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The semantic/episodic distinction: The case for social information processing

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Abstract

The directed-forgetting paradigm was used in order to dissociate episodic from semantic processes in an impression formation task. Results demonstrate that incongruent behaviors are more prone to manipulations that disrupt episodic memory, whereas congruent behaviors are unaffected by such manipulations. The results suggest that the distinction between episodic and semantic memory processes is central for the understanding of social information processing. An explanation is put forward according to which the incongruency effect, a signature effect of impression formation, is due to an episodic encoding advantage for incongruent behaviors because of their semantically isolated nature, and their impoverished semantic encoding.

Keywords: Social encoding; Impression formation; Incongruency effect; Social semantics; Episodic advantage; Retrieval inhibition; Directed forgetting; Episodic memory; Semantic memory; List position

Introduction

The ability to make sense of others using limited information is a crucial skill. When interacting for the first time with another individual, we must form an initial impression based on the available information which pulls together the individual's central characteristics. The study of how we process, store, and retrieve this social information is crucial for understanding how one goes from perceiving a set of behaviors to forming an evaluative and general personality impression.

In Hastie and Kumar's seminal study (1979), participants were presented with a list of behaviors preceded by an ensemble of traits, and were asked to form an impression of a social target from the information provided. Behaviors in the list could be congruent, incongruent or neutral with respect to the preceding traits. After reading the behaviors, participants were asked to write down as many behaviors as they could remember. A signature of impression formation processes has been the observation that incongruent behaviors are recalled better than neutral or congruent behaviors—the incongruency effect (e.g., Hastie & Kumar, 1979; for a review see Stangor & McMillan, 1992).

The classical framework

Based on their research on the incongruency effect, Hastie and Kumar (1979), and later Srull (1981); for a more recent model see Garcia-Marques and Hamilton, 1996, proposed an encoding and associative memory search model, where behaviors are encoded first in terms of the activated expectancy, creating a network of behaviors connected to the person node (i.e., a node that involves the categorical expectancy). The strength of these connections depends on the congruency of the specific behavior with the activated expectancy. Further, because incongruent items are not easily integrated into the personality

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impression, they require more extensive processing in order to be reconciled with other encoded information. Consequently, incongruent events will be kept in working memory where they will establish interepisodic associative linkages with other behaviors. Finally, each behavior is transferred along with its linkages to a location in long-term memory (Srull, 1981).

According to Garcia-Marques and colleagues (Garcia-Marques & Hamilton, 1996; Garcia-Marques, Hamilton, & Maddox, 2002), the retrieval routine that underlies free recall is also important for the understanding of the incongruency effect. This routine is *exhaustive* and *non-selective* in terms of content; it begins at the person node, and flows down one pathway until it reaches one behavior. After that, the search continues from that node to traverse the associative pathways until another behavioral episode is reached. When no new items are discovered, the search process will return to the person node and follow another path. Traversing the associative pathways during the process of behavior retrieval will more often lead to incongruent behavioral episodes than congruent ones because the former have denser inter-item linkages than the latter due to reconciliatory processing. Garcia-Marques and Hamilton also argued that when participants are probed to look for a selective target (e.g., estimate the frequency of a certain type of behavior), the retrieval mode adopted is *heuristic*, and *selective* in content; it is dependent on how strongly associated the items are with the person node. This heuristic retrieval routine can explain the robust pattern of the expectancy-based illusory correlations effect—because congruent items are more strongly connected to the person node, this heuristic retrieval mode will lead to the overestimation of congruent items over incongruent items. This framework has been extensively corroborated (e.g., Garcia-Marques et al., 2002; Hastie, 1980, 1988; Sherman & Hamilton, 1994; Srull, 1981; Srull, Lichtenstein, & Rothbart, 1985). Crucially, the sequence of behavioral recall output seems to comply with the predictions of the model. After recalling a congruent item, the probability of recalling an incongruent item is greater than the probability of recalling a congruent item (Srull, 1981).[1]

An alternative framework

Although the classical framework has been established as the received view, alternative proposals have been posited that, directly or indirectly, speak to the issue of the processing of social information (e.g., Johnston & Hawley, 1994; Reed Hunt & Lamb, 2001; Sherman, Lee, Bessenoff, & Frost, 1998). For instance, Reed Hunt and Lamb explained the isolation effect (i.e., better recall of isolated items) by appealing to a distinctive encoding advantage for isolated items in comparison to non-isolated ones. Similarly, Sherman et al. posited that congruent items are easily encoded due to their fit with the activated expectancy. More attentional resources are then available for the processing of incongruent items, which are harder to integrate into the impression due to their low conceptual fluency. The subsequent additional processing of incongruent items will strengthen their perceptual encoding, leading to better recall of these items.

The semantic/episodic distinction in social information processing

Shoben (1984) noted that the distinction between semantic and episodic memory should be more ubiquitous in social psychology frameworks, because the paradigms employed in social cognition might invoke these two memory systems differentially. Semantic memory refers here to the general knowledge that people hold about the world, from concepts to categories, whereas episodic memory refers to information about specific experiences defined in time and context (e.g., Schacter, Wagner, & Buckner, 2000). Extant frameworks do not seem to incorporate the semantic/episodic distinction. The classical framework asserts that this incongruency effect is principally due to the differential degree of encoding that congruent and incongruent items require (e.g., Hastie, 1988), and not due to major differences between the type of encoding that both behaviors motivate. An alternative framework holds that congruent and incongruent items require different types of encoding strategies. Although there are indications that the perceptual or distinctive processing proposed could be episodic in nature, it is not clear that this is the case.

In this paper, I will argue that the semantic/episodic distinction is central for the understanding of social information processing in general, and the incongruency effect in particular. It could be hypothesized that information will first be encoded in terms of its semantic fit with the activated expectancy. From this semantic processing, the semantically isolated nature of incongruent items will become evident, whereas congruent items will be assimilated into the personality impression. Moreover, the activated expectancy will interfere with the semantic encoding of incongruent items (Wigboldus, Dijksterhuis, & van Knippenberg, 2003). Incongruent items will then incur additional processing that will supply them with an encoding advantage of the type generally associated with episodic encoding, due to their isolated nature and their impoverished semantic encoding. I propose that it is this extended episodic encoding of incongruent items that is responsible for the better recall of incongruent items in tasks that tap into episodic recall.

This proposal makes clear predictions about the effect of manipulating the availability of episodic and semantic pro-

[1] Skowronski and colleagues (e.g., Skowronski & Welbourne, 1997) challenged the central assumption of the classical framework by showing that conditional probabilities, when corrected for chance, no longer present the typical pattern. Garcia-Marques (L. Garcia-Marques, personal communication, October 14, 2005) disputed these results. According to Garcia-Marques, correcting for differences in recall affects the conditional probabilities because they are not independent.