Idiographic autobiographical memories in major depressive disorder

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When cued with generic happy and sad words, depressed individuals have been found to articulate contextually impoverished, overgeneral memories of both positive *and* negative autobiographical events. The current study tested whether overgeneral memory is observed outside of the cue-word paradigm. Currently depressed, formerly depressed, and never-depressed controls underwent an idiographic interview procedure in which participants generated memories of their happiest and saddest lifetime events. Although depressed and nondepressed participants did not differ with respect to the specificity, retrieval difficulty, and emotionality of their saddest memories, depressed individuals' happiest memories were less specific, harder to retrieve, and less emotional than were nondepressed participants' happiest memories. The memory characteristics of formerly depressed participants largely resembled those of healthy controls. Overall, the present results suggest that meaningful cues trigger mood-congruent memory processing in currently, but not in formerly, depressed individuals.

Major depressive disorder (MDD) is a disabling psychiatric condition that affects nearly one fifth of the population (Kessler, 2002). The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994) classifies depression among the mood disorders. Mood disturbance is arguably the most salient feature of MDD, and imbues depressed persons' thought and affect with its characteristic negativity.

Cognitive approaches to depression (e.g., Beck, 1967; Bower, 1981) posit that pathological mood in depression is a consequence of the distorted processing of emotional material. Empirical evidence suggests that depression-related distortions operate in a mood-congruent fashion, interfering with the elaboration of positive emotional material and enhancing the elaboration of negative emotional material (Ingram, 1984; Teasdale, 1988). Mood-congruent biases have been found to characterise depressed persons' performance in a number of domains, such as attention, perception, and judgement (e.g., Gotlib & Cane, 1987).

Research in the area of memory has also been guided by the mood-congruency hypothesis. Perhaps the most explicit formulation of the mood-congruency hypothesis is Bower's (1981) semantic associative network model of mood and emotion. This model presents emotions, concepts, and experiences as distinct, but interconnected, nodes that are distributed across a larger network. In this network, activation in one node spreads automatically to adjacent nodes. Consistent with this model, a range of evidence seems to suggest that it is easier for individuals to remember past events when the valence of those events is consistent with current mood (e.g., Bower, 1981; Eich, Macaulay, & Ryan, 1994; Ruiz Caballero & Moreno, 1993; reviewed in Blaney, 1986; see also Parrott & Sabini, 1990). In the context of depression, sad mood presumably activates a variety of concepts and experiences that are related to sad affect, making it easier for depressed individuals to recall events that are congruent with a sad affective state. Studies that have tested depressed individuals' recall for experimentally presented information, such as word lists, have indeed indicated that depressed persons have better memory for negative information than for positive or neutral information (Bradley & Mathews, 1983; Bradley, Mogg & Williams, 1995).

Overgeneral autobiographical memory in depression

Although there is evidence of mood-congruent memory processes in MDD, several studies of autobiographical memory suggest that there may be important exceptions to this pattern. Most notably, several experimental investigations in which normative cue words were used to prompt memory have found that depressed individuals exhibit autobiographical memories that are script-like and contextually impoverished, a pattern labelled ''overgeneral memory'' (i.e., Williams, 1986). Importantly, overgeneral memories have been observed in MDD not only for positive autobiographical material, but also for negative autobiographical material (e.g., Goddard, Drischel, & Burton, 1996; Swales, Williams, & Wood, 2001; Williams & Dritschel, 1988), a finding opposite to what would be predicted by a mood-congruency model of memory.

Williams and his collaborators have interpreted overgeneral memory for negative events in depression as reflecting a learned strategy of affect regulation (Williams, 1996; Williams, Stiles, & Shapiro 1999). More specifically, individuals who experience childhood adversity learn to retrieve memories in a generic, script-like manner in order to minimise the negative affect that is associated with potentially painful memories. In other words, retrieving negative memories in a less specific fashion serves as a protective mechanism to help vulnerable individuals avoid the experience of negative affect. Consequently, overgeneral memory is conceived of a relatively stable emotion regulatory trait that is independent of current mood. Consistent with this postulation, investigators who have utilised the cue-word paradigm have found evidence of overgeneral memory in previously depressed persons who are euthymic at the time of testing (e.g., Brittlebank, Scott, Williams, & Ferrier, 1993; Williams, 1996; Williams & Dritschel, 1988).

How robust is overgeneral memory in depression?

Cue-word paradigms reliably yield findings of overgeneral memory in MDD. At the same time, the robustness and significance of these findings are not yet clear. One limitation of existing data is that they are drawn almost entirely from a single testing procedure, the Autobiographical Memory Test (AMT: Williams & Broadbent, 1986). In the AMT, participants must respond to individual cue words with an autobiographical memory within a fixed amount of time. Depressed persons' overgeneral memory on the AMT may be due to any number of different factors, such as the difficulty experienced by cognitively impaired depressed persons in forming associations to individual cue words, their impaired performance under conditions of time pressure, or more simply, the irrelevance of normative cue words to depressed persons' personal concerns. Highlighting the viability of these alternative explanations for depressed persons' overgeneral memory on the AMT, cognitive impairment has been found to be directly related to overgeneral memory (Phillips & Williams, 1997). Moreover, the results of a recent meta-analysis of the AMT (van Vreeswijk & de Wilde, 2004) suggest that minor procedural variations can influence the magnitude of overgeneral memory effects (e.g., smaller effects are obtained when less response time is allowed). Clearly, it is important to address the robustness of overgeneral memory for positive and negative events in MDD, ideally with paradigms that are less vulnerable than the AMT to alternative interpretations of general cognitive impairment, time pressure, or low personal concern of the cues.

Cognitive accounts of depression suggest that personal meaning may be a particularly important dimension in broadening the assessment of autobiographical memory in depression. Theoretically, it has been postulated that depressed persons possess negative cognitive schemas that are activated

differentially by idiographic concerns involving either relationship needs and/or achievement issues (Beck, 1983; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982). Empirically, studies that have purposefully used self-relevant stimuli have often obtained mood-congruent memory effects in depressed persons (see Blaney, 1986). Therefore, it stands to reason that assessing autobiographical memory with idiographic memory cues will facilitate mood-congruent memory processing in depressed persons (e.g., enhanced memories of negative events relative to positive events). In sum, both theory and data suggest that experiments that utilise idiographic memory procedures will provide the most robust tests of overgeneral memory in MDD.

The present study

The current study used an idiographic memory procedure to examine autobiographical memory in depression. This procedure is distinguished from the more typical cue-word paradigm in several ways: (a) it focuses on meaningful autobiographical events; (b) it is conducted in an interview format; (c) it affords participants several opportunities for memory elaboration; and (d) it does not impose time pressure or constraints. To examine whether the autobiographical memories of depressed individuals are characterised by mood-congruency or overgeneral memory, we contrasted the autobiographical memories of depressed and nondepressed individuals as a function of event valence (happiest vs. saddest). To further address the issue of mood-congruency, we also tested memories in formerly depressed individuals: A group of currently euthymic individuals who had a history of major depression. Finally, we examined several domains relevant to memory processing by assessing the level of detail, retrieval difficulty, and emotional intensity of each memory.

Hypotheses

We tested two competing hypotheses concerning autobiographical memory functioning in MDD.

1. The *overgeneral memory hypothesis* predicted that, compared to healthy never-depressed controls, the happiest and saddest memories of the depressed participants will be less specific, harder to retrieve, and less emotional. Because this style of memory processing is postulated to be trait-like, formerly depressed individuals were expected to resemble currently depressed individuals in their memory functioning.

2. The *mood-congruency hypothesis* predicted that currently depressed individuals' happiest memories will be less specific, harder to retrieve, and less emotional than will those of nondepressed persons (healthy and formerly depressed persons); in contrast, the saddest memories of depressed individuals will be more specific, easier to retrieve, and significantly more emotional than

will those of nondepressed individuals. Because of this style of memory processing is postulated to be mood state-dependent, formerly depressed individuals were expected to resemble healthy controls in their memory functioning.

METHOD

Participants

Participant screening.   Participants were recruited from a variety of sources. Clinical participants were solicited from two outpatient psychiatry clinics in a university teaching hospital, as well as through advertisements posted in numerous locations within the local community (e.g., internet bulletin boards, university kiosks, supermarkets); healthy nonpsychiatric controls were recruited from the community through advertisements posted in the same locations. Participants' responses to a telephone interview provided initial selection information. This phone screen established that participants were fluent in English and were between 18 and 60 years of age. Participants were excluded for reported lifetime history of brain injury or primary psychotic ideation, lifetime diagnoses of bipolar disorder, current diagnoses of panic disorder or social phobia, behavioural indications of impaired mental status or mental retardation, or reported signs of alcohol or substance dependence or abuse within the past six months. More importantly, this interview was used to identify individuals who were likely to meet criteria for one of three groups: (1) currently depressed individuals; (2) formerly depressed individuals; and (3) never-depressed healthy control participants. The final participant sample consisted of 26 unipolar depressed participants (76.9% female), 19 recovered unipolar depressed participants (73.6% female), and 29 nondepressed control participants (72.4% female). All participants provided written informed consent prior to the experimental session and were paid $25 per hour.

Group assignments.   All currently depressed participants met DSM-IV criteria (American Psychiatric Association, 1994) for current Major Depressive Disorder using the SCID-I (First, Spitzer, Gibbons, & Williams, 1995). SCID-I interviewers had previous experience with administering structured clinical interviews and were trained specifically to administer the SCID-I interview. In prior work, this team of interviewers achieved good interrater reliability for major depressive disorder ($\kappa = 1.00$, Rottenberg, Kasch, Gross, & Gotlib, 2002). Formerly depressed participants met SCID-I criteria for a past episode of MDD. In addition, guidelines from the NIMH Collaborative Program on the Psychobiology of Depression were implemented to screen out individuals who had current symptoms of depression (e.g., Keller et al., 1992). These guidelines required that, to be considered fully recovered, respondents must report virtually no signs of depressive illness (i.e., no more than two symptoms, and those symptoms experienced only to a mild degree) when questioned week-by-week

using a modified version of the SCID-I about the presence of all nine DSM-IV depression symptoms during the 8 weeks prior to the interview. We adopted this stringent definition of recovery in order that the formerly depressed participants would be relatively free of the significant functional impairment known to be associated with residual depressive symptoms (Judd, Paulus, Wells, & Rapaport, 1996). Therefore, formerly depressed participants who exhibited current subsyndromal or syndromal depression were excluded from the sample. Finally, healthy control participants satisfied the same general medical exclusion criteria as the depressed group, and did not have any lifetime diagnoses of an Axis I disorder when assessed with the SCID-I.

Depression and anxiety.   The *Beck Depression Inventory* (BDI; Beck, Rush, Shaw, & Emery, 1979) and the *Beck Anxiety Inventory* (BAI; Beck, Epstein, Brown, & Steer, 1988a) were administered to measure self-reported depression severity and self-reported anxiety severity. Both inventories are 21-item, self-report measures of intensity of depression or anxiety. Items on the BDI and BAI assess cognitive, affective, behavioural, and physiological symptoms of depression and anxiety, with the total score representing a combination of the number of symptom categories endorsed and the severity of the particular symptoms. The reliability and validity of these measures are acceptable and have been well documented elsewhere (Beck et al., 1988a; Beck, Steer, & Garbin, 1988b).

Global functioning.   The Global Assessment of Functioning Scale (GAF, Axis V, DSM-IV; American Psychiatric Association, 1994) was used to assess global functioning. The GAF is a single rating scale used to evaluate an individual's overall level of psychological, social, and occupational functioning. Ratings are made on the basis of the SCID-I interview and range from 1 (lowest level of functioning) to 100 (highest level of functioning). The reliability of the GAF has been demonstrated in prior work (Endicott, Spitzer, Fleiss, & Cohen, 1976) and with this team of interviewers (Kasch, Rottenberg, Arnow, & Gotlib, 2002; Rottenberg et al., 2002).

Autobiographical memory assessment

Emotions Interview.   The Emotions Interview is a brief (~15 min) semistructured interview designed to elicit details concerning the maximally happy and sad moments experienced by each participant in his/her lifetime (see Rottenberg, Joormann, Brozovich, & Gotlib, 2005).[1] An initial instructional set

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[1] We decided against constraining qualifying life events to particular temporal windows (e.g., the past 5 years). Analyses of the recency of the memories recalled indicated that the three groups did not differ in the recency of either happy or sad events, both $F(2, 71) < 1$.

requested participants to describe their happy and sad life events ''in enough detail so a person who was not there could understand why this moment was significant for you''. Participants were then instructed to describe their happiest event(s) in their lives. They were told to think about a specific moment and to describe it in detail. Participants were offered a few examples of what one might recall as a happiest event (e.g., having something very lucky happen, having a wonderful thing happen to their families, reaching an important goal). If the participant did not retrieve a specific event, the interviewer asked questions to help establish context and clarify the situation. For example, if a participant recalled several events, the interviewer asked which event affected the individual most positively. The interviewer also asked several standardised probe questions in order to provide additional opportunities for the participant to elaborate on the emotional quality of the event, such as, ''Can you describe why this event made you feel happy?'' and ''As you think about this happy event now, what thoughts or feelings come to mind?'' A similar procedure was used to elicit participants' saddest life events. With each participant's consent, the interview session was videotaped.

Memory variables.   Videotapes of the Emotions Interviews were transcribed. All interviewers' references to happy and sad emotional states were expunged from the transcripts to disguise the purpose of the interview. A team of five research assistants who were naive to the aims of the study and blind to participants' diagnostic group assignment coded the transcripts for detail, difficulty of memory retrieval, and emotionality. At least four research assistants coded each transcript independently. The four coders' ratings were averaged to create scores for detail, retrieval difficulty, and emotionality score for each memory. Interrater reliability for all ratings were found to be acceptable (all $\alpha > .7$).

Detail ratings were based on the amount of elaboration and specific contextual information that participants provided.[2] Difficulty of retrieval was operationalised in terms of the amount of prompting that was needed before a participant recalled a peak emotional memory. Finally, ratings of emotionality were based on raters' judgements of the emotional intensity of the language that was used to describe an event. All ratings were made on scales ranging from 0 (not at all) to 10 (extremely).

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[2] Memory specificity was also coded a categorical variable (e.g., as specific or generic; Williams & Broadbent, 1986). We decided to use the continuous measure of detail after preliminary analyses of the categorical data indicated that a high percentage of participants in each group retrieved at least one specific memory for each emotion in the idiographic memory paradigm. Categorical and continuous ratings were related as expected [i.e., memories that were coded as specific were rated as more detailed than were memories that were rated as generic—happiest: $t(72) = 4.53$, $p < .001$; saddest: $t(72) = 2.41$, $p < .02$].

Hypothesis testing

For each domain of response (i.e., detail, difficulty, and emotionality), we conducted a univariate repeated measures analysis of variance (ANOVA). In these analyses, group (current MDD, former MDD, healthy control) was a between-subjects factor, and event valence (happy, sad) was a within-subject factor.

The *overgeneral memory hypothesis* predicted a significant main effect of group in the omnibus ANOVA for each domain. Moreover, post hoc comparisons examining this main effect were expected to reveal that the emotional memories of currently and formerly depressed participants were less specific, harder to retrieve, and less emotional than were the emotional memories of the never-depressed controls.

The *mood-congruent memory hypothesis* predicted a significant group by event valence interaction for each domain. More specifically, follow-up planned contrasts examining performance within each event were expected to reveal that that depressed individuals' happiest memories were less specific, harder to retrieve, and less emotional than were the memories of the other participant groups, whereas depressed individuals' saddest memories were more specific, easier to retrieve, and significantly more emotional than were the saddest memories of the other participant groups. Finally, it was expected that formerly depressed individuals would resemble healthy controls in their autobiographical memory functioning.

RESULTS

Demographic and clinical characteristics

Demographic and clinical characteristics for the three groups of participants are presented in Table 1. The three diagnostic groups were equivalent with respect to gender, ethnic composition, marital status, age, income, and education level (all $ps > .1$). As expected, the groups differed in their self-reported severity of depression and anxiety [BDI: $F(2, 63) = 88.78$; BAI: $F(2, 68) = 42.17$, both $ps < .001$], with depressed participants obtaining higher scores on the BDI and BAI than did both recovered-depressed participants and never-depressed controls, who did not differ from one another. The groups also differed with respect to their scores on the GAF, $F(2, 69) = 346.42$, $p < .001$. The never-depressed controls had the highest GAF scores, followed by the recovered depressed group, followed by the currently depressed group, who had the lowest level of functioning, all $ps < .01$.

TABLE 1
Demographic and clinical characteristics of the depressed, recovered depressed, and
never-depressed (control) participants

	Depressed (N = 26)	Group recoverd (N = 19)	Control (N = 29)
Gender, Female N (%)	20 (76.9)	14 (73.6)	21 (72.4)
Percentage Married	28.0	21.0	48.2
Percentage Caucasian	84.6	78.9	69.0
Age, M (SD)	36.7 (8.0)	34.9 (10.8)	32.1 (9.9)
Education M (SD)	6.9 (1.3)	6.7 (1.5)	6.7 (1.4)
Annual income	3.9 (1.7)	4.0 (1.3)	4.6 (1.6)
BDI score	$25.0 (9.1)_a$	$5.6 (5.5)_b$	$2.6 (3.0)_b$
BAI score	$18.3 (9.7)_a$	$3.7 (3.9)_b$	$2.9 (4.2)_b$
GAF score	$52.7 (4.7)_a$	$83.4 (5.4)_b$	$86.6 (4.9)_c$

Note: Different subscripts within rows indicate significant group differences. BDI, Beck Depression Inventory; BAI, Beck Anxiety Inventory; GAF, Global Assessment of Functioning Scale.

Education was assessed on an 8-point scale, with higher numbers representing more education: A score of 6.7 reflects some college education. Income was assessed on a 6-point scale, with higher numbers representing more income: A score of 4.0 reflects annual income between $50,000 and $75,000.

Memory detail

A repeated measures ANOVA conducted on detail yielded a nonsignificant effect for group, $F(2, 71) < 1$. The group by event valence interaction predicted by the mood-congruency hypothesis, however, was significant, $F(2, 71) = 4.36$, $p < .05$. Planned contrasts revealed that while depressed individuals' happiest event memories were less detailed than the other groups, $F(1, 70) = 5.97$, $p < .05$, depressed participants' saddest event memories did not differ in level of detail from the other groups, $F(1, 70) < 1$. Finally, as predicted by the mood-congruency hypothesis, formerly depressed and healthy control subjects did not differ in their level of memory detail for either memory type (see Figure 1).

Memory difficulty

A repeated measures ANOVA conducted on retrieval difficulty also yielded a nonsignificant effect for group, $F(2, 71) < 1$. The group by event valence interaction predicted by the mood-congruency hypothesis, however, neared significance, $F(2, 71) = 4.36$, $p = .06$. Planned contrasts revealed that whereas depressed individuals exhibited greater difficulty in retrieving their happiest event memories than the other groups, $F(1, 70) = 5.56$, $p < .05$, depressed participants' did not differ in the difficulty of retrieving their saddest event memories, $F(1, 70) < 1$. Moreover, paired *t*-test analyses within each diagnostic
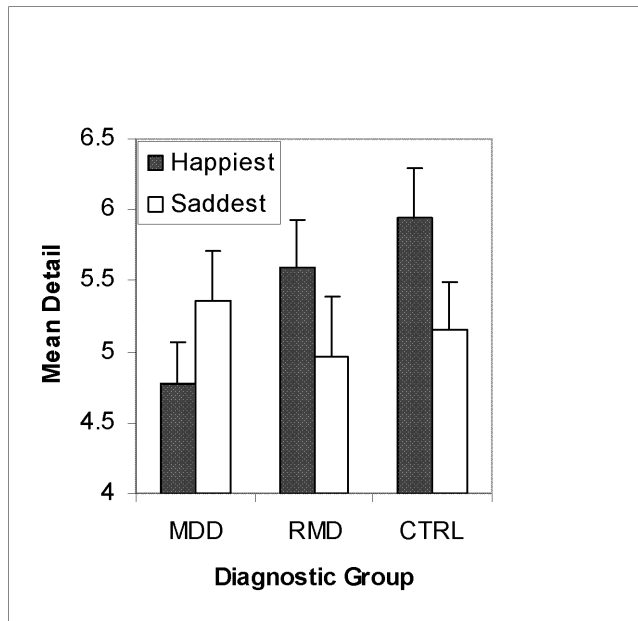
Figure 1.   Mean detail of participants' happiest and saddest event memories.

group revealed that depressed individuals had less difficulty retrieving their saddest event memories than their happiest event memories, $t(25) = 3.21$, $p <$ .01, whereas neither the formerly depressed participants nor the healthy controls exhibited differences in retrieval difficulty as a function of event valence (formerly depressed: $t(18) = 1.45$; healthy controls: $t(28) = 1.42$, both ps > .05. Depressed persons' relative ease of retrieving sad memories is more consistent with the mood-congruency hypothesis than with the overgeneral memory hypothesis (which predicts that depressed individuals should exhibit avoidance of sad material). Again, formerly depressed and healthy control subjects exhibited very similar patterns of performance when retrieving their event memories (see Figure 2). Overall, therefore, the data appear to fit the mood-congruency hypothesis better than they do the overgeneral memory hypothesis.

Memory emotionality

A repeated measures ANOVA conducted on the emotionality ratings yielded a nonsignificant main effect for group, $F(2, 71) < 1$. The group by event valence interaction predicted by the mood-congruency hypothesis, however, was significant, $F(2, 71) = 8.34$, $p = .001$. Planned contrasts revealed that whereas depressed participants' happiest event memories were less emotional than were
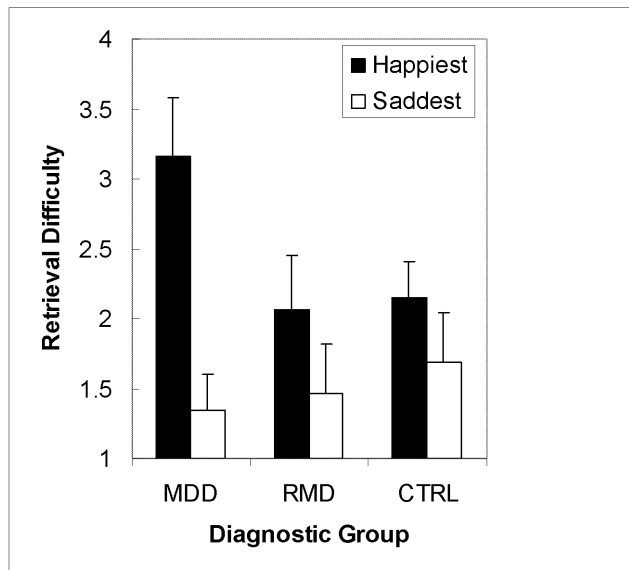
Figure 2.   Mean retrieval difficulty for participants' happiest and saddest event memories.

the happiest event memories of the other groups, $F(1, 70) = 4.82$, $p < 05$, depressed participants' saddest event memories were nonsignificantly more emotional than were the other groups, $F(1, 70) = 2.48$, $p = .15$. Finally, formerly depressed and healthy control participants exhibited similar levels of emotionality for the happy event; for the sad event, however, formerly depressed individuals exhibited marginally more emotional memories than did the healthy controls: $t(46) = 1.94$, $p < .06$. In fact, unlike the findings obtained for the other two domains, formerly depressed individuals more closely resembled currently depressed individuals than healthy controls in their emotionality profile (see Figure 3).

DISCUSSION

Previous investigators have found that, when presented with standardised cue words, depressed individuals articulate contextually impoverished, overgeneral autobiographical memories. To provide a robust test of overgeneral memory in MDD, the present study used an idiographic memory testing paradigm that was postulated to invoke mood-congruent memory processing. Consistent with the mood-congruency hypothesis, interactions were observed between group and event valence across all domains. Compared to the happiest memories of non-depressed participants, depressed individuals' happiest memories were less specific, harder to retrieve, and less emotional. In contrast, depressed individuals'
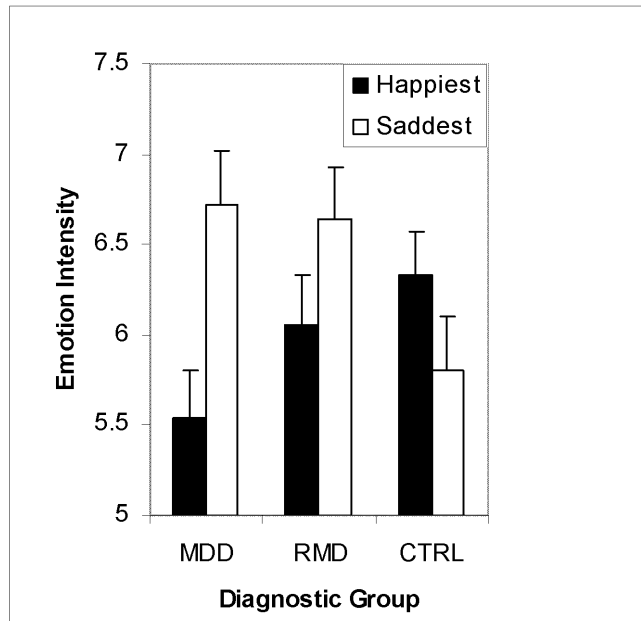
Figure 3.   Mean emotionality of participants' happiest and saddest event memories.

saddest memories were comparable to nondepressed participants' saddest memories in specificity, retrieval difficulty and emotionality. Although depressed persons did not differ reliably from the other groups in sad memory performance, it is noteworthy that the pattern of means (greater specificity, easier retrieval, and greater emotionality in MDD) tilted away from the overgeneral memory hypotheses in all cases. Finally, and consistent with the mood-congruency hypothesis, the memory performance of formerly depressed participants largely resembled that of healthy controls, adding to a body of research suggesting that, in the absence of a priming manipulation, cognitive functioning normalises with symptomatic resolution of depression (e.g., Gotlib & Cane, 1987).

In the idiographic memory cue paradigm, therefore, current depression appeared to strongly reduce the accessibility of emotionally salient, happy autobiographical memories and, to a lesser extent, to increase the accessibility of sad material. The deficits demonstrated in this paradigm by depressed individuals for their happiest event memories are particularly notable because: (1) highly meaningful happy events were solicited; (2) an interviewer provided repeated opportunities for elaboration; and (3) there was no time pressure. It appears from the present results that the difficulties experienced by depressed individuals in recalling happy autobiographical memories are substantial and are unlikely to be bound to the cue-word testing paradigm.

Evidence that depressed persons exhibit mood-congruency for auto-biographical memory when presented with idiographic cues suggests that there are important boundary conditions around the phenomenon of overgeneral memory in MDD. It remains for future research to demarcate these boundaries more precisely. Our idiographic memory paradigm intentionally diverged from the cue-word paradigm in several respects (e.g., cue meaningfulness, time pressure, opportunities for memory elaboration). It will be useful in further work to utilise parametric variations of each of these factors (ideally using within-subject designs) to elucidate the conditions under which depressed individuals are, and are not, characterised by overgeneral memory.

It is important to consider the degree to which depressed persons' mood-congruent memory performance might be attributable to factors other than recall. One possible explanation of our data concerns the recency of memories (e.g., depressed individuals' sad events occurred more recently than the other groups). In this context, it is important to note that there were no group differences in the recency of happy or sad memories in our data (see footnote 1). A second possibility is that the memory performance observed in depressed persons reflects differential exposure of depressed and nondepressed individuals to strong positive and negative life events. For example, it is possible that depressed individuals do not experience potent happy events to the same degree as do nondepressed controls. Although differential exposure to happy events may have contributed to the difficulty with which the depressed participants retrieved memories of happy events, we should point out that the formerly depressed individuals (who presumably share the currently depressed individuals' reduced lifetime exposure to happy events) performed like the healthy controls. Similarly, it is also possible, if not likely, that currently and formerly depressed individuals have been exposed to more severe negative life events than have healthy controls. If this is the case, this differential exposure to severe negative events could explain the higher emotionality ratings given to the saddest memories of both the formerly and the currently depressed participants in the present study. The influence of life event history on autobiographical memory performance remains an important issue for future work in this area to address. For this reason, we believe that the addition of objective measures of life event histories, such as the Life Events and Difficulties Schedule (Brown & Harris, 1978) would be a particularly useful addition to assessments of auto-biographical memory performance. Finally, this study was cross-sectional in nature, but a critical future direction for this area of research is the exploration of the etiological significance of idiographic autobiographical memory perfor-mance. Consistent with this notion, early findings in our laboratory using idiographic memory cues have suggested that this approach is indeed promising for predicting the course of MDD (Rottenberg et al., 2005).

In sum, this study provided a robust test of the overgeneral memory hypothesis and had several notable strengths. Memory was probed in carefully

diagnosed participants using a novel idiographic memory procedure designed to broaden the assessment of autobiographical memory and address alternative interpretations of findings obtained with cue-word paradigms. Across all domains, the results obtained with this battery were inconsistent with the overgeneral memory hypothesis and consistent with an alternative mood-congruency account of memory functioning. In extending our understanding of memory functioning in depression, we can draw three important conclusions from the results of this study: first, there are significant boundary conditions around the phenomenon of overgeneral memory in MDD; second, meaningful memory cues may be particularly important triggers of mood-congruent memory processing in this disorder; and, finally, the field would be well served by additional work designed to elucidate the precise conditions under which depressed persons' autobiographical memory exhibits overgeneral or mood-congruent characteristics.

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