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Several studies have shown that pioneering brands are preferred to later entrants. The "pioneering advantage" is remarkably robust and has been observed across a wide variety of products and contexts. Two longitudinal experiments were conducted to investigate judgmental mechanisms that contribute to this advantage. In experiment 1, the amount of information presented was held constant across brands. Nevertheless, subjects learned more about the pioneer than about later entrants and consequently judgments of the pioneer were more extreme and were held with greater confidence. Furthermore, the pioneering advantage increased over time, especially when subjects were exposed repeatedly to the features of the pioneer. Experiment 2 demonstrated that order-of-entry effects on consumer memory and judgment are eliminated when information about a set of brands is presented simultaneously as opposed to sequentially. Furthermore, the results revealed that sequential information processing benefits the pioneer even when product information is processed incidentally. Implications of the results for understanding and managing order-of-entry effects are discussed.

Order-of-Entry Effects on Consumer Memory and Judgment: An Information Integration Perspective

Pioneering brands often earn a long-term market share advantage over later entrants. This pioneering advantage has been observed in consumer and industrial markets (Brown and Lattin 1990; Gurumurthy and Urban, forthcoming; Lilien and Yoon 1990; Robinson 1988; Robinson and Fornell 1985; Urban et al. 1986) and in developing and mature markets (Urban et al. 1986). Moreover, the pioneering advantage tends to persist even when brands reposition and when consumer switching costs are low (Carpenter and Nakamoto 1989). Though the pioneering advantage is remarkably robust, it does not guarantee success (e.g., Rheingold's Gablinger's light beer) and degree of success can vary considerably. This variability implies that the effect may be susceptible to managerial influence.

Successful managerial intervention requires knowledge of the mechanisms that mediate the pioneering advantage. To the extent that these mechanisms can be influenced by marketing actions, the magnitude and persistence of the pioneering advantage can also be managed. Pioneering firms can use this knowledge to enhance the pioneering advantage, whereas competitors can use it to reduce the pioneer advantage.

Prior research on cognitive operations that mediate the pioneering advantage has focused on preference formation processes that occur when the ideal attribute combination for a new product category is ambiguous (Carpenter and Nakamoto 1989). Under such conditions, prior knowledge is unavailable to provide a framework to guide thinking about instances of the novel category and learning is difficult and complex. Consequently, consumer preferences are likely to evolve over time through an anchoring-and-adjustment process (Kahneman, Slovic, and Tversky 1982; Kahneman and Snell 1980). Because consumers are exposed to brands sequentially, the first brand tends to have a disproportionate effect on trial and preference. Consistent with this preference evolution model are Carpenter and Nakamoto's (1989) findings that, over

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time, (1) the ideal point shifts toward the pioneer’s location in perceptual space, (2) the pioneer becomes the prototype for the category, and (3) asymmetric product comparison processes (see Tversky 1977) differentiate the pioneer from later entrants but lead later entrants to be perceived as mere “copycats.”

Carpenter and Nakamoto’s (1989) model applies to product categories in which consumer preferences are relatively ambiguous (e.g., discontinuous innovations, high tech products). However, the pioneering advantage has also been observed for product categories in which preferences are much less ambiguous (e.g., continuous innovations, frequently purchased package goods; see Gurumurthy and Urban, forthcoming; Urban et al. 1986). In the former case, buyers have product knowledge but must learn about their preferences. In the latter case, preferences are well defined but buyers must learn about products. The goal of our study is to investigate the effects of order of entry on learning about products and to examine the consequences of these effects on judgment.

**ORDER-OF-ENTRY EFFECTS ON LEARNING AND MEMORY**

We develop a model of learning and memory for product information as a function of sequential brand exposure. The model suggests that consumers learn more about early brands than about followers. If differential learning about brands as a function of order of entry mediates the pioneering advantage, any marketing tactic that increases differential learning should also enhance the pioneering advantage. For example, promotional campaigns that increase processing effort, repetitive advertising, and other tactics that facilitate learning about the pioneer should also increase the magnitude of the pioneering advantage. Conversely, tactics that facilitate learning about a follower should reduce the difference in the amount of information learned about the pioneer versus the follower and, consequently, the pioneering advantage should be reduced. However, learning about followers is likely to be difficult when consumers are exposed to brands sequentially.

How can sequential exposure to product information create a learning advantage beneficial to the pioneer? We suggest that information about the first entrant in a new product category is likely to be perceived as novel and interesting. Because novel information is attention-drawing (Kahneman 1973), much of it will be encoded into long-term memory (Anderson 1983; Rehearsal (Rundus 1971) and repeated exposure to information (Madigan 1969; Nelson 1977) facilitate learning and increase the amount of information known about the pioneering brand. Hence, much is likely to be known about the pioneer before the second entrant appears on the market.

Because the pioneer and the second entrant are members of the same product category, they are likely to share many features or attributes. Consequently, much of the information pertaining to the second entrant will be perceived as redundant with what is known about the pioneer. Redundant information is not attention-drawing (Kahneman 1973) and is not weighed heavily in judgment (Wilton and Myers 1986; Wyer 1970; Wyer and Carlson 1979). In addition, exposure to redundant information is likely to truncate the information search process. Early cessation of the information-gathering process decreases the amount of information learned about a follower. Moreover, because the amount of redundant information encountered increases as more brands enter the market, attention to followers is likely to decrease as market clutter increases.

Attributes that are shared by a pioneer and a follower are perceived as novel and interesting for the pioneer and as redundant and unexciting for the follower. Because novel information is more attention-drawing than redundant information, recall for shared/redundant features should be greater for the pioneer than for followers. Moreover, if exposure to shared/redundant features induces consumers to truncate the search process, recall for unique features should also be greater for the pioneer than for followers.

\[ H_i: \text{Differential learning as a function of order of entry results in} \]

- (a) greater recall for shared features for the pioneering brand than for later entrants and
- (b) greater recall for unique features for the pioneering brand than for later entrants.

**ORDER-OF-ENTRY EFFECTS ON JUDGMENT**

Given that consumers are likely to learn more about the pioneer than about later entrants, what are the judgmental implications of this learning advantage? Information integration theory (Anderson 1967, 1981, 1982, 1991; Louviere 1988; Lynch 1985; Troutman and Shanteau 1976) suggests that the amount of information used to form an overall evaluation influences the extremity of the overall evaluation and confidence in that evaluation.

Briefly, information integration theory suggests that weights and scale values are assigned to the attributes or features of a product. This information is then combined, according to an integration rule (e.g., the averaging rule), into an overall evaluation of the product. The theory provides a useful framework for evaluating composition rules (including complex rules involving nonlinearity-in and interactions in preference models; see Lynch 1985) and for investigating several key judgmental phenomena (e.g., serial order effects, the negativity effect, the positive context effect; see Anderson 1981, 1982).

One of the most interesting and important findings in information integration research is the set-size effect—the finding that the overall evaluation of an object becomes more extreme as the amount of information known about the object increases, even when the value of each piece of information is held constant (Anderson 1981, 1982; Davidson et al. 1985; Yamagishi and Hill 1981, 1983). For example, in Anderson’s (1967) classic experiment on the set-size effect, subjects judged the likeliness of a target person described by sets of 1, 2, 3, 4,
or 6 adjectives. Pretesting had ensured that the adjectives were of equal value (the mean value of each set of adjectives was held constant). As predicted, as the number of presented adjectives increased, evaluation extremity also increased. Thus, the sheer amount of information used influences the extremity of an overall evaluation even when the evaluative implications of each piece of information are controlled.

The set-size effect should also be found when differential learning occurs. That is, manipulating the amount of information learned about each alternative (an internal set-size manipulation) should produce effects conceptually similar to those produced by varying the amount of information presented for each alternative (an external set-size manipulation). Thus, if consumers learn more about a pioneer brand than about later entrants, more extreme evaluations should be formed toward the pioneer, even when the amount of information presented for each brand is held constant.

H: Differential learning as a function of order of entry results in more extreme evaluations of the pioneering brand than of later entrants.

In addition, differential learning should influence confidence judgments. As the amount of evidence consistent with a particular judgmental position increases, confidence in this judgment also increases (Anderson 1981, 1982; Koriat, Lichtenstein, and Fischhoff 1980; Peterson and Pitz 1988). Because consumers know more about the pioneer than about later entrants, they should be more confident about the validity of their evaluations of the pioneer.

H: Differential learning as a function of order of entry results in greater confidence in evaluations of the pioneering brand than in those of later entrants.

Because the shared and unique features of the pioneer receive greater attention than those of later entrants, they are encoded more deeply and, consequently, the ability to retrieve these features from memory should diminish less over time (Anderson 1983). Hence, differential recall for the features of the pioneer versus the features of followers should increase over time.

Judgments of the pioneer and those of followers should also differ as a function of time. Because judgments of the pioneer are bolstered and supported by a relatively large amount of attribute information stored in a rich, associative network in long-term memory (see Anderson 1983 for a review of associative network models), they are likely to be relatively enduring and persistent over time. In contrast, because judgments of followers are supported by a small amount of information stored in an impoverished associative network, they are likely to decrease over time. Hence, in contrast to judgments of followers, judgments of the pioneer should remain more stable over time.

H: The effects specified in H through H and the pioneering advantage are more pronounced over time (this prediction implies an interaction between order of entry and time on memory and judgment).

Finally, because consumer learning is susceptible to managerial influence (see Hoch and Deighton 1989), it should be possible to increase the magnitude of the pioneering advantage by employing tactics designed to facilitate learning about the pioneer. For example, exposing consumers repeatedly to information about the pioneer (e.g., through repeated exposure to advertisements, press reports, package labels, sales pitches) should increase the learning advantage for the pioneer. From the manager's perspective, information conveyed through these mechanisms can be controlled and repeated; from the consumer's perspective, learning from education (as opposed to experience) is effective and efficient (Hoch and Deighton 1989). If order-of-entry effects on learning are moderated by repeated exposure, and if order-of-entry effects on judgment are mediated by differential learning.

H: The effects specified in H through H and the pioneering advantage are more pronounced with repeated exposure to the features of the pioneering brand (this prediction implies an interaction between order of entry and repeated exposure on memory and judgment).

To test the hypotheses, we conducted a longitudinal experiment in which subjects were exposed to Consumer Reports attribute information for three different brands (brand A, brand B, and brand C) over a four-week period. They received information pertaining to the pioneer brand in the first session, and two later entrants were introduced two weeks later in a second session. A third session was conducted two weeks after the second session. Memory and judgment measures were administered in each session.

**EXPERIMENT 1**

**Pretest**

A pretest was conducted to ensure that brands A and B were equally attractive and that brand C was superior to brands A and B. In the main experiment, order of entry for brands A and B was counterbalanced and the superior brand C was always the last entrant. This design was used to determine whether order-of-entry effects are sufficiently robust to lead consumers to prefer a pioneering brand over a superior later entrant.

Twenty-four MBA students were asked to rate the attractiveness of 36 attributes pertaining to the target product category, microwave popcorn. Attribute ratings were measured on scales ranging from 0 (extremely bad) to 10 (extremely good). On the basis of these ratings, descriptions were developed for three brands (brands A, B, and C). Each description consisted of four features common to all members of the choice set (shared features) and three features unique to each brand (unique features). Two of the four shared features were identical
for all brands and two were slightly more favorable for brand C (e.g., easy to prepare vs. fairly easy to prepare). Brand C's unique features were much more favorable than the features unique to brand A or to brand B.

Mean attribute ratings differed significantly across brands ($F_{1,46} = 3.50, p < .04$). Simple effect tests were performed to compare individual cell means while controlling for the compounding of alpha. Brands A and B were equally attractive ($M = 6.71$ vs. $6.74$, $F < 1$), whereas brand C ($M = 7.10$) was superior to brand A ($F_{1,23} = 5.63, p < .05$) and to brand B ($F_{1,23} = 4.78, p < .05$). A second pretest with an independent sample of 20 students drawn from the same population revealed that mean attribute importance ratings did not differ across brands ($F < 1$).

**Subjects**

An independent sample of 46 subjects, drawn from the same population used in the pretests, participated in experiment 1. Six subjects failed to participate in all three sessions and were excluded from the analyses.

**Procedure**

**Overview.** Figure 1 summarizes the experimental procedures used in experiment 1. Attribute information about the pioneer brand was provided in session 1. Brand A served as the pioneer for half of the subjects and brand B served as the pioneer for the remaining subjects. After subjects were exposed to the attribute information, judgment and memory measures were administered. Two weeks later, attribute information about the followers was provided. In addition, attribute information about the pioneer was presented again for subjects assigned to repeated-exposure conditions. The pioneer's attributes were not restated for the remaining subjects. At the end of session 2, judgment and memory measures were administered for all three brands. Two weeks later, the judgment and memory measures administered in session 2 were administered again in session 3.

**Session 1.** Subjects received a booklet containing Consumer Reports attribute information about a brand of microwave popcorn referred to as brand A. They were told that the purpose of the study was to examine their
personal opinions about brand A and that the manufac-
turer’s name would not be revealed because that in-
formation may influence their responses. The instructions
also emphasized that we were not associated with the
manufacturer in any way and that we were not concerned
about whether their reactions were positive or negative.
Subjects were assigned randomly to conditions in which
either brand A or brand B from the pretest served as the
first entrant in the main experiment. Consistent with the
pretest results, this counterbalancing manipulation had no
effect on brand attitudes ($F < 1$).

Session 2. Two weeks later, subjects participated in
an unexpected second session. Because the study was
conducted in a classroom setting, it was not necessary
to schedule subjects for subsequent sessions. Subjects
were assigned randomly to repeated-exposure conditions
in the second session. Half of the subjects received the
same description they had received in session 1 “in case
they forgot this information” (repeated exposure) and half
did not (single exposure). To minimize demand effects,
the instructions emphasized that the experimenters were
not concerned about whether the subjects’ reactions to-
ward brand A changed or remained the same.

In addition, all subjects received descriptions of two
new brands, referred to as brand B and brand C. The
superior brand (brand C) was always the last entrant (i.e.,
the last brand described in the booklet). Thus, rather than
labeling one brand as the pioneer and other brands as
later entrants, we simulated order of entry by exposing
subjects to three brands at different points in time.

Session 3. Two weeks later, subjects participated in
an unexpected third session in which memory and judg-
ment measures were administered (no new information
was provided). Again, to minimize demand effects,
the instructions emphasized that the experimenters were not
concerned about whether the subjects’ reactions changed
or remained the same. The longitudinal design of this
experiment enabled us to (1) simulate order of entry over
time and (2) trace the persistence of the pioneering ad-
vantage over time.

Dependent Measures

Judgment measures. Brand evaluations were mea-
sured on three 11-point semantic differential scales rang-
ing from 0 to 10, with endpoints labeled very good/bad,
favorable/unfavorable, and satisfactory/un-satisfactory.
These ratings were averaged to form a single brand at-
titude index for each alternative within each session (all
Cronbach’s $\alpha$’s > .92).

Subjects were asked to indicate how confident they
were about each of the three attitudinal judgments on
scales ranging from 0 (not at all confident) to 10 (very
confident). These ratings were averaged to form a single
confidence index for each brand within each session (all
Cronbach’s $\alpha$’s > .93). The rating scales were used in
all three sessions for the pioneer and in sessions 2 and
3 for the later entrants.

Following Carpenter and Nakamoto (1989), we used
constant sum scales to measure brand preferences in ses-
sions 2 and 3. Subjects were asked to allocate 100 points
among the three brands to indicate the extent to which
they preferred each brand. This choice probability index
provides a useful surrogate for market share (see Car-
penter and Nakamoto 1989).

Recall measures. After completing the judgment
measures, subjects were asked to recall as much attribute
information as possible for each brand. Two judges (in-
cluding a judge blind to the experimental hypotheses and
conditions) used a general meaning criterion to code the
free-recall protocols. Judges scored the number of shared
and unique features correctly recalled for each brand
within each session. Interjudge reliability was high (96%
agreement on 560 ratings). Discrepancies were resolved
by averaging judges’ ratings (e.g., if one judge provided
a score of 2 and the other a score of 3, a score of 2.5
was assigned).

Results

We first examined preference judgments as a function
of order of entry as a manipulation check. After demon-
strating that the pioneering advantage was obtained,
we examined the effects of variables hypothesized to
mediate (recall for shared features, recall for unique fea-
tures, brand evaluations, confidence judgments) and
moderate (time, exposure level) this advantage.

Pioneering advantage. Brand choice probabilities as
a function of order of entry, time, and exposure level are
plotted in Figure 2. A 3 (order of entry: pioneer, second
entrant, third entrant) $\times$ 2 (time: session 1, ses-
sion 2) $\times$ 2 (exposure level: single exposure, repeated
exposure) mixed analysis of variance (order of entry and
time served as within-subject factors and exposure level
served as a between-subject factor) performed on pre-
ference judgments yielded a significant main effect for
order of entry ($F_{2,76} = 25.33, p < .001$). Regardless of
whether brand A or brand B served as the pioneer, the
pioneer was preferred strongly over the second entrant
($M = .47$ vs. .29, $F_{1,39} = 47.72, p < .001$). Moreover,
the second entrant tended to be preferred over the third
($M = .29$ vs. .25, $p < .10$). Hence, as Figure 2 indi-
cates, a strong pioneering advantage was obtained.
Moreover, the pioneering advantage was obtained even
though pretesting ensured that the last entrant was su-
perior to the earlier entrants.

Our information integration analysis suggests that the
pioneering advantage increases over time ($H_2$) and
increases with repeated exposure to the pioneer ($H_3$).
Consistent with $H_2$, a significant order-of-entry $\times$ time
interaction was found ($F_{2,76} = 16.47, p < .001$). As Figure 2 indicates, pioneering advantage was
greater in session 3 than in session 2. In addition, con-
sistent with $H_3$, a significant order-of-entry $\times$ time $\times$
repeated-exposure interaction was observed ($F_{2,76} = 3.23,$
$p < .05$). As predicted, a strong pioneering advantage
was obtained and it became more extreme over time,
especially in repeated-exposure conditions. We now turn
to memorial and judgmental mechanisms hypothesized to mediate the pioneering advantage.

Recall for shared features. The proportion of shared features correctly recalled as a function of order of entry, time, and repeated exposure is plotted in Figure 3. To test the hypothesis that differential learning as a function of order of entry results in greater recall for shared features for the pioneering brand ($H_{4a}$), we performed a $3 \times 2 \times 2$ mixed analysis of variance on recall for shared features. This analysis revealed a significant main effect for order of entry ($F_{2,76} = 22.98, p < .001$). As Figure 3 indicates, recall for shared features was greater for the pioneer than for the second entrant ($M = .63$ vs. $.43, p < .001$) and somewhat greater for the second entrant than for the third ($M = .43$ vs. $.36, p < .09$). Hence, strong support is found for $H_{4a}$.

Recall performance decreased over time ($F_{1,38} = 86.62, p < .001$). However, this effect was qualified by a significant order-of-entry $\times$ time interaction ($F_{2,76} = 6.95, p < .003$). As Figure 3 indicates, recall for shared features was greater for the pioneer than for the second entrant in session 2 ($M = .73$ vs. $.48, p < .001$) and in session 3 ($M = .53$ vs. $.38, p < .01$). However, recall differences between the second and third entrants were more pronounced in session 3 ($p < .03$) than in session 2 ($F < 1$). Hence, partial support is found for the moderating role of time ($H_3$) in differential recall for shared features ($H_{4a}$). The pioneer maintained an advantage in recall for shared features over time, and recall for shared features decreased faster over time for the third entrant than for earlier entrants.

$H_3$ suggests that the effect of order of entry on recall for shared features should be moderated by repeated exposure to the features of the pioneer. Consistent with this prediction, a significant order-of-entry $\times$ repeated-exposure interaction was found ($F_{2,76} = 4.69, p < .02$). Followup tests revealed that the order-of-entry effect on recall for shared features was more pronounced in repeated-exposure ($F_{2,40} = 23.33, p < .001$) than in single-exposure conditions ($F_{2,36} = 5.33, p < .03$). Hence, strong support is found for the moderating role of repeated exposure ($H_3$) in differential recall for shared features ($H_{4a}$).

Recall for unique features. The proportion of unique features correctly recalled as a function of order of entry, time, and exposure level is plotted in Figure 4. To test the hypothesis that differential learning as a function of order of entry results in greater recall for unique features for the pioneering brand, we performed a $3 \times 2 \times 2$ mixed analysis of variance on recall for unique features. This analysis revealed that recall for unique features tended to decrease with order of entry ($F_{2,76} = 2.79, p < .07$). Recall for unique features was greater for the pioneer than for the third entrant ($M = .38$ vs. $.27, p < .02$).
but was only slightly greater for the pioneer than for the
second entrant ($M = .38 \text{ vs } .31, p < .16$). Hence, par-
tial support is found for $H_4$.

Though recall for unique features decreased over time
($F_{1,38} = 17.13, p < .001$), this trend was qualified by a
marginally significant order-of-entry $\times$ time interaction
($F_{2,76} = 2.79, p < .07$) $H_5$ predicts that differences in
recall for unique attributes as a function of order of entry
($H_{1b}$) should increase over time. Consistent with this pre-
prediction, followup tests revealed no difference in recall
between brands in session 2 ($F < 1$), but greater recall
for the pioneer than for the second entrant in session 3
($M = .38 \text{ vs } .21, p < .01$); no difference in recall was
found between the second and third entrants ($F < 1$).

Finally, $H_6$ predicts that the order-of-entry effect on
recall for unique features ($H_{1b}$) should be more pro-
nounced in repeated- than in single-exposure conditions.
However, the order-of-entry $\times$ repeated-exposure inter-
action and the three-way interaction were nonsignificant.
Hence, the results fail to support the moderating role of
repeated exposure ($H_6$) in differential recall for unique
features ($H_{1b}$).

Set-size manipulation check. The total number of shared
and unique features recalled (averaged across sessions)
decreased with order of entry ($F_{1,78} = 92.57, p < .001$).
More features were recalled for the pioneer than for the
second entrant ($M = 4.20 \text{ vs } 2.66, F_{1,39} = 102.78, p
< .001$) and for the second than for the third entrant ($M
= 2.66 \text{ vs } 2.24, F_{1,39} = 7.63, p < .01$). Though the
amount of information presented for each brand was held
constant, the amount of information learned about each
brand decreased with order of entry. Hence, the internal
set-size manipulation was effective.

Brand evaluations. Attitudes toward the brands as a
function of order of entry and time are reported in the
top three rows of Table 1. To test the hypothesis that
differential learning as a function of order of entry re-
sults in more extreme evaluations of the pioneering brand
($H_6$), we performed a $3 \times 2 \times 2$ mixed analysis of variance
on brand evaluations. As predicted, this analysis
yielded a significant main effect for order of entry ($F_{2,76}
= 12.42, p < .001$). Regardless of whether brand A or
brand B served as the pioneer, more favorable evaluations
were formed toward the pioneer than toward the
second entrant ($M = 7.28 \text{ vs } 6.27, F_{1,39} = 18.15, p <
.001$). In addition, more favorable evaluations were
formed toward the second entrant than toward the third
entrant ($M = 6.27 \text{ vs } 5.59, F_{1,39} = 6.62, p < .02$).
Thus, strong support is found for $H_6$.

$H_6$ suggests that the order-of-entry effect on evalu-
ation extremity ($H_7$) should become more pronounced over
time. However, the order-of-entry $\times$ time interaction was
nonsignificant. $H_6$ suggests that the order-of-entry effect
on evaluation extremity ($H_7$) should become more pro-
nounced with repeated exposure to the features of the
pioneer. Consistent with this prediction, a marginally
significant order-of-entry $\times$ repeated-exposure interaction
was found ($F_{2,76} = 2.55, p < .09$). As expected,

the order of entry effect was more pronounced in
repeated-exposure ($F_{2,80} = 23.51, p < .001$) than in
single-exposure conditions ($F_{2,80} = 4.75, p < .05$).

Confidence judgments. Ratings of confidence asso-
ociated with brand attitudes as a function of order of entry
and time are reported in the bottom three rows of Table
1. To test the hypothesis that differential learning as a
function of order of entry results in greater confidence
in evaluations of the pioneering brand ($H_7$), we per-
formed a $3 \times 2 \times 2$ mixed analysis of variance on con-
fidence judgments. Though the main effect for order of
entry was nonsignificant ($F < 1$), a significant order-of-
entry $\times$ time interaction was found ($F_{2,76} = 3.18, p
< .05$). As Table 2 indicates, evaluations of the pioneer
(vs. later entrants) tend to be held with greater convic-
tion (consistent with $H_7$). Over time, however, confi-
dence tended to decrease more for the second entrant ($M
= 6.99 \text{ vs } 5.68$, difference = 1.31) than for the first
($M = 7.38 \text{ vs } 6.58$, difference = .80) or third entrant
($M = 6.76 \text{ vs } 5.97$, difference = .79). Thus, partial
support is found for the hypothesis that confidence de-
creases with order of entry ($H_7$) and for the hypothesis
that time moderates this effect ($H_7$).

Finally, $H_8$ suggests that the effects of order of entry
on confidence ($H_7$) should be more pronounced in re-
peated-exposure than in single-exposure conditions.
However, no main effect and no interactions involving

| Table 1 |
|-----------------|--------|--------|--------|
|                  | Session 1 | Session 2 | Session 3 |
| Brand evaluations|         |         |         |
| Pioneer          | 7.43    | 7.31    | 7.25    |
| 2nd entrant      | —       | 6.34    | 6.20    |
| 3rd entrant      | —       | 5.68    | 5.50    |
| Confidence judgments |       |         |         |
| Pioneer          | 7.42    | 7.38    | 6.58    |
| 2nd entrant      | —       | 6.99    | 5.68    |
| 3rd entrant      | —       | 6.76    | 5.98    |

| Table 2 |
|-----------------|--------|--------|--------|
|                  | Simultaneous presentation condition | Stimulus-only condition | Replication condition |
| Order of entry   |         |         |         |
| Pioneer          | 30.08  | 39.21  | 44.92  |
| 2nd entrant      | 30.31  | 32.86  | 31.15  |
| 3rd entrant      | 39.62  | 27.93  | 23.92  |
repeated exposure were observed. Though the preference data indicate that both time and repeated exposure to the features of the pioneer moderate the magnitude of the pioneering advantage, the attitude data suggest that time qualifies order-of-entry effects on confidence but not on evaluations, whereas repeated exposure qualifies order-of-entry effects on evaluations but not on confidence.

Discussion

The results of experiment 1 indicate that order of entry influences learning about products even when the amount of information presented for each alternative is held constant. Because the features of the pioneer are novel and attention-drawing, they are weighed heavily in judgment. Later entrants have many features that are shared with the pioneer. These shared features are novel for the pioneer, but redundant for followers. Consequently, features that are shared by a pioneer and followers are weighed more heavily in judgments of the pioneer than in judgments of followers. Moreover, exposure to redundant features tends to truncate the search process and leads consumers to overlook features unique to followers.

Because more is learned about the pioneering brand than about later entrants, evaluations of the pioneering brand are more extreme and tend to be held with greater confidence. This internal set-size effect is conceptually similar to the external set-size effect observed when the amount of information presented is manipulated across alternatives (Anderson 1981, 1982). The set-size effect observed on attitudinal judgments (i.e., evaluations of single objects) carries over to relative preference judgments and, consequently, the pioneer was strongly preferred over later entrants. Moreover, the magnitude of the pioneering advantage increased over time, especially when subjects were exposed repeatedly to the features of the pioneer. This pattern of results was observed regardless of whether brand A or brand B served as the pioneer, and despite the fact that the last entrant, brand C, was superior to brand A and brand B.

EXPERIMENT 2

The results of experiment 1 suggest that sequential exposure to product attribute information influences the perceived novelty of that information. Attribute information about the first entrant is novel and interesting, whereas the same information is redundant and uninteresting for later entrants. Consequently, the features of the pioneer receive more attention and are encoded more deeply. However, the features of the pioneer should seem less novel when information about a set of brands is presented simultaneously as opposed to sequentially. Thus, under simultaneous-presentation conditions, differential learning and the pioneering advantage should be eliminated. In experiment 2, we tested this hypothesis by including a simultaneous-presentation condition in the experimental design.

H1: The effects specified in H1 through H3 and the pioneering advantage are eliminated when information about a set of brands is presented simultaneously as opposed to sequentially.

Another goal of experiment 2 was to scrutinize the presumed superiority of brand C more closely. Though the pretests conducted for experiment 1 suggested that the set of attributes used to describe brand C were evaluated more favorably than the sets used to describe brand A and brand B, a weighted-additive integration model was assumed (e.g., Anderson 1981, 1982; Lynch 1985). This assumption would have been violated if judgments of any given attribute were dependent on judgments of another attribute presented for a given brand. By asking subjects to judge a brand on the basis of a complete set of attributes (rather than by examining judgments of individual attributes), we can assess configural effects. Hence, if the configuration of attributes used to describe brand C is superior to the configurations used to describe brands A and B, brand C should be preferred to brands A and B in the simultaneous-presentation condition.

Experiment 2 was also designed to examine possible measurement effects in judgments of the pioneering brand. In experiment 1, subjects were exposed to attribute information about the pioneer and to rating scales and a recall test for the pioneer. During the second session, the rating scales and the recall tests were administered again for the pioneer and were administered for the first time for later entrants. Repeated exposure to rating scales and to recall tests for the pioneer may have induced subjects to think more extensively about the pioneer than about followers.

To investigate this possibility, a stimulus-only condition was included in experiment 2. In session 1, subjects were exposed to attribute information about the pioneer. No rating scales and no recall test were provided in this session. Two weeks later, attribute information was presented for later entrants, and rating scales and recall tests were administered for all three brands. Hence, rating scales and recall tests were administered only once for each brand. If the effects observed in experiment 1 were measurement-induced, they would be eliminated in the stimulus-only condition in experiment 2.

Finally, a replication condition was included in the design of experiment 2. As in experiment 1, subjects were exposed to attribute information, rating scales, and a recall test for the pioneer. Two weeks later, attribute information about later entrants was provided and responses were assessed for all three brands.

H4 implies an interaction effect between brand and condition on memory and judgment. In the simultaneous-presentation condition, brand C (the superior brand) should be preferred over brands A and B. In contrast, in the two sequential-presentation conditions (i.e., stimulus-only and replication conditions), brand A (the pioneer) should be preferred over brands B and C. Greater recall for shared and unique features and more extreme evaluation and confidence judgments should also be ob-
served for the preferred brand. Though a significant pioneeering advantage is predicted in the stimulus-only condition, this effect should be more pronounced in the replication condition. Any factor that facilitates learning about the pioneer—including repeated exposure to measurement instruments that increase processing effort—should also increase the magnitude of the pioneering advantage.

Subjects. An independent sample of 40 subjects, drawn from the same population used in experiment 1, participated in experiment 2. Subjects were assigned randomly to one of three experimental conditions: simultaneous presentation, stimulus only, or replication.

Procedure. In the simultaneous-presentation condition, the same stimulus materials and the same measures used in experiment 1 were employed. The brand stimuli were presented simultaneously on the same page in the product information booklet. After subjects were exposed to attribute information about brands A, B, and C, the judgment and memory measures were administered for all three brands.

Two weeks later, subjects participated in an unexpected second session. The judgment and memory measures were administered again for all three brands. No attribute information was provided in session 2.

In the stimulus-only condition, subjects were exposed to attribute information about the pioneering brand (brand A) in session 1. No judgment or memory measures were administered in session 1. Because exposing subjects to attribute information and providing no followup task (i.e., no questions about responses to the information) would seem unusual to subjects, the procedure was justified by an appropriate ruse. After subjects were exposed briefly to attribute information about the pioneer, the experimenter collected the stimulus materials and apologized for bringing the wrong set of questionnaires. He explained that the questionnaires he intended to use were left at home and consequently he would be unable to complete the experiment. He then apologized again and told subjects that the experiment was over.

Two weeks later, subjects participated in an unexpected second session. In session 2, subjects were exposed to attribute information about brands B and C and were asked to complete judgment and memory measures for all three brands.

In the replication condition, as in experiment 1, subjects were exposed to attribute information, judgment scales, and a recall test pertaining to the pioneering brand (brand A). Two weeks later, subjects participated in an unexpected second session. In session 2, subjects were exposed to attribute information about brands B and C and were asked to complete judgment and memory measures for all three brands.

Dependent measures. Brand evaluations were assessed on three semantic differential scales. Ratings on these scales were averaged to form a single brand attitude index for each brand (all Cronbach α’s > .93). Confidence judgments pertaining to each of these scales were also averaged to form a single confidence index for each brand (all Cronbach α’s > .93). Constant sum scales were used to assess relative preferences.

Recall protocols were coded by two judges (including a judge blind to the experimental hypotheses and conditions). Interjudge reliability was high (92% agreement). Discrepancies were resolved by averaging judges’ ratings.

Results

Preferenee judgments. Subjects’ preferences as a function of brand and experimental condition are reported in Table 2. To test the hypothesis that the pioneering advantage is eliminated when information about a set of brands is presented simultaneously as opposed to sequentially ($H_0$), we performed a 3 (brand A, brand B, brand C) × 3 (simultaneous-presentation, stimulus-only, replication condition) mixed analysis of variance on preference judgments. Brand served as a within-subject factor and condition served as a between-subject factor. As predicted, a significant brand × condition interaction was found ($F_{2,50} = 13.16, p < .001$). In the simultaneous-presentation condition, brand C ($M = 39.62$) was preferred to the pioneer ($M = 30.08, p < .001$) and to the second entrant ($M = 30.31, p < .001$). Thus, strong support was found for $H_0$. Not only was the pioneering advantage eliminated when brand information was presented simultaneously, but brand C was preferred strongly to brands A and B. Hence, brand C is clearly superior to brands A and B.

Brand C was preferred to the pioneer in the simultaneous-presentation condition ($M = 30.08$ vs. 39.62 for the pioneer vs. brand C, respectively, $p < .001$). In contrast, the pioneer was preferred to brand C in the stimulus-only condition ($M = 39.21$ vs. 27.93 for the pioneer vs. brand C, respectively, $p < .001$). This preference reversal indicates that the superior brand (brand C) dominates the pioneer when brand information is presented simultaneously. However, when brand information is presented sequentially, the pioneer dominates the superior brand (brand C).

The analyses also revealed that preferences did not differ between the pioneer and the second entrant in the simultaneous-presentation condition. However, the pioneer was preferred to the second entrant in the stimulus-only condition ($M = 39.21$ vs. 32.86, $p < .01$). Again, sequential information processing was crucial for producing the pioneering advantage. Furthermore, the results cannot be attributed to differential exposure to measurement instruments across brands. The same set of measures was administered for each brand, and each set was administered only once.

Finally, in the replication condition, the pioneer was preferred strongly to the second entrant ($M = 44.92$ vs. 31.15, $p < .001$) and the second entrant was preferred strongly to the third entrant ($M = 31.15$ vs. 23.92, $p < .001$). As expected, the pioneering advantage was somewhat more pronounced in the replication condition than in the stimulus-only condition.

Recall for shared and unique features. The propor-
tion of shared features recalled correctly as a function of brand and condition is reported in the top three rows of Table 3. To test the hypothesis that order-of-entry effects on recall for shared features (H_{1b}) are eliminated when brand information is presented simultaneously (H_{e}), we performed a 3 \times 3 mixed analysis of variance on recall for shared features. As predicted, the brand \times condition interaction was significant (F_{2,74} = 8.85, p < .001). As Table 3 indicates, in simultaneous-presentation conditions, recall for shared features tended to be greater for brand C than for brand A or brand B, whereas in sequential-presentation conditions, recall for shared features tended to be greater for the pioneer than for later entrants.

The proportion of unique features recalled correctly as a function of brand and condition is reported in the bottom three rows of Table 3. To test the hypothesis that order-of-entry effects on recall for unique features (H_{1b}) are eliminated when brand information is presented simultaneously (H_{e}), we performed a 3 \times 3 mixed analysis of variance on recall for unique features. The predicted brand \times condition interaction was nonsignificant. As Table 3 indicates, recall for unique features was greater for brand A (M = .49) and brand B (M = .53) than for brand C (M = .31) across conditions (F_{2,74} = 14.58, p < .001). Thus, H_{e} is supported for shared features (H_{1b}), but not for unique features (H_{1b}).

**Brand evaluation and confidence judgments.** Overall evaluations as a function of brand and condition are reported in the top three rows of Table 4. To test the hypothesis that order-of-entry effects on brand evaluations (H_{1}) are eliminated when brand information is presented simultaneously (H_{e}), we performed a 3 \times 3 mixed analysis of variance on attitudinal judgments. As predicted, a significant brand \times condition interaction was found (F_{2,74} = 20.68, p < .001). In the simultaneous-presentation condition, more favorable evaluations were formed toward the superior brand C (M = 7.28) than toward brand A (M = 5.56, p < .001) or brand B (M = 5.69, p < .001). In contrast, in sequential-presentation conditions (i.e., stimulus-only and replication conditions), more favorable evaluations were formed toward the pioneer than toward the second entrant. In addition, more favorable evaluations were formed toward the second entrant than toward the third (all p's < .01). Hence, H_{e} is strongly supported for brand evaluations (H_{1}).

Confidence judgments as a function of brand and condition are reported in the bottom three rows of Table 4. To test the hypothesis that order-of-entry effects on confidence judgments (H_{1}) are eliminated when brand information is presented simultaneously (H_{e}), we performed a 3 \times 3 mixed analysis of variance on confidence judgments. As expected, the brand \times condition interaction was significant (F_{2,74} = 6.70, p < .001). In the simultaneous-presentation condition, judgmental confidence was greater for brand C than for brand A or brand B (p's < .01). In the stimulus-only condition, confidence judgments did not differ across brands. In the replication condition, judgmental confidence was greater for the pioneer than for the second entrant and greater for the second entrant than for the third (p's < .05). Thus, H_{e} is supported for confidence judgments (H_{1}).

**Discussion**

Experiment 2 provides strong support for the hypothesis that order-of-entry effects on consumer memory and judgment are eliminated when information about a set of brands is presented simultaneously as opposed to sequentially. Moreover, the effects of order of entry were sufficiently robust to produce a preference reversal between the pioneer and a superior follower. When brand information was presented simultaneously, the superior follower was preferred to the pioneer. In contrast, when brand information was presented sequentially, the pioneer was preferred to the superior follower.

Though this pattern would not be expected if a follower dominated the pioneer on nearly all attributes (Carpenter and Nakamoto 1990), the results suggest that a superior follower will not overcome the pioneering advantage (1) when the follower and the pioneer share many similar features and (2) when information about a set of

<p>| Table 3  |
|-----------------|-----------------|-----------------|-----------------|
| <strong>RECALL FOR SHARED AND UNIQUE FEATURES AS A FUNCTION OF ORDER OF ENTRY AND MANNER OF PRESENTATION (EXPERIMENT 2)</strong> |</p>
<table>
<thead>
<tr>
<th>Dependent measure</th>
<th>Simultaneous-presentation condition</th>
<th>Stimulus-only condition</th>
<th>Replication condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall for shared features</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioneer</td>
<td>.33</td>
<td>.64</td>
<td>.64</td>
</tr>
<tr>
<td>2nd entrant</td>
<td>.27</td>
<td>.38</td>
<td>.36</td>
</tr>
<tr>
<td>3rd entrant</td>
<td>.56</td>
<td>.47</td>
<td>.41</td>
</tr>
<tr>
<td>Recall for unique features</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioneer</td>
<td>.36</td>
<td>.54</td>
<td>.56</td>
</tr>
<tr>
<td>2nd entrant</td>
<td>.41</td>
<td>.57</td>
<td>.62</td>
</tr>
<tr>
<td>3rd entrant</td>
<td>.28</td>
<td>.37</td>
<td>.28</td>
</tr>
</tbody>
</table>

**Table 4  |
<p>| BRAND EVALUATIONS AND CONFIDENCE JUDGMENTS AS A FUNCTION OF ORDER OF ENTRY AND MANNER OF PRESENTATION (EXPERIMENT 2)** |</p>
<table>
<thead>
<tr>
<th>Dependent measure</th>
<th>Simultaneous-presentation condition</th>
<th>Stimulus-only condition</th>
<th>Replication condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand evaluations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioneer</td>
<td>5.56</td>
<td>7.52</td>
<td>8.26</td>
</tr>
<tr>
<td>2nd entrant</td>
<td>5.69</td>
<td>6.33</td>
<td>7.13</td>
</tr>
<tr>
<td>3rd entrant</td>
<td>7.28</td>
<td>5.26</td>
<td>6.18</td>
</tr>
<tr>
<td>Confidence judgments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pioneer</td>
<td>5.46</td>
<td>7.45</td>
<td>8.87</td>
</tr>
<tr>
<td>2nd entrant</td>
<td>5.36</td>
<td>7.19</td>
<td>8.33</td>
</tr>
<tr>
<td>3rd entrant</td>
<td>6.13</td>
<td>7.36</td>
<td>7.82</td>
</tr>
</tbody>
</table>
brands is encountered sequentially with relatively long lags in time between brands. Under these conditions, attention to brand information is likely to decrease with order of entry. Consequently, the features of the follower are more likely to be neglected.

Experiment 2 also introduced a new procedure for examining measurement effects on consumer judgment. This procedure is potentially useful for isolating measurement effects in any empirical investigation of judgment and decision making. Specifically, the stimulus-only condition enabled us to examine the effects of repeated exposure to measurement instruments on judgments of the pioneer. By separating stimulus presentation and measurement administration by a period of two weeks, we were able to trace the effects of spontaneous (as opposed to measurement-induced) stimulus encoding on subsequent judgments. Comparing delayed judgments across stimulus-only and stimulus-test conditions enables researchers to ascertain the effects of repeated measurement on judgment.

In addition to controlling for possible measurement effects, the stimulus-only condition enabled us to investigate incidental learning effects on judgments of brands. Under more natural conditions, consumers are exposed to brand information incidentally and are not required to express judgments of brands on response scales. The results of experiment 2 indicate that a robust pioneering advantage emerges even when information about the pioneer is processed incidentally.

**GENERAL DISCUSSION**

Considered together, the results indicate that order of entry influences learning, which then affects attitudinal, confidence, and preference judgments in a manner that is beneficial to the pioneering brand. Information pertaining to a pioneer is perceived as novel and interesting and consequently is weighed heavily in judgment. By contrast, information pertaining to later entrants is perceived as redundant and uninteresting and consequently is weighed less heavily in judgment. Moreover, because perceived redundancy increases as more brands enter a market, learning about brands decreases with order of entry.

Because the amount of information known about the pioneer exceeds the amount known about later entrants, more extreme and more confidently held judgments are formed toward the pioneer (the set-size effect). Furthermore, order-of-entry effects on preferences become more extreme over time, especially with repeated exposure to information pertaining to the pioneering brand. Similar effects are likely to be found with other variables that increase exposure to information about the pioneer, including repetitive advertising, word-of-mouth communications from multiple sources, point-of-purchase displays, and combinations of these variables (e.g., repetitive advertising with word-of-mouth messages and point-of-purchase displays).

The results of experiment 2 indicate that order-of-en-try effects on memory and judgment are eliminated when information is processed simultaneously as opposed to sequentially. Hence, the pioneering advantage should be most evident among consumers who are likely to monitor the development of a market over time and, hence, are likely to be exposed to information about brands sequentially as the brands become available. Late adopters, in contrast, are less likely to process brand information sequentially and consequently should be less susceptible to the pioneering effect. Hence, in the very long run, the pioneering advantage may decrease because of the influx of late adopters (Robinson and Fornell 1985).

Our results and the results of Carpenter and Nakamoto (1989) indicate that consumer learning is an important mediator of the effects of order of entry on the pioneering advantage. When brand-specific preferences are ambiguous (and category preferences are unambiguous), order of entry influences learning about brands in a manner that benefits the pioneer. When product category preferences are ambiguous (and brand-specific preferences are unambiguous), order of entry influences learning about a category in a manner that benefits the pioneer (Carpenter and Nakamoto 1989). Though different learning processes are involved in the acquisition of brand-specific knowledge and category-level knowledge, sequential information processing appears to benefit the pioneer in both cases.

**Boundary Conditions**

The role of consumer learning in judgment and choice is likely to vary across different product classes. For example, learning differences between brands should be less pronounced in difficult learning environments (e.g., cluttered markets with homogeneous brands, technical product categories, etc.). Further, more complex learning processes are involved in learning from first-hand experiences with products (learning from experience) than in learning from second-hand sources of information (e.g., friends, salespersons, advertisers; learning by education) and it is more difficult to manage what consumers learn from experience (Hoch and Deighton 1989).

Several other factors are likely to influence consumer learning. Any factor that influences learning should also affect the magnitude of the pioneering advantage. For example, level of prior knowledge pertaining to a product category and level of involvement/interest in a product category should increase the amount of information learned about later entrants and therefore decrease differential learning as a function of order of entry. The result should be a corresponding decrease in the magnitude of the pioneering advantage. Similarly, when consumers are exposed to information about different brands simultaneously or nearly simultaneously (i.e., when the time lag between entries is brief), differential learning and the pioneering advantage should decrease. Differential learning should also be influenced by market clutter. As the number of brands available decreases, the
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amount of information learned about followers should increase. As more is learned about followers, the magnitude of the pioneering advantage should be reduced.

The nature of the information available about brands should also moderate the magnitude of the pioneering advantage. For example, information about important attributes is less likely to be neglected, even when such information pertains to the features of followers. Moreover, the set-size effect should be less pronounced when intercorrelations among attributes are perceived to be high (vs. low). Hence, attribute structure should serve as an important moderator of the judgmental effects of order of entry.

Finally, we stress that algebraic integration processes—such as those emphasized by information integration theory (Anderson 1981, 1982)—are not used in all judgmental contexts. When prior knowledge is used to interpret a set of attributes as a whole, an overall evaluation is formed on the basis of a configural, schema-based process (Sujan 1985; Wyer and Carlston 1979). Only when information is analyzed in terms of independent attributes, and when the judgmental implications of each attribute are considered separately, are consumers likely to use an algebraic integration process to form overall evaluations (Wyer and Carlston 1979). However, because extensive prior knowledge is unlikely to be available for many new product categories, consumers are compelled to use data-driven, attribute-based processes in many new product contexts. Hence, information integration theory provides a useful framework for investigating judgments of new products. This approach is likely to be less useful in mature product contexts (but see Levin et al. 1983).

Enhancing the Pioneering Advantage

Consistent with our information integration analysis of the pioneering advantage, recent empirical evidence indicates that pioneers (as opposed to later entrants) achieve a higher level of trial penetration and a higher level of repeat purchase (Gurumurthy and Urban, forthcoming). Because extremely favorable evaluations are formed toward the pioneer, a high level of penetration is likely to be attained. Because these judgments are bolstered by a large amount of information stored in long-term memory, they persist over time and resist competitors’ tactics used against the pioneer. This judgmental persistence and resistance leads to high repeat purchase rates and to a long-run market share advantage for the pioneer. Even a very small advantage can be profitable in large markets in the long run (Abelson 1985).

Our analysis suggests that managers of pioneering brands should implement promotional and channel-related tactics that facilitate consumer learning. As consumer learning about the features and benefits of pioneers increases (i.e., as set size increases), the magnitude and duration of the pioneering advantage will also increase.

Hoch and Deighton’s (1989) model of the judgment-updating process provides a useful framework for identifying factors that foster or inhibit consumer learning. For example, managers of pioneering brands should reinforce the agenda through repeated exposure to attribute information. This tactic increases set size and facilitates the development of belief structures needed to interpret complex, information-rich consumption experiences. Once these belief structures are in place, product trial should be encouraged because biased encoding of ambiguous evidence will support and increase confidence in prior beliefs (Ha and Hoch 1989; Hoch and Ha 1986). Moreover, direct behavioral experience leads to the development of strong, accessible brand attitudes that are likely to have an enduring impact on purchase decisions (Berger and Mitchell 1989; Fazio 1986; Fazio, Powell, and Williams 1989).

One counterintuitive implication of the information integration analysis of the pioneering advantage is that the common practice of emphasizing a single core benefit may be inappropriate for pioneers. To increase set size, a large number of attributes and benefits should be emphasized. Even relatively unimportant attributes can increase set size (Hoch and Deighton 1989) and thereby increase the magnitude and duration of the pioneering advantage. Emphasizing a single core benefit is useful only when that benefit implies a large set of attributes and features.

Reducing the Pioneering Advantage

Sequential information processing works to the pioneering brand’s advantage. Consequently, it is difficult to overcome the effects of order of entry on consumer learning and judgment. Because the unique features of later entrants tend to be overlooked, followers have difficulty in (1) differentiating their brands from the pioneer and (2) prompting consumers to learn much about their brands. Hence, simply providing information about many attributes and benefits of a follower is likely to be insufficient for overcoming the pioneering advantage.

Consumers are likely to be unmotivated to learn much about the relative advantages of later entrants. Extremely high levels of repetitive advertising may increase the prominence of the unique features of later entrants, but followers may not have the resources necessary to match the advertising budget of the pioneering firm. Hence, Hoch and Deighton (1989) suggest that underdogs should try to gain the cooperation of retailers in order to encourage side-by-side comparisons of their brands with market leaders, or should develop their own alternative channels of distribution (e.g., home parties, direct marketing).

Another alternative is to disrupt the agenda with search-encouraging ads or with promotional campaigns that emphasize new usage situations. Later entrants can be promoted as variety enhancers rather than as replacements for the pioneer, or they can be linked to special usage situations that do not strongly imply the use of the pioneering brand. Finally, it may be beneficial to stress
one key unique benefit in the promotional campaigns of later entrants. If encouraging consumers to learn much about followers is difficult, consumers should be encouraged to learn a single core benefit that implies a large set of attributes and features.

CONCLUSION

When preferences are well defined and consumers are relatively unknowledgeable about brands, sequential exposure to information about different brands produces differential learning about brands as a function of order of entry. Different brands within a product category are likely to have many overlapping features. Though these features are novel and attention-drawing for the pioneering brand, they are redundant and uninteresting for later entrants. Consequently, learning about brands decreases with order of entry. The learning advantage conferred to the pioneering brand translates into more extreme and confidently held judgments of the pioneer. Judgments held with conviction are persistent over time and resistant to competitors’ activities. Together, these judgmental processes lead to a long-run pioneering advantage.

APPENDIX

**BRAND PROFILES EMPLOYED IN EXPERIMENTS 1 AND 2**

<table>
<thead>
<tr>
<th>Brand A</th>
<th>Brand B</th>
<th>Brand C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairly low cost per serving</td>
<td>Fairly low cost per serving</td>
<td>Fairly low cost per serving</td>
</tr>
<tr>
<td>Fairly low level of sodium per serving</td>
<td>Fairly low level of sodium per serving</td>
<td>Fairly low level of sodium per serving</td>
</tr>
<tr>
<td>Not salty</td>
<td>Not salty</td>
<td>Very slightly salty</td>
</tr>
<tr>
<td>Fairly easy to prepare</td>
<td>Very crispy</td>
<td>Easy to prepare</td>
</tr>
<tr>
<td>Easy to swallow</td>
<td>No oil flavor</td>
<td>Slightly low in corn, grain flavors</td>
</tr>
<tr>
<td>Slightly less tough than other brands</td>
<td>Stuck in teeth a bit less than others</td>
<td>Slightly less tough than others</td>
</tr>
<tr>
<td>Very few kernels left unpopped</td>
<td>Fairly low level of calories per serving</td>
<td></td>
</tr>
</tbody>
</table>

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