DUAL-PROCESS THINKING:
AUTOMATIC AND CONTROLLED INFLUENCES ON CONSUMER JUDGMENT

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ABSTRACT

Much research posits a dual-process approach to judgment (Epstein 1994; Kahneman and Frederick 2002; Stanovich and West 2000). While this approach is rather broadly accepted, direct empirical support for the view was lacking until recently (Ferreira et al. 2006). Using a process dissociation procedure (Jacoby 1991) paired with decision problems in an exclusion/inclusion format, Ferreira et al. (2006) provide support for the dual-process approach. The present study aimed to apply a similar methodology in examining automatic and controlled components of consumer decision making under different processing goals.

Background and Predictions

Existing research suggests that automatic, heuristic reasoning is a default while controlled, rule-based reasoning requires effort and deliberation (Tversky and Kahneman 1974). Some automatic reasoning usually will be present, but controlled reasoning can predominate with sufficient effort (Ferreira et al. 2006). Importantly, the nature of reasoning may vary but no decision is process-pure (Epstein 1994; Ferreira et al. 2006; Stanovich and West 2000). In making a decision, we expect processing goals to influence use of automatic and controlled processing.

H1: Individuals in an intuitive (rational) condition will employ less (more) rule-based reasoning.

Situational differences, individual differences, or decision-problem variables may influence controlled reasoning (Kahneman and Frederick 2002; Tversky and Kahneman 1974). Automatic processing essentially remains unchanged regardless of processing goal or decision (Ferreira et al. 2006). In considering a decision, we expect that situational variables such as processing goals will not influence automatic processes.

H2: Levels of heuristic reasoning will remain unchanged for individuals in intuitive and rational conditions.

Controlled processes may override automatic processes in some situations. However, a dual-process conception of judgment suggests that no decision is process pure. Controlled processes require activation and effort whereas automatic processes engage in default. Along these lines, automatic, heuristic reasoning influences decisions more than controlled, rule-based reasoning (Kahneman and Frederick 2002; Tversky and Kahneman 1974).

H3: The heuristic reasoning mode will have greater influence on decision performance than rule-based reasoning.
Method

Participants were 61 students from a large Midwestern university who responded to a 2 (intuitive/rational condition) × 2 (problem list A/B) × 2 (exclusion/inclusion problems) mixed design. Condition and problem list were between-subjects and exclusion/inclusion problems were within-subjects. The exclusion problems presented a dilemma between an “obvious” nonstatistical answer and a complicated statistical answer. Inclusion problems removed this opposition. Following data collection, participant responses were computed into estimates of automatic (heuristic: H) and controlled (rule-based: RB) processes (Jacoby 1991).

Results

A manipulation check suggested that individuals in the rational condition believed that they were deliberating more carefully than those in the intuitive condition (t(58) = 5.15, p < .001). We performed a mixed ANOVA with instruction-type as a between-subjects variable and estimates of RB and H as within-subjects repeated measures (Ferreira et al. 2006). The analysis suggested a reasoning mode main effect with H greater than RB (F(1,58) = 319.95, MSE = 11.01, p < .001). However, a reasoning mode × instruction type interaction was not significant (F(1,58) = .280, p > .50). Instructions did not have a differential influence on RB and H and Hypothesis 1 was not supported. Planned contrasts indicated that moving from an intuitive to a rational condition did not increase RB (t(58) = .57, p > .50) and that H was not influenced by condition (t(58) = .02, p > .90). The absence of change for H between rational and intuitive conditions suggested that it was at work as a default, providing support for Hypothesis 2. The prevalence of H for individuals in both conditions combined with H operating as a default and no change in RB provided some support for Hypothesis 3.

Discussion and Further Research

The finding that automatic heuristic reasoning was more prevalent than controlled rule-based reasoning is in line with existing research (Ferreira et al. 2006; Tversky and Kahneman 1974). However, an interaction between reasoning mode (H and RB) and instruction type (rational or intuitive) did not replicate. One possible explanation among several considered for this unexpected finding might be due to the nature of the distinction between automatic/controlled consumer judgments. Specifically, the difference between automatic and controlled reasoning may be qualitative in nature, with the heuristics common to automatic reasoning better described as simplified rules common to controlled reasoning. A specific examination of this claim would make this explanation more compelling and supportive of research suggesting that the dual processes often will not diverge (Tversky and Kahneman 1974).

The present study lends some support to the existing dual-process conception of judgment. Automatic processes tend to predominate and exist as a default. However, a lack of reasoning mode differences even when participants’ perceptions about their thinking differed by a manipulation check raises some questions. The nature of how controlled processing can override automatic processing needs further examination. The predominance of automatic reasoning in the present study suggests that this line of research is ripe for investigation. Careful reasoning and especially automatic heuristics are likely to influence consumer decisions heavily, often, and simultaneously.
Selected References


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