Research Article

Different routes to metacognitive judgments: The role of accuracy motivation ☆

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Abstract

The current research proposes that metacognitive difficulty affects product evaluation through two different routes—the feelings of ease-of-retrieval heuristic and the self-validation process. The findings across four laboratory experiments show that metacognitive difficulty can undermine product evaluation through the feelings of ease-of-retrieval heuristic among low-accuracy individuals, regardless of a perceived fit between expected and experienced difficulty. In contrast, the findings indicate that metacognitive difficulty can enhance (vs. undermine) product evaluation among high-accuracy individuals through the self-validation process when there is a perceived fit (vs. misfit) between expected and experienced difficulty. We suggest that individuals under high accuracy motivation are more likely than those under low accuracy motivation to draw less determined and more flexible interpretation of metacognitive difficulty in making their product evaluation.
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Introduction

Considerable research on metacognitive difficulty has demonstrated that individuals make their judgments on the basis of not only the content of information retrieved or processed but also the ease or difficulty with which information is brought to mind (see Greifeneder, Bless, & Pham, 2010, for a review). The prevailing view has been that metacognitive difficulty is interpreted as negative implications to what the content of information retrieved or processed predicts, thereby undermining the favorability of a judgment through the feelings of ease-of-retrieval (Schwarz,

2004). In accordance with this view, numerous past studies have shown that metacognitive difficulty is most likely to reduce attitude favorability under conditions of low processing motivation through the ease-of-retrieval heuristic because individuals' reliance on metacognitive feelings is much greater when processing motivation is low rather than high (Aarts & Dijksterhuis, 1999; Dijksterhuis, Macrae, & Haddock, 1999; Grayson & Schwarz, 1999; Haddock, 2002; Rothman & Hardin, 1997; Rothman & Schwarz, 1998).

On the other hand, the discrepancy-attribution hypothesis suggests that individuals may exhibit less determined and more flexible reliance on metacognitive difficulty depending on the extent to which actual metacognitive experiences deviate from expected subjective difficulty (Menon & Raghubir, 2003; Sela & Berger, 2012; Whittlesea & Williams, 1998, 2000). Metacognitive difficulty, for example, no longer undermines or even enhances attitude favorability when individuals are partaking in the subjective experiences of judging the average others (vs. the self) (Caruso, 2008) or casual acquaintances (vs. close friends) (Rothman & Hardin, 1997), generating reasons for a less-familiar

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car (vs. a more-familiar car) (Tybout, Sternthal, Malaviya, Bakamitsos, & Park, 2005), and recalling experiences from the distant past (vs. recent past) (Raghubir & Menon, 2005). Because no significant difference exists between expected and experienced metacognitive difficulty, metacognitive difficulty is less likely to be perceived as a diagnostic input for judgments under these circumstances.

More importantly, the self-validation hypothesis offers an alternative psychological mechanism by which metacognitive difficulty effects can occur—at least under high motivation condition (see Briñol & Petty, 2009, for a review). Unlike the traditional feelings of ease-of-retrieval heuristic framework, the self-validation hypothesis posits that the effects of metacognitive difficulty should be magnified under conditions of high rather than low processing motivation because the process of evaluating the validity of thoughts at a metacognitive level is involved (Tormala, Petty, & Briñol, 2002; Tormala, Falces, Briñol, & Petty, 2007). Likewise, Greifeneder and Bless (2007) postulate that metacognitive inferences are drawn through a two-stage backward inference process by which individuals are aware of subjective difficulty and then make further reflection upon experienced metacognitive difficulty. As such, it is highly likely that metacognitive difficulty is interpreted as an indication of the quality of content information rather than as an indication of the lack of information availability under high processing motivation.

In support of this view, Briñol, Petty, and Tormala (2006) have demonstrated that metacognitive difficulty can decrease or increase attitude favorability under conditions of high processing motivation depending on whether negative or positive meanings are inferred from the same metacognitive experience. In a related vein, recent studies have further demonstrated that positive metacognitive inferences are drawn when individuals are highly motivated to pursue goals (Kim & Labroo, 2011; Labroo & Kim, 2009) or when they are specifically evaluating the most novel and unique product for a special-occasion (Pocheptsova, Labroo, & Dhar, 2010). In summary, all the findings suggest that more flexible metacognitive inferences are likely to be drawn under high rather than low processing motivation because relatively more motivational resources are required for generating thoughts at a primary level of cognition and further evaluating the validity of thoughts at a metacognitive level (Petty, Briñol, & Tormala, 2002).

In the current research, we propose that metacognitive difficulty can affect product evaluation through two different routes: the feelings of ease-of-retrieval route under low processing motivation and the self-validation route under high processing motivation. We hypothesize that individuals under high processing motivation will draw either negative or positive metacognitive inferences through the self-validation process depending on whether there is a perceived fit between expected and experienced difficulty. In contrast, we hypothesize that individuals under low processing motivation will draw negative metacognitive inferences through the feelings of ease-of-retrieval heuristic regardless of the perceived fit. To test our hypotheses, the current research operationalizes processing motivation via the different levels of motivation for accuracy (e.g., Aarts & Dijksterhuis, 1999; Kühnen, 2010; Wänke & Bless, 2000), and varies the degree of a perceived fit between expected and experienced difficulty via

the different levels of target familiarity (e.g., Caruso, 2008; Tybout et al., 2005).

In the next sections, we develop our hypotheses about how metacognitive difficulty affects product evaluation through two different routes under low versus high accuracy motivation depending on a perceived fit between expected and experienced difficulty. Four laboratory experiments test our research hypotheses and explore a psychological mechanism underlying these effects. Finally, we discuss implications of our findings for future research on metacognitive judgments.

Theoretical background

In most of the prior research, metacognitive difficulty or cognitive disfluency has generally been interpreted as a negative indication to what the content of information retrieved or processed predicts (Greifeneder et al., 2010). The informational values drawn from metacognitive difficulty, however, can vary depending on the level of perceived discrepancy between expected and experienced difficulty, such that metacognitive difficulty affects judgments negatively only when the actual subjective experiences of difficulty significantly deviate from prior expectation about the level of subjective difficulty (Menon & Raghubir, 2003; Raghubir & Menon, 2005; Whittlesea & Williams, 1998, 2000). Rothman and Hardin (1997), for example, found that participants drew negative metacognitive inferences from cognitive disfluency to arrive at their judgment of close friends whereas their judgment of casual acquaintances was made on the basis of the content of behaviors retrieved from memory. Menon and Raghubir (2003) revealed that providing consensus information that described a judgmental task as being difficult, before information retrieval affected prior expectation about the level of subjective difficulty, reduced the informational value of the actual subjective metacognitive experiences, resulting in judgments that were based on the content of information retrieved.

Consistent with the discrepancy-attribution framework, Raghubir and Menon (2005) found that metacognitive difficulty decreased satisfaction ratings when dine-out instances were recalled from recent past memories whereas no significant difference was found when those instances were recalled from distant past memories. More recently, Sela and Berger (2012) found that metacognitive inferences led individuals to voluntarily spend more time and expand the consideration set further when making an unimportant decision for which subjective experiences of difficulty were unexpected, whereas no such metacognitive inferences were made for an important decision that was expected to be difficult. In similar vein, Tybout et al. (2005) demonstrated that metacognitive difficulty undermined the evaluations of a BMW and a Hyundai car among Koreans but enhanced the evaluation of a Saab, because the actual subjective experiences of difficulty in generating positive reasons were unexpected for the more-familiar BMW and Hyundai but already expected for the less-familiar Saab. Also, Caruso (2008) showed that participants rated themself as less creative and the average university student as more creative after retrieving six rather than two creative behaviors.