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The influence of cognitive and emotional suppression on overgeneral autobiographical memory retrieval

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ABSTRACT

Over-general autobiographical memory (OAM) retrieval is characterized by retrieval of categoric autobiographical memories. According to the CarFAX model, this tendency may result from avoidance which functions to protect the person against recalling details of upsetting memories. This study tested whether avoidance strategies impact on the ability to retrieve specific autobiographical memories. Healthy participants ($N = 51$) watched a negative video clip and were instructed to either suppress any thought (thought suppression), suppress any feeling (emotional inhibition), or think and feel naturally (controls) in response to the video. Participants then completed the Autobiographical Memory Test. Participants engaging in either thought suppression or emotional inhibition retrieved fewer categoric autobiographical memories than controls. These findings challenge the affect regulation component of the CarFAX model insofar as they suggest that regulatory strategies that aim to reduce awareness of adverse emotional memories do not necessarily lead to increased recall of categoric autobiographical memories.

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1. Introduction

There is strong convergent evidence that psychological disorders are characterized by overgeneral autobiographical memory (OAM). This retrieval style involves the tendency to retrieve categoric personal memories from one's past (e.g. '*all the times that I've failed my exams*', '*my holidays in summer were all great as a child*'). This pattern has been observed in those suffering from suicidality (William & Broadbent, 1986), complicated grief (Golden, Dalgleish, & Mackintosh, 2007), major depressive disorder (Wilhelm, McNally, Baer, & Florin, 1997), posttraumatic stress disorder (Harvey, Bryant, & Dang, 1998), eating disorder (Dalgleish et al., 2003), and borderline personality disorder (Jones et al., 1999). Further, this overgeneral retrieval style has been associated with other maladaptive functioning, such as deficits in problem-solving (Evans, Williams, O'Loughlin, & Howells, 1992), reduced ability to plan for the future (Williams et al., 1996), and engagement in maladaptive coping strategies (Jones et al., 1999).

Williams and his colleagues (Williams et al., 2007) have proposed the CarFAX model to explain OAM retrieval. This model posits that the retrieval search is impaired prior to locating specific memories by three possible mechanisms: (a) *ruminating* on why adverse events occur, (b) *avoiding* reminders of these negative events to regulate more positive affective responses, or (c) *depletion of executive cognitive resources* available to regulate the retrieval of specific memories. Whereas many studies have examined the impact that rumination (e.g. Sutherland & Bryant, 2007; Watkins & Teasdale, 2001) and the depletion of executive cognitive resources (e.g. Dalgleish et al., 2007) have on the manifestation of OAM, relatively few studies have examined the role of affect regulation or avoidance in the retrieval of OAMs. CarFAX posits that one may abort the retrieval

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search for a personal memory prematurely as a means of regulating unwanted affective states linked to the memories. Some support for the role of avoidance or affect-regulation in OAM comes from correlational findings that individuals who are less specific in their memory recall score higher on a range of avoidance assessments, including behavioral avoidance, experiential avoidance, and thought suppression (Hermans, Defranc, Raes, Williams, & Eelen, 2005). Other support comes from evidence that less specific autobiographical memories of negative events are associated with less affective response (Raes, Hermans, de Decker, Eelen, & Williams, 2003).

2. Thought suppression

One common form of cognitive avoidance involves thought suppression, which requires deliberate inhibition of a specific thought. There is convergent evidence that attempted suppression leads to the paradoxical effect of increased occurrence of the suppressed thought, either during the period of attempted suppression or after suppression has terminated (Wenzlaff & Wegner, 2000). Whereas some studies have reported the initial enhancement effect (e.g. Wegner, Schneider, Carter, & White, 1987), others have noted the subsequent rebound effect (e.g. Davies & Clark, 1998; Harvey & Bryant, 1998), others have found neither of the two effects (e.g. Kelly & Kahn, 1994; Muris et al., 1993), and others have found instead a decrease in the to-be-suppressed stimuli (e.g. Roemer & Borkovec, 1994). One meta-analysis of 28 studies concluded that thought suppression is associated with a small to moderate rebound effect (Abramowitz, Tolin, & Street, 2001).

2.1. Thought suppression and the ironic process theory

The prevailing model of thought suppression is the ironic process theory, which posits that thought suppression involves two processes (Wenzlaff & Wegner, 2000). The *operating process* is a conscious, effortful process that searches for mental contents consistent with the desired state. This process searches for other mental materials as substitutes to engage the person's thinking away from the to-be-suppressed thoughts. The other is the *monitoring process,* which is less effortful and occurs simultaneously to inspect consciousness for traces of the to-be-suppressed stimulus so that the operating process can be re-engaged to maintain suppression. Given that the operating process is effortful, it can be truncated in conditions where the person's cognitive resources are depleted by other competing cognitive tasks. Accordingly, ironic control theory holds that the primary reason attempted suppression is unsuccessful is because under conditions of cognitive load or cessation of suppression, the monitoring process heightens sensitivity to the unwanted thought. Consistent with this proposal, increased cognitive load interferes with suppression (Wegner, Erber, & Zanakos, 1993).

2.2. Thought suppression and OAM retrieval

Several studies have examined the effect of attempted thought suppression on the recall of autobiographical memories. Dalgleish and Yiend (2006) asked dysphoric adults to recall a specific negative past event which they were then either asked or not asked to suppress. They found that those suppressing the target memory showed a faster recall of memories of other negative past experiences. It should be noted, however, that Dalgleish and Yiend (2006) examined the effect of suppression on the accessibility, and not the specificity, of autobiographical memories. Extending on this finding, Neufeind, Dritschel, Astell, and MacLeod (2009) focused on a non-clinical sample and examined how suppressing memories related to a distressing video clip affected recall of other autobiographical memories. This study found that greater engagement in thought suppression significantly correlated with (in Study 1), and directly engaging in the suppression of thoughts of a distressing video led to (in Study 2), faster recall of other memories of negative experiences. Both of these studies concluded that the paradoxical effects of thought suppression are not limited to the recall of target memories but also the recall of other autobiographical memories. If suppression is conceptualized as a form of affect regulation, it appears that both the Dalgleish and Yiend (2006) and the Neufeind et al. (2009) studies do not support the Car FAX prediction regarding the affect regulation component of the model. However, neither of these studies specifically compared the predictions of ironic control and CarFAX model in relation to the impact of thought suppression on specific autobiographical memories retrieval. It is worth noting that the effort associated with avoidance is purportedly different between the CarFAX and Ironic Control theories. Whereas the ironic control theory posits an explicitly active avoidance strategy that is cognitive demanding, CarFAX suggests that is a more passive process that can become habitual over time such that it more effortlessly limits the extent to which the retrieval search is completed. The distinction between these two approaches appears blurred, however, because Williams, Watts, MacLeod, and Mathews (1997) also state that although "it is possible that this functional memory strategy is governed by consciously controlled processes, we do not exclude the possibility that it is a response that is shaped without the involvement of conscious monitoring (p. 134)." That is, it is uncertain the extent to which the avoidance functions within the CarFAX model are passive or active. In either case, the CarFAX and Ironic Control theories appear to propose distinct hypotheses regarding avoidance insofar as CarFAX predict that avoidance should lead to the recall of fewer specific autobiographical memories. In contrast, ironic control theory predicts that avoidance in the form of suppression should paradoxically lead to greater awareness of related autobiographical memories. Although previous studies have only demonstrated faster recall of memories following suppression, rather than more specific recall (Dalgleish & Yiend, 2006; Neufeind et al., 2009), we propose that the act of