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The Effects of Perceptual and Conceptual Training on Novice Wine Drinkers' Development

Kathryn A. LaTour

Cornell University, kal276@cornell.edu

Michael S. LaTour

Cornell University, mssl275@cornell.edu

Andrew H. Feinstein

California Polytechnic University - Pomona

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Abstract

Wine marketers and restaurateurs have a vested interest in helping novice wine drinkers to learn more about wine, with the goal of encouraging them to purchase more wine and higher quality wine (with its higher price tag). The question posed here is how best to conduct that educational effort, using a perceptual approach or a conceptual approach. Most wine promotions tend to be perceptual, in the form of tastings and printed tasting notes. However, the two experiments described in this article demonstrate the greater benefit of conceptual learning, which involves explaining how the wine is produced generally and discussions of wine varieties in particular. In the first experiment, three groups of participants (novices, intermediates, and experts) were served a sample of zinfandel and then asked to identify that exact wine from a group of five, four of which had been adulterated with sweetener. Some participants were allowed to write down a description of the wine, and all were subjected to a fictitious advertising campaign designed to sway their choice on the matching test. In general, novices relied more on the terms offered by the advertising, and intermediates who have more perceptual learning than conceptual learning were also swayed when they were not given an opportunity to activate their conceptual knowledge (but not swayed as much when conceptual knowledge was activated). Experts paid no attention to the advertising whatsoever. The second experiment compared the educational experience of novices only, with a similar testing procedure, except this time the test groups were given either conceptual or perceptual educational sessions. The conceptual training was a twenty-five-minute tutorial in wines, while the perceptual training involved sensory aspects of wine (i.e., color, smell, and taste). Once again, all groups saw a fictitious advertisement for the "X" zinfandel. Those with conceptual learning were more likely to match the original sample and were less swayed by the fictitious advertising than those who had perceptual training. These respondents were also likely to rate the wine as being higher quality and willing to pay a higher price for it. One conclusion for wine marketers is that perceptual learning (as in tastings) is just the beginning of the process of developing wine consumers. Conceptual learning, where people learn about the process and details of wine production, is also essential.

Keywords

wine merchandising, wine education, perceptual learning, conceptual learning

Disciplines


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Comments

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By Kathryn A. LaTour¹, Michael S. LaTour², and Andrew H. Feinstein³

Abstract

Wine marketers and restaurateurs have a vested interest in helping novice wine drinkers to learn more about wine, with the goal of encouraging them to purchase more wine and higher quality wine (with its higher price tag). The question posed here is how best to conduct that educational effort, using a perceptual approach or a conceptual approach. Most wine promotions tend to be perceptual, in the form of tastings and printed tasting notes. However, the two experiments described in this article demonstrate the greater benefit of conceptual learning, which involves explaining how the wine is produced generally and discussions of wine varieties in particular. In the first experiment, three groups of participants (novices, intermediates, and experts) were served a sample of zinfandel and then asked to identify that exact wine from a group of five, four of which had been adulterated with sweetener. Some participants were allowed to write down a description of the wine, and all were subjected to a fictitious advertising campaign designed to sway their choice on the matching test. In general, novices relied more on the terms offered by the advertising, and intermediates who have more perceptual learning than conceptual learning were also swayed when they were not given an opportunity to activate their conceptual knowledge (but not swayed as much when conceptual knowledge was activated). Experts paid no attention to the advertising whatsoever. The second experiment compared the educational experience of novices only, with a similar testing procedure, except this time the test groups were given either conceptual or perceptual educational sessions. The conceptual training was a twenty-five-minute tutorial in wines, while the perceptual training involved sensory aspects of wine (i.e., color, smell, and taste). Once again, all groups saw a fictitious advertisement for the “X” zinfandel. Those with conceptual learning were more likely to match the original sample and were less swayed by the fictitious advertising than those who had perceptual training. These respondents were also likely to rate the wine as being higher quality and willing to pay a higher price for it. One conclusion for wine marketers is that perceptual learning (as in tastings) is just the beginning of the process of developing wine consumers. Conceptual learning, where people learn about the process and details of wine production, is also essential.

Keywords

wine merchandising, wine education, perceptual learning, conceptual learning

Wine . . . offers a greater range for enjoyment and appreciation than possibly any other purely sensory thing which may be purchased.

Ernest Hemingway

Wine marketers understand that to increase the overall size of their market they must make wine more approachable and easier to understand. Knowledgeable wine consumers tend to buy more, spend more, and form greater loyalty to brands they admire (Shanken 1986). Currently, many consumers lack confidence in their ability to select a wine for either their own consumption or to share with others. In this article, we present the results of two studies that indicate the

value of teaching novice consumers about wine's conceptual aspects to enhance how they learn from their direct tasting experiences. We also suggest that such conceptual training can help lay the groundwork for marketing communications to drive consumer learning and preference development.

¹Las Vegas, NV USA

²University of Nevada—Las Vegas, USA

³California Polytechnic University—Pomona, USA

Corresponding Author:

Kathryn A. LaTour, 9608 Coral Rose Crt., Las Vegas, NV 89134
Email: drs.latour@cox.net

As the Hemingway quote implies, learning about wine has great potential for enhancing consumers' lives, but it is a complex product. Consumers often find it difficult to encode (Shapiro and Spence 2002) and novice consumers typically struggle to discriminate among their tasting experiences (Hoegg and Alba 2007). To overcome these complexities, some wine producers, particularly mass marketers, have used a stealth branding approach that focuses on bold, iconic logos and brand names (Labroo, Dhar, and Schwarz 2008).

Marketing can go beyond slogans and labels to educate novice consumers and augment their appreciation of the product so that they will later remember their experiences with the producer in a favorable manner. Consumer research suggests that advertising can get consumers to appreciate and like their tasting experiences more (Elder and Krishna 2010). Therefore, some marketers have begun nontraditional activities whereby they "teach" consumers about their products.

Two common routes for marketers to influence consumer learning are direct experience, such as taste tests, and information presentations, such as seminars. Learning the consumption vocabulary and product category knowledge for discriminating experiences is considered "conceptual learning," while acquiring information from direct product experiences is called "perceptual learning" (Melcher and Schooler 1996). Psychological research suggests that the type of route consumers take in their learning can affect how they later learn from their direct product experiences (Melcher and Schooler 1996).

This research investigates the role of consumers' expertise in assessing experiential learning in what is arguably a complex and ambiguous product—wine—and seeks to determine what type of knowledge consumers need to obtain to strengthen their personal taste experiences. In our first study, we use an inverse approach to assess whether experiential learning has occurred—seeing whether consumers can disregard misleading information and rely on their own experience. Based on those findings, in our second study we examine what type of training results in novices being most able to learn from and appreciate their tasting experience.

Conceptual Background

The Complexity of Wine

Wine has been used as a product in which to study expertise dating back to William James (1890). Gibson and Gibson describe the difference between novice and expert wine consumers in the following way (1955, p. 35):

The gentleman who is discriminative about his wine shows a high specificity of perception, whereas the

crude fellow who is not shows a low specificity. A whole class of chemically different fluids is equivalent for the latter individual: he cannot tell the difference between a Claret, Burgundy, and Chianti.

The analysis of brain activity while wine is tasted has revealed differences between the more cognitive responses of wine professionals compared to the less cognitive responses of nonprofessional drinkers (Styles 2003). Castriota-Scanderberg et al. (2005) compared brain activity between professional sommeliers and novices while tasting wine. Participants were told to sample three wines and a sugar substance, identify the wine (or substance), and make subjective evaluations while in an fMRI machine. These researchers found some similarities between the groups but sommeliers showed additional activation in the amygdala-hippocampus area, suggesting they were relying on memories of prior tastings during their taste experience. In the "aftertaste" section of the fMRI study, both sommeliers and novices showed activation in the right side of amygdala-hippocampus area but sommeliers showed additional activation in the left side of this area and also activation in the left dorsolateral prefrontal cortex. The prefrontal cortex is associated with planning and the use of cognitive strategies. The researchers conclude that the sommeliers are experiencing something different from the average person when they drink wine: "There is clear evidence that the neural connections of the brain change with training and experience" (Dr. Scanderberg, cited in Goode 2007, p. 89).

The difference between novice and expert decision making has been written about extensively in the consumer literature (see Alba and Hutchinson 1987 for a review). These researchers have found that while novices may say that their decision making is based on evaluating the information available, novices may ascribe more importance to external information, like advertising or word of mouth. These researchers also find novices are also more likely to use heuristic processing, which results in "halo effects" due to advertising and other information received. Experts, in contrast, should be able to differentiate relevant and irrelevant information and rely more on their own data-driven experiences. Alba and Hutchinson (1987) say further that expertise should make the role of embellishment unnecessary (where embellishment refers to making inferences based on incomplete information. . . . For instance, a novice might infer that wine reviewed by *Wine Spectator* must be a pretty good wine).

Though the literature is vast in comparing expert and novice decision makers, there is little on how consumers acquire their knowledge and the role played by marketing in the management of that experiential learning. One group of consumers of potential interest to researchers is those with moderate experience, for example, a consumer

who buys the featured “two buck chuck” at Trader Joe’s and enjoys the wine nightly with dinners. These consumers may have had many experiences with wine and “know what they like,” but that experience has not included directive (conceptual) learning, which one would receive in sommelier training. In fact, recent research has shown that these intermediate (or “aficionado”) consumers learn little from their direct tasting experience but under some conditions with directed study can learn to retain more information (LaTour and LaTour 2010). Understanding how these more intermediate consumers react to marketing communications can provide insights into how to best guide novices’ learning process.

Types of Learning and Memory

Park, Mothersbaugh, and Feick (1994) distinguished between product usage frequency (perceptual knowledge) and general knowledge of the product category (conceptual knowledge). These researchers found that knowledge based on product use was more likely to influence judgments than was general conceptual knowledge because consumers’ personal experiences are more accessible in memory. However, perceptual experience with a product does not necessarily lead to expertise, and Hutchinson and Alba (1991) argue that in most cases, incidental learning through experience is low. In addition, perceptual knowledge forms in episodic memory, which is unstable and subject to distortions (e.g., Braun 1999) or revisions based on such experiences as reading the newspaper, receiving postexperience advertising, or hearing someone else’s opinion. This is why a marketing strategy of building brand awareness is effective for mass market wines and “two buck chuck,” which are entirely drinkable but not exceptional.

Most research on expertise finds, in contrast, that directed study (acquisition of conceptual knowledge) is needed to develop expertise (Shanteau 1988). Conceptual knowledge forms in semantic memory, which builds over time and is more stable. Because episodic memories are unstable, particularly for an ambiguous experience like wine, a combined strategy should foster novices’ learning about and their appreciation of wine. Episodic memory and semantic memory are not necessarily separate, and some consumer researchers suggest that while novices primarily rely on episodic memories when they evaluate products, they can create associations to more generalized conceptual knowledge (semantic memories) and are thus able to learn and retain their experiences (Mitchell and Dacin 1996). This combined strategy recognizes that sensory experiences are ambiguous and can be shaped by marketing communications (Hoch and Deighton 1989). Marketers can use conceptually driven marketing communications to set consumer expectations that are confirmed or disconfirmed in a product experience (Deighton 1984).

Verbal Overshadowing: The Interaction of Experience and Language

Language is central to how consumers interpret, categorize, and remember their experiences. Because people rely on language, they may be oblivious to its limitations. A particularly insidious example of this is known as verbal overshadowing, which occurs when postexperience verbalization (such as from advertising) can alter how an experience is remembered. Braun (1999) served consumers a vinegar-tinged watered-down orange juice, and then shared advertising which suggested that the sample was fresh and sweet. Asked to match the original from four test samples, consumers later identified a different (sweeter) sample as the juice they thought they had tasted earlier.

Verbal overshadowing, as demonstrated in the Braun (1999) study occurs when the act of describing a nonverbal stimulus impairs subsequent recognition (Melcher and Schooler 1996). This is most likely to occur when there are asymmetries between perceptual and conceptual knowledge. Melcher and Schooler (1996) looked at this concept in a wine-tasting experience that compared novices, intermediates, and experts. The verbal overshadowing hypothesis suggests that those with intermediate knowledge should be affected the most by postexperience verbalization because their perceptual knowledge exceeded their conceptual knowledge. Their results were consistent with this hypothesis, and LaTour and LaTour (2010) found similar results but with an important caveat: when intermediates were directed to focus on their experience and activate their conceptual knowledge, they were less influenced by the advertising. For novice wine drinkers the advertising verbalization acted in confirmatory manner that helped them remember the wine, while experts remained unswayed. Emile Peynaud, French enologist, refers to the relationship between attention and memory: “. . . it is easy to describe what one senses provided one has made sufficient effort to notice it” (Peynaud 1987, p. 215). When the intermediates were given a wine aroma wheel during their tasting, for instance, they were able to use their conceptual knowledge to build stronger experiential memories (LaTour and LaTour 2010).

To further demonstrate the role activating conceptual knowledge can play on experiential learning, we asked participants in our first study to write down their experiences immediately after they consumed the product. This should help them create a stronger memory trace that leads to more data-driven processes (provided they have the perceptual and conceptual knowledge in which to accurately describe that experience). This should get them to pay more attention to the misinformation so that it is more likely to be detected as “false” (Tousignant, Hall, and Loftus 1986) and reduce susceptibility (Greene, Flynn, and Loftus 1982). Because the intermediates have had many past experiences with wine, greater attention to their sensory experience ought to

allow them to better detect the clash between the experience and the advertising (Chang 2004) and thus allow them to learn and retain more from their experience.

Experimental Overview and Hypotheses

Our experiments follow Braun (1999), in that they use the postexperience advertising paradigm to assess consumer learning. Participants taste a wine, are exposed to misleading advertising, and then are asked to identify the wine they tasted earlier (from samples that are similar to the taste aspects noted in the advertising). The consumers' ability to disregard postexperience advertising in their memory judgments and rely on their own tasting would provide evidence that learning had occurred.

In Experiment 1, we compare how novice, intermediate, and expert wine consumers react to postexperience advertising. In one condition, the consumers receive the advertising and are not directed to pay close attention to their tasting experience. In this condition, we would expect the following:

Hypothesis 1: Only expert consumers (who have both conceptual and perceptual knowledge) will be able to resist postexperience advertising and rely on their own tasting experience when making their memory identification judgments.

In Experiment 1 we also have a condition where participants are directed to write down their tasting experience, which should activate their conceptual product knowledge. In this case we expect the following:

Hypothesis 2: Consumers who are intermediate will be able to activate their conceptual knowledge by writing down their experience, which will allow them to resist misleading marketing communications in their memory identification judgments.

Since we do not expect novices to be able to resist the misleading advertising in either case, Experiment 2 is designed to identify what type of training might make them act more like intermediates (when their conceptual knowledge has been activated) and experts, thereby allowing them to disregard the misleading marketing communications.

For this we drew from Melcher and Schooler (2004), who attempted to isolate the effect of conceptual and perceptual training based on instruction about mushrooms—an area where their participants could be considered novices. In the perceptual training they had participants categorize mushroom pictures. In the conceptual training group, participants heard a lecture about mushrooms and gained a consumption vocabulary. Their results suggested that perceptual training can increase the effect of verbal

overshadowing, but their findings were mixed in terms of the role conceptual learning can play at reducing verbal overshadowing. Consistent with their view that conceptual knowledge is important, they found that poor verbalization skills (vocabulary) were associated with poor recognition performance. In their first experiment they felt their conceptual training failed to teach the appropriate knowledge and that some participants relied on perceptual characteristics between the mushrooms and experienced the same levels of verbal overshadowing as the perceptually trained participants.

In our first experiment, we predict that activating conceptual knowledge might be an important aspect for how consumers ascertain and assess their experiences (especially for the intermediates). For the second experiment we followed the ideas of Elder and Krishna (2010), who found that multisensory ads result in consumers appreciating and liking their sensory experience more so than advertising focusing on just one sensory dimension. In the case of wine, though, we thought that participants might need additional training to fully appreciate the multisensory conceptual information provided in the advertising.

In Experiment 2, therefore, we developed training sessions similar to what wine marketers might employ. However, our sessions are either perceptually or conceptually focused (per Melcher and Schooler 2004), which allows us to test which type of learning leads to novices forming stronger experiential memories. Additionally, we look at what type of training session leads to the most favorable consumer evaluations of the product. We propose the following:

Hypothesis 3: Perceptual training will lead to greater postexperience advertising effects on recognition than conceptual training because novice consumers will not have the conceptual knowledge or language to be able to thwart misleading advertising.

In Experiment 2 we add product evaluative measures to determine whether (and what type of) learning sessions result in consumers' more favorable product evaluations. We predict that novice consumers will need conceptual training to fully appreciate the ad and the product experience:

Hypothesis 4: Consumer training experiences that are conceptually oriented will provide novice consumers the context to appreciate the advertising and thus will have the most impact on consumers' overall product evaluations.

Experiment 1

We recruited 225 participants between the ages of 21 and 85 from the university and community and randomly assigned them to one of three experimental conditions

(control, advertising, and write down experience and advertising). After the study we administered a test that allowed us to classify participants into the appropriate expertise group (from Melcher and Schooler 1996). Each cell contained twenty-five participants, which, following Braun (1999) has been found to be sufficient to determine differences between groups.

We initially followed Melcher and Schooler's (1996) categories for novices, intermediates, and experts. Our novices were similar to those found in that study, consisting of students and community members that either just started drinking wine or drink different types of alcoholic beverages. Our group of intermediates drank wine much more often than those in the Melcher and Schooler (1996) study—averaging fifteen times a month, for an average sixteen years. The experts were those who have obtained both perceptual and conceptual knowledge. Our sample of experts included six Master Sommeliers, thirty-five sommeliers, six wine distributors, three winemakers, four food and wine critics, two Napa Valley wine tour guides, and four food and beverage directors from large casino-hotels.

Stimuli

We used the same basic stimuli as reported in LaTour and LaTour (2010). We worked with a Master Sommelier so that our wine testing instrument and advertising were focused on one attribute (sweetness), which could be directly manipulated in the wine samples. The Master Sommelier suggested using a zinfandel because its residual sugar can vary so greatly that adding more sweetness would not be an obvious manipulation. The target wine was a Kenwood zinfandel from Sonoma Valley, California, that retails for about \$15 per bottle. It is described by the winemaker as: "Medium-bodied with black cherry, spice, and vanilla oak flavors that finish with classic peppery Zinfandel notes." This is not a sweet wine from the bottle, and after trying several ways of adjusting the samples, we added 0.5 ml of a simple syrup to each ounce of wine, resulting in five levels of the wine that varied considerably in sweetness. A blind test by two other Master Sommeliers and a wine executive found each level to be distinctly different. (We were seeking a just-noticeable-difference.)

As sweetness was our focal attribute, our test ad's headline read: "X Zinfandel. X's only sweet red. France meets California in a splendid offering for those who want the benefits of red wine, without the dryness. Enjoy it with a healthy meal." In addition, we included critic reviews within the advertising text (similar to the *Consumer Reports* featured in Deighton 1984). According to wine critics, these ratings can make or break a new wine regardless of the overall product quality (Rivlin 2006). This type of advertising approach is becoming more common in this product category. For example, *Wine Spectator* ran a full-page ad in

the *New York Times* on October 15, 2006, featuring and celebrating their wine reviews and rating system. So, one description included in our manipulations, attributed to the *Wine Spectator*, read: "We give it a 93. X's has a good sugar to acid balance, as well as being very fruit friendly. Red cherry, blackberry, crème de cassis and licorice in aroma and taste. Wonderful new entry."

Procedure

Participants were instructed to taste the X wine without swallowing. They were instructed to taste the glass of wine immediately in front of them labeled with an X (a one-ounce sample of the unadulterated Kenwood zinfandel). As per Melcher and Schooler (1996) for the condition involving writing down the experience, participants were given this instruction: "Describe this wine precisely and in as much detail as you can. Describe it uniquely, so that someone else would match it to your description. Consider all elements of the wine's taste, smell, feel, or related associations. . . ." They were given five minutes to write down their description. Those in the other conditions proceeded to a puzzle (to match the writing time).

Those in the advertising conditions were given the X wine ad and asked to provide feedback on it. Finally, the recognition test was given to all participants. Five wines were situated on a placemat, each having different letters underneath. Participants were instructed to taste the wines in a counter clockwise direction (there were five different placement orders; no significant differences found in that ordering). They were asked to identify the X wine by the letter underneath the glass. They then were asked to write about their memory of X wine in their own words, and we then administered the test that allowed us to categorize their experience.

Measures

The memory identification was the letter chosen to represent their earlier experience. Participants rated their confidence with identifying the original sample on a scale of 0 (not at all sure) to 100 (extremely sure). They also indicated whether their identification was a Remember (where their identification was accompanied by a conscious recollection of the taste), a Know (when the subject recognizes but cannot consciously recollect anything from the earlier tasting), or a Guess (cannot recall the taste and randomly selected one of the five choices) (per Tulving 1983).

Coding

Two judges read participants' written responses to the advertising and coded for the number of words written. They also coded the participants' strategy in response to the advertising:

Exhibit 1:
Experiment 1: Reactions to Postexperience Advertising by Expertise

Level of Expertise	Overall No. of Words Written ^a	% Confirming Experience ^b	% Disconfirming Experience ^c	% Focused on Ad Details ^d
Novice	22	75	0	55
Intermediate	33	46	88	52
Expert	38	8	28	88

a. The experts wrote more in their reactions to the advertising than intermediates and novices, significant at $F(2, 143) = 11.19, p < .0001$, and post hoc tests found the novices to be significantly lower than both the experts and intermediates.

b. We found that novices used a confirmation-seeking strategy more than the other groups, significantly different at $\chi^2(2, n = 149) = 46.3, p < .0001$.

c. Intermediates, meanwhile, used a disconfirmation strategy more than the other groups, significantly different at $\chi^2(2, n = 140) = 17.47, p = .0002$.

d. Experts were focused more on the ad details than the other groups; the model was significant at $\chi^2(2, n = 149) = 17.47, p < .0001$.

whether the participant seemed to use the ad language to confirm their taste experience, whether the participant seemed to use the ad language to disconfirm their taste experience, or whether they just focused on the details of the ad in their feedback. The interrater reliability of the judges was .90 and disputes were settled through discussion.

Manipulation Check

A measure of participants' perceptual knowledge of red wine was obtained by summing the following measures: a scale where they indicated how often they drink red wine (1 = not at all, 7 = very often), an open-ended measure where they indicated how often per month they drink red wine; and a measure indicating how long they have been drinking red wine (0 points for a year or less, 3 points for two to five years, 5 points for five to nine years, 7 points for ten-plus years). A measure of conceptual knowledge was obtained by summing the wine quiz (same as Melcher and Schooler 1996) with an assessment of their directed learning of wine (1 point for taking one to two wine classes; 2 points for three classes; 3 points for classes plus wine industry training; 4 points for reaching the sommelier level; 5 points for reaching Master Sommelier). As expected, experts were high on both types of knowledge ($M = 17.9$ on perceptual, $M = 5.3$ on conceptual), novices were low on both ($M = 2.1$ on perceptual, $M = .28$ on conceptual), and the intermediates were high on perceptual ($M = 14.5$) but low on conceptual knowledge ($M = 1.4$).

Results

Reaction to advertising. We coded for the overall number of words written and then looked at the processing strategy participants took in their response to the ad, whether they used it to confirm or disconfirm their experience, or if they instead chose to solely focus on the ad details (a person could theoretically do all three in their response to the ad). See Exhibit 1 for these results. The experts wrote more in their reactions to

the advertising than intermediates and novices did, but the only significant difference was between the experts and novices, particularly in regard to their processing strategy. We found that novices used a confirmation-seeking strategy more than the other groups. For example, one novice wrote: "This ad provided a good descriptor of the flavors in the wine. . . ." Novices used the confirmation strategy more often than the disconfirmation strategy, suggesting they were accepting of the advertising overall.

Intermediates, meanwhile, used a disconfirmation strategy more than the other groups. Disconfirmation was more likely when they had written down their taste experience. Forty-eight percent applied disconfirmation, versus 36 percent who used it to confirm what they tasted. For example, one intermediate wrote: "I did not get the same characteristics of the wine as the ad. Personally, I feel that the ad and the wine itself are two separate things." Those that received the ad only were less critical, with only 16 percent using it to disconfirm their experience, and 56 percent using it to confirm what they had experienced. There was a significant difference between the use of the disconfirmation strategy across these conditions, $\chi^2(1, n = 50) = 5.8, p = .01$. The intermediates showed similarities to the novices as they seemed to be more accepting of the ad information when they didn't write down their experience. One wrote: "'France meets California' was intriguing, it made me want to try the wine again with that in mind. . . . The commentaries on the wine seemed pretty accurate and made the wine sound good."

Experts were focused more on the ad details than the other groups were. Unlike intermediates, experts did not seem to use the ad to embellish their experience by confirming or disconfirming. Instead, they were better able to "switch gears" and provide feedback on the ad itself. For example one wrote: "first note is there is no prominent call to action, sort of a flat lifeless. Photo looks like a food ad, more than a wine ad. Headline is assuming knowledge of wine. Change to something like 'Drink a new, sweeter red wine.' . . ."

Recognition. The main dependent measure is recognition. In the postexperience advertising literature, it is proposed

that the advertisement sways recognition in the direction of the ad's words (in this case toward a sweeter wine). The letters representing the five wine samples were converted to numbers for the analysis. Higher numbers were associated with more sweetness and therefore we could infer more influence of the advertising. (Given the manipulation with the simple syrup, we felt this could be considered an interval scale for analysis, per Braun 1999.)

Hypothesis 1 posits that both novices and intermediates will be influenced by the advertising, but experts will not be so influenced. Hypothesis 2 posits that writing down the experience will make the sensory memory stronger for intermediates (since they activated their conceptual knowledge), and they will be able to resist the advertising influence. To test these two hypotheses, we first ran a model with expertise, advertising, and their interaction as factors. That overall model was significant at $F(8, 224) = 16.9, p < .0001$; expertise significant at $F(2, 224) = 48.7, p < .0001$; advertising significant at $F(2, 224) = 8.2, p = .004$; and the interaction significant at $F(4, 224) = 5.4, p = .005$. Because of the expected differences in expertise (and the significant interaction), we ran the models separately within each level of expertise. As shown in Exhibit 2, for novices, Hypotheses 1 and 2 predict that the advertising will sway recognition; for experts, Hypotheses 1 and 2 predict no significant effects, and for intermediates, Hypothesis 1 predicts the advertising will influence recognition when they do not write down their experience, and Hypothesis 2 predicts that there will be no influence of the advertising when they do write down their experience.

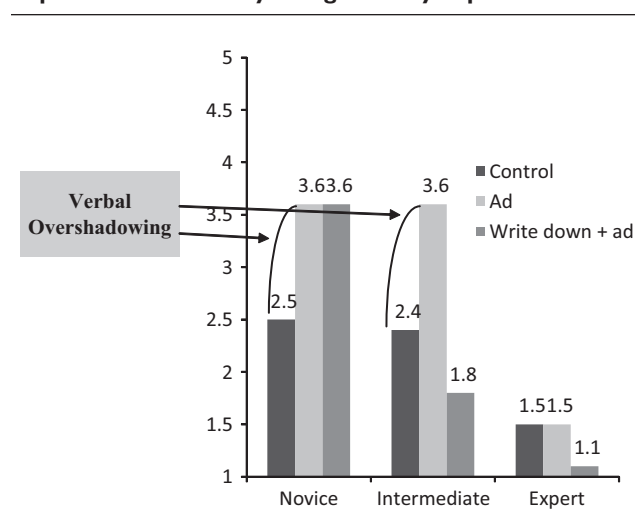
The model was significant overall for novices, $F(2, 74) = 6.97, p = .002$, with both the advertising and the write-down experience with advertising significantly higher than the control condition, using the Dunnett procedure. The model was not significant for experts, $F < 2$, and the model was significant for intermediates, $F(2, 74) = 7.97, p = .0007$; the ad-only group was significantly different than the control, but the write down plus ad group was not.

Experts were overall more confident in their recognition, $M = 80$, compared to $M = 67$ for intermediates and $M = 60$ for novices. The overall model was significant at $F(8, 224) = 5.56, p < .0001$; expertise was the only significant factor at $F(2, 224) = 21.3, p < .0001$; and post hoc tests found the experts to be significantly higher than the novices and intermediates. Experts also indicated their identifications were more "remember" judgments, 82 percent, versus intermediates 45 percent and novices 46 percent—experts significantly greater at $\chi^2(2, n = 225) = 27.6, p < .0001$. Novices were more likely to say they used a "guess" strategy, 25 percent, compared to 8 percent of intermediates and no experts—significant at $\chi^2(2, n = 225) = 25.5, p < .001$.

Discussion

Hypothesis 1, which predicted that when novices and intermediates are not directed to pay close attention to their

Exhibit 2:
Experiment 1 memory recognition by expertise



sensory experience they will succumb to postexperience suggestion, was supported. Novices who received the ad used it to confirm or make sense out of their taste experience more so than the other groups, suggesting they were using a confirmation-seeking strategy. Intermediates also used this confirmation strategy when they did not pay close attention to their tasting.

Our experts were the "boundary condition," the point at which advertising neither helped nor hurt the advertised wine. Unlike the novices and intermediates, they did not need the ad to embellish on their experience. Instead, the experts really had no use for the ad. For them, the taste experience was diagnostic and they used their own approach.

The intermediates present the most interesting insight into how consumers might learn to disregard misleading marketing communications. Without a wine background, novices cannot benefit from writing down their experience because they cannot draw on relevant knowledge. Intermediates do have the background experience—in their frequent consumption of wine they learned (incidentally) the norms of the category. It appeared that writing down their taste experience made the discrepancy in the advertising more obvious, which allowed them to return to a more accurate recognition judgment (achieving 92 percent accuracy).

Experiment 2

Experiment 2 tests a new group of novices on the principle that marketers can attempt to influence novice consumers' learning by providing them direct perceptual experiences through taste tests, or they can focus on building more conceptual knowledge to direct their learning. The traditional view of learning is that as consumers have more consumption experiences with a product, they will

become more expert in their decision making and be able to disregard marketing communications (Cowley and Janus 2004). The question addressed in this experiment is, which type of learning experience is best in developing novice consumers?

Sample

One hundred fifty students who were considered wine novices participated in this seventy-five-minute session for course credit. Some were trained by experience (perceptual); some were instructed in a conceptual approach; and others were not trained. Likewise, some were exposed to advertising and others were not. The result was a 3 training (perceptual, conceptual, none) \times 2 advertising (present, absent) between-subjects design. Participants were randomly assigned to one of these six conditions, and each experimental cell contained twenty-five participants. The recognition tasks were similar to those in experiment one.

Method

The learning tasks lasted approximately twenty-five minutes and preceded the same memory identification measures used in experiment one. Similar to Melcher and Schooler (2004), the perceptual learning task was developed to focus on low-level categorization learning. The session began with giving participants five samples of wine. Their first task was to put them in order from lightest to darkest and to match them to paint swatches. The aroma task followed, where they were given five samples of red wine with aroma additives. They also received samples of different aromas—vanilla, black pepper, blackberry, black currant, and cherry. Their task was to identify the most prominent aroma that appeared in each of the five samples of wine. For the taste task, they were given five samples of wine and were asked to rate them from sweetest to least sweet (similar to the main study where simple syrup was added to some of the samples). Following both the aroma and taste tasks, they were given the correct information so they could go back and reexperience the samples. We were, however, careful not to provide verbal descriptors or evaluative feedback in these tasks (e.g., sweet wine is better, or cherry is a positive aroma in wine) to keep the learning at a more data-driven perceptual level. We simply gave them the answers.

The conceptual learning task comprised a PowerPoint presentation (also similar to Melcher and Schooler 2004). The goal of this task was to provide participants with background information on red wine and zinfandel. The presentation covered the following topics: wine-growing regions (Old World vs. New World), the difference between red and white wine production, discussion of varietals, and zinfandel itself—its history, descriptors, and properties. Several

tasting notes of zinfandels were presented so that participants would begin to acquire a consumption vocabulary. The presentation was devoid of sensory experiences—participants did not see examples or images of red wines; they did not experience the aroma of the different wines; and they did not taste the different wines.

Following their learning session (or no session) participants tasted the new zinfandel wine sample. They were directed to write down comments and to use the knowledge gained from their learning session as they evaluated the wine. The rest of the session followed as in the previous experiment—ad presentation and evaluation (or not in the control conditions), wine identification, and then overall product evaluations.

Measures

Recognition was again our main dependent measure of interest. We also had participants evaluate the wine on the same attitude and feeling items used in Braun (1999), and indicate how much they would pay for it. The five overall attitude measure items loaded on one factor, with a Cronbach's alpha = .95.

Manipulation Checks

We coded the participants' notes during the tasting experience as a means to see whether they focused on perceptual characteristics or used the conceptual information from training as they evaluated the wine. We found a difference between the two training groups. The perceptual training group focused more on the sensory aspects of their tasting (such as smell, color, taste). Using training, advertising, and their interaction as factors, the overall model was significant at $F(5, 149) = 34.2, p < .0001$, and training was the only significant factor $F(2, 149) = 84.4, p < .0001$ (perceptual $M = 2.54$ sensory terms, conceptual $M = 1.2$ terms, and the no training group that used $M = 0.34$ sensory terms; the perceptual group was significantly higher than the other groups). Meanwhile, the conceptual training group used more words pertaining to the background information and terms that they had just learned, overall model significant at $F(5, 149) = 88.2, p < .0001$, and training was the only significant factor $F(2, 149) = 220, p < .0001$; $M = 2.9$ terms in the conceptual group, while the no training used $M = 0.12$ terms and the perceptual group used $M = 0.14$ terms (the conceptual group was significantly higher than the other groups).

Finally, participants took a quiz to assess their conceptual knowledge of wine. The wine quiz covered the conceptual knowledge from the training session (such as the difference in red and white wine production, and language acquired to describe zinfandel). The overall model was significant at $F(5, 149) = 62.7, p < .0001$, and training was

again the only significant factor, $F(2, 149) = 156.3, p < .0001$. The conceptual groups scored significantly higher on the quiz than the other groups (using post hoc tests), $M = 8.1$ conceptual; perceptual was $M = 2.1$ and the no learning group $M = 0.34$.

Results

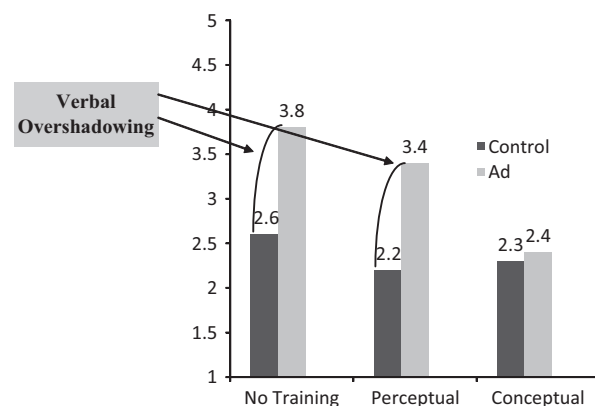
Effect of training on memory recognition. We analyzed the recognition data using GLM (a Generalized Linear Model) with training (conceptual, perceptual, none), advertising (received, not), and the interaction of the two as factors. The overall model was significant at $F(5, 149) = 6.3, p < .0001$; advertising was significant at $F(1, 149) = 14.4, p < .0001$; training was significant at $F(2, 149) = 5.6, p < .0004$; and the interaction was significant at $F(2, 149) = 2.9, p = .05$. Hypothesis 3 predicts that the perceptual training conditions will result from overshadowing from advertising, so we looked at the perceptual with advertising or no advertising. That model was significant at $t(48) = 3.3, p = .002$; means follow: perceptual with ad $M = 3.4$, perceptual with no ad $M = 2.2$.

For the conceptual conditions, we expected that there would be no overshadowing effect on recognition, $M = 2.4$ to the conceptual–no ad condition $M = 2.3, t < 1$. For control conditions, we found the same results as Experiment 1 where ad influenced recognition, $M = 3.8$ compared to $M = 2.6$ no ad, $t(48) = 3.05, p = .004$. Hypothesis 3 is therefore supported—perceptual training led to postexperience advertising overshadowing effects on recognition, while conceptual training did not. See Exhibit 3 for the means.

Also, we ran the overall model on confidence in recognition, which was significant at $F(5, 149) = 2.4, p = .03$; only training was significant at $F(2, 149) = 5.5, p = .005$, with the conceptual group having the most confidence, $M = 72$, compared to $M = 65.5$ perceptual and $M = 58.6$ no training (the conceptual group was significantly different from the no training group). The conceptual group also had more “remember” judgments—70 percent compared to 58 percent perceptual and 42 percent no training, significant at $\chi^2(2, n = 150) = 8.0, p = .02$. There were more “guesses” in the no training group, 34 percent, compared to 10 percent in the conceptual group and 12 percent in the perceptual group, significantly different at $\chi^2(2, n = 150) = 11.7, p = .002$.

Evaluative judgments. Our next set of analyses focuses on how the different types of training influenced how the product was ultimately evaluated. Hypothesis 4 predicts that consumers trained to appreciate the conceptual aspects of the wine will rate it more favorably after receiving the postexperience advertising. GLM was run with training, advertising, and their interaction as factors, with attitude and expected retail price as the dependent measures. The overall attitude model was significant at $F(5, 149) = 2.9, p = .02$; training was the only significant factor at $F(2, 149) = 6.3,$

Exhibit 3:
Memory identification by training and advertising condition



$p = .002$. The conceptual group had the most favorable attitudes, $M = 6.0$, compared to $M = 4.5$ perceptual, $M = 4.8$ no training (and significantly different from both of these other conditions). The price model was significant at $F(5, 149) = 7.4, p < .0001$; training was significant at $F(2, 149) = 12.0, p < .0001$; advertising was significant at $F(1, 149) = 11.1, p = .001$; and the interaction was not significant. Those who received the advertising were expecting a higher price, $M = \$15.89$ than those who saw no advertising, $M = \$11.40$ (significantly different). The conceptual group was expecting to pay more, $M = \$18.02$, than the perceptual group, $M = \$12.91$ and the no training group, $M = \$10.04$ (conceptual group significantly higher than the other two groups).

Discussion

Consistent with Hypothesis 3, perceptual training resulted in greater verbal influence from advertising. Also consistent with Hypothesis 3, the conceptual training reduced overshadowing of the advertising on sensory memory; in fact, as occurred in Experiment 1 with the intermediates, providing access to conceptual knowledge increased confidence and quality of memory recognition. As noted above, Melcher and Schooler (2004) failed to find definitive evidence that conceptual learning might reduce overshadowing. In contrast, though our novices did not have much experience with wine, they did show an interest in learning more about it. (Perhaps Melcher and Schooler’s focus on mushrooms might not have provided motivation for knowledge acquisition.)

The conceptual training session began to develop participants’ semantic knowledge about wine and provided them with a vocabulary of terms so that they did not have to rely on

the advertising to make sense of their experience. Having conceptual knowledge about wine helped them appreciate and integrate the advertising information into judgment.

General Discussion

The way that marketing communication influences consumer experience varies as one learns about the product. As novices, consumers rely heavily on marketing information that can overwhelm their personal judgment (as seen in Experiment 1). Unfortunately, as novices do not have the knowledge structure to incorporate that advertising information, the effect might not be long lasting, and their next experience may not be much different from their initial one because of the “one shot” episodic nature of experiential learning. Note that this group had the lowest confidence and most “guess” memories in that first experiment.

As the consumers acquire experience in a product category, they acquire perceptual knowledge and indirectly conceptual knowledge that allows them to categorize marketing communications (such as “this does or does not describe the product”). That information can be used to strengthen their judgments and to shape their expectations for future product encounters, as demonstrated by the intermediates’ ability to disregard the misleading marketing information in Experiment 1. Consumers can then more actively learn about the category, after which they experience a greater degree of differentiation in their product experience. At this point, marketing efforts are no longer used to embellish their product experiences but are considered purely an external information source, as our experts demonstrated in Experiment 1.

While novice consumers’ ability to learn from their perceptual taste experience was initially low, participants demonstrated that their ability to learn conceptual information was much better (as in our conceptual training in Experiment 2). Most people find visual and verbal information to be an effective training tool (Pinker 1999). What we found interesting is the manner in which this verbal information interacted with our respondents’ perceptual experience. As found in Experiment 2, conceptual training allowed the novices to create a stronger memory of their wine tasting. One of the obvious benefits to marketers was that this type of training led to novices expecting a higher price for the advertised wine.

In an earlier study, we found that a cross-sensory tool (wine aroma wheel) was effective in enhancing aficionados’ experiential learning (LaTour and LaTour 2010). To integrate the findings from this research investigation, we suggest that novices first acquire conceptual knowledge and once that has been obtained, then cross-modal tools like the wine aroma wheel can be effective in directing their learning from experience.

Developing Consumer Tastes

In aesthetic product categories where the experience is open to multiple interpretations, consumers’ interpretation of their experience may in part result from cultural patterns of preference and social inquiry that involve how consumers develop the ability to judge what is good, beautiful, or of high-quality. To return to our opening issue, the challenge for wine marketers is how to most effectively influence the taste development in novices.

Looking at most U.S. wines, it appears that producers are following the advice of Hughson and Boakes (2002, p. 467), who concluded: “One of the most important and public facets of wine expertise is competence in describing wines.” They noted that most bottles of wine produced in the New World provide some sensory analysis of the product, as do most reviews found in newspapers and magazines and many marketing efforts. As we also found, Hughson and Boakes point to the “apparent contradiction between the use by novices—for example, in deciding what wine to purchase—of a sensory analysis written by an expert and their apparent inability to interpret such descriptions accurately.” Our findings suggest that wine marketers might consider helping novices work through this complex information by providing them with a conceptual background about the product.

As is true of other industries that involve judgment and various levels of expertise, wine industry marketers design different types of communications strategies for people with different levels of expertise. For example, wine marketers target novice consumers with bright bold logos, “cute” labels, vivid point-of-purchase displays, and advertising that connects the wine to good times or to a certain level of sophistication. For intermediates, the wine makers advertise in wine magazines and try to get their wines reviewed and rated by influential critics. For experts, the industry provides tastings, discounts, and other incentives to get these opinion leaders to consider purchasing their wine. Our research suggests that these three groups are not so distinct, and wine purveyors and restaurateurs have the opportunity to help novices become intermediate in their knowledge.

The large intermediate (or “core”) segment (25.4 million strong) is particularly important to wine makers in the United States because they consume more than 88 percent of all the wine sold (Wine Market Council 2003). The Wine Market Council estimates that another 14 million consumers are relatively marginal drinkers who might be persuaded by marketing to increase their consumption. Based on our research, wine makers should accompany tastings with conceptually based marketing material that guides the consumers’ learning. A wine maker could highlight the terms most advantageous to their particular blend (such as “sweetness,”

Exhibit 4: **Summary of Marketing Recommendations for Enhancing Consumer Learning**

Don't label by hype alone	While many novices aren't currently engaged in thinking deeply about wine and find "fun with labels" to be a sufficient incentive to buy, it does not build "brand communities," nor multifaceted "brand personality." Therefore, brand equity is suboptimal unless wine marketers commit to the learning process for novices. While effective labeling and promotion can boost market share and build name awareness, they do not bring novices into the fold sufficiently.
A hard lesson for the French	As the French wine marketers have learned, having a wonderful product with plenty of product lore won't do the trick either to grow brand communities. Additional learning steps for novices have to be taken even when the quality to the trained palate and nose is unmistakable. This is not to say that the "mystery" and "romance" for higher end wines is a thing of the past. To be swept off one's feet requires "cultivation."
Don't forget to engage perceptual experiences	While this paper's obvious thrust is to promote conceptual learning, this does not denigrate the value of more perceptual based learning too. Product experience and conceptual learning tools need to be "coupled" in creative ways. Hence, wine events, ever so popular, cannot be "stand alone" perceptual learning but a crucial conduit for introducing conceptual learning tools like the wine aroma wheel as an enjoyable part of the "wine adventure."

as in our study) and build the consumers' vocabulary with words that play up their wine's distinct advantages. For other suggestions, see Exhibit 4.

As industries move to less mass marketing and more customized consumer learning experiences, the opportunity for framing how and what consumers learn from their direct experiences looms large. The French wine industry is currently banking on this type of learning influence. The French government has enlisted the help of American sommeliers in the United States to host dinner parties featuring French food, French music, and of course, French wine (Hershings, Marketplace on NPR, June 3, 2009). This type of promotional effort recognizes the social aspect of wine consumption and the opportunity to guide consumer learning and preference. From these initial tasting experiences, the consumer can be guided to prefer, for instance, right bank wines, the sommeliers can persuade them that French first-growths are really the most superior and that the consumer should not consider other options when selecting wines, providing them with specific brands for their consideration sets.

Limitations and Future Research

In assessing expertise in Experiment 1, there were other factors (like age) that differed between groups (novices by definition are new wine drinkers so they were overall younger than the intermediates and experts). We did some additional analyses to control for age by comparing novices, intermediates, and experts of similar ages, and the reported results still obtained, demonstrating that expertise continued to have an effect. However, future research ought to also consider age differences in response to marketing communications in the wine context. In Experiment 2, to isolate perceptual and conceptual learning and build off the verbal-overshadowing

literature, the conditions we created might not translate directly into how marketers can train consumers. Our twenty-five-minute training sessions were longer than what a marketer might have available to influence consumer learning in a retail setting. Also, perceptual and conceptual information might be intertwined in real-world consumer settings. Future research ought to examine ways in which novice learning might be enhanced at the retail level. In addition, future research might consider things like how cultural values, involvement, and other sociodemographic characteristics influence the consumer learning process.

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Bios

Kathryn A. LaTour is a consumer memory researcher. She is also a certified sommelier and is interested in the multifaceted nature of learning from complex sensory experiences.

Michael S. LaTour is a professor of marketing and Beam Research Fellow at the College of Business, University of Nevada, Las Vegas. Widely published, his works focus on the consumer experience.

Andrew H. Feinstein is Dean and James A. Collins Distinguished Chair at the Cal Poly Pomona's Collins College of Hospitality Management. He is also the California State University Director of Hospitality Management Education. The Collins College has an extensive wine program and produces award-winning Zinfandels in conjunction with the college of Agriculture.