Measurement Issues For Compulsive Buying Assessment: the Impact of Hot Vs Cold Mode on Gender Difference

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Compulsive buying questionnaire scores were compared between two modes (mall intercept, i.e. “hot”, and self-completion survey away from the shopping scene, i.e. “cold”) by aggregating the results of four separate studies. Exploratory results show a higher amplitude gender difference in cold mode than in hot one. Some hypothesis are formulated in order to explain why such an unexpected discrepancy occurred between the two operational modes. In particular, it is suggested that different affect priming could be triggered by these two modes, thus eliciting different responses from male and female respondents.

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Compulsive Buying Questionnaire and Repression: The Impact of Hot vs Cold Data on General and Gender Scoring

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Mall intercept has been conjectured to be more precise and reliable than other methodologies such as phone surveys (Bush and Hair, 1985) in that less questions were eluded in the former, and the latter was usually yielding more “socially acceptable” answers. This could be caused by a memory priming effect (Bower, 1981) when respondents are answering in a “cold” situation (e.g. inside their homes) rather than in a “hot” situation. In other words, their cognitions could be affected by their affect at the moment when they are filling the questionnaire.

Despite a relatively important number of studies related to the measurement of Compulsive buying, the use of questionnaires through mail surveys seems to have exclusively prevailed over the use of mall intercept procedures (e.g. Faber and O’Guinn, 1992; Valence et al., 1988), and most of these studies found a significant difference in self-reported compulsive score between males and females respondents.

In a small recent study involving 49 participants in a mall intercept, self-assessing their compulsivity by answering a Lejoyeux questionnaire (Lejoyeux et al., 1996; Lejoyeux et al., 1997), we were however unable to find any significant difference in genders, even though some other elements of reliability and nomological validity with the hedonic/utilitarian value in shopping (Babbin et al, 1993) were congruent with previous studies.

We thought that the main difference between our study and the previous studies on compulsive buying was the methodology (a “mall intercept” vs mail survey) could explain the lack of significant difference between genders in respect of their scores.

We therefore undertook an exploratory meta-analysis with 4 previous studies using the same Lejoyeux questionnaire (Lejoyeux et al, 1996; Lejoyeux et al., 1997) with different methodologies (2 studies in a mall intercept condition, and 2 studies in a “cold” condition, where the interviewing process was done in the respondents’ home), totalling 490 respondents (290 in “hot” condition, and 200 in “cold” condition; 218 male respondents, and 272 female respondents).

The studies included the 20 items likert scales of the Lejoyeux test of compulsive shopping and the shopping value questionnaire (Babbin et al, 1993) was included in order to test the nomological validity of the test (Peter, 1981). The internal reliability for both of the questionnaires was very good overall, and consistent with previous literature findings (r(Lejoyeux)=0.78; r(hedonic)=0.93). Nomological validity was achieved, consistent with previous literature findings (Faber and O’Guinn, 1992) through an established correlation between hedonic value in shopping and the compulsive score (r=0.364; p<0.01).

Although we found a significant effect of gender over the variance of the compulsive score (F(1,438)=31.486; p<0.0001; males=3.1; females=4.5), showing that female respondents tend to score higher than males overall in these 4 experiments, we also found a significant effect, at the highest level, of the “heat” condition (F(1,438)=18.56; p<0.0001; hot=3.3; cold=4.3), showing that the overall levels of compulsivity are slightly higher in “cold” condition than in a “hot” one; it can also be noticed that the interaction of gender and heat is also significant (F(1,438)=4.312; p<0.05; male-hot=2.8, male-cold=3.4, female-hot=3.7, female-cold=5.3), showing a possible effect of affect priming in female respondents.

It should be noted that the hedonic score stemming from the shopping value questionnaire are showing a small evolution that is consistent with respect to genders (F(1,486)=64.28; p<0.0001, male=2.57; female=3.33) and reverse with respect to the heat of the test (F(1,486)=11; p<0.0025; hot=3.13; cold=2.79).

It is interesting to note that, contrary to what Bush and Hair’s (1985) findings could hint at, we do not find a higher mean score of compulsivity in the mall intercept procedure than in the “cold” procedure, but rather the contrary (albeit the overall difference is fairly small).

It is however interesting to note that females seem to be much more sensitive to the change of methodology than men, whose variation does not seem to change much. We can therefore suspect that this variation could indicate the process by which one tends to get a higher difference in compulsive scores between genders in mall intercepts. It could be possible that the females experience a better mood during shopping than at home, thus inducing an affect priming phenomenon that leads them to appraise differently the consequences of their shopping when they have been shopping and when they are in a different condition. Conversely, men could just appraise their shopping experience less emotionally, therefore leading to a more “consistent” evaluation between a “hot” and “cold” condition.

This meta-analysis should however be viewed as an exploratory study, where the results are subject to confirmation in a further study that can truly compare the two conditions in strictly similar methodological settings. We feel however that the results contained herein may foster some reflections on the overall validity of mail surveys with respect to mall intercept, as far as compulsive buying is concerned. A second potential implication of this study is that there may be more explanations to the difference in results between mall intercept methodologies and “cold” surveys than just more involved and expert shoppers in the former methodology.

References
Considerable research has demonstrated that people create mental categories to process and access the information that they receive (Barsalou 1992), and that these mental categories may be arranged in hierarchical structures (Collins and Loftus 1975). People add new categories, or subcategories, to these structures when they encounter novel objects or experiences, such as new products, that do not fit within existing categories (Sujan 1985; Sujan and Bettman 1989). An underlying assumption of previous studies is that the general category within which people will locate a novel entity, and hence a new subcategory created for it, is known. However, some entities, such as innovative new products, could be assigned to multiple categories (Keller, Sternthal, and Tybout 2002; Moreau, Markman, and Lehmann 2001). It is here that managers and marketers could benefit from a deeper understanding of how mental categorization works.

In this paper, we develop a spreading activation model of the process by which individuals construct new mental categories. In an experiment and an empirical study, we show that the Category Activation Model (CAM) reliably predicts where individuals will locate a new subcategory within an existing category structure.

The ways in which consumers categorize products have important implications for firms. For example, previous research has shown that the category to which consumers assign a new product can affect the inferences that they draw about it (Moreau, Markman, and Lehmann 2001), their evaluation of and willingness to pay for it (Sujan 1985), and their likelihood of retrieving it in memory-based choice (Nedungadi 1990; Nedungadi, Chattopadhyay, and Muthukrishnan 2001). Thus, being able to predict and influence how consumers construct and locate subcategories for entire classes of products, especially radically innovative new products, could benefit firms substantially. For example, when Motorola introduced the Envoy, the first personal digital assistant, consumers had to create a new mental subcategory because, although the Envoy shared many features with existing portable computers, pagers, and organizers, it was distinctly different from products in these categories (Keller, Sternthal, and Tybout 2002). Knowing where consumers were most likely to locate the new personal digital assistant subcategory could have helped Motorola design and market the Envoy to better satisfy their expectations.

Whereas previous research has examined how people access information in hierarchical category structures and the general rules that govern how these category structures grow and develop (Freyd 1983; Murphy and Medin 1985; Rosch 1978), the ways in which people construct individual new categories have not yet been investigated. We develop the CAM to predict where people are most likely to locate a new subcategory within an existing category structure.

We build on previous research that shows that priming a category increases its accessibility and subsequent use (Herr 1989; Higgins and King 1981). Consistent with this research, we assume that when a category is accessed some of the resulting activation remains with the category and the rest spreads through the entire network, or category tree. Further, we assume that when a category is more activated, the probability that a new subcategory will be constructed under it is increased. Combining these two assumptions, it follows that by accurately describing the process by which activation spreads through the network, we are able to predict the probability that a new subcategory will be constructed at any given location within it. In the paper, we show that these probabilities depend on the network’s link structure, which determines how activation spreads. Specifically, the CAM predicts that the locus of a new subcategory is strongly influenced by the number of subcategories already connected to each category within the existing structure.

We tested the CAM’s predictive ability in an experiment involving an innovative new exercise product that shares attributes with existing products in the health and entertainment categories. In the experiment, we first familiarized 91 participants with a category structure for health and entertainment products. Then we presented them with a description of the new product, and gave them the opportunity to create a new subcategory for it under either the health or entertainment category. We manipulated the number of subcategories already existing under these categories, and also manipulated the priming of these categories using an unrelated proof-reading task. The results support our hypothesis that the probability that a person will construct a new category as a subordinate of a particular category $i$ is proportional to the relative number of categories that are already subordinate to $i$. Furthermore, the results suggest that people are more likely to locate new subcategories within categories that already contain many subordinates precisely because such categories are more activated and accessible than those that contain fewer subordinates.
In a second study, we further tested the CAM’s predictive ability by analyzing how computer users create new file folders within their directory trees. In this study, we analyzed data on nearly 70,000 directories created by more than 1,600 users on internet servers at two universities and a high school. We wrote a program to collect data from these servers and provide a snapshot of each user’s directory tree, including the exact time at which each file folder within the tree was created. We then showed that the structure of these directory trees and the process by which they developed are consistent with the CAM’s predictions. These results provide support for the CAM in an externally valid context.

In addition to categorizing products, consumers also categorize their expenditures by placing them into mental accounts (Thaler 1999). Since consumers utilize these accounts to track their expenses, it follows that the category to which consumers assign an expenditure may affect their willingness to incur additional expenditures that are either similar or different (Cheema and Soman 2006; Heath and Soll 1996). In two extension studies, we show that the CAM can be used to both predict and influence the location of new mental accounts. Thus, the CAM has implications not only for how new products should be positioned, but also for how they should be priced. Influencing category construction is an exciting area that additional research should examine.

References