subjects were given 1 min to provide a specific example for each statement. Once a subject had thought of an example, s/he gave a brief description of what it was. The time taken to think of an example, from when the experimenter finished reading the statement until the first word of the subject's response, was recorded with a stop watch by the experimenter. A brief description of the example given was written down by the experimenter before going on to the next item. After completion of testing, subjects' responses were coded for specificity drawing on criteria used in coding of autobiographical memories. A response was considered specific if the subject could give a concrete example about something including information such as time or place, for example, "When I'm living with my boyfriend in France, working for the Diplomatic Service." A response was coded as moderately specific if a concrete example was given but without time or place information, for example, "When I'm settled in a good job, climbing the career ladder." General responses were those where an abstract example was given, such as "When I feel happy

with myself.” Reliability of specificity ratings was determined by two independent judges who rated a sample of 10% of the responses. The agreement of the independent judges with the experimenters’ ratings was 82% and 87%.

### *Procedure*

Subjects were tested individually. There was no set location for the testing session, although most subjects were interviewed in their own study rooms on the college campus. Subjects were informed that the study was concerned with their thoughts and feelings and that they would be required to fill in questionnaires and answer statements which would be read out to them. Confidentiality and anonymity were stressed. All subjects were informed that participation was entirely voluntary and that they could withdraw from the study at any time during the testing session. No subjects withdrew from the study.

The subjective probability task was given to subjects. It was emphasized to each participant that they should not spend too long thinking about each item. Once the subjective probability task was completed, the specific generation task was administered. It was explained to subjects that each statement would be read aloud by the experimenter and that their task was to think of a specific example of each statement as quickly as possible. Subjects were told to be as specific as possible in their responses, referring to a particular time, place, and people, where possible. It was emphasized that there were no other constraints on their answers, except that they should be plausible to the person. First, subjects were given a sample item—“Try to picture a situation in the future, or give me an example in the future, when someone is friendly towards you.” They were given an example of a generalized response, which was “everyone is always friendly towards me,” and a specific response, which was “When I open a new bank account next month, the assistant manager will be friendly to me.” It was established that subjects understood the difference between a specific and a general response and were clear that what was required was a specific response. Subjects were then given two practice items, one positive and one negative, and the experimenter did not proceed until the subject had given a specific example to both practice items. The experimenter then proceeded with the 16 items. If a general example was given, subjects were asked whether they had a specific example in mind or were just thinking in general. The response to this question was also recorded to enable later coding of the response. If the subject could not think of a response within

1 min, the experimenter moved on to the next question and a time of 60 sec was recorded. The same procedure was followed for all 16 items.

Subjects were then given the BHS and the BDI to complete. They were told that there was no time limit but that they should not spend too long thinking about their responses. After completing the questionnaires, subjects were thanked for their participation and debriefed.

## RESULTS

The main analyses are divided into two sections. The first section compares the dysphoric and control groups on the two future-thinking tasks. The second set of analyses also included the 10 subjects falling in the intermediate range of BDI scores, and reports correlations and partial correlations of BDI and BHS with the measures of future-thinking.

### *Group Analyses*

First, dysphoric and control subjects were compared on their scores on the BDI and BHS. Dysphoric subjects scored more highly than controls on the BDI [ $M = 19.1$  vs.  $3.7$ ,  $t(42) = 12.0$ ,  $p < .001$ ] and the BHS [ $M = 7.2$  vs.  $2.2$ ,  $t(42) = 4.2$ ,  $p < .001$ ].

Subjective probability judgments for future events were analyzed within a Group (dysphoric, control)  $\times$  Condition (positive, negative) analysis of variance (ANOVA). There was a significant main effect of condition [ $F(1, 42) = 21.0$ ,  $p < .001$ ], qualified by a significant Group  $\times$  Condition interaction [ $F(1, 42) = 13.8$ ,  $p < .001$ ]. There was no significant main effect of group [ $F(1, 42) = 3.2$ , ns]. The means are shown in Fig. 1. Newman-Keuls tests revealed that dysphoric subjects gave higher likelihood estimates than controls for negative events ( $p < .005$ ) but the two groups did not differ in their estimates of the likelihood of positive events. The control subjects estimated positive events to be more likely than negative events to happen to them ( $p < .005$ ) but the dysphoric subjects did not differ in their estimates for positive and negative events.

Latency to provide specific examples was analyzed within the same Group  $\times$  Condition ANOVA. However, consideration of the specificity ratings revealed that subjects did not always provide specific examples to the cues. Simply taking average latencies would mean that latency to provide general examples would be included in the means. For example, over a quarter of the dysphoric subjects' "specific examples" were, in fact, general (27.5% for both positive and negative items). The control subjects were



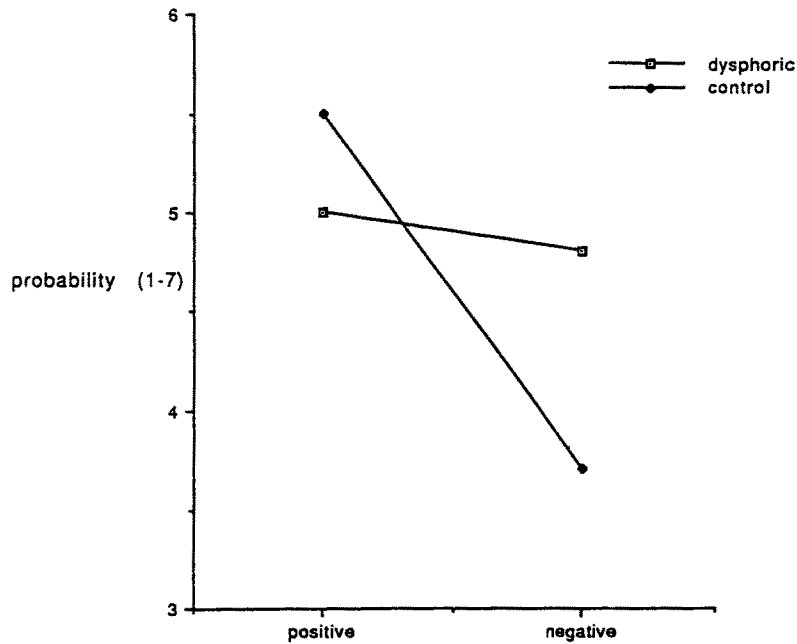


Fig. 1. Subjective probabilities for positive and negative future general events for dysphoric and control subjects.

also providing a significant number of general responses, although not as many as the dysphoric subjects (15% and 13% for positive and negative items, respectively). This phenomenon is interesting in its own right and will be returned to. However, for purposes of measuring ease of providing specific examples, the general responses represented a confound. Consequently, mean latencies were calculated for each subject, excluding items where a general response had been provided. Thus, although the task was not totally successful in eliciting specific responses, excluding the general responses meant that analyses were based on specific examples. Both moderately specific and highly specific items were included in the revised means, on both theoretical and practical grounds. Generation of future examples entails greater uncertainty (and hence lower specificity) than retrieval of past examples. For example, Williams and Broadbent (1986) reported that control subjects retrieved over 80% of specific memories, compared with less than 50% of specific future examples provided by controls in the present study. Moderately specific future-thinking would thus seem to be fairly representative of attempts at specific future-thinking. The

use of only highly specific examples would have also meant discarding the majority of responses, therefore reducing the reliability of the data.

The Group  $\times$  Condition ANOVA on mean latencies showed no significant main effects ( $F < 1$ ) for each but did reveal a Group  $\times$  Condition interaction [ $F(1, 42) = 5.9, p < .025$ ]. The means are shown in Fig. 2. Newman-Keuls tests found no individual comparison between means to be significant. Thus, dysphoric subjects did differ from controls in their relative ease of thinking of specific future positive as opposed to negative events, although neither difference was enough on its own to significantly distinguish between the groups.

### Correlational Analyses

For the correlational analyses, variables were treated as continuous and therefore all subjects tested were used in the analyses. The correlations of the two future judgment measures (subjective probability and latency)

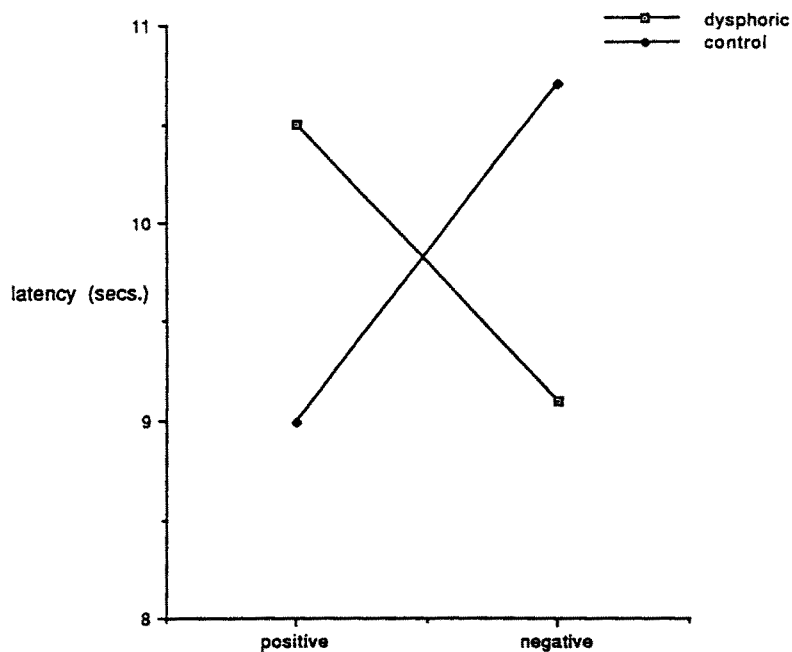


Fig. 2. Latency to generate specific positive and negative events for dysphoric and control subjects.

for positive and negative events with the two questionnaire measures, BDI and BHS, are shown in Table I. Also shown are the correlations between the number of inappropriately general memories given by subjects and their BDI and BHS scores.

Both BDI and BHS were associated with judgments that positive events were unlikely and negative events likely. For latency, the only significant relationship was that hopelessness was associated with being slow to think of specific examples of positive future events. Number of general responses correlated with hopelessness and depression for both positive and negative events. The interpretation of these correlations is made more difficult by the fact that BHS and BDI were highly correlated [ $r(52) = .69$ ,  $p < .001$ ]. In order to disentangle the contributions of BHS and BDI to these correlations, partial correlations were carried out for subjective probability, latency, and generality with BDI, partialing out the contribution of BHS, and with BHS, partialing out the contribution of BDI. The results of these partial correlations are shown in Table II.

With the influence of hopelessness removed, depression was related to believing general negative events were more likely to happen and to being fast to think of specific examples of those events. Depression levels did not relate to positive events assessed by any measure or to the number of general negative events given. With depression removed, hopelessness was related to judging positive events to be less likely and with a relative inability to think of specific examples of positive events, indicated by being slow to think of specific examples and providing more general examples. Hopelessness was also associated with being slower to think of specific examples of negative events and providing more general examples of negative events.

In order to see whether there was any direct relationship between the two future judgment tasks, correlations were carried out between mean subjective probabilities, mean latencies, and number of general responses

Table I. Pearson Correlations of Subjective Probability, Latency, and Number of General Responses, for Positive and Negative Events, with BHS and BDI ( $N = 54$ )<sup>a</sup>

	Probability		Latency		Generality	
	Positive	Negative	Positive	Negative	Positive	Negative
BDI	-.48 <sup>d</sup>	.52 <sup>d</sup>	.17	-.16	.36 <sup>c</sup>	.40 <sup>c</sup>
BHS	-.65 <sup>d</sup>	.38 <sup>c</sup>	.35 <sup>c</sup>	.08	.44 <sup>d</sup>	.47 <sup>d</sup>

<sup>a</sup>BHS = Beck Hopelessness Scale; BDI = Beck Depression Inventory.

<sup>b</sup> $p < .05$ , two-tailed.

<sup>c</sup> $p < .01$ , two-tailed.

<sup>d</sup> $p < .001$ , two-tailed.

**Table II.** Partial Correlations of Subjective Probability, Latency, and Generality, for Positive and Negative Events, with BDI, Partialing out the Contribution of BHS, and with BHS, Partialing Out the Contribution of BDI ( $N = 54$ )<sup>a</sup>

		Probability		Latency		Generality	
		Positive	Negative	Positive	Negative	Positive	Negative
BDI	(-BHS)	-.06	.38 <sup>c</sup>	-.11	-.31 <sup>b</sup>	.08	.11
BHS	(-BDI)	-.50 <sup>d</sup>	.04	.33 <sup>b</sup>	.28 <sup>b</sup>	.28 <sup>b</sup>	.30 <sup>b</sup>

<sup>a</sup>BHS = Beck Hopelessness Scale; BDI = Beck Depression Inventory.

<sup>b</sup> $p < .05$ , two-tailed.

<sup>c</sup> $p < .01$ , two-tailed.

<sup>d</sup> $p < .001$ , two-tailed.

given, for positive and negative items. Subjective probability for positive events correlated significantly with latency for positive events [ $r(52) = -.39$ ,  $p < .001$ ], showing that the subjects who judged positive events as likely were also those who were fastest to think of specific examples. This correlation was reduced to nonsignificance when subjects' BHS scores were partialled out. The only other significant correlation was between subjective probability for positive events and number of general examples for negative events [ $r(52) = -.28$ ,  $p < .05$ ]. This correlation is difficult to interpret and was in any case reduced to nonsignificance when BHS scores were partialled out.

## DISCUSSION

The hypothesis that, relative to controls, dysphoric subjects would show a greater degree of general belief in the probability of experiencing future negative events was supported. Also as predicted, dysphoric and non-dysphoric subjects did not differ on their subjective probability judgments for future positive outcomes. However, against prediction, dysphoric subjects did differ from controls in their accessibility of specific examples of those events, being faster to provide specific examples of future negative events relative to positive events. The combination of being faster for negative events and slower for positive events significantly discriminated dysphoric subjects from controls.

Measures of hopelessness and depression showed a double dissociation with subjective probabilities for negative and positive events, after the variance shared by each construct was removed. Consistent with MacLeod et al.'s (1993) argument that hopelessness is related to lack of anticipation

of future positive outcomes, high levels of hopelessness were associated with a reduced belief in the likelihood of future positive outcomes but, once the effects of depression had been controlled for, were unrelated to belief in the likelihood of negative outcomes. Depression levels, on the other hand, were unrelated to measures of positive anticipation, after controlling for hopelessness, but were related to an elevated belief in the likelihood of future negative events. Depression, after controlling for hopelessness, was related to being fast to think of specific examples of negative outcomes but showed no relationship to speed of thinking of specific examples of positive outcomes. Hopelessness, on the other hand, was associated with being slow to think of specific examples of positive outcomes and, after partialing out depression, also being slow to think of specific examples of negative outcomes. The partial correlations revealed that depression and hopelessness pulled in opposite directions on speed of thinking of specific examples of negative outcomes—depression was associated with being faster and hopelessness was associated with being slower.

The data on the generality of the responses given for the example generation task showed that depressed subjects provided more general examples to both positive and negative cues, indicating a greater difficulty in thinking of specific future events. However, the partial correlations revealed that this effect was related to subjects' levels of hopelessness rather than depression. Hopelessness being related to slowness and generality for both positive and negative future outcomes is consistent with suggestions that hopelessness may represent a general disengagement from the future, where the future is just not thought about, rather than an imbalance of positive and negative thoughts about the future (Baumeister, 1990; MacLeod, Williams, & Linehan, 1992).

Against prediction, depression was associated with latencies for specific events. This finding suggests that depression is associated with negative future thinking at both a general level and a specific level. The relationship between depression and specific thinking is also supported by the memory literature where depressed subjects have been found to be faster to produce unpleasant personal memories and slower to produce pleasant personal memories (Teasdale & Fogarty, 1979). The fact that depressed subjects provided more inappropriately general examples of future events, both positive and negative, also has a parallel in the memory literature. Williams and Scott (1988) found that depressed patients volunteered more general memories, positive and negative, when given cues and asked to recall specific examples of memories associated with those cues. The parallels with the memory literature suggest that some of the same processes may be operating in both memory and future-thinking. The extent to which the

recall of personal memories is used as the basis for future-thinking is an area which further research could usefully address.

The rationale for the experiment was based upon two distinctions that could be made concerning future-thinking—positive versus negative anticipation, at a specific or a general level. The positive–negative distinction has received support. There were clear dissociations in the pattern of results for positive and negative items. The general–specific distinction received more qualified support. In support of the distinction, depression was related to subjective probability judgments for negative events but not positive events, whereas latencies for specific examples were affected for the combination of both positive and negative events. However, correlational analyses showed that general and specific items showed a broadly similar pattern in the relationships between positive and negative items and hopelessness and depression.

What is clear is that there are important distinctions to be made in future-thinking and that any demonstrated relationship between mood disturbance and future-thinking will be affected by the particular measure of future-thinking used. The two tasks here have been characterized as measuring general thinking and specific thinking. However, there are other ways in which tasks can differ. The future-thinking measure used by MacLeod et al. (1993), asking subjects to think of things they were or were not looking forward to, has been argued to be a measure of specific future-thinking, yet it is a quite different task from the specific task used in the present study. In the present study, subjects were given situational cues and had to generate a specific example; in the MacLeod et al. study, the only cues were valence instructions. In some ways the present task is analogous to a cued recall memory task and the MacLeod et al. task to a free-recall memory task. Subjective probability judgments have been argued to be measuring generalized judgments about the future, although it is clearly possible to assess generalized beliefs at an even more general level, for example, asking people whether they think many good things or bad things will happen to them in the future. It is probably closest to this very general level that the Beck Hopelessness Scale assesses future-thinking. Following the memory analogy, very general questions, such as some of the questions making up the Beck Hopelessness Scale, can be thought of as being like a metamemory task (how well someone thinks they could remember something), whereas subjective probability judgments are more like a recognition memory task.

A note of caution must be sounded about the choice of particular items or cues to elicit future-thinking. The items used in the present study were selected through sampling of items used in previous studies. However, the choice of particular items may be important and the results should be

replicated using different sets of positive and negative items. The items also varied in a number of ways which may be important. For example, some of the cues were feeling states—"You will feel proud"—and others were particular behaviors—"You will make an important mistake"; some concerned other's responses—"People will get annoyed with You"—and some referred to one's own actions—"You will let someone down." Such distinctions may prove to be as important as the ones being explicitly examined in the present study.

The role played by future-directed thinking in emotional disturbance is an important but understudied area. General terms such as pessimism, negative expectancies, and even hopelessness may be useful in some contexts but it is clear that they mask different dimensions of future-thinking and that these dimensions may be differentially involved in emotional disturbances such as depression, parasuicide, and anxiety. Future research should try to map out some of the dimensions of future-thinking, using a variety of tasks and measures, and understand how these different dimensions relate to different forms of emotional disturbance.

## APPENDIX

### Items Used in Subjective Probability Task

Positive	Negative
You will feel confident	You will feel rejected
You will be enthusiastic about things	You will find yourself rather irritated
You will feel proud	You won't handle problems well
You will feel happy	People will get annoyed with you
You will have good experiences	You'll let someone down
You will be pleased with yourself	People will act hostile towards you
You will be liked	You will feel inferior
You will achieve what you set out to do	You will make an important mistake

## REFERENCES

- Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopeless depression: A theory-based subtype of depression. *Psychological Review*, *96*, 358-372.
- Baumeister, R. F. (1990). Suicide as escape from the self. *Psychological Review*, *97*, 90-113.
- Beck, A. T., Rush, A. J., Shaw, B. F. & Emery, G. (1979). *Cognitive therapy for depression*. New York: Guilford Press.

- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: 25 years of evaluation. *Clinical Psychology Review, 8*, 77-100.
- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology, 42*, 861-865.
- Brewin, C. B. (1988). *Cognitive foundations of clinical psychology*. Hove and London: Erlbaum.
- Brown, G. W., & Harris, T. O. (1978). *Social origins of depression*. Tavistock: London.
- Butler, G., & Mathews, A. (1983). Cognitive processes in anxiety. *Advances in Behavior Research and Therapy, 5*, 51-62.
- Campbell, J. D., & Fairey, P. J. (1987). Effects of self-esteem, hypothetical explanations, and verbalization of expectancies on future performance. *Journal of Personality and Social Psychology, 48*, 1097-1111.
- Dunning, D., & Story, A. L. (1991). Depression, realism, and the overconfidence effect: Are the sadder wise when predicting future actions and events? *Journal of Personality and Social Psychology, 61*, 521-532.
- Greene, S. M. (1989). The relationship between depression and hopelessness: Implications for current theories of depression. *British Journal of Psychiatry, 154*, 650-659.
- Haaga, D. A. F., & Solomon, A. (1993). Impact of Kendall, Hollon, Beck, Hammen, and Ingram (1987) on treatment of the continuity issue in "depression research." *Cognitive Therapy and Research, 17*, 4, 313-324.
- Kendall, P. C., Hollon, S. D., Beck, A. T., Hammen, C. L., & Ingram, R. E. (1987). Issues and recommendations regarding the use of the Beck Depression Inventory. *Cognitive Therapy and Research, 11*, 289-299.
- MacLeod, A. K., Rose, G. S., & Williams, J. M. G. (1993). Components of hopelessness about the future in parasuicide. *Cognitive Therapy and Research, 17*, 441-455.
- MacLeod, A. K., Williams, J. M. G., & Linehan, M. M. (1992). New developments in the understanding and treatment of suicidal behavior. *Behavioral Psychotherapy, 20*, 193-218.
- Melges, F. T., & Bowlby, J. (1969). Types of hopelessness in psychopathological process. *Archives of General Psychiatry, 20*, 690-699.
- Pietromonaco, P., & Markus, H. (1985). The nature of negative thoughts in depression. *Journal of Personality and Social Psychology, 48*, 799-807.
- Pyszczynski, T., Holt, K., & Greenberg, J. (1987). Depression, self-focused attention, and expectancies for positive and negative future life-events for self and others. *Journal of Personality and Social Psychology, 46*, 14-25.
- Taylor, E. B., & Klein, D. N. (1989). Assessing recovery in depression: Validity of symptom inventories. *Cognitive Therapy and Research, 13*, 1-8.
- Teasdale, J. D., & Dent, J. (1987). Cognitive vulnerability to depression: An investigation of two hypotheses. *British Journal of Clinical Psychology, 26*, 113-126.
- Teasdale, J. D., & Fogarty, S. J. (1979). Differential effects of induced mood on retrieval of pleasant and unpleasant events from episodic memory. *Journal of Abnormal Psychology, 88*, 248-257.
- Williams, J. M. G. (1992). *The psychological treatment of depression* (2nd ed.). London and New York: Routledge.
- Williams, J. M. G., & Broadbent, K. (1986). Autobiographical memory in attempted suicide patients. *Journal of Abnormal Psychology, 95*, 144-149.
- Williams, J. M. G., & Scott, J. (1988). Autobiographical memory in depression. *Psychological Medicine, 18*, 689-695.
- Young, M. A., Halper, I. S., Clark, D. C., Scheftner, W., & Fawcett, J. (1992). An item-response theory evaluation of the Beck Hopelessness Scale. *Cognitive Therapy and Research, 16*, 579-587.