Special Session Summary  the Ubiquitous Influence of Expectations

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[to cite]:

[url]:
http://www.acrwebsite.org/volumes/9130/volumes/v32/NA-32

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**SESSION OVERVIEW**

Life is largely a matter of expectation.
—Horace (65 BC–8 BC)

Perhaps it is a common phenomenon experienced at conferences to watch a presentation, ostensibly unrelated to your work, and to be amazed at the connections you can draw to your own work at a deeper theoretical level. The collection of papers brought together for this session captures that feeling. Consider the following questions: Is a business traveler, who is choosing between a tasty but unhealthy breakfast and a healthy but less tasty plain fat-free yogurt, more likely to choose the tasty less healthy breakfast if she views this decision as one of a series that she expects to make over the next three days? Do consumers’ expectations of their own ability to use a new product affect their evaluations of such products? And, does consuming a drink expected to improve physical performance but purchased on sale (vs. at regular price) result in poorer perceived performance in fitness-related activities? While each of these questions (studied in the three papers) investigates a different substantive domain, the theoretical thread that sews them together is the impact of expectations.

Consumers’ choices, evaluations, and behaviors are often materially influenced by their expectations of what should be, both now and in the future. For example, when people buy multiple items simultaneously for consumption over several periods they choose more variety than if they buy one item before each consumption, presumably because they expect satiation in their tastes. Expectations are ubiquitous in consumer research, but often in a supporting, rather than leading, role. In this session we bring expectations to the forefront. The three papers in this session investigate the influence of expectations using domains of self-control, new product adoption, and placebo effects. The collective findings demonstrate that biases result when expectations are flawed due to motivated cognition, inaccurate internal representations or potentially misleading external manipulations.

Most basically, *Merriam-Webster* defines the verb “expect” as “looking forward.” Thus, it is a clear component of evaluations and decisions made over time. A more specific definition, though, describes an expectation as something considered “probable, certain, reasonable, or due.” This connotes the realm of forecasting and prediction—making judgment on what should or is likely to happen. It is not surprising then that expectations will be used as bases of evaluations for states and outcomes that are dynamic or process-oriented. In this session, we cover three domains where the power of expectations is well-illustrated. In the work by Khan and Dhar, individuals’ decisions to indulge are facilitated when framed as part of a decision series in which later virtuous choices are expected. As Khan and Dhar demonstrate, such expectations are not always validated. In the work by Moreau and Wood, expectations about ease of learning or usage drive the emotional reaction to new products. Thus, evaluations of new products can be substantially influenced by “teaching” demonstrations that alter consumers’ expectations. Shiv, Carmon, and Ariely provide a powerful demonstration of impact of expectation by applying the placebo effect in a marketing domain. They show how subtle changes to the expected efficacy of a product (e.g., price discounting) can have strong effects on its perceived efficacy after use.

The issues covered by this session are pertinent to understanding the dynamics of consumer decision making. Taken together, the three papers attempt to uncover the processes by which expectations of future reactions can systematically impact judgment and choice.

"Effect of Future Expected Decisions on Current Choices"

Uzma Khan, Yale University
Ravi Dhar, Yale University

Imagine a business traveler who is choosing between two breakfast offerings—a very tasty but unhealthy breakfast (a relative vice) and a very healthy but less tasty plain fat-free yogurt (a relative virtue). Is this person more likely to choose the tasty, less healthy breakfast if she views this decision as one of a series that she will be making over the next three days? Although consumers in the real world make choices that are interrelated, most choice research has focused on isolated decisions without considering choices that are made before or after the current choice. Recent research suggests that prior choices can have a systematic effect on preference and choices. We add to this emerging literature on choices made in sequence by showing a systematic effect of seeing a choice as being part of a sequence of future expected choices. Specifically, we demonstrate that in a choice between a relative vice and a virtue, people who see the choice as part of a sequence of similar future choices are more likely to choose a vice than respondents who see the same choice as a single decision.

We propose that viewing the first choice as part of sequence of future choices increases the choice for a vice option by allowing people to optimistically expect that they will pursue virtuous options in the future. This belief in one’s ability to choose the more virtuous option follows from research on optimistic bias and planning fallacy. We show that viewing a choice as part of a sequence leads people to overestimate the likelihood that they will choose the more virtuous option later, hence providing them with a (guilt-reducing) justification to opt for a vice now.

Two studies are conducted to demonstrate that the proportion of respondents choosing a vice is higher when the initial choice is presented as part of a sequence of future choices. Two additional studies are conducted to test for the underlying mechanism.

In the first study, subjects selected a video from options that included both highbrow (e.g., *Schindler’s List*) and lowbrow (e.g., *I Love Trouble*) movies. In a pretest, the former were rated as more virtuous than the latter. Subjects were assigned to either control condition (single choice) or a sequence choice condition. Those in the sequence condition were told that a survey would be conducted over two weeks, and they will choose a free movie rental each week for participating in the survey. After completing an unrelated survey, participants in both conditions chose a movie for the current weekend from a list that contained both highbrow and lowbrow movies. Prior to making this choice, participants in the sequence condition were asked to indicate the movie they wanted to receive next weekend. They were told that choice for the first week was final but the second week’s choice could be changed next week. Consistent with our prediction, we find that significantly more
people chose a lowbrow movie in the sequence condition than in the control condition. Consistent with an optimism bias, more respondents in the sequence condition indicated that they will choose a highbrow than a lowbrow movie next weekend.

In the second study, as a compensation for survey-participation, subjects selected between highbrow (e.g., *The Economist*) and lowbrow magazines (e.g., *Xtra*) in control or sequence condition. Highbrow magazines were pretested to be more virtuous than lowbrow magazines. Sequence condition participants were told that the survey would be conducted over two weeks and each week they would choose a free magazine. After completing an unrelated survey, subjects in both conditions chose the magazine they wanted for the current week. Moreover, participants in the sequence condition were asked to predict the magazine that they wanted to receive next week before indicating their choice for the current week (second week’s choice was indicated as alterable). A week later, without any prior notice, the control subjects were approached again and were given the same choice of magazines for completing another survey. We find that in the first period more people chose the lowbrow magazine in the sequence condition than in the control. Next we compared the prediction of the participants in the sequence condition with the actual second period choices of the control participants. Participants in the sequence condition were significantly more likely to predict choosing the highbrow magazine in comparison to the proportion of control participants who actually chose a highbrow magazine in the second choice. This is consistent with our theory that viewing a choice as part of a sequence of future choices can lead people to overestimate the likelihood that they will choose the more virtuous option later.

To rule out the possibility that subjects in the sequence condition were actually alternating between the two options, study 3 examined the first and second period choices of participants in the sequence condition. The study involved a choice between a plain fat-free yogurt (virtue) and a large cookie (vice) in lieu of survey-participation. All instructions were same as study 2, except that instead of predicting their choice for the next period, subjects in the sequence condition actually made a second choice after one week. Control participants also made the same choice again next week. However, unlike subjects in the sequence condition who knew about the second choice, control subjects were unaware of the future choice while making their initial decision. As in the previous studies, we find that more people chose a cookie for the first choice in the sequence than in the control condition. Second period choices were consistent with a motivated cognition explanation rather than a notion that people alternate vices of the first period with virtues in the second period. Specifically, the choice proportion of a cookie in the second period was not lower in the sequence condition than in the control.

Study 4 further investigates motivated cognition as the process underlying our effects and is being currently run. Control participants will choose between a yogurt and a cookie without being told about any future choices. Participants in sequence condition will make the same choice after predicting which of the two snacks they want in the next period. In two additional conditions, participants will choose between a yogurt and a cookie for the current period after being told of a specific snack they will receive in the next period. In one of these two conditions they will be told that they will get a low-fat yogurt in the next period, while in the other condition they will be informed that they will receive a cookie. We predict that the effect of motivated cognition on current choice will be moderated when people know that they will receive a cookie in the next period. That is, when there is no opportunity to predict a virtuous choice in the future, people will not feel justified choosing a vice in the current period.

In conclusion, we discuss broader theoretical implications of our results and suggest how our proposed effect is relevant for choices other than decisions concerning vices and virtues.

“The Influence of Usage Expectations on Consumers’ Emotional and Cognitive Responses to New Products”
C. Page Moreau, University of Colorado–Boulder
Stacy L. Wood, University of South Carolina

With the exception of the recent work by Fournier and Mick on satisfaction and technological paradoxes, little if any research has examined the influence of consumers’ expectations of and actual experiences in using an innovative product. In cases of continuous innovations (e.g., a new brand of orange juice), this distinction is largely moot. However, in other cases where the product requires adaptation and learning (e.g., Palm Pilots), it is not. In this research, we assert that understanding an individual’s expectations regarding his/her ability to use a product, combined with his/her actual experiences over time is crucial to understanding the dynamic reactions of consumers to the new product post-purchase. As a consumer’s experience with a product evolves over time, the expectations used to make satisfaction judgments are likely to evolve and change as well.

Consumers do form expectations about a product’s attributes and benefits, but with technology products, they are also likely to form expectations about their own ability to achieve those benefits. In the context of an initial use of a new product, consumers who are familiar with a similar set of products are likely to expect the new target product to be easier to use than those who have no prior relevant experience. Consumers who lack such prior experience are likely to rely more upon other relevant inputs, such as communications from marketers and observations of other consumers, in constructing their usage expectations. Thus, one communication tactic that marketers may employ is the use of a product demonstration to provide consumers with a vicarious product experience.

A straightforward prediction might be that consumers who are given a product demonstration will construct expectations similar to those who have direct product experience. However, research has shown that the inexperienced may not be able to imagine what they do not know, and thus, may be more positive if no demonstration is provided. When a demonstration is provided for a product which will require learning (and with which the consumer has no direct experience), the product demonstration may increase both the specificity and negativity of the inexperienced consumers’ expectations. Effectively, the demonstration may make salient the technological intricacies required to master the new product, increasing the trepidation in inexperienced consumers’ usage expectations. Experienced consumers, however, are likely to be less influenced by such external information and will rely primarily on their own experience to shape expectations of their initial use of a new product.

**Study 1: The PalmPilot Study**

The study was a 2 (product demonstration: provided vs. not provided) X 2 (Palm experience: no vs. yes) between-subjects design. Participants were 175 undergraduate students at a large mid-western university. Upon arriving at the experimental location, all participants were told that they would be participating in a study about how people react to new products. They were then told that the product under consideration in their experiment was a new PDA, the Palm Zire, and that it didn’t matter whether or not they had ever used a PDA before.

At this point, participants in the “demonstration” condition were told that the experimenter would provide them with a brief demonstration relevant for the two tasks. In the demonstration, the
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experimenter held up the Zire, showed the participants where the stylus was located, and indicated how to tap the main menu buttons to find the appropriate tasks and briefly demonstrated how and where to draw the letters on the screen of the Zire. She then indicated that they should open the experimental packet and proceed through on their own. Participants in the “no demonstration” condition were simply given those same instructions immediately after they received their packets.

All participants then read through the introductory pages which provided more detail about the Palm Zire, the type of tasks it can undertake, and an example description of how to enter an appointment. The participants completed the first set of dependent measures, then received a Zire. Participants were given step-by-step instructions and asked to complete their first task of entering an appointment. Each participant showed their work to the experimenter and, if it was correct, instructed to proceed to the next set of dependent measures. If the task was not correct, the participant was asked to attempt to correct it. Once the second battery of dependent measures was complete, the participant proceeded to their second task, entering an address. The same procedure was followed for this task as well. Once the participants had finished the final set of dependent measures, they were thanked and debriefed.

Results. Specifically, we predicted that inexperienced consumers who did not receive a demonstration would be more negatively surprised than their inexperienced counterparts who did receive one. To test this hypothesis, we used the measure of expectation disconfirmation described above as the dependent variable, in which higher numbers indicate a more negative surprise and lower numbers, a more positive surprise. As predicted, inexperienced participants who did not receive the demonstration experienced the most negative disconfirmation of expectations, finding the Zire significantly more difficult to use than their counterparts who did receive the demonstration (F 1, 172=21.2, p<.0001; M demo: 3.5 vs. M no demo: -1.8). As predicted, the demonstration did not significantly influence disconfirmation for those with prior experience (F 1, 172=.69, p>.10; M demo: 2.3 vs. M no demo: 1.1). We also predicted that the influence of our two independent factors, prior experience and product demonstration, on usage expectations will diminish over time. To test this hypothesis, we used a repeated measures ANOVA which included usage expectations at each point in time as our repeated measure plus our two independent factors. The predicted three-way interaction between time, prior experience and product demonstration, on usage expectations will diminish over time. To test this hypothesis, we used a repeated measures ANOVA which included usage expectations at each point in time as our repeated measure plus our two independent factors. The predicted three-way interaction between time, prior experience and product demonstration, on usage expectations will diminish over time. To test this hypothesis, we used a repeated measures ANOVA which included usage expectations at each point in time as our repeated measure plus our two independent factors. The predicted three-way interaction between time, prior experience and product demonstration, on usage expectations will diminish over time. To test this hypothesis, we used a repeated measures ANOVA which included usage expectations at each point in time as our repeated measure plus our two independent factors. The predicted three-way interaction between time, prior experience and product demonstration, on usage expectations will diminish over time. To test this hypothesis, we used a repeated measures ANOVA which included usage expectations at each point in time as our repeated measure plus our two independent factors. The predicted three-way interaction between time, prior experience and product demonstration, on usage expectations will diminish over time.
conditions first signed a form authorizing us to charge their U-Bill account the price of the drink. They then consumed the drink and then watched a video clip that lasted for 10 minutes. They were then asked to solve 20 jumble-word puzzles in 30 minutes. They were told that they could give up attempting any puzzle and move on to the next, but if they did so, they would not be able to return to the puzzle that they skipped.

Experiment 2 used a 2 (price) by 2 (elaboration) between-subject design. One hundred and twenty five students participated in the experiment. The elaboration factor was manipulated by having some participants rate, immediately prior to the puzzle task, how effective SoBe is at improving one’s concentration and mental performance (7-point scale items); other subjects did not respond to the scale items. As can be seen in figure 1, an ANOVA on our critical dependent variable, namely the number of puzzles solved, revealed a significant price by elaboration interaction (F(1,121)=5.06, p<.03), apart from a significant main-effect of price (F(1,121)=34.01, p<.0001. Under conditions of no elaboration, the number of puzzles solved was significantly higher in the full-price condition (M=9.5) than that in the sale-price condition (M=7.68; F(1,121)=6.07, p<.02). Compared to conditions of no elaboration, when elaboration was high, the number of puzzles solved was no different when the drink was at regular price (M=9.91; p=n.s.), but significantly lower when the drink was on sale (M=5.79 under conditions of high elaboration versus 7.68 under conditions of no elaboration; F(1,121)=7.14, p<.01).

Experiment 3 used a 2 (price) by 2 (price-salience) between-subjects design with an added control condition. One hundred and ninety four students participated in the experiment. The price-salience factor was manipulated by asking some participants, “Given the price of SoBe, please rate how effective SoBe is at improving one’s concentration and mental performance; other participants were not asked this question. (Note that the price-salience manipulation is identical to the elaboration manipulation in experiment 2, except that we drew participants’ attention to the price of SoBe without mentioning the price. Our hypothesis was that drawing participants’ attention to the price will nullify the placebo effect through a correction process). As can be seen in figure 2, an ANOVA on our critical dependent variable, namely the number of puzzles solved, revealed a significant price by price-salience interaction (F(1,193)=5.09, p<.03), apart from a marginally significant main-effect of price (F(1,193)=3.13, p<.07. Under conditions of low price-salience, the number of puzzles solved was significantly higher in the full-price condition (M=8.35) than that in the sale-price condition (M=6.79; F(1,193)=7.80, p<.006). Compared to conditions of low price-salience, when price-salience was high, the number of puzzles solved was no different when the drink was at regular price (M=8.03; p=n.s.), but significantly higher when the drink was on sale (M=8.21 under conditions of high price-salience versus 6.79 under conditions of low price-salience; F(1,193)=6.91, p<.01).

The results from the preliminary experiment and from the two main experiments enable us to arrive at the following. First, we demonstrate a reliable placebo effect related to price discounts in the contexts of “health-drinks.” Second, when individuals elaborate prior to engaging in the main task, their expectations about the efficacy of the drink are enhanced resulting in stronger placebo effects. Third, when the link between price and efficacy is made salient, the placebo effects gets attenuated, suggesting that the placebo effect involves non-conscious processes.