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# Perceptual Fluency, Attitudes and Choice: Special Session: The Role of Metacognition in Consumers' Judgments

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created through an incidental noise mask is attributed to familiarity (Whittlesea, Jacoby and Girard 1990).

In this research, we suggest that the fluency induced by computational complexity is misattributed to the analog distance between numbers. Results from four experiments were found to support this hypothesis. In experiment 1, fluency and numerical distance was manipulated in a within-subjects design. Participants were shown 24 pairs of prices; each pair comprised of a regular price and a sale price. Participants were asked to evaluate the magnitude of the discount on a small-large semantic differential scale by computing the difference between the regular price and the sale price. The price stimuli differed from each other in the magnitude of the discount (small vs. large) as well as in the number complexity (difficult vs. easy). Consistent with our hypothesis and contrary to the rules of arithmetic, participants in our experiments perceived the discount magnitude to be larger when the difference was easier to compute (e.g., 5.00-4.00; difference 1.00) than when it was difficult to compute (e.g., 4.99-3.98; difference 1.01). This effect manifested across all levels of discounts as well as prices. Experiment 2 shows this effect is robust and manifests with judgments of price difference as well as judgments of weight difference. However, this effect manifests only when the judgment requires mental computations. When the participants did not have to do the mental computations to make the judgment, processing fluency had no effect on judgments (Experiment 3). Finally, the observed effect seems to be on account of non-conscious misattribution of the metacognitive experience. When the participants were explicitly warned that the computation is either easy or difficult, processing fluency had no effect on judgments (Experiment 4).

#### **“Perceptual Fluency, Attitudes and Choice”**

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In a series of studies we examine the relationship between perceptual fluency, attitudes and their accessibility and choice from a limited set of brands. We hypothesize that under these conditions, brand choice is a two-stage process. The first stage is a recognition stage where certain brands will “stand out” in the environment. The second stage is a choice stage, where consumers use information about the brands, which is stored in memory to make a choice.

Previous research indicates that objects with highly accessible attitudes “stand out” in the environment (Roskos-Ewoldsen and Fazio 1992) and that perceptual fluency will also cause this to happen (Jacoby, Kelley and Dywan 1989). Consequently, attitude accessibility and perceptual fluency are expected to influence the first stage. Previous research also indicates that beliefs, attitudes and their accessibility will influence the second stage (e.g., Fazio and Towles-Schwen 1999).

These conjectures are tested in a series of experiments. In all the experiments, the participants are provided with information about four hypothetical brands of personal music players that vary on five attributes so that there is a clear rank order of the brands on the attributes. One brand is evaluated as very positive, the second as slightly positive, the third slightly negative and the fourth very negative. Both the attribute information and the attitudes provide the same rank order. During the experiment, the participants form an attitude toward each brand.

In the first experiment, the perceptual fluency, attitude accessibility of the second best personal music player are manipulated and the participants are asked to select which brand they would purchase if they all had the same price under either high or low motivation and opportunity conditions. Under high motivation and opportunity conditions the participants are given as much time as

they want to make a decision and are told that if they select the best brand they are eligible to enter a drawing to win \$25. Under low motivation and opportunity conditions the participants were told to make a decision as quickly as possible.

Under high motivation and opportunity conditions only attitude accessibility had an influence on choice while under low motivation and opportunity conditions, both attitude accessibility and perceptual fluency were found to have independent influences on choice. The response times of the choice process were not measured in this experiment, so it is possible that the low motivation and opportunity condition included both the recognition stage and part of the choice stage in the choice process. In other words, the choice of the brand with the highly accessible attitude may be due to effects at both the recognition and choice stage.

To examine this possibility we conducted a second experiment, which is similar to the first, only the perceptual fluency and attitude accessibility of the third best brand, which has a negative attitude, are manipulated. In addition, the response times in the choice task were measured. As expected, neither attitude accessibility nor perceptual fluency affected choice under high motivation and opportunity conditions. However, under low motivation and opportunity conditions, perceptual fluency has a significant effect on choice while attitude accessibility has a marginally significant effect. A closer examination of the data indicates that with a median split on the response times used when reaching a decision, all the participants who selected the third best brand, which had a negative attitude made the decision quickly. In fact, all the participants who choose the third best brand did so within 1.1 seconds.

In a third experiment, we replicated the low motivation and opportunity conditions of the first experiment, however, we forced the participants to make a choice within 1.1 seconds. The results indicate a significant interaction between the effects of perceptual fluency and attitude accessibility on choice. Both high perceptual fluency and high attitude accessibility had significant effects on choice. However, these effects were not additive.

In summary, the results of our experiments indicate that the recognition stage lasts for approximately 1.1 secs and perceptual fluency and attitude accessibility affect this stage. If choices are based on this stage, perceptual fluency and attitude accessibility will affect choice regardless of the valence of the attitude. Attitudes, attitude accessibility and attribute information will influence the second stage. In our studies attitudes and attribute information provided the same rank order information of the brands, so only attitude accessibility had an effect on choice when the attitude was positive. These results indicate that even when attitudes are formed toward the alternatives, they do not influence choice when it is based on metacognitive processes.