Special Session Summary  Fluency and Feelings of Attraction, Belief, and Interest

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SESSION OVERVIEW

The idea of a subjective experience of “fluency,” or ease of mental processing, is often invoked in psychology and consumer behavior research. For example, fluency has been used to explain effects of repetition on liking for advertisements (e.g., Janiszewski, 1993), on consideration set formation (Shapiro, 1999), on belief in repeated brand claims (Hawkins and Hoch, 1992), on complexity and spacing effects for advertising elements such as logos (Janiszewski and Meyvis, 2001), and the match between regulatory focus and persuasive appeals (Lee and Aaker, 2004). In addition, notions of fluency are commonly used within consumer psychology to describe performance on memory tasks as varied as old-new recognition and spreading activation in a semantic network.

The three presentations in this session attempt to develop the notion of fluency as it applies to basic experiences and judgments likely apply to consumer behavior. The first two presentations report effects of fluency-like differences in processing derived not from prior exposure to stimuli, but from features of the range of current stimuli, to both memory-related judgments and subjective judgments such as attractiveness, truth, and involvemiveness.

Benoît Monin reported his findings on the “warm glow heuristic,” where the pleasantness we feel from attractive stimuli and the feeling of familiarity from prior exposure can substitute for each other. That is, under many circumstances, we tend to think that attractive stimuli look familiar prior exposure, even if we have never encountered them before. This finding has far-reaching consumer behavior implications, from product design to promotional strategy. Ian Skurnik, in collaboration with Benoît Monin and Tarun Dewan, described research showing that fluency from rhyming advertising slogans can increase the perceived truth of the statements. People rate rhyming slogans (e.g., “The Bank of Bend will give you a loan”) more familiar, more likeable, and also more true than non-rhyming but semantically equivalent counterparts (“The Bank of Bend will give you a loan”). This effect of rhyme on truth was mediated by perceived familiarity—i.e., is rhyming structure made statements feel familiar, and therefore judged more true. Finally, Bruce Whittlesea discussed his SCAPE framework of memory, which provides a conceptual integration of both the causes and consequences of “fluency” experiences. This framework does not treat fluency as an unanalyzable construct, but a specific set of consequence of our evaluations of ongoing mental processes. A unique insight arising from this framework is that the same dimensions of mental processing that give rise to what we call remembering also influence a range of subjective feelings about current and novel stimuli; especially feelings such as pleasantness, interestingness, and involvemiveness. His work allows a reinterpretation and elaboration of prior thinking about fluency effects, and points out new directions for research in consumer topics.

“The Warm Glow Heuristic: When Liking Leads to Familiarity”

Benoît Monin, Stanford University

One ingredient that is sometimes relied on when making familiarity judgments about a stimulus is the positive affect that it elicits. Thus, when there is no other obvious criterion for judgment, pleasant stimuli, e.g., attractive faces or positively valenced words, should feel more familiar, even if they are in reality novel. I call the reliance on positive affect when making judgments of familiarity the ‘Warm Glow Heuristic’ (Monin, 2003) in reference to Titchener’s introspective descriptions of the feeling of familiarity, and propose that it results from misattributing the agreeableness elicited by the stimulus to the fluency of prior exposure.

Garcia-Marques and Mackie (2000; 2001) have proposed that familiarity is inherently a positive feeling, and that positive mood might sometimes be erroneously attributed to familiarity. The recurrent finding that positive mood leads to shallower processing of persuasive arguments (e.g., Bless, Bohner, Schwarz, & Strack, 1990) might thus be attributable to the fact that when in a good mood, we think we have encountered the arguments before and feel less of a need to scrutinize them.

If our first reaction to stimuli is affective (Zajonc, 1980, 1998), and later judgments are influenced by our immediate affective reaction (Slovic, Finucane, Peters, & McGregor, 2002; Schwarz, 1990), then it is possible that affective/evaluative reactions (“Do I like X?”) are used to make judgments that are on the surface unconnected to affect (e.g., “Have I seen X before?”). In effect, we answer a hard question by addressing an easier one instead, a process referred to as attribute substitution by Kahneman & Frederick (2002), and assumed to underlie most of the heuristics that have been studied in the literature (e.g., Tversky & Kahneman, 1974). Schwarz proposed that affect often serves as the basis of cognitive judgments in his “feelings-as-information” model and with the “How do I feel about it?” heuristic (Schwarz, 1990; Schwarz & Clore, 1988, 1996). He argued that affective states can play an informative role in controlled inference processes, even in non-evaluative judgment tasks.

One way in which a positive reaction may lead to a feeling of familiarity is that it may be mistaken for or misattributed to easy processing in meta-cognitive judgments. The experience of fluency has been shown to be an important factor in familiarity judgments (Jacoby and Kelley, 1987: Jacoby, Kelley & Dywan, 1989; Jacoby, Kelley, Brown & Jasechko, 1989: Jacoby & Whitehouse, 1989). Previously encountered stimuli are easier to apprehend because we have formed a representation of them. Thus ease of processing when encountering a stimulus is interpreted as an indication of previous exposure in the absence of any basis for analytical judgment, a shortcut dubbed the “fluency heuristic” (Jacoby & Dallas, 1981; Johnston, Dark & Jacoby, 1985; see also Whittlesea & Williams, 2000, 2001). Furthermore, Reber, Winkielman and Schwarz (1998) demonstrated that manipulating the perceptual fluency of a stimulus influences how much that item is liked. Thus fluency is pleasant, and may serve as a common denominator underlying the effect under study here.

In a first study, 80 faces picked randomly from a college yearbook were rated by separate groups of judges on attractiveness, familiarity (confidence that you have seen this person before on campus—in reality all pictures were new), and several other dimensions. Average ratings of familiarity (n=40) were highly correlated with ratings of attractiveness (n=34), r=.64, p<.001. In a second study, 40 faces were first presented and 50 participants quickly indicated the gender of each face. Then, after some filler tasks, they were asked to recognize these previously-seen faces among an array of 40 new faces. Using attractiveness ratings from Study 1, we found that the attractiveness of a given face significantly increased the probability that it be called ‘old’, regardless of whether it was actually seen before.
In a third study, we sought to go past the correlational nature of the first two studies by manipulating attractiveness experiences directly by contrast. Participants rated three blocks of pictures: one block of average-attractiveness pictures, one block of either very attractive or very unattractive pictures, and then another block of average pictures. The first block served as a covariate, the middle block was the manipulation, and the third block was the d.v. Twenty-seven participants rated attractiveness throughout, and showed the expected contrast effect (Wedell, Parducci & Geiselman, 1987): after unattractive faces the average faces looked more attractive, whereas after the attractive faces they looked less attractive. Another 28 participants rated the familiarity of the average faces in the first and third block: they showed a similar pattern on familiarity. After rating the attractiveness of unattractive faces, average faces looked more familiar than after rating the attractiveness of attractive faces.

A fourth study explores the conditions under which people will rely most on the warm glow heuristic, by using the recognition procedure of Study 2, but by adding two levels of decreasing difficulty, one in which they were asked to guess which they might have seen subliminally by tapping the last two factors between subjects.

For people who rated truth first, and vice versa, all other words, when there was no difference in familiarity due to other words, when there was no difference in familiarity due to the rhyming effects: that people took rhymes as a cue to literariness, the subjective sense of fluency, or ease of processing a piece of information, can affect a variety of judgments related to the information. For example, fluent processing of information increases judgments of familiarity (Whittlesea, Jacoby, & Girard, 1990) and preference (Mandler, Nakamura, & VanZandt, 1987). Researchers have established feelings of fluency using a number of methods, chiefly by changing a feature of the context in which information is presented. For example, subjective fluency is heightened by prior exposure, and by greater perceptual clarity. Fluency can also be induced by rhyme. Whittlesea and Williams (2001) found that presenting words in the context of rhyming non-words (e.g., pingle–single) increased the familiarity of the rhymed words, apparently by increasing the momentary fluency with which they were processed.

The present research investigates the impact of rhyme-induced fluency on judgments of truth. McGlone and Tofghiabkhsh (2000) suggested that rhyming information might seem more true than non-rhyming information as a direct consequence of fluency on truth. Another theoretical possibility is that rhyme has an indirect influence on perceived truth, through familiarity. Past research has found that making claims familiar by repeating them increases their perceived truth. Because familiarity is a common attributional consequence of fluency, other methods of increasing processing fluency—such as rhyme—should also indirectly increase truth ratings.

Experiment 1 investigated how rhyme increases subjective truth, and Experiment 2 explores some behavioral consequences of this effect on product choice. In Experiment 1, people read a list of 30 statements and rated each one for perceived truth and familiarity. Half of the statements had a rhyming structure and the other half did not. There were 2 versions of the list of statements to counterbalance rhyming and non-rhyming versions of a statement, so that a rhyming statement (e.g., “Variety prevents satiety”) in one list appeared in a non-rhyming version (e.g., “Variation prevents satiety”) in the other list. Ratings for both truth and familiarity were made on a seven-point scale, and the order of these ratings was blocked and counterbalanced across participants (i.e., participants rated all statements for truth before rating them for familiarity, or vice versa). Including the counterbalances, the study design was fixed effects of repetition on both familiarity and truth. To test for mediation, we conducted two sets of regression analyses—this approach was necessary because of the difficulty of systematically controlling the timing of participants’ familiarity and truth judgments. One set of regressions showed that familiarity predicted truth ratings, and that the intercept was not different from zero. In contrast, a reversed regression using truth to predict familiarity ratings produced an intercept significantly different from zero. In other words, when there was no difference in familiarity due to rhyme, there was no difference in truth ratings, but the reverse was not the case. This pattern strongly argues that familiarity mediates the relation between rhyme and truth, and that rhyme-induced fluency does not have a direct effect of truth judgments.

There were no differences in time spent reading and rating rhyming and non-rhyming statements (all ts<1.3, ps>.18). This finding helps rule out an alternative to a fluency-based account of the rhyming effects: that people took rhymes as a cue to literariness, leading people to interpret the words more broadly and to search for a wider variety of contexts onto which the content might map. Such a processing difference between items would suggest longer response times for rhyming than non-rhyming statements.

In two additional studies, people read a series of advertisements with a brief product description and either a rhyming or nonrhyming claims at the end (e.g., “Miller tastes good, like a light beer should”). Participants rated rhyming slogans as more familiar, more likeable, and more credible than their non-rhyming counterparts. In addition, participants were more likely to choose a product that had been introduced with a rhyming slogan vs. a non-rhyming slogan in a forced choice task.

These findings add to our knowledge of the range of judgmental effects of fluency. In addition, they help specify the process through which the form that information takes (rhyming vs. nonrhyming structures) can influence perceived truth. Fluency from rhymes can influence perceptions of truth, and in turn may enhance the probability of choice in a consumer setting.
“Fluency and Judgments of Pleasantness, Interest, and Involvingness: Memory Evaluation as a Basis for Subjective Experience”

Bruce Whittlesea, Simon Fraser University

The SCAPE framework is a general, integrative framework of memory that accounts for effects of fluency and the perceptual experience of heightened ease of processing. Several experiments using a variety of paradigms test predictions about some subjective experiences of interest to consumer psychology, including pleasantness, interestingsness, and the involvingness of tasks. The data display a complex pattern of dissociations across tasks and paradigms, all of which I argue can be explained as the products of people evaluating their current mental performance. The general principles of the SCAPE framework and the patterns of findings provide a new way of understanding effects of processing fluency, and suggest a number of future directions for research.

Briefly, the SCAPE framework suggests that memory has two primary functions, production and evaluation. The evaluation function is thought to be the direct source of subjective experience: in interpreting the quality of their performance and attributing it to some plausible source in the past, the situation, the stimulus or their own current state, people experience feelings of knowing, remembering, error and so on. Most of our previous investigations of the evaluation function have focused on the occurrence of feelings of familiarity, in studies of the recognition process. However, the assumptions about inference and attribution underlying the SCAPE account derive from early studies of the development of attitudes, decision-making and social judgment, by investigators such as Festinger (1957), Heider (1958), Schachter and Singer (1962), Chapman and Chapman (1967), Kelley (1967), Zajone (1968), Bem (1972), Kahneman and Tversky (1973), Fischoff (1975), Mandler (1975), Cantor and Mischel (1977) and Nisbett and Ross (1980). It therefore seems appropriate to investigate the implications of the SCAPE account for subjective responses in activities other than remembering. The experiments in this presentation form a beginning of that enterprise, exploring the basis of feelings such as interest, pleasantness, and task involvingness.

According to the SCAPE framework, people evaluating their own processing arrive at one of three fundamental conclusions: the perception of coherence, incongruity or discrepancy. These perceptions are thought to be the product of an interpretive process: they are not direct perceptions of the real relationships among aspects of processing. In fact, it could be argued that in reality, a processing event can only be either coherent or incongruous (well-formed or ill-formed): that the sense of strangeness that is fundamental to the perception of discrepancy is a purely psychological characteristic, not a property of the event itself.

To take a representative series of experiments, we conducted an investigation of the effects of encountering and evaluating events that are actually incongruous, by developing what we call the specific-incongruity paradigm. Participants read pairs of sentences such as “He went to the store and bought her the DIAMOND” and “They went to the dump to throw out the GARBAGE.” Some sentences were presented as seen here; the remaining sentences were made incongruous by interchanging their terminal words within pairs (e.g., “He went to the store and bought her the GARBAGE”). The overall design resulted in four test conditions (coherent/ specifically incongruous pairing X positive / negative word). For each sentence, participants were asked to read the stem and completion and then to rate either the pleasantness or interestingness of the terminal word on a seven point Likert scale. It was made clear to the subjects that the judgment was to be made exclusively about the terminal word (presented alone on the monitor), not the sentence as a whole.

Briefly, results showed that words following congruous stems were judged about 12% more pleasant than words following incongruous stems, $F(1,14)=16.44, MSe=.01, p<.001$. In contrast, words following incongruous stems were judged about 11% more interesting than words following congruous stems, $F(1,14)=6.26, MSe=.03, p<.025$. The former illusion is almost undoubtedly the result of the subjects experiencing coherence as pleasantness. A set of follow-up studies showed that the basis of the interestingness illusion is more complicated. These studies suggested that incongruity per se is not enough to cause the illusion: it is also necessary for that incongruity to be accompanied by a feeling of strange connectedness of the stem and termination. The illusion of interestingness seems to be caused by a perception of discrepancy rather than incongruity.

According to the SCAPE account, having arrived at a perception of coherence, discrepancy or incongruity, people attribute their self-evaluation to some source that makes sense, given those aspects of the stimuli that are salient to them given the task and context and their intuitive causal theories. We have observed that people perform such attributions in making judgments about their past (causing feelings of familiarity) and also judgments about the properties of the stimuli themselves (causing feelings of pleasantness and interestingsness). Another series of experiments investigat-ated whether people also make such attributions about their own current disposition, such as their perceived involvement with the task.

Other results suggest that people have a dominance hierarchy for evaluation and attribution, such that variations in the coherence of processing are attributed to global aspects of the stimulus over local aspects (e.g., to strangeness of the sentence over interestingness of the word) and to aspects of the stimulus over aspects of the person (e.g., to interestingsness over alertness). However, to state that suggestion too strongly may be misleading. Under other circumstances (e.g., judging others’ behavior) people often make an attribution to disposition over situation (the “fundamental attribution error”: Nisbett & Ross, 1980). It seems likely that the most generally true statement is that people generate inferences that “make sense of as much data as possible at the most functionally useful level” (Marcel, 1983, p. 238); but that, in so doing, they are open to systematic error in noticing important variation in their own performance and in the structure of the world, in evaluating the coherence of their performance and in attributing variation in their performance to internal and external sources of control.