"What Is It?" Categorization Flexibility and Consumers' Responses to Really New Products

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To understand really new products, consumers face the challenge of constructing new knowledge structures rather simply changing existing ones. Recent research in categorization suggests that one strategy for creating representations for these new products is to use information already contained in familiar product categories. While knowledge from multiple existing categories may be relevant, little research has examined how (and if) consumers process information drawn from more than one domain. We use two experiments to demonstrate how consumers use cues from multiple categories to develop expectations about and preferences for new products. Our findings suggest that the first plausible category label provided to the consumer significantly influences their categorizations, expectations, and preferences. Only when advertisers place limits on the type of information to transfer from each existing category can consumers use information from multiple categories effectively.

How do consumers learn about and develop preferences for new products that do not fit neatly into any existing category? These so-called really new products (Lehmann 1994) are innovations that defy straightforward classification in terms of existing product concepts (Gregan-Paxton and Roedder John 1997, p. 275) and thus "create, or at least substantially expand, a category rather than reallocate shares" within an existing one (Marketing Science Institute 1994, p. 6). From a marketer's perspective, the significant learning costs that these innovations impose on consumers present not only a challenge, but also an opportunity. In the process of educating consumers about a new product, marketers have the chance to influence how consumers structure their representations of it.

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Recent research in marketing and psychology suggests that consumers often use information already contained in existing product categories to learn about new products (Gregan-Paxton 1999; Gregan-Paxton and Roedder John 1997; Markman, Yamauchi, and Makin 1997; Yamauchi and Markman 2000). Because many novel innovations share properties with members of multiple existing product categories, however, it is critical for marketers to understand how consumers use information from more than one category to learn about a new product. For example, Febreze, an "innovative new product designed to eliminate odor on fabrics," claims to create a new category (Febreze 1998, quote on home page). However, Febreze is similar to laundry detergents because it works directly on fabric and is also similar to air fresheners because it eliminates odors. How do consumers use their prior knowledge in both of these categories to understand this innovation? In this article, we focus specifically on how and under what conditions consumers use knowledge from multiple categories to understand and develop preferences for new products.

CATEGORIZATION-BASED KNOWLEDGE TRANSFER

The extensive categorization literature in both marketing and psychology has traditionally focused on how people organize knowledge in memory and how they classify novel

objects (see, e.g., Cohen and Basu 1987; Loken and Ward 1990; Sujan and Bettman 1989; see also Ross and Spalding 1994). More recently, however, researchers have focused on the use of categories in making inferences about (i.e., learning about) new items (Gregan-Paxton 1999; Markman et al. 1997; Murphy and Ross 1994; Ross 1997; Thomas 1998). When a novel item is classified as a member of an existing category, information in that category is transferred to the novel item and used to structure the new representation (Gregan-Paxton 1999; Waldmann, Holyoak, and Fratianne 1995). Few researchers, however, have examined the conditions under which knowledge is transferred from multiple categories.

Research in knowledge transfer suggests that knowledge from a familiar domain (e.g., an existing category) is transferred to an unfamiliar target in three stages: access, mapping, and transfer (Gentner 1989; Gregan-Paxton and Roedder John 1997; Holyoak and Thagard 1989; Markman and Wisniewski 1997). Once a category has been accessed, properties of that category are placed in one-to-one correspondence with (i.e., mapped onto) properties of the target to facilitate the transfer of knowledge (Gentner 1983; Gentner and Markman 1997). For example, as illustrated in Figure 1, when mapping information from the film-based camera category to the digital camera, the objects "button" and "flash" can be mapped onto their counterparts in the digital camera representation. Once these mappings have been constructed, additional information about film-based cameras (e.g., "button opens shutter") is then transferred from the category to the digital camera, with the initial mappings serving as "pathways" for the additional knowledge (Gregan-Paxton and Roedder John 1997, p. 267).

Marketers can encourage categorization-based transfer by giving consumers a plausible category label that suggests a new product's category membership. When a category label is provided, consumers are encouraged to make more extensive mappings from the category to the target than when no label is present (Gregan-Paxton 1999). There are three reasons for this effect. First, a category label encourages people to think of the object as a whole (e.g., "this object is a ___"), because the goal of categorization is to maximize within-category similarity while reducing the similarity across categories (Medin and Schaeffer 1978; Rosch and Mervis 1975). Thus, consumers given a category label are likely to transfer information from the existing category to the new product in order to maximize the perceived similarity of the new product to the existing category (Gregan-Paxton 1999; Yamauchi and Markman 2000). Second, a category label guides attention, focusing people on the features within the category while discouraging attention to the features of other categories (Murphy and Ross 1994; Ross and Murphy 1996). This guided attention leads people to use feature information from a single category when making inductive inferences about a new object rather than using feature information from multiple categories (Murphy and Ross 1994; Yamauchi and Markman 2000). Third, category labels have been shown to override feature similarity as a factor predicting the type of inferences made about missing information (Gelman and Markman 1986). Even children as young as three years old preferred to base their inferences about a new object on its stated category membership rather than on its appearance (Gelman and Markman 1987). Taken together, these findings suggest that when a plausible category label is present, extensive mappings and knowledge transfer between a category and a target are likely to occur.

When extensive knowledge is transferred from a category to a target new product, consumers are likely to categorize the new product into the category that was first cued. Once this categorization occurs, consumers then use the category to make inferences about the product, and these inferences influence consumers' preferences for the new product. More formally,

H1a: The product category cued by an ad will significantly influence consumers' categorization of the new product in the direction of the cue and away from other plausible categorizations.

H1b: Consumers' expectations of a new product's performance will be inferred from the performance of products in the category into which the new product is categorized.

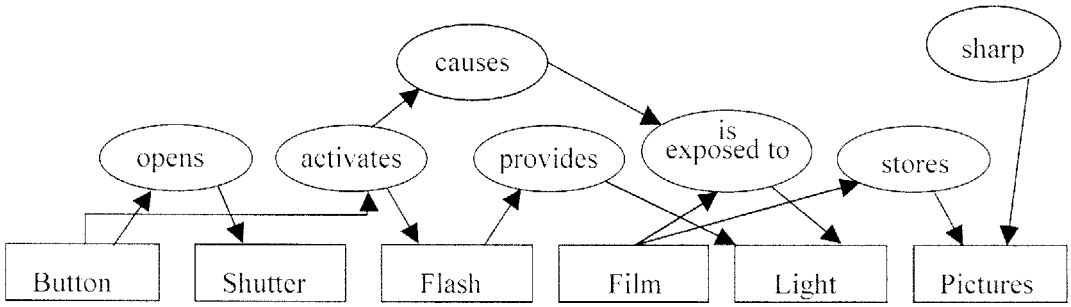
H1c: Consumers' expectations of a new product's performance will affect their preferences for the new product (i.e., higher expectations will lead to higher preferences).

However, simple priming could also explain these predictions. Thus, to rule out priming as an explanation, a stronger test of categorization-based knowledge transfer requires that subjects be exposed to multiple category cues. Markman (1987, 1989) proposed the mutual exclusivity constraint on word learning that suggests that people resist giving a second category label to an object after they have acquired a first label for it. This constraint implies that category labels encourage people to use the category named by the new label as a basis for structuring the target representation. Consequently, the first plausible category label provided should induce extensive knowledge transfer. Once this extensive transfer has occurred, a person's ability to map information from a second category onto that target may be impaired.

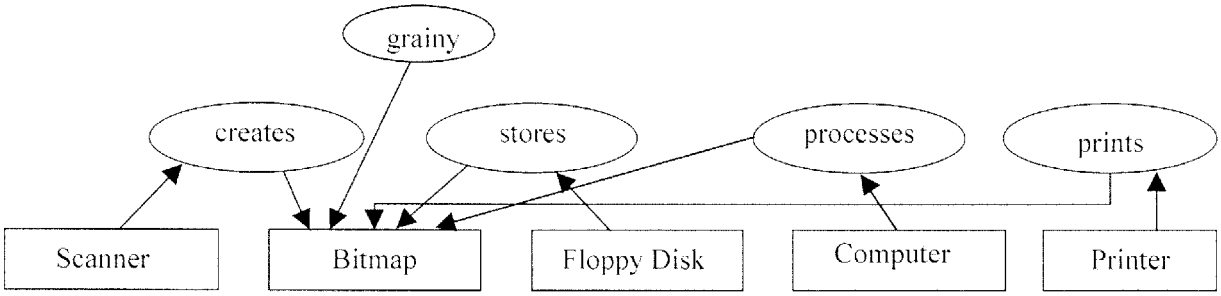
For example, a digital camera could be plausibly categorized as either a camera or as a computer peripheral. As shown in Figure 1, both the film-based camera representation and the scanner representation are initially compatible with the rather impoverished digital camera representation because mappings from either category to the target are possible. However, on being told that the digital camera (Figure 1*C*) is like a film-based camera (Figure 1*A*), consumers may transfer the bulk of the properties contained in their representation of film-based cameras into their representation of the digital camera. Once this transfer has occurred, consumers' representations of the digital camera will look much like their representations of film-based cameras.

FIGURE 1

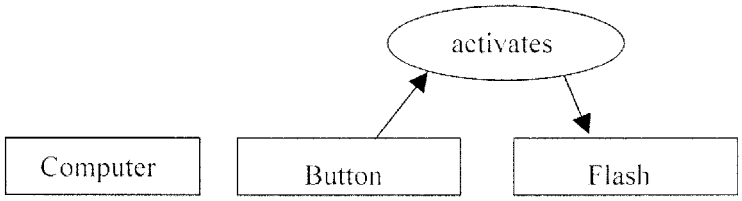
PRODUCT CATEGORY REPRESENTATIONS



A. Film-Based Cameras



B. Scanners



C. Digital Cameras

With fewer common elements between the new digital camera representation and the existing scanner category, much of the relevant information contained in the scanner representation (Figure 1*B*) may not be transferred because consumers will have difficulty in finding common elements on which to make an initial mapping.

Thus, we propose the following:

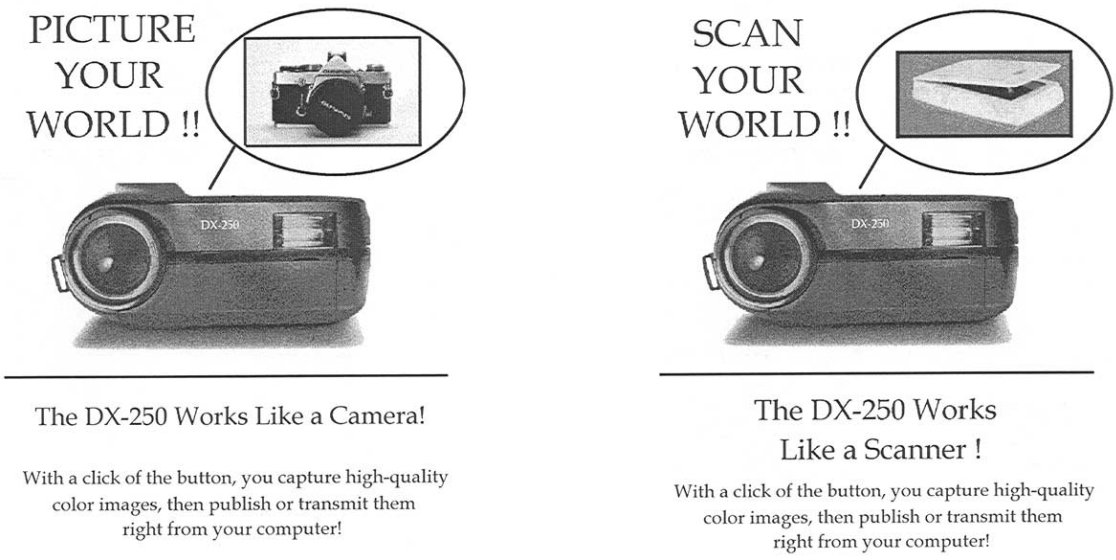
H2a: When given two consecutive and plausible category labels, consumers will rely primarily on the first label provided when categorizing a really new product.

H2b: When given two consecutive and plausible category labels, consumers will rely primarily on the first label provided when making inferences about a really new product's performance.

We test these hypotheses in experiment 1.

FIGURE 2

DIGITAL CAMERA AD



EXPERIMENT 1

Product Class

A digital camera was chosen to operationalize the really new product because a pretest revealed that none of the 40 subjects had ever used or seen one at the time of the study. This lack of familiarity in the target population insured that subjects' existing representations of the digital camera would be limited (i.e., impoverished). Further, research has shown that a digital camera does not fit unequivocally into any existing product class, and thus, the digital camera is not automatically categorized as a camera (Moreau, Lehmann, and Markman 2001). Finally, because the digital camera defies straightforward classification, knowledge in different existing categories can be used to structure an initial representation of the new product.

Design and Stimuli

Two versions of an ad for a digital camera were created to cue different category labels (traditional film-based cameras vs. computer scanners). Both versions of the ad showed the same picture of a digital camera with body copy reading, "With the click of a button, you capture high-quality color images, then publish or transmit them right from your computer!" To avoid obvious demand effects, the body copy contained information from both the camera domain and the computer accessory domain and provided no explicit mappings to any given category. Rather, the copy encouraged subjects to think of the digital camera as a whole product, not as a collection of different attributes and functions.

The specific category cued by the ad was manipulated in the headline, "Picture (Scan) Your World!" and in the subheadline, "The DX-250 Works Like A Camera (Scanner)!" To strengthen the manipulation, a "thought bubble" was shown rising from the digital camera, and it contained a picture of a traditional camera (scanner) (Fig. 2). A pretest ($n = 88$) revealed no significant differences between the ads in terms of subjects' (*a*) evaluation of the ad, (*b*) attitude toward the ad, (*c*) perceived realism of the ad, and (*d*) perceived effectiveness of the ad (one-way ANOVAs; all p's $> .30$).

Design and Procedure

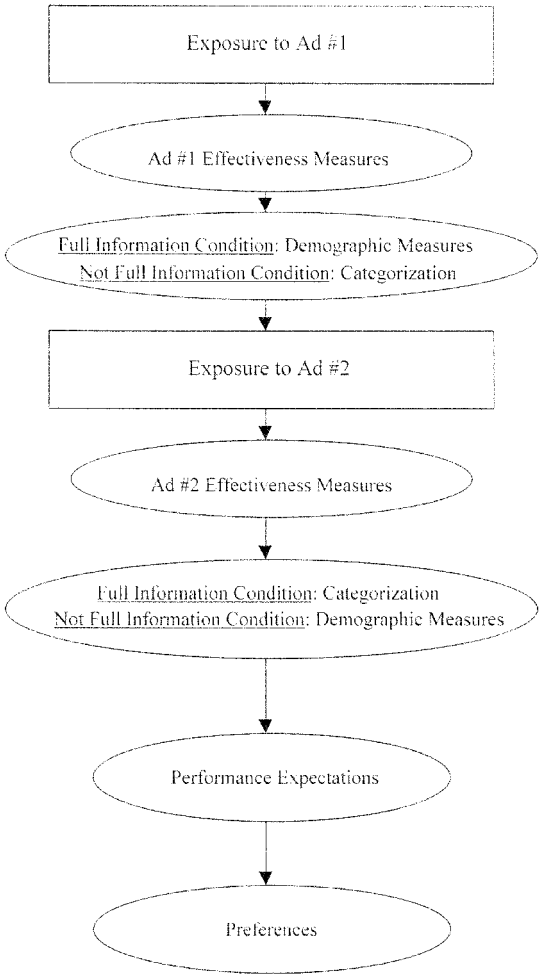
Two factors were manipulated between-subjects: (1) the order of exposure to the ads (camera first vs. scanner first) and (2) the timing of the categorization task (after one ad vs. after both ads). The procedure for this two-by-two design is summarized in Figure 3.

Subjects were 128 undergraduates from a southwestern university who participated in this "marketing research study" for course credit. The average age of the sample was 19.8 years, and 42 percent of the subjects were female. Subjects were randomly assigned to an experimental condition and given a packet containing both manipulations.

The first ad appeared on the first page of each packet. Subjects were given 45 seconds to "think about the product advertised" and were then instructed to turn the page to answer seven questions regarding the ad's effectiveness. Subjects in the "categorization task first" condition then completed the categorization task while the other subjects

FIGURE 3

PROCEDURE FOR EXPERIMENTS 1 AND 2



answered five straightforward demographic questions. When all subjects had completed this first set of questions, they were told to turn the page and were given another 45 seconds to "think about the product advertised" in the second ad. After responding to the second set of ad-effectiveness questions, subjects then completed either the demographic questions or the categorization task (depending on their condition) and then responded to the performance expectation task and preference measures (alpha = .85). On a seven-item scale (alpha = .80), subjects reported no differences in the effectiveness of the two ads in each of the order conditions (within-subjects ANOVA: $F(1, 87) = .08$, $p > .50$).

Dependent Measures

Categorization. Subjects were given the layout of a hypothetical electronics store with several departments, including computers and computer accessories; cameras; televisions and VCRs; and audio equipment. Subjects were asked, "If you were shopping for the DX-250 in the store shown below, where is the FIRST place in the store you would go to find the product?" and were instructed to use an *X* to indicate the location. The department in which each subject placed the *X* indicated their categorization of the digital camera.[1]

Performance Expectations. The measure of performance expectations required subjects to indicate their expectations of the picture quality produced by the digital camera. Subjects were given a printed set of three pictures of the same object (a flowering tree) purportedly taken by a digital camera. The three pictures were actually created by using a photo software package to manipulate only the pixel density and thus the clarity of the picture. The pixel densities used were 100 dots per inch (dpi), 600 dpi, and 1,200 dpi.[2]

Subjects selected the picture that they thought best represented the quality of the output they would expect from the DX-250. Because higher picture quality is associated more closely with film-based cameras than with computer accessories (Burrows 1997, p. 106; McCarthy 1996, p. 117), Hypothesis 1b predicts that subjects categorizing the DX-250 as a camera will have higher picture quality expectations than those categorizing it as a computer accessory.

Preferences. A five-item scale was used to assess subjects' preferences for the product. On five seven-point scales, subjects indicated their attitude toward and overall evaluation of the product. Additionally, subjects were given a list of seven situations and asked whether or not they would use this product in each situation. Subjects' responses to each situation were then summed to create an intended-use measure. The five scale measures and the intended-use measure were then standardized and summed to create a measure of overall preference (alpha = .76).

Results

Categorization. Subjects completing the categorization task after seeing only one ad provided the data to test Hypothesis 1a, and the results from these subjects support this hypothesis. Of those subjects seeing the camera ad first, 74 percent categorized the DX-250 as a camera, compared to only 32 percent of the subjects who saw the scanner ad first ($\chi^2(1) = 6.76$, $p < .01$).

[1]A categorization of the digital camera as a computer accessory was coded zero and a categorization as a film-based camera was coded one. No subject placed the DX-250 into any other category.

[2]Manipulation checks revealed significant differences between the three pictures, with the 1,200 dpi picture having the highest clarity, followed by the 600 dpi picture, and then the 100 dpi picture. Expectations were coded as follows: 3, the 1,200 dpi picture; 2, the 600 dpi picture; and 1, the 100 dpi picture.

Hypothesis 2a predicts that this pattern will also hold for subjects completing the categorization task after exposure to both ads, and the results also support this hypothesis ($\chi^2(1) = 5.16$, $p < .05$). Fifty-nine percent of subjects seeing the camera ad first categorized the DX-250 as a camera, compared to only 35 percent of subjects seeing the scanner ad first ($z = 1.99$, $p < .05$). While not as dramatic in this categorization-after-both-ads condition as compared to the categorization-after-one-ad condition, the pattern demonstrates the dominant influence of the first category label cued. Note that because subjects saw the ads sequentially, the second ad could have had a more pronounced influence on subjects' categorization since it was more proximally related to the task. However, our results indicate that the first ad has the greatest influence on the categorization decision. This difference cannot be explained by differences in ad effectiveness.

Performance Expectations. Hypothesis 1b predicts that subjects' categorizations of a new product should be correlated with their performance expectations, and we would expect that relationship for subjects categorizing the new product after seeing both ads. Consistent with this expectation, subjects categorizing the DX-250 as a camera reported higher performance expectations than did those categorizing it as a computer accessory ($M_{\text{camera}} = 1.79$ vs. $M_{\text{computer}} = 1.41$; $t = 2.10$, $p < .05$). The correlation between categorization and performance expectations for these subjects was both positive and significant ($r = .24$, $p < .05$).

Subjects categorizing the new product after seeing only one ad provide the data to test Hypothesis 2b, which predicts that subjects will rely heavily on the first category cued when inferring performance. These subjects were exposed to only one of the category labels at the time of making their categorization decision. Between making their categorization decision and reporting their performance expectations, these subjects were exposed to the second ad and category label. Information stored in this second category could potentially be used to restructure the representation of the DX-250 and to infer its performance. Were this to happen, the correlation between the categorization decision and performance expectations for these subjects would be lower than the .24 obtained in the categorization-after-both condition. However, as Hypothesis 2b predicts, subjects based their inferences primarily on the first category, and the correlation between categorization and performance expectations in this group is actually numerically higher than the correlation found in the categorization-after-both condition ($r = .34$, $p < .05$). Moreover, the performance expectations of these subjects also differed significantly according to categorization, with means nearly identical to those reported in the categorization-after-both condition ($M_{\text{camera}} = 1.82$ vs. $M_{\text{computer}} = 1.37$; $t = 2.21$, $p < .05$).

Preferences. A three-way ANOVA was used to test Hypothesis 1c, with ad order (camera first vs. scanner first), categorization decision, and performance expectations serving as the independent factors. Consistent with Hypothesis 1c, only performance expectations significantly affected consumers' preferences ($F(2, 117) = 9.91$, $p < .001$). As predicted, high expectations of picture quality were related to higher preferences for the DX-250 ($M_{\text{high}} = .35$, $M_{\text{medium}} = -.38$, $M_{\text{low}} = -.50$). Subjects' categorization of the DX-250 also had a marginally significant influence on preferences, with those categorizing the DX-250 as a camera having higher preferences than those categorizing it as a computer accessory ($M_{\text{camera}} = .29$ vs. $M_{\text{computer}} = -.25$, $F(1, 117) = 3.34$, $p < .10$).

Discussion

In experiment 1, all subjects saw exactly the same information, yet the order in which they saw the information had significant effects on where they would shop for the DX-250, how they expected it to perform, and on their overall preferences for the new product. Specifically, subjects relied heavily on information from the first category when forming their representations of the new product.

Given that useful information about really new products can often be found in multiple categories, it is important for marketers to understand how to facilitate the transfer of information from multiple domains. Evidence suggests that when people are focused on a specific correspondence, the inferences they draw from the category to the target are likely to be constrained to information directly related to the focal correspondence (Clement and Gentner 1991). For example, a digital camera manufacturer could assert that its product was like a film-based camera in the way that the consumer takes pictures (e.g., "push the button to capture an image"). The manufacturer could also assert that the digital camera was like a scanner in the way that the consumer processes the pictures (e.g., "hook it up to a computer to download an image"). In this case, consumers could effectively use information from both categories to achieve a higher level of understanding about the new product while making fewer erroneous inferences. Under these conditions, the new product representation can be structured using information from both categories. Thus,

H3a: When given two consecutive and plausible category labels and explicit mappings from each category, consumers will rely on both the first and second labels when categorizing a really new product.

H3b: When given two consecutive and plausible category labels and explicit mappings from each category, consumers will use information from both the first and second categories when inferring the performance of a really new product.

We test these hypotheses in experiment 2.

EXPERIMENT 2

Experimental Stimuli

The stimuli used in this experiment were identical to those used in experiment 1 with one exception: the body copy for each ad was rewritten in order to provide explicit mappings from each cued category to the target. Specifically, the copy in the ad cuing the camera (computer scanner) category read, "The New DX-250 is Like a Camera (Scanner)! You can take (process) pictures with the DX-250 in the same way you would with a camera (scanner)." All other aspects of the ad remained the same.

Method and Procedure

The design and procedure for experiment 2 is identical to that of experiment 1. In this two-by-two design, two factors were manipulated between subjects: (1) the order of exposure to the ads (camera first vs. scanner first) and (2) the timing of the categorization task (after the first ad vs. after both ads). Eighty-three undergraduates from a southwestern university participated in this "marketing research study," were randomly assigned to an experimental condition, and were given a packet containing both manipulations. Coefficient alpha for the preference measures was .82.

Results

Categorization. While the explicit mappings may limit the amount of knowledge transferred from the first category, the influence of the first category label on subjects' categorization decisions should still exist for subjects in the categorization-after-the-first-ad condition. As expected, the first ad cued had a significant effect on the categorization decisions made by these subjects ($\chi^2(1) = 5.60$, $p < .05$). Specifically, 66 percent of subjects seeing the camera ad first categorized the DX-250 as a camera, while only 25 percent of those seeing the scanner ad first categorized it as a camera ($z = 2.92$, $p < .01$).

If explicit mappings do enable subjects to use information from both categories, as Hypothesis 3a predicts, the influence of the first ad on subjects' categorization of the DX-250 should dissipate as subjects begin to rely on information cued by the second ad. Thus, subjects categorizing the DX-250 after seeing both ads should not be significantly influenced by the order in which the ads are presented, and in fact, presentation order did not significantly influence these subjects' categorization decisions ($\chi^2(1) = 2.47$, $p > .10$). Despite the lack of significance, however, the pattern of results was directionally consistent with the results obtained in experiment 1. Specifically, 57 percent of subjects who saw the camera ad first categorized the DX-250 as a camera, compared to 31 percent of subjects who saw the scanner ad first. Based on this finding, it is hard to conclude that the explicit mappings enable subjects to use information from both categories when reasoning about the new product. Thus, we highlight further evidence in the performance expectation results to suggest that subjects are using information from both base domains in this experiment.

Performance Expectations. A two-way ANOVA, with categorization and the order of the dependent variables included as independent factors, revealed both a main effect of categorization on expectations ($F(1, 80) = 5.84$, $p < .01$) and an interaction between order and categorization ($F(1, 80) = 7.22$, $p < .01$).

For subjects making their categorization decision after seeing both ads, we again expect a positive correlation between subjects' categorization decisions and their performance expectations because these subjects had been exposed to both category cues at the time they reported both their categorization decision and their performance expectations. Thus, these subjects' representations of the DX-250 were ostensibly the same when they made both judgments. The data support this prediction (Table 1). Subjects categorizing the DX-250 as a camera reported significantly higher performance expectations than did those categorizing it as a computer accessory ($M_{\text{camera}} = 2.00$ vs. $M_{\text{computer}} = 1.21$, $t = 3.14$, $p < .01$). The correlation between categorization and performance expectations was both positive and significant ($r = .49$, $p < .01$).

For subjects making their categorization decision after seeing only one ad, however, their representations of the new product (including their expectations of performance) could be altered by the second ad between the time they make their categorization decision and when they report their expectations of the DX-250's performance. If information from the second category is transferred and used, as Hypothesis 3b predicts, the correlation between subjects' categorization decisions and their performance expectations should be lower than the .49 obtained from subjects making the categorization decision after seeing both ads. The results support Hypothesis 3b. The correlation between categorization and performance expectations in this group is close to zero ($r = -.04$, $p > .82$). Specifically, subjects categorizing the DX-250 as a camera expected about the same level of performance as those categorizing it as a computer accessory ($M_{\text{camera}} = 1.55$ vs. $M_{computer} = 1.50$, $t = .23$, $p > .80$).

Preferences. Again, a three-way ANOVA was used to test Hypothesis 1c, with ad order (camera first vs. scanner first), categorization decision, and performance expectations serving as the independent factors. Performance expectations were again a significant predictor of preferences ($M_{\text{high}} = .18$, $M_{\text{medium}} = -.08$, $M_{\text{low}} = -.83$; $F(2, 72) = 4.22$, $p < .05$).

GENERAL DISCUSSION

The ability to selectively transfer information from multiple categories is critical for consumers who are learning about innovations. Because really new products often contain features and relations derived from multiple existing categories, consumers will learn about these products more

TABLE 1

SUMMARY OF RESULTS FROM EXPERIMENTS 1 AND 2

	Experiment 1		Experiment 2	
	Categorization after one ad	Categorization after both ads	Categorization after one ad	Categorization after both ads
Percentage who saw the camera ad first and categorized it as a camera	74	59	66	57
Percentage who saw the camera ad second and categorized it as a camera	32	35	25	31
Difference in percentages	.42**	.24*	.41**	.26
Correlation between categorization and expectations	$r = .34^{*}$	$r = .24^{*}$	$r = -.04$	$r = .49^{**}$
Picture quality expectations (3 = best, 1 = worst):				
Camera	1.82	1.79	1.55	2.00
Computer	1.37*	1.41*	1.50	1.21**

*Significant at .05.
**Significant at .01.

quickly and with fewer mistakes if marketers delineate the appropriate information that should be transferred from each domain. The two studies in this article were designed to examine how and under what conditions consumers use information from multiple categories to develop their preferences for new products.

The findings from experiment 1 suggest that when two plausible category labels are activated sequentially, the label presented first has a dominant influence on consumers' perceptions of a new product. However, experiment 2 demonstrates that this primacy effect can be somewhat mitigated by providing consumers with explicit mappings from each of the two categories.

Theoretical Contributions

While prior research in marketing has examined how consumers integrate new products into their existing category structures (Meyers-Levy and Tybout 1989; Ozanne, Brucks, and Grewal 1992; Sujan and Bettman 1989), these studies have examined how consumers cope with incrementally new products (i.e., a new kind of soft drink, car, and single reflex lens camera, respectively). In each case, the researchers expected consumers to use multiple levels (i.e., superordinate, basic, and subordinate) of a single existing category to reason about the product. By definition, innovative products defy straightforward categorization. Thus, consumers must integrate knowledge from multiple sources in order to comprehend them. Our research begins an examination of how and under what conditions consumers access and use knowledge from multiple domains (see Moreau et al. [2001] on how experts integrate information from multiple knowledge bases).

Our focus on the use of information itself is also a theoretical contribution. Historically, categorization research in both marketing and psychology has focused on how consumers organize knowledge in memory and classify novel objects. Only recently has categorization research examined how people use categories to learn and make inferences about novel objects, and little empirical work has examined how these inferences are made when multiple category labels are both plausible and accessible. Our research was designed to address this gap.

Our work also extends recent research highlighting the crucial role that category labels play in predictive inference. We demonstrate that relating the category label of a known category to a new product leads people to take the structure of the known category and apply it to the new one. Previous research by Yamauchi and Markman (1998, 2000) has shown that category labels focus consumers on relationships among features within a category when making feature predictions. This work is also consistent with research by Gelman and Heyman (1999) that demonstrates that even children act as though category labels denote a cluster of stable properties of an object. We extend these findings by showing that when two competing category labels are provided, the first label has a disproportionate influence on consumers' inferences about and preferences for a new product.

This research has focused on categorization-based knowledge transfer. However, the recent interest in analogical-based knowledge transfer (e.g., Gregan-Paxton and Roedder John 1997) and its growing applications to the marketing area suggest that future research needs to be done to more clearly distinguish categorization-based knowledge transfer from analogical knowledge transfer.

Managerial Implications

Because really new products can be plausibly categorized into more than one existing product class, marketers have options when positioning these novel products. Firms can choose a positioning strategy that will enable them to optimize both their in-store placement and distribution strategies. This is important since where consumers shop for a new product can influence both their choice decision and, if the product is purchased, their ensuing satisfaction.

For example, a consumer shopping in the camera department of a store is likely to compare the price of a digital camera to the price of traditional, film-based cameras whereas a consumer shopping in the computer department is likely to compare its price to that of scanners, printers, and other computer accessories. This difference in context could influence subjects' perceptions of the digital camera's value and, therefore, influence their choice decision.

Our studies showed that the category (i.e., aisle) where consumers expected to find the product influenced their performance expectations, which, in turn, affected their preferences. Consumers looking for the digital camera in the camera aisle reported higher performance expectations than those shopping in the computer aisle. Thus, a firm can choose a positioning strategy that positively influences consumers' inferences about the product's performance. However, because expectations are a major determinant of satisfaction, the product's positioning should not overly inflate consumers' expectations.

Conclusion

As technology continues to facilitate the rapid creation of innovative new products, it is critical for marketers to leverage the power of consumers' existing knowledge to help them learn. Because many of these innovative products contain both attributes and relations contained in disparate categories, a better understanding of how consumers combine information from multiple domains is important. Future research is needed to better understand the mechanisms underlying this type of dynamic knowledge transfer. This work should also trace the alignment, mapping, and transfer stages to document how consumers' representations of new products develop. In this way, we can differentiate between categorization-based and analogy-based knowledge transfer, a necessary step in gaining a better understanding of how consumers integrate information from multiple existing domains.

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