Are All Teasers Created Equal?

The Effectiveness of Sampling Experiences on Inducing Consumers’ Desire for the Target Product

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ABSTRACT

Marketers commonly invite consumers to experience samples (e.g., view sample pages from a book) to induce their desire for the target product (e.g., the book). We study two hitherto neglected and potentially important factors that influence the effectiveness of such sampling experiences, one about the environment (physical location of the sample) and one about the consumer (prior expectation to consume the target product). We propose that sampling experiences will be more effective in inducing consumers’ desire for the target product if the sample is located outside (rather than inside) the target product, and if consumers have no prior expectation (rather than have a prior expectation) to consume the target product. Six studies, involving both direct and indirect sampling experiences, supported these propositions and provided process evidence that these two factors operate through a common underlying variable: perceived overlap between sampling experience and experience of the target product.
Marketers spend a large sum of money providing sampling experiences (i.e., “teasers”) to consumers (Kantar Media Reports 2013; Meyer 1982; Parmar 2003). For example, Amazon.com invites potential book buyers to “click to look inside” for sample pages; Godiva offers registered chocolate aficionados free chocolate samples every month; software developers provide trial versions; skincare and cosmetic brands regularly distribute free samples. Whereas sampling experiences are designed to induce consumers’ desire for the target product, empirical research documented both a facilitating effect (Jones 2001) and an undermining effect (Lammers 1991).

In this research, we explore factors that influence the effectiveness of sampling experiences on inducing consumers’ desire for the target product, holding the content of the sampling experiences constant. Our research examines the following questions and tests the following hypotheses:

1) What influences the effectiveness of sampling experiences on inducing consumers’ desire for the target product? As we will review, the existing literature has already suggested a variety of factors. In the current research, we propose a hitherto neglected but potentially important factor – the perceived overlap between sampling experience (i.e., the experience of consuming the product sample) and product experience (i.e., the experience of consuming the target product), namely, the extent to which consumers perceive the sampling experience as a part of the product experience. We hypothesize that consumers will have a lower desire for the target product if they perceive higher overlap between sampling experience and product experience.

2) What influences the perceived overlap between sampling experience and product experience? We propose two factors, one about the marketing environment and one about the consumer himself or herself. The factor about the marketing environment is the location of the
product sample relative to the target product. We hypothesize that consumers would perceive a larger overlap between sampling experience and product experience, and therefore have a lower desire for the target product, if the samples are displayed inside than outside the target product. The factor about the consumer is his or her prior expectation to consume the target product. We hypothesize that consumers would perceive a larger overlap between sampling experience and product experience, and therefore have a lower desire for the target product, if they have a prior expectation to consume the target product than if they do not.

In the rest of the paper, we first elaborate on our theory, then report six empirical studies that tested our theory, and finally discuss the theoretical and marketing implications.

WHAT INFLUENCES THE EFFECTIVENESS OF SAMPLING EXPERIENCES ON INDUCING CONSUMERS’ DESIRE FOR TARGET PRODUCT?

Factors Already Recognized in Existing Literature

Existing literature shows that sampling experiences can either increase or decrease consumers’ desire for the target product. We first review reasons that can increase consumers’ desire. One cluster of reasons is related to the informative value of sampling experiences in the context of consumer learning (Hoch and Ha 1986). Sampling experiences provide useful product information (Jain, Mahajan, and Muller 1995), which increases consumers’ awareness of the target product and its benefits (Heiman et al. 2001). Furthermore, if sampling experiences are positive, they could improve the image of, and the attitude towards the product (Bettinger, Dawson, and Wales 1979; Hamm, Perry, and Wynn 1969). All of these factors can trigger
“unplanned wants” (Stilley, Inman, and Wakefield 2010) from consumers. For example, a consumer would not desire a newly introduced snack before knowing its existence and its delicious taste; however if she tries a bite size sample and likes it, her desire would rise. For another example, a person may not desire viewing an album of an unknown painter; however if she views a few sample paintings by the artist and likes them, her desire will rise.

Another cluster of reasons why providing sampling experience can increase consumers’ desire for the target product is related to the impact of sampling experiences on consumers’ need states. Research shows that, sampling experiences could intensify one’s need state (Cabanac 1979; Berridge and Robinson 1995) and stimulate the reward-seeking system (Wadhwa, Shiv, and Nowlis 2008), resulting in a craving for the target product (Solomon 1980). For example, Cornell, Rodin, and Weingarten (1989) found that participants ate more pizza (ice cream) when offered both foods after taking one bite of pizza (ice cream) in an earlier stage, although they stated that they liked pizza and ice cream equally in an independent survey. Indeed, data from the marketplace show that providing sampling experiences often boosts consumers’ desire to get the target products (Heiman et al. 2001). Specifically, sampling experiences could exert two effects (Bawa and Shoemaker 2004). One is an acceleration effect, whereby consumers who would want the target product at a later time will now get it sooner after experiencing the sample. The other is an expansion effect, whereby consumers who would not want the target product before will now want it after experiencing the sample. According to studies by Linstendt (1999) and by Jones (2001), sampling experiences can boost consumers’ desire of getting the target products by up to 500% on the day of promotion.

There are also reasons why providing product samples can decrease consumers’ desire for the target product. First, in terms of providing product information, sampling experiences
may fail to meet consumers’ expectation and such disconfirmation would decrease desire for the target product (Anderson 1973). Second, in terms of need states, sampling experiences could satisfy one’s hunger and result in lower need for the target product. For example, Steinberg and Yalch (1978) found that, consistent with the conventional wisdom that a snack before dinner can “kill one’s appetite,” food samples in a supermarket satisfied nonobese consumers’ hunger and lowered their food purchases in general. Furthermore, in accordance with the law of diminishing marginal utility (e.g., McAlister and Pessemier 1982), consumer’s marginal desire for the target product would be lower when they sampled part of the product than when they did not sample. Consistent with these reasons, data from the marketplace also identified a cannibalization effect such that sampling experiences specifically reduced the purchases of the sampled brands (Bawa and Shoemaker 2004). Similarly, Lammers (1991) found that, within minutes of sampling chocolates, only the sales of other chocolate varieties increased, rather than the sampled type.

A Novel Factor – Perceived Overlap between Sampling Experience and Product Experience

The previous section has reviewed a set of already-recognized factors of why sampling experiences may change consumers’ desire for the target product. In the current research, we do not dispute or study any of these previously documented factors. Instead, we propose a hitherto neglected but potentially important factor – the perceived overlap between sampling experience (i.e., the experience of consuming product samples) and product experience (i.e., the experience of consuming the target product). We reason that because the sampling experience and the product experience share commonality, consumers could perceive the sampling experience as a part of the product experience (i.e., perceiving an overlap between the two experiences). We
hypothesize that consumers will desire the target product less if they perceive the overlap to be high than if they perceive it to be low. A high perceived overlap signals to consumers that they have already experienced a large portion of the target product (“I have been there” or “I have done that”) and consequently they no longer need the target product as much. Figure 1 depicts our model.

[Insert figure 1 about here]

Our reasoning is in line with research showing that consumers disengage from focal activities after taking part in a few related actions and feeling that they have (partially) completed the focal activities (Dhar and Simonson, 1999; Fishbach and Dhar 2005; Fishbach, Dhar, and Zhang 2006; Khan and Dhar 2006; Laran and Janiszewski 2009; Mazar and Zhong 2010; Monin and Miller, 2001). For example, consumers who purchased green products (virtue activity) subsequently cheated more and behaved more selfish (vice activity) (Mazar and Zhong 2010), males who explicitly objected sexist statement later prejudiced female job candidates more (Monin and Miller, 2001), and students who perceived themselves as having studied hard in the past day indicated higher interests in pursuing non-academic activities, such as hangout out with friends, watching television, and so on (Fishbach and Dhar 2005). Moreover, even indicating intention to pursue certain activities (Khan and Dhar 2006) and imaging future actions (Fishbach and Dhar 2005) could lead to disengagement in the present. Likewise, we contend that sampling experience could decrease consumers’ desire for the target product when consumers perceive it as largely overlapping with the product experience and fulfilling their desire for the target product, which renders the consumption of the target product redundant.
WHAT INFLUENCES THE PERCEIVED OVERLAP BETWEEN SAMPLING EXPERIENCE AND PRODUCT EXPERIENCE?

The analysis above raises a critical question: What determines the perceived overlap between the sampling experience and the product experience? We propose and examine two factors in this research, one about the marketing environment and one about the consumer. These may not be the only factors, but we believe these are important factors and will focus on them in this research. We will speculate on other possible factors in the General Discussion section.

*Marketing Environment Factor: Location of Product Sample*

The factor about the marketing environment is the *location of the product sample relative to the target product*. To illustrate, consider two alternative scenarios of how a bookseller promotes a painting album. In one scenario, the “inside” condition, the bookseller allows potential readers to open the first few pages of the book to view the same paintings as samples and keeps the rest of the book closed and sealed. In the other scenario, the “outside” condition, the seller presents the first few paintings from the album as samples on separate sheets of paper (e.g., flyers) and shows them to potential buyers; the seller keeps the actual album closed and sealed so the readers cannot open it. In both conditions, the potential buyers know that the samples are from the book. Thus, normatively, the sample paintings in the two conditions provide the same information. Psychologically, however, they are likely to create different perceptions. We propose that, in the “inside” condition, the reader will perceive the sampling experience to be a part of the product experience; in other words, she will perceive the overlap
between the sampling experience and the product experience to be high. Conversely, in the “outside” condition, the reader will perceive the sampling experience (i.e., the experience of viewing the sample paintings) to be separate from the product experience (i.e., the experience of viewing the whole album), even though she knows that the sample paintings are from the book; in other words, the reader will perceive the overlap between the sampling experience and the product experience to be low.

Our reasoning is consistent with previous literature showing that mental representation of objects relation is a direct reflection of that in the physical world. The strongest evidence comes from research on mental rotation, showing that the time people take to rotate a 3-D object in their mind is proportional to the actual angle of the rotation in the physical world (Shepard and Metzler 1971). In addition, research on embodied cognition also shows ample evidence that people’s high-level cognition is influenced and constrained by the physical environment (Wilson 2002).

In sum, given our prior analysis on how perceived overlap between the sampling experience and the product experiences could influence the desire for the product, we propose that:

**H1:** The effectiveness of sampling experiences on desire for the target product depends on the location of the product samples relative to the target product. Specifically, product samples displayed inside (vs. outside) the target product will lead to a higher perceived overlap between the sampling experience and the product experience, which, in turn, will lead to a lower desire for the target product.
**Consumer Factor: Expectation to Consume the Target Product**

In the previous section, we have introduced an environment-based factor. In this section, we explore a consumer-based factor. Like the environment-based factor, we believe this consumer-based factor also influences the perceived overlap between the sampling experience and the product experience and, thereby influences consumers’ desire for the target product. This factor is the consumer’s existing expectation to consume the target product.

To illustrate, consider two consumers at a bookstore. As they enter the store, one of them (the “with-expectation” consumer) has a plan to purchase a particular painting album and view it, and the other consumer (the “without-expectation” consumer) does not have such a plan. As they are in the store, a sales representative hands each of them a flyer, which contains sample paintings from the album. Normatively, the flyers in the two conditions provide the same information. Psychologically, however, they are likely to create different perceptions. We propose that because the with-expectation consumer has a goal to experience the product and is guided by this goal to detect goal-related information (Balcetis and Dunning 2006; Bruner 1957; Gollwitzer 1990; Veltkamp, Aarts, and Custers 2008; Wilcox et al. 2009), she will be likely to relate the sampling experience to the product experience; in other words, she will perceive the overlap between the sampling experience and the product experience to be high. Conversely, the without-expectation consumer does not have a goal to experience the product to begin with, and thus will be unlikely to relate the sampling experience to the product experience; in other words, she will perceive the overlap between the sampling experience and the product experience to be low.
In sum, given our prior analysis on how perceived overlap between the sampling experience and the product experiences could influence the desire for the product, we propose that:

**H2:** The effectiveness of a sampling experience on desire depends on whether the consumer already has a prior expectation to consume the target product. Specifically, consumers with a prior expectation (vs. without a prior expectation) to consume the target product will have a higher perceived overlap between the sampling experience and product experience, which, in turn, will lead to a lower desire for the target product.

Next we report a set of six studies that tested our proposed framework. Studies 1 to 3 tested hypothesis 1, regarding the location of samples. Studies 4 to 6 tested hypothesis 2, regarding the expectation of the consumer. Across these studies, we used both direct sampling experience (i.e., sampling a fraction of the target product; studies 1, 2, 4 and 5) and indirect sampling experience (i.e., receiving information on the sampling experience; studies 3 and 6), and measured desire for the target product via both real behavior (studies 1, 2, 4, and 5) and self-report (studies 3 and 6). In addition, studies 2 and 4 used a causal chain design to provide direct causal evidence on our proposed mechanism. A summary of the features of our studies is in Table 1.
Table 1: Overview of the Studies

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Study</th>
<th>Objective</th>
<th>IVs (Design)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 (Sample Location)</td>
<td>1</td>
<td>Tests H1 in art (painting album) domain with direct sampling experience.</td>
<td>2 (sampling experience: with vs. without) × 2 (location: inside vs. outside)</td>
</tr>
<tr>
<td></td>
<td>2a &amp; 2b</td>
<td>Tests the causal mechanism underlying H1. Study 2a tests the causal link from Sample Location to Perceived Overlap; Study 2b tests the causal link from Perceived Overlap to Desire for Target Product.</td>
<td>Study 2a: 2 (location: inside vs. outside); Study 2b: 2 (perceived overlap: high vs. low)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Tests H1 and replicates the result of Study 1 in food (chocolate) domain with only indirect sampling experience.</td>
<td>Same as Study 1</td>
</tr>
<tr>
<td>H2 (Expectation to Consume Product)</td>
<td>4</td>
<td>Tests H2 in art (painting album) domain with direct sampling experience.</td>
<td>2 (sampling experience: with vs. without) × 2 (expectation to consume: with vs. without)</td>
</tr>
<tr>
<td></td>
<td>5a &amp; 5b</td>
<td>Tests the causal mechanism underlying H2. Study 2a tests the causal link from Expectation to Consume Product to Perceived Overlap; Study 2b tests the causal link from Perceived Overlap to Desire for Target Product.</td>
<td>Study 5a: 2 (expectation to consume: without vs. with); Study 5b: 2 (perceived overlap: high vs. low)</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Tests H2 and replicates the result of Study 4 in food (chocolate) domain with only indirect sampling experience.</td>
<td>Same as Study 4</td>
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**STUDY 1**

Study 1 tested hypothesis 1 with a painting album as the target product. The study followed a 2 (sampling experience: with vs. without) × 2 (location: inside vs. outside) between-participants design. Participants in the with-sampling-experience condition previewed two paintings from the target album, and participants in the without-sampling-experience condition
previewed two non-painting (i.e., non-sample) pages from the target album. In the inside condition, the preview materials (either the paintings or non-paintings) were shown from within (i.e., inside) an opened album; in the outside condition, the preview materials were printed on flyers and placed next to (i.e., outside) a closed target album (see figure 2 for the stimuli). In both conditions we told participants that the preview pages were from the album, and our location manipulation (inside vs. outside) was only a perception manipulation.

[Insert figure 2 about here]

On the basis of hypothesis 1, we predicted that among participants who viewed the sample paintings, those in the inside condition would show a lower desire for viewing the entire album than those in the outside condition; whereas for participants who viewed non-sample materials (i.e., control conditions), this pattern would not hold.

Method

This study adopted a 2 (sampling experience: with vs. without) × 2 (location: inside vs. outside) between-participants design. One hundred and fifty-six Mechanical Turk workers (96 males, 60 females; mean age = 30) participated in this study for a nominal payment.

We told participants that we were testing the content of a website that introduced traditional Chinese painting and painters. All of the participants then read a short biography of a Chinese painter, Yan-Kai, who “just released a mountain album, which consists of his 21 most famous mountain paintings,” and viewed a photo of a closed album, whose cover only had the
album title, “YAN-KAI: A SERIES OF MOUNTAIN LANDSCAPE PAINTINGS” on it. Participants further read that they would view two sample pages that were randomly drawn from the album. In the with-sampling-experience condition, participants then either viewed an opened album showing two sample paintings (inside condition), or the same two sample paintings presented next to a closed album (outside condition). In the without-sampling-experience condition, participants then either viewed an opened album showing a dedication page and a page of the painter’s seal (inside condition), or the same two pages presented next to a closed album (outside condition) (see figure 2 for the stimuli). We then told all of the participants that they could view the whole album by clicking a “load the album” button. This loading process was set to always fail, and we offered participants opportunities to reload the album as many times as they wanted to, and made it clear that their payment would not be influenced by their choice. We measured how many times participants tried to reload before giving up, assuming that the greater their desire to view the album, the more times they would attempt to reload it.

Results and Discussion

We used the number of times the participants chose to reload the album as an indicator of their desire to view the album. In theory, participants could reload the album for an unlimited number of times, but in our data the number of times participants chose to reload ranged from 0 to 6. A 2 (sampling experience: with vs. without) × 2 (location: inside vs. outside) ANOVA yielded a marginally significant main effect of location ($F(1, 152) = 3.08, p = .08$) and, most important, a marginally significant interaction ($F(1, 152) = 3.24, p = .07$; see figure 3). Planned contrasts revealed that, among participants with sampling experience, those in the inside
condition ($M = .24, SD = .58$) reloaded the album less times than those in the outside condition ($M = .74, SD = 1.12; t(78) = 2.53, p < .05$); whereas among participants without sampling experience, reloading times did not differ between the inside condition ($M = .62, SD = .83$) and the outside condition ($M = .62, SD = .91; t(78) < 1, ns.$).

Results from study 1 supported our prediction that relative to participants who viewed the sample paintings in the outside condition, participants who viewed the sampling paintings in the inside condition exhibited a lower desire for viewing the whole album. Note that the manipulation in this study was subtle, and all of the participants knew that the samples were from the album, nevertheless, this subtle manipulation created a significant difference between the inside condition and the outside condition. In addition, the null effect in the two without-sampling-experience conditions (i.e., control conditions) ruled out the possibility that the proposed effect may be driven by the inherent positivity of the outside condition. In our next study, we only included the with-sampling-experience conditions and directly tested the proposed causal mechanism.

**STUDY 2A AND 2B**

Study 1 lent support to our first hypothesis, that the location of the sample influences desire for the target product after the sampling experience. According to our framework, the causal mechanism underlying this hypothesis is that sample location influences the perceived overlap between sampling experience and product experience, and this perceived overlap, in
turn, influences one’s desire for the target product. Study 2 tested this causal chain. Specifically, Study 2a tested the first link, from Sample Location to Perceived Overlap, and Study 2b tested the second link, from Perceived Overlap to Desire for the Target Product. Our method of testing a causal chain by separately testing each component link was inspired by recent work by Spencer, Zanna, and Zhong (2005; also see Risen and Critcher 2011). Specifically, in Study 2a, we manipulated whether the location of samples was inside or outside the target product and directly measured the perceived overlap between sampling experience and product experience. In study 2b, we described the notion of perceived overlap to participants and manipulated the perceived overlap (high versus low) and measured the desire for the target product after the sampling experience. We predicted that displaying the product samples inside the target product would lead to a higher perceived overlap between sampling experience and product experience (study 2a), and a high perceived overlap would lead to a lower desire for the target product (study 2b).

**STUDY 2A**

*Method*

This study used a 2 (location: inside vs. outside) between-participants design. Sixty-nine Mechanical Turk workers (40 males, 29 females; mean age = 32) participated in this study for a nominal payment.

We used the same cover story and presented participants with the same sample paintings as in study 1, either displayed inside the album or outside the album. After viewing the sample paintings, participants read, “You have seen some sample paintings from the album. On the one
hand, the experience of viewing the samples could be deemed as something that is in addition to the experience of actually viewing the whole album. On the other hand, the experience of viewing the samples could also be deemed as something that is a part of the experience of viewing the whole album. To you, to what extent does your experience of viewing the samples overlap with the experience of actually viewing the whole album?” We then presented participants with 7 Venn diagrams (see figure 4), each of which had a large circle that represented “Viewing the whole album” and a small circle that represented “Viewing the samples.” The overlap between the large circle and the small circle varied from small (denoted by 1) to large (denoted by 7). We then asked participants to circle the diagram that best represented their perception.

[Insert figure 4 about here]

Results and Discussion

As predicted, we found that participants perceived higher overlap between the experience of viewing the samples and the experience of viewing the whole album when the samples were presented inside the album ($M = 4.47, SD = 2.02$) than outside the album ($M = 3.32, SD = 1.83$; $t(67) = 2.35, p < .05$).

Results from study 2a lent support to our hypothesis that people would perceive a higher overlap between sampling experience and product experience when the product samples are displayed inside than outside the target product.
STUDY 2B

Method

This study used a 2 (perceived overlap: high vs. low) between-participants design. One hundred and thirty-eight Mechanical Turk workers (80 males, 58 females; mean age = 33) participated in this study for a nominal payment.

We told participants that this is a study on sampling experience and that they would view some sample paintings from a painting album titled “YAN-KAI: A SERIES OF MOUNTAIN LANDSCAPE PAINTINGS” recently released by Yan-Kai, who specializes in traditional Chinese painting. We further told participants “In a previous study, we asked a group of participants to first view some sample paintings and then the whole album, and indicate how they perceived the relationship between ‘the experience of viewing sample paintings’ and ‘the experience of viewing the whole album.’” We then showed two Venn diagrams that represented high and low perceived overlap respectively (see figure 5). Specifically, in diagram A, the small circle that represented “viewing the samples” completely overlapped with the big circle that represented “viewing the whole album”; in diagram B, these two circles had no overlap at all. In the high-perceived-overlap condition, we told participants that the majority of participants in our previous study chose diagram A (the left one); whereas in the low-perceived-overlap condition, we told participants that the majority of participants in our previous study chose diagram B (the right one). With such impression, participants then proceeded to view the two sample paintings that we used in study 1, following which they encountered the same reloading task as in study 1.

[Insert figure 5 about here]
Results and Discussion

We used the number of times the participants chose to reload the album as an indicator of their desire to view the whole album. We found that those in the high-perceived-overlap condition \((M = .52, SD = .83)\) reloaded the album fewer times than those in the low-perceived-overlap condition \((M = .92, SD = 1.24; t(136) = 2.21, p < .05)\).

Results from study 2b supported our hypothesis that a higher perceived overlap between sampling experience and product experience would lead to a lower desire for the target product. Note that in this study, the sample paintings were always presented outside the target product, yet by directly manipulating the perceived overlap between the sampling experience and the product experience we could obtain the predicted difference.

Collectively, results from studies 2a and 2b supported our proposed causal mechanism that presenting product samples inside (as oppose to outside) the target product leads to a higher perceived overlap between sampling experience and product experience, which, in turn, leads to a lower desire for the target product.

STUDY 3

Study 3 was a replication of study 1, adopting the same design, but using a different type of target product and a different type of sampling experience. In study 1, the target product was a painting album, for viewing; in study 3, it was chocolate, for eating. In study 1, the sample was a
fraction of the target product, which provided a direct sampling experience; in study 3, it was a video showcasing the eating experience, which provided an indirect sampling experience. The reason we used an indirect sample experience in this study was that marketers often provide consumers indirect rather than direct sampling experiences. For example, advertisements marketers sometimes show how other people are enjoying their products (e.g., driving a car or eating a chocolate), rather than letting potential buyers drive the car or try the chocolate themselves. We were curious whether the result we found in study 1 could be replicated with such an indirect experience. We predicted that it would, because recent research on vicarious experience shows that indirect experience (e.g., merely perceiving or imaging an activity) could lead to a similar effect as direct experience (Larson, Redden, and Elder, forthcoming; Morewedge, Huh, and Vosgerau 2010).

Method

Like Study 1, this study adopted a 2 (sampling experience: with vs. without) × 2 (location: inside vs. outside) between-participants design. One hundred and forty undergraduate students from a North American university (61 males, 79 females; mean age = 21) participated in this study for monetary compensation.

We framed this study as a snacks survey. Participants first answered some filler questions on snacks preference. We asked participants questions such as “Do you like sweet snacks?” “Do you like salty snacks?” “Do you like chewy snacks?” “Do you like crispy snacks?” To answer each of these questions, participants would choose a number between 1 and 3, where 1 = not at all, 3 = very much) and hunger level (“Are you hungry?” 1 = not at all, 3 = very much). These
measures did not differ across conditions and thus were excluded from further analysis. Participants then read that they would watch a video about M&M’s chocolate. Depending on conditions, they further read that they would see a person “taking several pieces of M&M's from an M&M's pack and eat them, one at a time” (with-sampling-experience, inside), “taking several pieces of M&M's from a bowl and eat them, one at a time” (with-sampling-experience, outside), “taking several slips of paper from an M&M's pack and read the information on them, one at a time” (without-sampling-experience, inside), or “taking several slips of paper from a bowl and read the information on them, one at a time” (without-sampling-experience, outside). Participants then viewed the corresponding video (see snapshots of these videos in figure 6) while wearing a headset. In all of the four videos, a pack of milk chocolate M&M’s (1.69 oz; brown package) and a green bowl were in the foreground. To eliminate the impact of seeing food photos on consumption desire (Larson, Redden, and Elder, forthcoming), we only showed the back side of the package (i.e., manufacture information, nutrition information) on the camera. A female college student acted as the protagonist in all of the four videos. In the with-sampling-experience condition, she ate 20 pieces of M&M’s, one at a time, with intermittent commentaries (e.g., “delicious,” “very sweet,” “crispy”); in the without-sampling-experience conditions, she read 12 pieces of facts about M&M’s (e.g., “M&M's are produced by Mars, Incorporated.” “In 1980, M&M's were introduced internationally to Australia, Canada, Europe, Hong Kong, Japan, Malaysia, and the United Kingdom.” “Forrest Mars, Sr., son of the founder of the Mars Company Frank C. Mars, invented the idea for the candy in the 1930s during the Spanish Civil War.”) in random chronological order. Each video lasted for about 190 seconds. To match the colors of M&M’s, the paper slips in the without-sampling-experience conditions were also in different colors. Upon viewing the video, participants answered two questions on their desire for
M&M’s: 1) Are you craving for M&M’s now? (1 = definitely no, 7 = definitely yes) and 2) How attractive is one piece of M&M’s to you now? (1 = not attractive at all, 7 = very attractive).

[Insert figure 6 about here]

**Results and Discussion**

We collapsed the two desire measures \( r = .76, p < .001 \) into one. A 2 (sampling experience: with vs. without) \( \times \) 2 (location: inside vs. outside) ANOVA found no main effect of sampling experience \( F(1,136) = .005, p = .94 \) or location \( F(1,94) = .98, p = .32 \) but a significant interaction effect \( F(1,136) = 4.83, p < .01; \) see figure 7). In support of our prediction, planned contrasts showed that of the participants who viewed the eating M&M’s videos (i.e., samples), those in the inside condition \( (M = 2.60, SD = 1.36) \) reported a lower desire for eating M&M’s than those in the outside condition \( (M = 3.39, SD = 1.68; t(67) = 2.12, p < .05) \); however, of the participants who viewed the M&M’s facts videos (non-samples), the inside condition \( (M = 3.13, SD = 1.32) \) and outside condition \( (M = 2.83, SD = 1.43) \) did not differ \( (t(69) = .91, p = .37) \).

[Insert figure 7 about here]

Results from study 3 again lent support to our hypothesis that the physical location of samples matters such that when the samples are from inside the target product consumers exhibit a lower desire for the target product after the (indirect, or vicarious) sampling experience, as
compared to when the samples are from outside the target product. Collectively, studies 1-3 tested hypothesis 1 using both direct sampling experience and indirect sampling experience, and provided causal evidence on the impact of sample location relative to the target product on desire for the target product. Our next three studies tested hypothesis 2.

STUDY 4

Study 4 again used a painting album as the target product and manipulated the presence or absence of a sampling experience. In addition, we manipulated whether participants expected to view the whole album in prior or not.

On the basis of hypothesis 2, we predicted that among participants who viewed the sample paintings, those with a prior expectation to view the whole album would show a lower desire for viewing the whole album than those without such an expectation; whereas among participants who viewed non-sample materials (i.e., control conditions), this pattern would not hold.

Method

This study adopted a 2 (sampling experience: with vs. without) × 2 (expectation to consume the target product: with vs. without) between-participants design. One hundred and thirty Mechanical Turk workers (85 males, 45 females; mean age = 30) participated in this study for a nominal payment.
We first told participants that they would soon read about a Chinese painter who “is famous for his paintings of flowers, and has recently released a flower painting album.” Participants in the with-expectation condition further read, “After reading his biography, you will view the whole Flower Album;” whereas participants in the without-expectation condition were not given this information. All of the participants then started reading a biography of the artist on the computer screen. In the with-sampling-experience condition, participants viewed two thumbnails of the flower paintings by the side of the biography, whereas in the without-sampling-experience condition, participants did not see any samples. Upon finishing reading the biography, participants answered whether they liked the writing of the biography (a filler question which did not differ across conditions and was excluded from further analysis). We then told all of the participants, “Next you can view the flower album and answer some questions, which will take about 3 minutes. However you can also skip this part (i.e., viewing the Flower Album and answering the questions), because we already collected enough data for this part.” As in study 1, we made it clear that their payment would not be influenced by their choice. We measured whether participants chose to view the album or not, assuming that choosing to view the album indicated a stronger desire for the album.

**Results and Discussion**

We used the percentage of participants who chose to view the flower album as an indicator of their desire for the target product. A 2 (sampling experience: with vs. without) × 2 (expectation to consume the target product: with vs. without) logistic regression on the choice percentage yielded a significant main effect of expectation ($Wald(1) = 5.98, \beta = 1.29, \text{SE} = .53, p$
< .05), a marginally significant main effect of sampling experience ($Wald(1) = 3.83, \beta = 1.00, SE = .51, p = .05$), and, most importantly, a significant interaction effect ($Wald(1) = 10.21, \beta = 2.34, SE = .73, p < .01$) (see figure 8). Planned contrasts showed that, among participants who viewed the sample paintings, those with the expectation to view the whole album (41%; 14/34) were less likely to choose to view the whole album than those without the expectation to view the whole album (67%; 22/33; $\chi^2(1) = 4.38, p < .05$). Conversely, among participants who did not view the sample paintings, those with the expectation to view the whole album did not have a lower desire for viewing the whole album than those without the expectation; if anything, the opposite was true (73%; 24/33 vs. 42%; 14/33; $\chi^2(1) = 6.20, p < .05$).

[Insert figure 8 about here]

Results from study 4 supported hypothesis 2 that the effectiveness of providing sampling experiences depends on consumers’ prior expectation of whether to consume the target product. In addition, results from the two without-sampling-experience conditions (i.e., control conditions) ruled out the possibility that the proposed effect may be driven by the inherent positivity of the without-expectation condition. In the next study, we only included the with-sampling-experience conditions and directly tested the proposed causal mechanism.

**STUDY 5A AND 5B**

Study 4 lent support to our second hypothesis, that the expectation of the consumer influences desire for the target product after sampling experience. According to our framework, the causal mechanism underlying this hypothesis is that consumer expectation influences the
perceived overlap between sampling experience and product experience, and this perceived overlap, in turn, influences one’s desire for the target product. Study 5 tested this causal chain. Specifically, study 5a tested the first link, from Expectation to Consume the Target Product to Perceived Overlap, and study 5b tested the second link, from Perceived Overlap to Desire for the Target Product. Specifically, in study 5a, we manipulated whether the participants expected to consume a target album or not and measured the perceived overlap between sampling experience and product experience. In study 5b, we described the notion of perceived overlap to participants and manipulated the size of the overlap (high versus low) and measured their desire for the target product after they viewed the sample paintings. We predicted that participants in the with-expectation condition would perceive a higher perceived overlap between sampling experience and product experience, and a higher perceived overlap would lead to a lower desire for the target product.

**STUDY 5A**

*Method*

This study used a 2 (expectation to consume the target product: with vs. without) between-participants design. Fifty-seven Mechanical Turk workers (28 males, 29 females; mean age = 29) participated in this study for nominal payment.

We used the same cover story and showed participants the sample paintings as in study 4. We then presented participants with the same Venn diagrams as in study 2a and asked them to indicate the diagram that best represented their perceived relationship between the sampling experience and the product experience.
Results and Discussion

As predicted, participants in the with-expectation condition \((M = 4.66, SD = 2.22)\) perceived higher overlap between the sampling experience and the product experience than those in the without-expectation condition \((M = 3.32, SD = 1.87; t(55) = 2.45, p < .05)\).

Results from study 5a supported our proposition that people with an expectation to consume the target product would perceive a higher overlap between sampling experience and product experience than those without such an expectation.

STUDY 5B

Method

This study used a 2 (perceived overlap: high vs. low) between-participants design. One hundred and thirty-eight Mechanical Turk workers (80 males, 58 females; mean age = 33) participated in this study for a nominal payment.

We used the same cover story and the same manipulations of overlap as in study 2b, following which participants viewed the two sample paintings used in study 4. Finally, participants encountered the choice question as in study 4 (i.e., “view the Flower Album” or “Skip the Flower Album”).

Results and Discussion
As predicted, less people in the high perceived overlap condition (25%; 16/64) chose to view the target album than in the low perceived overlap condition (45%; 31/69; \( \chi^2(1) = 5.77, \ p < .05 \)).

Collectively, results from studies 5a and 5b supported our proposed causal mechanism that, expectation to consume the target product would lead to a higher perceived overlap between sampling experience and product experience, which, in turn, leads to a lower desire for the target product.

STUDY 6

Study 6 was a replication of study 4 in the context of study 3. Like study 4, study 6 followed a 2 (sampling experience: with vs. without) X 2 (expectation to consume the target product: with vs. without) between-participants design, and like study 3, it used chocolate as the target product and a video to provide an indirect sampling experience.

Method

This study adopted a 2 (sampling experience: with vs. without) \( \times \) 2 (expectation to consume the target product: with vs. without) between-participants design. Ninety-eight undergraduate students from a North American university (51 males, 47 females; mean age = 19) participated in this study for a nominal payment.
In the with-expectation condition, we framed the task as tasting Ghirardelli chocolate and told participants that they would eat a Ghirardelli chocolate square after reading an article, viewing a video, and filling out a questionnaire about Ghirardelli. In the without-expectation condition, we framed the task as evaluating information on Ghirardelli and told participants that they would read an article, view a video, and fill out a questionnaire about Ghirardelli. All of the participants then read a short article about the history of Ghirardelli: “In 1849, when Domingo Ghirardelli immigrated to the United States from his homeland of Italy, he had dreams of striking it rich in the California Gold Rush. He settled on opening a tent-store in Stockton, CA, selling various supplies and confections to fellow miners. With his new business proving successful, Domingo decided to open a store and hotel in San Francisco. After a major fire in 1851 destroyed his businesses, he began to rebuild. In 1852, he formed a new confectionery company that would soon become the Ghirardelli Chocolate Company.”

After reading the article, participants viewed a 63-second video. In the with-sampling-experience condition, the video was a Ghirardelli chocolate commercial, which displayed the feature (e.g., shape, color, texture) of the product and then a woman slowly eating the chocolate, so that participants could gain indirect sampling experience. In the without-sampling-experience condition, because participants learnt from the article about Ghirardelli that San Francisco was the hometown of Ghirardelli, we showed a video on San Francisco sceneries. Upon finishing watching the video, participants answered several filler questions, including “How much did you like the video?” (1 = not at all, 7 = very much), and “Do you like chocolate in general?” (1 = not at all, 7 = very much). Answers to these questions did not differ across conditions and thus these questions were excluded from further data analysis.
Next, we told participants in the with-expectation condition “In the final part of this study, you can eat one Ghirardelli chocolate, as we told you before,” and in the without-expectation condition “In the final part of this study, you can eat a Ghirardelli chocolate.” We further added, in both conditions, that, unfortunately, the chocolate had just run out, and a research assistant was on her way to get more. We told participants that it might take a few minutes before the chocolate would arrive and asked them whether they were willing to wait and, if so, how long they were willing to wait. We used the reported waiting time as a proxy of the desire for the Ghirardelli chocolate, assuming that long reported waiting time indicated stronger desire.

**Results and Discussion**

Because the distribution of the willingness-to-wait responses was positively skewed, we log-transformed the responses prior to our analysis. A 2 (sampling experience: with vs. without) × 2 (consumer expectation: with vs. without) ANOVA found no main effect of expectation ($F(1,94) = .15, p = .70$), no main effect of sampling experience ($F(1,94) = .06, p = .81$), but a significant interaction effect($F(1,94) = 9.88, p < .01$; see figure 9). Planned contrasts showed that, in the with-sampling-experience condition, those who had an expectation to eat the chocolate were less willing to wait ($M = .51, SD = .64$) than those who did not have such expectation ($M = 1.12, SD = 1.03; t(47) = 2.36, p < .05$). In contrast, in the without-sampling-experience condition, those who had an expectation to eat the chocolate were more willing to wait ($M = 1.01, SD = .82$) than those who did not have such an expectation ($M = .54, SD = .76; t(47) = 2.08, p < .05$). This result was not theoretically important to the current research, and was consistent with prior research on the default effect (Sunstein and Thaler 2003; Johnson and Goldstein 2004) and
action readiness (Oyserman 2009). Specifically, the default for participants in the with-expectation condition was to view the album whereas participant in the without-expectation condition did not have such a default. Therefore in the absence of sampling experiences, people in the with-expectation condition were more likely to choose to view the album. Besides, participants in the with-expectation condition were prepared and ready for viewing the album whereas participants in the without-expectation condition were not, and thus in the former condition participants were more likely to choose to view the album in the absence of sampling experiences.

[Insert figure 9 about here]

Results from study 6 replicated the findings from study 4 in the indirect sampling domain. Like a direct sampling experience, an indirect sampling experience can also reduce consumers’ desire for the target product if the consumers have a prior expectation to consume the target product.

**GENERAL DISCUSSION**

Providing sampling experiences, either direct or indirect, is a widely adopted marketing strategy (Kotler 1988). Consumers like sampling experiences: they are willing to try product samples (Jones 2001) and prefer receiving sampling experiences to receiving coupons (Fitzgerald 1996); they also hold favorable attitudes towards advertisements that bring indirect sampling experiences (Shavitt, Lowrey, and Haefner 1998). In this research, we ask what
influence the effectiveness of sampling experience on consumers’ desire for the target product? Whereas existing research has already documented a variety of factors, we focus on a hitherto overlooked factor: perceived overlap between sampling experience and product experience. We further propose that the perceived overlap depends on two more specific factors: one about the environment (whether the sample is displayed inside or outside the target product) and one about the consumer (whether the consumer has an existing expectation to consume the target product).

A set of six studies lent support to our theoretical framework and specific hypotheses. Our first three studies tested hypothesis 1 that displaying product samples inside the target product would lead to a lower desire than displaying product samples outside the target product, in both a direct sampling experience domain (studies 1 and 2) and an indirect sampling experience domain (study 3). In addition, studies 2a and 2b showed the causal pathway that the location of samples changed perceived overlap between sampling experience and product experience, which further influenced desire for the target product. Our latter three studies tested hypothesis 2 that consuming product samples with an expectation to consume the target product would lead to a lower desire than without an expectation to consume the target product, in both a direct sampling experience domain (studies 4 and 5) and an indirect sampling experience domain (study 6). In addition, studies 5a and 5b showed the causal pathway that consumption expectation changed perceived overlap between sampling experience and product experience, which further influenced desire for the target product.

Other Factors That May Influence Perceived Overlap between Sampling Experience and Product Experience
In the current research, we empirically tested two factors that influence the perceived overlap between the sampling experience and the target product experience: the location of product sample relative to the target product and the consumption expectation of the consumer. Besides these two factors, other factors may also influence the perceived overlap and, hence, consumers’ desire for the target product. One such factor, which is probably neither surprising, nor particularly interesting, is the “size” of the sampling experience – the larger the “size,” the greater the perceived overlap. For example, the consumer would perceive greater overlap between the sampling experience and the product experience after viewing 10 sample paintings from an album than 5 paintings and thus desire the target album less in the former condition than the latter.

Another factor that could influence the perceived overlap is the temporal distance between the sampling experience and the product experience. Ceteris paribus, the shorter the distance, the larger the perceived overlap. For example, consumers would perceive greater overlap when the opportunity of consuming the target product immediately follows the sampling experience than when it comes after an interval, and thus desire the target product less in the former condition than the latter.

A third factor that may influence the perceived overlap is the extent to which the sampling experience is perceived to be similar to, or representative of the product experience. All else constant, the more the sampling experience is perceived to be similar to or representative of the target product, the greater the perceived overlap between the sampling experience and the product experience. For example, the more the viewers believe that the sample paintings from a painting album are representative of the paintings in the target album, the greater overlap they would perceive, and therefore the lesser they would desire the target album.
Types of Consumption Experiences: Diminishing Marginal Utility Versus Increasing Marginal Utility

We propose that a high perceived overlap between sampling experience and product experience (i.e., perceiving the sampling experience as a part of the product experience) gives people a feeling that they have already “been there, done that”, or in other words “I have already consumed part of it,” and therefore leads to lower desire for the target product. The assumption inherent in this reasoning is that the marginal utility of consuming the target product is diminishing; for example, the marginal utility of eating another piece of chocolate will be lower if one has already eaten three pieces than if one has already eaten only one piece. However, there are also consumption experiences with increasing marginal utility; for example, the marginal utility of another chapter in an addictive mystery novel may be greater if one has already read three chapters in that book than if one has read only one. Whereas our current research focuses on the first type of experience (e.g., eating chocolates, viewing paintings, etc.) with diminishing marginal utility, future research should also explore the second type of experience (e.g., reading mystery novels, playing addictive video games, etc.) with increasing marginal utility, to see whether our predicted effects would reverse.

Marketing Implications

Marketers invest a huge sum of money every year to provide potential buyers sampling experiences. For example, the food and candy industry alone, in the second quarter of 2013,
spent $1.62 billion to give potential buyers a sense of the experience of using their products (Kantar Media Reports 2013). The current research identifies conditions where the sampling experience could be more or less effective in inducing consumers’ desire for the target product.

One such factor is where the samples are located relative to the target products. To see a practical implication of this factor, consider again our opening example that Amazon.com invites potential book buyers to “click to look inside” for sample pages. Currently, Amazon.com displays the sample pages of a book as if they are directly from the target book, and consumers click “open” the digital book to read several pages from within. We suggest that Amazon.com might do better if it presents the sample pages outside the book. For example, Amazon.com could show the image of the closed book and present sample pages next to it, as we did in study 1 (see figure 2).

Another factor that our research shows would influence the effectiveness of a sampling experience on consumers’ desire for the target product is consumers’ existing expectations. To illustrate a practical implication of this factor, consider the following example: Currently, Godiva offers free chocolate samples to registered chocolate aficionados, most of whom have regular purchase plans, and are likely to already expect to buy and consume Godiva chocolates. We suggest that Godiva might do better if it sends the free samples to consumers who do not have preexisting purchase plans.

Sampling experiences are supposed to “tease” -- to wet consumers’ appetite for the target products. But not all teasers are created equal. The current research highlights the importance of examining both environment and consumer factors that influence the effectiveness of teasers.
References


FIGURE 1: THEORETICAL FRAMEWORK

- Location of Sample relative to Product: inside vs. outside
- Expectation to consume Product: with vs. without
- Sampling Experience
- Perceived Overlap between Sampling Experience and Product Experience: higher vs. lower
- Desire for Product: lower vs. higher
FIGURE 2: ALBUM INFORMATION (STUDY 1)

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<th>Inside</th>
<th>Outside</th>
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<tr>
<td>(paintings)</td>
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<td><img src="image4" alt="Outside without paintings" /></td>
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<tr>
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<tr>
<td>(non-paintings)</td>
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<td><img src="image8" alt="Outside without non-paintings" /></td>
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FIGURE 3: RELOADING TIMES AS A FUNCTION OF SAMPLING EXPERIENCES AND LOCATION (STUDY 1)
FIGURE 4: MEASUREMENT OF PERCEIVED OVERLAP BETWEEN THE SAMPLING EXPERIENCE AND THE PRODUCT EXPERIENCE (STUDY 2A AND STUDY 4A)
FIGURE 5: MANIPULATION OF PERCEIVED OVERLAP (STUDY 2B AND STUDY 5B)
FIGURE 6: SNAPSHOTS OF THE M&M’S VIDEOS (STUDY 3)

<table>
<thead>
<tr>
<th>Experience Type</th>
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<tbody>
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<td>With-sampling-experience (eating M&amp;M’s)</td>
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<tr>
<td>Without-sampling-experience (reading information)</td>
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FIGURE 7: DESIRE FOR M&M’S AS A FUNCTION OF THE PRESENCE OF SAMPLING EXPERIENCE AND LOCATION OF SAMPLES (STUDY 3)
FIGURE 8: PERCENTAGE OF PEOPLE WHO CHOSE TO VIEW THE FLOWER ALBUM AS A FUNCTION OF CONSUMPTION EXPECTATION AND PRESENCE OF SAMPLING EXPERIENCE (STUDY 4)
FIGURE 9: TIME (IN MINUTES) THAT PEOPLE WERE WILLING TO WAIT FOR THE CHOCOLATE AS A FUNCTION OF CONSUMPTION EXPECTATION AND PRESENCE OF SAMPLING EXPERIENCE (STUDY 6)