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Putting congeniality effects into context: Investigating the role of context in attitude memory using multiple paradigms

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ABSTRACT

In three experiments, we evaluated remembering and intentional forgetting of attitude statements that were either congruent or incongruent with participants' own political attitudes. In Experiment 1, significant directed forgetting was obtained for incongruent statements, but not for congruent statements. In addition, in the remember group, recall was better for incongruent statements than congruent statements. To explain these findings, we propose a *contextual competition at retrieval hypothesis*, according to which incongruent statements become more strongly associated with their episodic context during encoding than do congruent statements. At the time of retrieval, incongruent statements compete with congruent statements due to the greater amount of contextual information stored in their memory trace. We tested this hypothesis in Experiment 2 by studying free recall of congruent and incongruent statements in a mixed-pure list design. In Experiment 3, memory for incongruent and congruent statements was tested under recognition test conditions that varied in terms of how much direct retrieval of contextual details they required. Overall, the results supported the contextual competition hypothesis, and they indicate the importance of context strength in both the remembering and intentional forgetting of attitude information.

Introduction

Imagine that you are following a political candidate who you think has been impressive in a current campaign. You have listened to this candidate speak, and are well-informed about this individual's views on important political issues. Unfortunately, you later learn of a scandal that this candidate was involved in, and you decide that you no longer want to vote for this candidate. Furthermore, you feel that you should attempt to forget all the information you have learned about this candidate not only because it is no longer relevant, but also because it could help you better learn the views of other candidates who are still contending for your vote. In situations like this, motivated forgetting of unwanted information could serve an adaptive role by allowing for the formation of more accurate impressions about other candidates.

In this paper, we investigated whether people's pre-existing attitudes influence what they later intentionally forget from presented information – that is, are they more likely to forget information that is congruent with their attitudes? Are they more likely to forget information that is incongruent with their attitudes? In addition to intentional forgetting, we also examined whether people are more likely to remember attitude-congruent or attitude-incongruent information when the goal is to maintain that information in memory rather than to discard it from memory. The directed forgetting paradigm, which is described in the next section, provides an excellent opportunity to investigate both of these questions simultaneously.

Directed forgetting procedure, basic findings, and mechanisms

In the laboratory, intentional forgetting has often been studied using the directed forgetting procedure (e.g., Bjork,

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LaBerge, & LeGrand, 1968). In this paper, we have used list-method directed forgetting, which involves presenting participants two lists of items to learn for a later memory test. Following presentation of List 1, participants are given a cue to either forget or to remember all List 1 items. Participants in the remember group are informed that List 1 contained only the first half of items they will need to remember later, while participants in the forget group are informed that they will not be tested on the List 1 items later, and therefore should forget them. All participants then study a second list of items, after which they are asked to recall items from both lists.

Typically, such procedures lead to robust memory impairment of List 1 items by the forget group compared to the remember group – known as the *costs* of directed forgetting. In addition, List 2 items are sometimes better remembered by the forget group than the remember group – known as the *benefits* of directed forgetting (for reviews, see Bäuml, 2008; Johnson, 1994; MacLeod, 1998). The benefits appear to be less robust and are not always observed together with the costs (e.g., Conway, Harries, Noyes, Racsmány, & Frankish, 2000; Pastötter & Bäuml, 2010; Sahakyan, Delaney, & Goodmon, 2008; Sahakyan, Delaney, & Kelley, 2004; Whetstone, Cross, & Whetstone, 1996; Zellner & Bäuml, 2006).

Early explanations of directed forgetting proposed an inhibitory account whereby the forget cue produces the costs by inhibiting List 1 items; consequently, the inhibited List 1 items produce less interference on List 2, leading to the benefits (e.g., Bjork, 1989; Bjork & Bjork, 1996; Geiselman, Bjork, & Fishman, 1983). However, recently, the contextual explanation has become more popular. According to this account, directed forgetting arises from a mismatch between the retrieval context and the encoding context of List 1 items (Lehman & Malmberg, 2009; Sahakyan & Kelley, 2002; Spillers & Unsworth, 2011). Specifically, according to Sahakyan and Kelley (2002), the forget cue motivates participants to shift their mental context between the lists by engaging in thoughts unrelated to the experiment. During the test, the retrieval context better matches the encoding context of List 2 than List 1, causing impaired recall of List 1 items. The benefits occur because of reduced interference, which arises as a consequence of encoding the lists with different contextual cues. The contextual account brings directed forgetting into the family of effects that are modeled by contextual mechanisms in global memory models like SAM and REM (Lehman & Malmberg, 2009, 2011).

In response to dissociations between the costs and the benefits of directed forgetting, two-factor accounts have also been proposed. These accounts attribute List 1 costs to either inhibition or context change, and they explain List 2 benefits by an improvement in List 2 encoding that occurs either as a result of adopting better study strategies during List 2 learning (Sahakyan & Delaney, 2003, 2005) or due to a reset of encoding processes during List 2 (Bäuml, Hanslmayr, Pastotter, & Klimesch, 2008; Pastötter & Bäuml, 2010).

Directed forgetting has been examined with a variety of stimuli including letters (Muther, 1965), unrelated words (for a review, see MacLeod, 1998), emotional words (e.g., Wessel & Merckelbach, 2006), stereotypic trait words (e.g., Macrae, Bodenhausen, Milne, & Ford, 1997), pictures (e.g., Basden & Basden, 1996;), sentences (e.g., Geiselman, 1974), motor actions (e.g., Burwitz, 1974), behavioral descriptions given during an impression formation task (e.g., Golding, Fowler, Long, & Latta, 1990), and autobiographical memories (e.g., Joslyn & Oakes, 2005). While a wealth of studies have demonstrated that people are capable of controlling their own forgetting by reducing the accessibility of unwanted information, there is virtually no research examining whether people's preexisting attitudes influence what type of information they are likely to intentionally forget. For instance, after hearing a debate, one may decide that they do not want to vote for either the candidate that represented their own party or the candidate representing the opposing party. In this instance, will the voters be able to successfully forget the information they learned about both candidates? Or instead, will their political attitudes influence which candidate's views they are able to successfully forget? In other words, are they more likely to forget information that is consistent or inconsistent with their existing views? The current research aims to answer these questions.

Although two prior studies examined directed forgetting of stereotypic trait words (e.g., Araya, Akrami, & Ekehammar, 2003; Macrae et al., 1997), they do not address how preexisting attitudes affect directed forgetting because research on stereotype memory typically investigates effects associated with the *expectancy* of stereotype information rather than preexisting attitudes (for a review, see Rojahn & Pettigrew, 1992; Stangor & McMillan, 1992). For example, both Araya et al. (2003) and Macrae et al. (1997) implicitly primed a specific stereotype category prior to the presentation of the stereotypic trait words, and then examined whether directed forgetting varied for stereotype-congruent vs. incongruent trait words. Overall, participants in both experiments were able to forget words that were related to the primed stereotype, however, neither of these studies investigated whether participants actually held the relevant stereotypic beliefs, and if so, how those attitudes affected the magnitude of directed forgetting. Therefore, these studies remain silent about the relationship between pre-existing attitudes and directed forgetting. Our goal was to investigate the effects of explicit attitudes on directed forgetting by presenting participants with various statements that were either consistent or inconsistent with their political party attitudes.

Research on memory for attitudes has focused on how attitudes affect memory when the goal is to remember (rather than forget such information). The earliest work often found improved memory for information that was consistent or congruent with one's own beliefs – known as the *congeniality effect* (e.g., Levine & Murphy, 1943). However, numerous studies since then have produced either null congeniality effects (e.g., Eagly, Kulesa, Brannon, Shaw, & Hutson-Comeaux, 2000; Greenwald & Sakumura, 1967), or even anti-congeniality effects, with enhanced memory for attitude incongruent rather than congruent information (e.g., Cacioppo & Petty, 1979). A meta-analysis investigating memory for attitude information confirmed that the congeniality effect is highly inconsistent and the