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Fuzzy-trace theory and source monitoring An evaluation of theory and false-memory data

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Abstract

Fuzzy-trace theory and the source-monitoring framework are evaluated with respect to recent data on false memory. Lindsay and Johnson discuss key findings generated by fuzzy-trace theory from a source-monitoring perspective, such as *independence* between recognition judgments of true and false memories, increases in false recognition through *mere-memory testing*, vivid false recognition—phantom recollection—through *repeated cuing of gist*, and *false-recognition reversal*, in which semantically related items are misrecognized less often than unrelated items [Learn. Individ. Differ. 7 (1995) 1; J. Exp. Child Psychol. 71 (1998) 194; Learn. Individ. Differ. 9 (1997) 95]. Lindsay and Johnson qualify core assumptions of source monitoring (e.g., source similarity is said to increase, decrease, and have no effect on source confusions and false memories; records of internal cognitive operations might not discriminate reality from self-generated representations) to accommodate these effects, as well as opposite effects. Although the power and scope of the source-monitoring perspective is evident, their approach suffers from limitations of imprecision and unfalsifiability. Nevertheless, they are to be commended for actively engaging data generated by alternative perspectives and for advancing sorely needed theoretical understanding of false-memory effects. © 2000 Elsevier Science Inc. All rights reserved.

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1. Introduction

Reyna and Lloyd (1997) set out to compare and evaluate explanations offered by contemporary theories of false memory: constructivism, source monitoring, and fuzzy-trace

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theory. Lindsay and Johnson are to be commended for continuing that dialogue and actively engaging some of the data generated by alternative perspectives, discussed in Reyna and Lloyd. Since new empirical effects have far outpaced theoretical understanding in false-memory research, much more of this sort of comparison is needed.

Although there are certainly points of contrast between the source-monitoring framework (SMF) and fuzzy-trace theory, which are apparent in both our original paper and the commentary, it must be stated categorically that Reyna and Lloyd (1997) did not claim that “SMF holds that source similarity is the sole determinant of memory errors,” nor did we claim that “SMF holds that familiarity is the sole determinant of errors in the eyewitness misinformation paradigm,” nor did we ignore the role of semantic features in the source-monitoring framework. Naturally, we did not claim that there were *multiple sole* determinants of source-monitoring predictions, and the role of semantic similarity in the source monitoring framework was discussed repeatedly in Reyna and Lloyd.

Semantic similarity in the source monitoring framework was explicitly discussed (as one of many sources of similarity along with other determinants of responding in false-memory paradigms) on page 111 [“As with constructivism, source monitoring predicts that semantic similarity between unrepresented and presented items should increase false recognition (because any resemblance to presented items should increase source confusions.”)], and again explicitly on pages 112, 114, and 117. Indeed, the description of factors (semantic and otherwise) taken into account in the source monitoring framework given by Lindsay and Johnson in their section “Brief Introduction to the Source Monitoring Framework” agrees with the description given in Reyna and Lloyd (1997), and has been published widely in other sources that Reyna and Lloyd relied on. Of course, any special status accorded to semantic factors does not spring naturally out of the source monitoring framework where semantic similarity is only one of a multitude of factors. Because of the centrality of the concept of “gist” in fuzzy-trace theory, however, a special emphasis on semantic factors is appropriately attributed to fuzzy-trace theory.

This misunderstanding of our characterization of the source monitoring framework could have been caused by the fact that we did not use all factors equally in predicting different effects with different tasks. Using all the same factors, including irrelevant ones, for different situations would surely have been a mischaracterization of the source monitoring framework. Instead, our approach was to generate principled predictions based on relevant mechanisms in the source monitoring framework in order to account for the range of effects observed in different false-memory paradigms. In that regard, Lindsay and Johnson’s commentary represents a major contribution in extending their approach to new phenomena generated outside their theoretical penumbra, specifically, to effects predicted and confirmed by applying fuzzy-trace theory.

2. What does the source monitoring framework predict?

The question that concerned Reyna and Lloyd (1997) was: what mechanisms of contemporary theories, such as fuzzy-trace theory and the source monitoring framework, can account for known false-memory effects and predict new effects? This question is even

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