



“Know thyself!” The role of idiosyncratic self-knowledge in recognition memory[☆]

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Abstract

In two experiments, it is demonstrated that knowledge about idiosyncratic aspects of one's own memory performance may become the basis for inferences in recognition. In the first study, beliefs about the effect of the encoding conditions on memory were experimentally induced by varying the memory task such that participants' performance was superior either for high-frequent or for low-frequent words. As a consequence, participants tended to accept test words that belonged to the category that they were led to believe to be less memorable. In the second study, idiosyncratically based beliefs were compared to nomothetically based beliefs and it was shown that idiosyncratic knowledge had a predominant influence. These sets of findings suggest that to understand reconstructive mechanisms in recognition, idiosyncratic knowledge (or beliefs) about one's own memory must be taken into account.

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In the history of psychology, the act of remembering has been understood in at least two different ways (see Koriat & Goldsmith, 1996). Traditionally (Ebbinghaus,

1895/1964; Locke, 1894/1975), remembering was seen as a search for a specific piece of information that was assumed to be deposited at a particular place. In this view, a person trying to remember was portrayed as a mental scout trying to find the trace to the location where the information was hidden. Within this metaphor of the memory as a “storehouse,” research interest has primarily focused on memory structure and the consequences of that structure for successful retrieval (e.g., Anderson & Bower, 1973; Squire, Knowlton, & Musen, 1993; Tulving, 1985).

Although this conceptualization has generated a great wealth of insights about human recollection, it stands in sharp contrast to an alternative view that depicts the person trying to remember in a more constructive role. Most prominently, Bartlett (1932) contradicted the thesis that remembering was the finding of “fixed, lifeless, and fragmentary traces.” Instead, he described

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it as an act of “reconstruction or construction” (p. 213) undertaken to make sense of one’s subjective experience. The most important tool in this activity is the knowledge about the world that individuals have acquired.

The interplay between subjective experiences and world knowledge has received much attention from research on causal attribution. As pioneers in this area, Schachter and Singer (1962) have argued that specific emotions may result from the explanation of nonspecific autonomic arousal when the situation provides cues about potential causal determinants. Using their logic, Schwarz and Clore (1983; see also Schwarz & Clore, 1996) demonstrated that basic subjective experiences may be informative about more complex attitudes to the extent that the informative value of such experiences is not undermined by an alternative causal attribution. In one study, for example, Schwarz and Clore (1983) found that participants used their current mood to infer the quality of their life as a whole. Such an inference, however, was only drawn when the experienced affect was not attributed to an irrelevant cause, such as the prevailing weather conditions.

These relations between subjective experience and objective knowledge suggest that subjective experiences such as arousal, mood, or familiarity are by themselves not specific with respect to the inferences they afford. Rather, they must be supplemented with knowledge. For the domain of memory, the argument resembles that of Bartlett (1932) who reasoned that knowledge about the world is necessary to make sense of one’s recollective experiences (Tulving, 1983). Extending Bartlett’s thesis, we argue that people’s knowledge about themselves is equally important. Specifically, we propose that knowledge about the determinants of a recollective experience is an crucial element when people re-construct the past they have experienced.

The importance of such inferences has been demonstrated for decisions about the source of a recollective experience (see Johnson, Hashtroudi, & Lindsay, 1993; Johnson & Raye, 1981). For example, to decide whether such an experience was caused by actual perception or by mere imagination, people generated judgments that were based on peripheral (e.g., spatial and temporal) characteristics of the representation that afforded inferences about the source of the experience.

Attributional inferences are most likely under conditions in which the circumstances fail to provide a plausible cause (e.g., Schachter & Singer, 1962; see also, Bless & Strack, 1998). This is rarely the case in standard recognition tasks that only require *yes* or *no* responses. In such situations, however, ambiguity and the necessity of attributional inferences may depend on the quality of the recollective experience. That is, when such experiences are weak or unclear, inferences may become necessary to decide whether a stimulus has been presented. To draw such inferences, people must apply

their knowledge about their own memory. For example, to decide whether the absence of a recollective experience is due to the fact that the stimulus was not presented, people may use knowledge about whether they *would have* recognized a particular item, had it been presented.

Although it has been frequently demonstrated that metamnemonic knowledge may regulate learning (e.g., Nelson, 1996), there is little evidence that basic recognition performance may be subject to metamnemonic knowledge. One relevant set of studies was conducted by Strack and Bless (1994) who varied the memorability (Brown, Lewis, & Monk, 1977) of the recognition items. Specifically, it was expected that highly memorable distractor items will be more likely rejected than less memorable distractors. Because of the mnemonic experience that is elicited by target items, no effect of memorability was predicted for them. To test this notion, participants were led to believe that they would have remembered a test stimulus by increasing the salience of certain items. Under incidental learning conditions, participants were presented a series of slides that depicted 30 tools and five additional objects not belonging to this category. Because the tools were in the majority, it was assumed that the nontools would be distinct and improve recognition (see Von Restorff, 1933). If participants are implicitly aware of this influence, they may use this metamnemonic knowledge to infer that distinct or salient stimuli should be held more memorable than nonsalient ones. Such an inference should be particularly likely when participants have no recollective experience of the prior presentation of the item. As a consequence, salience should be most likely to increase the rejection of distractor items because participants know they would have recognized the stimulus had it been actually presented. Obviously, a recollective experience becomes inaccessible over time and thus targets will underlie the very same processes after long delays. However, research on savings from relearning and other implicit measures has found that information can be recalled after quite long periods (see Nelson, 1978). Therefore, distractors for which a recollective experience does not exist are the clearest case for testing our hypothesis.

The results of these studies supported this prediction. Whereas the recognition of target stimuli was not affected by the salience manipulation, the rejection of distractors was clearly a function of their salience. That is, while approximately a third of the nonsalient distractor tools were falsely recognized, all salient nontools were rejected when they had not been presented before. Moreover, participants did this with high confidence. This outcome proved to be robust; it was observed in two studies and was unaffected by the use of the definite article that was previously found to influence recognition responses (e.g., Dodd & Bradshaw, 1980; Loftus, 1975).

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