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## **When Does the Past Repeat Itself? the Role of Behavior Prediction and Personal Norms**

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Although we know that many behaviors are repeated, we know little about what influences the strength and likelihood of behavior repetition. Two laboratory studies and two field studies investigate how behavior prediction and personal norms interact to influence whether or not people repeat their past behavior. We find that asking people about their future behavior increases their likelihood of repeating past behaviors when personal norms are weak but reduces it when personal norms are strong. By identifying a new consequence of asking question about future behavior (behavior repetition) and a new moderator (personal norm strength), our results contribute to the debate regarding the relative importance of habits and intentions in guiding behavior and reconcile some seemingly contradictory past findings in mere-measurement and self-prophecy research.

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## SYMPOSIA SUMMARY

### Breaking Behavior Repetition: New Insights on the Role of Habits and Intentions

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#### SESSION OVERVIEW

First year psychology students learn that most behaviors are repeated, that past behavior is the best predictor of future behavior, and that habits are hard to break. For example, diary studies show that 45% of all the daily activities of students occur almost every day and in the same location (Wood and Quinn 2005). Many studies have also shown that past behavior has a significant effect on future behavior and that these effects are not fully mediated by beliefs and intentions (Ajzen 2002). Interventions that attempt to break habits by changing people's beliefs and intentions are often unsuccessful, even when they significantly influence intentions (Ouellette and Wood 1998; Verplanken and Wood 2006). In fact, repeated behaviors (e.g., inadequate exercise, overeating, smoking) are among the leading causes of preventable deaths.

However, there are significant disagreements regarding the conceptual significance of behavior repetition ("Is it proof of real habituation?"), its empirical reality ("Does the residual effect of past behavior disappear once intentions are measured?"), about methods ("Is behavior frequency a valid measure of habit strength?" and "Is behavior repetition subject to mere-measurement effects?"), and about their implications for behavior change ("When are intentions stronger than habits at guiding behavior?" and "Which interventions work for breaking habits?").

Yet, these important issues are largely absent from current consumer research, which tends to undervalue habit as a concept. The goal of this symposium is to provide an opportunity for consumer researchers to take a new look at habits and to learn about the exciting new research that is being done by colleagues in social psychology. To this end, we bring together prominent habits researchers from social psychology and marketing to summarize the state of the art in habits research and to chart new avenues for research in this important domain.

To achieve these goals, Bas Verplanken will start with an overview of how habits have traditionally been conceptualized (i.e., as behavior repetition) and measured (i.e., as behavioral frequency). He will then provide a new scale to measure habit strength that is consistent with current views of habit as automatic, stimulus-based disposition to repeat well-practiced responses. Finally, he will show how this new conceptualization of habits provides new insights on what can be done to break bad habits.

In the second presentation, David Neal will show the results of a series of studies conducted with Wendy Wood and Anthony Pascoe showing that many everyday repetitive behaviors are automatically triggered by recurring environmental cues and not by deliberative, intended, and goal-mediated psychological processes. He will then show that changing environmental features (e.g., moving to a new house) and ensuring high levels of self-control capacity brings behavior under intentional control and helps people change their purchase and consumption habits.

In the third presentation, Pierre Chandon (in joint work with Vicki Morwitz, Ronn Smith, Eric Spangenberg, and David Sprott) will show how question-behavior research on the unintended effects of measuring intentions can contribute to the current debate about the relative importance of habits and intentions in guiding behavior. He will present the results of four longitudinal experiments (two in the field and two in a laboratory context) that demonstrate that measuring intentions strengthens behavior repeti-

tion when personal norms are weak but disrupts behavior repetition when personal norms are strong.

The discussion leader will be Gavan Fitzsimons. Gavan Fitzsimons will draw on his research on automatic behavior and on the effects of measuring intentions to discuss the contribution of the three papers of the session and to lead a discussion about an appropriate research agenda for continued work in this area.

#### EXTENDED ABSTRACTS

##### **"Habit and Consumer Behavior: Implications for Interventions and Behavior Change"**

*Bas Verplanken, University of Bath*

We seldom do things for the first time. A large portion of everyday behavior, including many consumer behaviors, is repeated in one form or another. While a single act may have important personal consequences, when behaviors are repeated, they exert significant, cumulative impact on medical, social, and economic outcomes experienced by both individual consumers and society as a whole. An important aspect of repetition is that repeating behaviors may turn these into habits. A habit can be conceptualized as a recurrent, often unconscious pattern of behaviour that is acquired through frequent repetition in a stable context. In this presentation, I will (1) argue that habit is an undervalued concept in consumer research, and show why habits are important to study; (2) claim that habits have been incorrectly conceptualized as 'frequency of past behavior,' and propose a more adequate conceptualization; and (3) discuss implications of considering the habit concept for interventions and behavior change.

Although many consumer behaviors are highly repetitive, this aspect is not or is only indirectly incorporated in most models of consumer behavior. For instance, according to the theory of planned behavior, past behavior influences future behavior through the mediating effects of model variables such as attitudes and behavioral intentions. Nevertheless, research on the residual variance effect shows that past behavior has a distinct and independent effect on future behavior over and above the model variables. Although this effect may have many causes, some of our research demonstrates that habituation may be one of those. In addition, habit has been found to attenuate the influence of attitudes and intentions on behavior, which suggests that habits may function as boundary conditions for the validity of social cognitive models. Habituation has also been found to affect information processing, such as information acquisition. In all, there is good reason to pay more attention to habit as a concept of interest to consumer behavior researchers.

Habit has always been conceptualized as frequency of past behavior. Consequently, most instruments to assess habit strength comprise of some measure of past behavioral frequency. However, it can be argued that repetition of behavior is a necessary, but not a sufficient condition to define behavior as habit. In addition to repetition, habits are defined by the automatic nature of acting. That is, habits may be executed without much awareness, deliberation or conscious intent, may efficiently co-occur with other activities, and are sometimes difficult to control. These features of automaticity, in addition to the aspect of repetition, provide a more appropriate and psychologically meaningful account of habit than confining

habit to past behavioral frequency. Following this reconceptualization of the habit construct, we developed a generic 12-item meta-cognitive instrument to measure habit strength. This instrument is not only a more valid measure of habit, it also provides the opportunity to test hypotheses that could not be tested with past behavioral frequency measures.

The features of automaticity that define habits, are the very features that make existing habits difficult to change. That is, the lack of awareness, deliberation and conscious intent that characterizes habits, the efficiency of habitual behavior, and the difficulty to control habits, may all contribute to the perseverance of habitual behavior. Unhealthy snacking habits, for instance, are difficult to change because habitual snackers typically do not make deliberate tradeoffs, take their snacks while doing other things simultaneously, and simply find it hard to leave. Together with the findings that habits are associated with a “tunnel vision,” as well as the weak relations between attitudes, intentions and habitual behavior, the defining features of habits spell bad news particularly for the effectiveness of informational campaigns. However, I will also argue that there may be windows of opportunities for such interventions when habits are broken in a more or less natural fashion. This may occur, for instance, when people move, when companies merge, or when people’s everyday routines are jeopardized or temporarily changed.

Finally, it can be argued that the features that define habits are the very features that are attractive for desirable behaviors to obtain. That is, we would like desirable behaviors to be executed frequently and automatically, and not be easily challenged by external information. In other words, the creation of desirable habits may be explicitly adopted as an intervention goal. This often will require much more than providing information. New habits should first and foremost be satisfactory solutions. Creating habits also implies creating stable contexts in which the new habits are sustained. For instance, the purchase of healthy food may only be expected to become habitual when such food is easily available at the right times and places.

Habit has long been ignored as a distinct and interesting construct. The conceptualization of habit as frequency of past behavior seems at least partly responsible for this. By defining habit as repeated behavior that has gained a degree of automaticity, we may now work with a more valid and psychologically more interesting concept. Taking habit into account may lead to new approaches to changing existing as well as creating new consumer behavior.

### **“Triggers of Real-World Habits: Implications for Consumer Behavior”**

*David Neal, Duke University*

*Wendy Wood, Duke University*

*Anthony M. Pascoe, Duke University*

Classic approaches to consumer behavior have tended to focus on the role of relatively conscious, deliberative decisions in driving action (e.g., information processing models; elaboration-likelihood model; see Bargh, 2002). Within this perspective, consumers are depicted as engaged in fairly dynamic processes of updating and adjusting their behavior to maximize subjective utility. How well does this model apply to well-established consumer habits? In this talk, we use a combination of naturalistic and experimental data to argue that habits are relatively isolated from people’s deliberative, intended, and goal-mediated psychological processes (Wood & Neal, in press). We argue that habits depend instead on cues in the performance environment that have historically co-varied with the response. Specifically, environmental cues come to be represented

with habitual responses in memory so that the simple perception of the cues can trigger performance of the response.

In support of this habit model, we present data from a series of studies some of which directly measure consumer behavior and some of which assess habits more broadly. Our first three studies indicate that habits are relatively independent of people’s current goals and intentions. Study one used a diary paradigm in which participants’ fast food purchases were tracked over a one-week period and then predicted from (a) the strength of their past purchasing habits and (b) the favorability of their stated intentions (i.e., whether they held favorable or unfavorable purchase intentions). Regression analyses showed that intentions were powerful predictors of actual purchasing behavior when habits were not in place, but did not predict behavior for those with strong habits (Ji Song & Wood, in press).

We then will present convergent evidence from a second, more controlled experimental paradigm. These studies simulated habit formation in the laboratory using a probabilistic learning task borrowed from cognitive neuroscience (Poldrack et al., 2001). Specifically, participants played a computer game in which they learned to predict weather outcomes (rain vs. shine) based on probabilistically associated visual cues. For some participants, the learning trials involved procedures known to encourage use of habit-based, procedural associations in memory. For others, the learning trials involved more explicit, declarative learning of specific outcomes. After learning, we primed a task-relevant goal (i.e., achievement) in some participants but not others using a scrambled sentence task. Participants were then tested on their weather prediction ability. Implicit achievement goal priming improved the performance of those relying on declarative memory, but impaired performance of those using habit-based procedural memory. This effect was replicated in a second study using an explicit goal-priming technique (performance-contingent payment). Thus, activating response-relevant goals not only failed to facilitate, but actually impaired, habitual responding.

These first two studies, although employing radically different paradigms, support a similar conclusion. They suggest that people’s habits are relatively independent from current goals and intentions. Extrapolating to the consumer domain, we theorize that marketing campaigns should tailor content to the strength of consumers’ habits in the target domain. Change in consumer habits will not be easily accomplished by a focus on changing intentions and goals.

In the second part of the talk, we address the mechanisms by which it is possible to change purchase and consumption habits. The results of a real-world diary study will be presented showing that people’s newspaper reading and TV watching habits tend to be disrupted when the context in which they perform those behaviors changes in some way (e.g., when cohabitants’ behavior changes). These data provide a real-world analogue for experimental work conducted by others showing that habits are linked to, and triggered by, the contextual cues that have consistently co-varied with past performance. Importantly, the diary data also reveal that context change tends to bring behavior under the control of people’s intentions. Specifically, even those with strong habits to read the newspaper or watch TV acted in line with their (favorable or unfavorable) intentions when the context had been disrupted. Based on this, we argue that context change (e.g., when people move to a new house) offers opportunities to target the formation of new consumer habits by influencing people’s intentions and goals when their old habits have been disrupted. In particular, new resident marketing programs hold great promise to alter habitual consumer behaviors (see Verplanken & Wood, 2006).

Also relevant to understanding the mechanisms for changing consumer habits is recognition of the extensive self-control resources required for consumers to control existing habits. In line with recent work showing that self-control is a readily depleted, finite resource (Muraven & Baumeister, 1998), we present diary data suggesting that people's real-world habits are especially difficult to inhibit when their self-control resources are low. Over four days, we tracked people's performance of personally important desirable (e.g., attending gym) and undesirable behaviors (e.g., purchasing candy bars). For two of the four days, we imposed a chronic self-control drain on participants by having them use their non-dominant hand for a variety of tasks (e.g., opening doors, answering cell phones). When self-control capacity was taxed in this way, participants were significantly more likely to fail at inhibiting unwanted habits. These data suggest that consumer habits will be especially unlikely to be amenable to change through marketing techniques that address intentions and goals when people's self-control resources are low (e.g., at the end of the day).

#### **“When Does the Past Repeat Itself? The Role of Behavior Prediction and Personal Norms”**

*Pierre Chandon, INSEAD*

*Vicki Morwitz, New York University*

*Ronn Smith, University of Arkansas*

*Eric R. Spangenberg, Washington State University*

*David E. Sprott, Washington State University*

Whether done intentionally or out of habit, many behaviors are repeated. Although no one denies the empirical evidence regarding the prevalence of repeat behavior and the predictive power of past behavior, two issues remain intensely debated. The first issue is whether behavior repetition provides evidence of habituation or whether it is simply a proxy measure of other unobserved or poorly measured factors, such as intentions, that actually drive behavior (Bargh and Chartrand 1999; Ouellette and Wood 1998; Webb and Sheeran 2006). Unfortunately, all the studies attempting to answer this question share a common methodological problem: In order to assess the unique contribution of each factor, they measure both intentions and behaviors in the same groups of people. If the simple act of measuring intentions changes behavior repetition, the results of these studies a) may not generalize to the general population of people whose intentions were not measured and b) may be systematically biased by factors such as subjective norms, which, as we argue, determine whether measuring intentions strengthens or weakens behavior repetition.

The second debated issue is to determine, from a practical standpoint, which interventions can be used to reinforce the repetition of behaviors generally considered virtuous and to disrupt the repetition of harmful behaviors. We hope to provide new insights into this question by examining the role of behavior prediction. Asking people about their future behavior is known to influence both socially normative and non-normative behaviors (Chandon, Morwitz, and Reinartz 2004; Chandon, Morwitz, and Reinartz 2005; Sherman 1980; Spangenberg and Greenwald 1999; Spangenberg et al. 2003). It is also an important question from a public health perspective because many research and prevention programs routinely include behavior prediction requests (Williams, Block, and Fitzsimons 2006), and may therefore unknowingly disrupt socially beneficial habits or reinforce socially harmful ones.

The objective of this research is to examine how behavior predictions and personal norms interact to reinforce or disrupt behavior repetition. Drawing on mere-measurement and self-prophecy studies (known collectively as question-behavior research,

Sprott et al. 2006), we hypothesize that asking people to predict their future behavior disrupts behavior repetition when personal norms are strong but increases repetition when they are weak. Stated differently, we hypothesize that prediction leads people to act according to their personal norm—and hence reduces the likelihood of repeating past behavior—when personal norms about the appropriate frequency of behavior are strong, but leads to behavior polarization—and hence to a higher likelihood of repeating the past—when personal norms are weak.

Two field experiments, one in a low-norm context (grocery purchasing) and one in a high-norm context (exercising), provide empirical support for our hypotheses. Study 1 shows that asking people about their future online grocery shopping intentions increased the number of transactions and total expenditures among frequent shoppers, but decreased these behaviors for those with medium and low pre-study usage. Hence, Study 1 shows that self-prediction increases online grocery purchasing habits. In Study 2, we obtain the exact opposite results when looking at exercising, a high-normative behavior. We find that asking people about their future exercising behavior reduced attendance at a health and fitness club among the top tier of its most assiduous members and increased it among the more intermittent users. Both Studies 1 and 2 used unobtrusive measures of behavior (e.g., shopping transaction data and daily attendance data) obtained in collaboration with the online grocer and with the health club.

The results of the field studies were supported by two laboratory experiments in which we manipulate and measure normative beliefs in a more controlled environment. In Study 3, we asked students to keep diaries measuring how much time they spend each day on a behavior with high normative beliefs (exercising) and on two behaviors with low normative beliefs (news watching and book reading). We also collected data on norm importance beliefs for each behavior by each participant. Participants were then asked to predict whether or not they would engage in one of the three behaviors in the following weeks. One week later, participants filled out unanticipated surveys of their post-prediction behavior duration. As expected, Study 3 shows that for behaviors with low normative beliefs (i.e., news and books) asking questions about future behavior increased the time spent among the most frequent users but reduced it for the least frequent users. For example asking questions about future behavior increased the time spent watching news by 47 minutes (+31%) among top-tier news watchers, but led to a 25-minute reduction (-74%) among the bottom tier. In contrast, self-prediction increased the time spent for the high social norm behavior (i.e., exercise) by 41 minutes in seven days (+69%) among the bottom tier of exercisers, but decreased exercise duration by 141 minutes (-49%) among the top tier. Finally, Study 4 provides initial evidence that personal norms strength interacts with behavior prediction because of the different accessibility of strong and weak personal norms and because of the resulting conflict with past behavior. Specifically, it shows that personal norms are more available for exercising than for either book reading or news watching and are more likely to conflict with past behavior when people are asked to predict their future behavior for exercising than for either book reading or news watching. It also shows that the strength and availability of personal norms are correlated at the individual level.

Although the focus of this research is on the effects of behavior prediction (i.e., the effects of *measuring* intentions, not the effects of intentions per se), our framework and results provide new insights on the two related debates of the relative importance of past behavior in guiding future behavior and on the factors that influence behavior repetition. We also contribute to the question-behavior

literature by demonstrating a new consequence of prediction, namely that it affects behavior consistency over time, and by providing new insights on the processes underlying question-behavior effects. Finally, our findings help unify this literature by showing that some of its seemingly contradictory results can be explained by the fact that some looked at behaviors, such as exercising, for which personal norms tend to be strong whereas others looked at behaviors, such as grocery shopping, for which personal norms tend to be weaker.

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