In search of the marketing imagination: Factors affecting the ... Andrews, Jonlee; Smith, Daniel C *JMR, Journal of Marketing Research;* May 1996; 33, 2; ProQuest Central pg. 174

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The profitability of established products is affected greatly by the extent to which they are meaningfully differentiated from competing alternatives. Maintaining meaningful differentiation, in turn, is facilitated by ongoing development of creative marketing programs. Although marketplace observation reveals a general lack of creativity in the way established products are marketed, some product managers are able to devise creative marketing programs for their products. The authors test hypotheses concerning the effects of individual (i.e., product manager) and situational (i.e., planning process) characteristics on marketing program creativity. The findings reveal that marketing program creativity is a function of individual problem-solving inputs (e.g., knowledge of the marketing environment, diversity of experience, diversity of education), motivational factors (e.g., intrinsic motivation, risk taking), and situational factors (e.g., planning process formalization, interaction with others, time pressure).

In Search of the Marketing Imagination: Factors Affecting the Creativity of Marketing Programs for Mature Products

The marketing imagination is the starting point of success in marketing.... The search for meaningful distinction is a central part of the marketing effort. If marketing is seminally about anything, it is about achieving customer-getting distinction by differentiating what you do and how you operate. All else is derivative of that and only that.

-Theodore Levitt, The Marketing Imagination

Marketing seems to be reduced to a price war in one form or another, and the low price brands are winning.

> Daniel Adams, "Brand Management System in Need of a Big Shake-Up"

Although new products have been called the lifeblood of a firm, the bulk of most firms' earnings comes from wellestablished products. For example, over half of Procter and Gamble's earnings are accounted for by three established product lines—toothpaste, laundry detergent, and diapers (Rice 1986). One of the more significant factors affecting the profitability of such products is the extent to which they are meaningfully differentiated from competing alternatives (e.g., Buzzell and Gale 1987; Levitt 1986). Over time, however, even strong positions of differentiation can be eroded by competitive forces that drive market evolution. Fortunately, gravitation toward competitive parity is not predestined (Tellis and Crawford 1981) but can be averted through the ongoing development of creative marketing initiatives (i.e., marketing actions that set the product apart from competitors in meaningful ways). These initiatives encompass not only modifications to the physical product, but also changes to other variables, such as packaging, labeling, positioning, and promotion.

Unfortunately, marketing programs for many established products fall short in terms of creativity. As a result, manufacturer-initiated price wars have arisen in product categories ranging from disposable diapers to mutual funds. Likewise, in many consumer product categories, competitors have reduced their products to commodities through extensive use of price-based promotions. Consumers have become more loyal to the deal than to the brand (*The Economist* 1992). Indeed, marketing managers have been criticized by senior management for their inability to define new methods for promoting products to customers, their inability to modify product positions, their failing to innovate in distribution and other areas, and their tendency to

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meet significant new competition with traditional ways of doing business (Webster 1981, p. 12).

At the same time, however, some product managers have been able to develop imaginative marketing programs for their products. Examples include the Jell-O Jigglers promotion (using four packages instead of one to create a dessert that could be eaten with a person's fingers), Oscar Mayer's resealable hot dog packages, and the Hungry Jack syrup bottle (sized and shaped for the micowave oven, with a heatsensitive label that informs consumers of when the syrup is ready). Although these innovations may appear mundane, they deviate from conventional practice in ways that are meaningful to customers. Thus, their impact on productlevel performance is often significant. For example, Information Resources scanner data indicates a 4.5 share point increase in the 12-month period following the introduction of Hungry Jack's packaging and labeling innovation.

Despite the importance of creative marketing programs, little is known about factors that affect the generation of such programs. Therefore, the purpose of our study is to identify factors that promote or inhibit the creativity (i.e., meaningful uniqueness) of marketing programs for established products. It is worth noting that marketing program innovation can be viewed as a special case of product innovation. Identifying factors that affect marketing program creativity addresses an important issue related to product innovation in general. Specifically, research on factors affecting new product success has consistently found that the primary determinant of customer response is the degree to which a product provides meaningful benefits relative to competing alternatives (e.g., Cooper 1986). A logical area of further study concerns the origin of innovations that provide unique and meaningful benefits (Day 1994, p. 69; Rogers 1983, p. 134). By examining factors that affect the creativity of marketing programs, we shed light on this more general issue.

A review of the way firms manage established products provides insight into variables that might affect the creativity of marketing programs for these products. Several common properties of product management exist. The product management organization is anchored by product or brand managers whose primary responsibility is to develop and implement marketing programs for a particular product. These programs comprise tactical initiatives related to promotions, packaging, labeling, positioning, and/or the product itself. The initiatives emerge from a formal or informal marketing planning process undertaken by a product manager who works alone (often with informal input from others) or plays the central role in a small team consisting of several assistant or associate product managers (Lehmann and Winer 1994).

There is a rich body of social science research dealing with factors that affect the creativity of some output (e.g., a painting, a scientific idea, a marketing program). The model that emerges from this work maps onto the core properties of product management noted previously. Specifically, the creativity of a given output is affected by the interplay of individual factors (e.g., characteristics of the product manager) and situational factors (i.e., the marketing planning

process and various conditions under which such plans are developed). In the subsequent section, we develop a working definition of *marketing program creativity* and identify a specific set of variables that may help or hinder the development of such programs.

BACKGROUND

Construing Creativity of the Marketing Program

In social science research, the most widely used definition of creativity focuses on the *meaningful novelty* of some output (e.g., a painting, a chemical compound) relative to conventional practice in the domain to which it belongs (e.g., abstract art, adhesives) (Hennessey and Amabile 1988; Jackson and Messick 1965). Accordingly, we define *marketing program creativity* as the extent to which the actions taken to market a product (e.g., package changes) represent a meaningful difference from marketing practices in the product category. It is interesting to note that meaningful novelty also has been used to describe the creativity of advertisements (Haberland and Dacin 1992) and solutions to everyday business problems (Ray and Myers 1986).

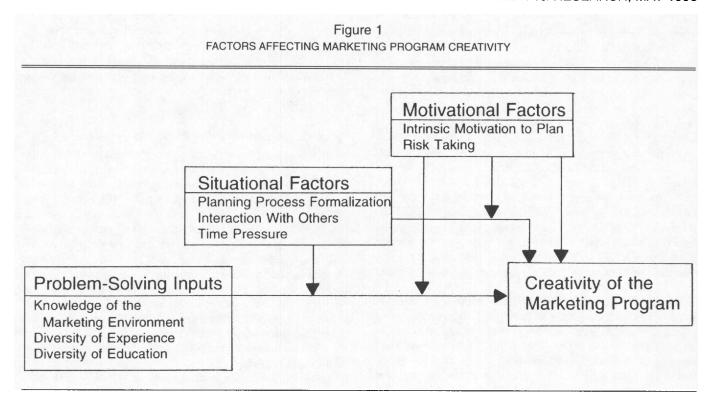
We now turn to identifying factors thought to promote or inhibit the development of creative marketing programs. Three complementary streams from the social science literature on creativity provide the basis for this task. These streams examine characteristics of the *people* who produce creative outputs, the *process* they use, and the *environment* in which they work.

The Role of Individual Factors in Developing a Creative Marketing Program

Two broad sets of factors are expected to affect a product manager's ability to devise a creative marketing program: (1) various problem-solving inputs or raw materials possessed by a manager and (2) factors related to the product manager's level of motivation to expend the effort necessary to develop creative marketing programs.

Problem-solving inputs. Creative ideas often are the result of a process focused on solving a specific problem through combining existing concepts in new ways (e.g., Osborn 1963). It is often said that there is nothing new under the sun, only new ways of uniting existing concepts. Thus, researchers who investigate the creative process generally recognize that before a person can produce something new, he or she must amass knowledge of the domain of interest and related and unrelated domains (e.g., Amabile 1983; Koestler 1964). This knowledge serves as the raw material from which new ideas are synthesized. In marketing, a person's core knowledge inputs include his or her knowledge of trends and actors surrounding the current product category, experience in other product categories, and educational background.

Motivational factors. To generate a creative solution, a large number of ideas or variations typically must be produced (e.g., Amabile 1983; Hogarth 1980). Generating these ideas requires considerable effort, time, and the ability to remain focused on the problem being addressed. It also takes a certain degree of courage, because creative ideas, by definition, deviate from the status quo and hence may trigger defensive reactions from others (Osborn 1963). Not sur-



prisingly, creativity researchers have identified two key motivational factors that play a major role in the creative process: (1) a person's intrinsic motivation to perform the task being studied (e.g., development of marketing programs) (Amabile 1983) and (2) his or her willingness to take risks (Hogarth 1980; Kim 1990).

The Role of Situational Factors in Developing a Creative Marketing Program

Producing a creative solution depends, in part, on the problem-solving style used by a person (e.g., Amabile 1983; Koestler 1964; Ray and Myers 1986; Simon 1960). Creativity is facilitated by using a nonroutine, or heuristic, process—one that departs from cookbook procedures. Conversely, a programmed, or algorithmic, process (i.e., following a specified set of steps) yields output that is likely to differ little from the past. We consider three aspects of the marketing planning process and work environment that are expected to affect whether a product manager uses a heuristic or algorithmic problem-solving approach: (1) the formalization of the planning process, (2) the degree of interaction a product manager has with people in other functional areas, and (3) the degree of time pressure a manager feels in marketing planning. In the subsequent section, we discuss the expected impact of these variables on marketing program creativity. We also develop hypotheses regarding interactions between problem-solving inputs, motivational factors, and situational factors (see Figure 1).

THEORY AND HYPOTHESES

Problem-Solving Inputs

Knowledge of the marketing environment. Knowledge of the marketing environment can be construed in terms of two

broad areas commonly examined when constructing the situation analysis of a marketing plan: a product's *operating environment* and the *macroenvironment* (e.g., Lehmann and Winer 1994). The operating environment consists of the channel members, competitors, and customers relevant to the product category or industry, whereas the macroenvironment is conceptualized as a broad set of trends in the economy, demographics, technology, and political and legal factors.

In addition to providing a pool of resources from which to devise new ideas, knowledge of the marketing environment plays another important role in generating solutions to marketing problems. Greater knowledge of the marketing environment increases a product manager's ability to analyze incoming data and extract useful information (for related comments, see Alba and Hutchinson 1987). A greater level of knowledge also enables a product manager to ask the right questions (Miyake and Norman 1979); it reduces the time cost of acquiring new information from the data available and increases awareness of information that can be acquired (Alba and Hutchinson 1987). These benefits are expected to enhance a product manager's ability to identify emerging problems or opportunities pertinent to the product in question. Thus, environmental knowledge should have a positive effect on marketing program creativity.1

¹Some have argued that existing knowledge may blind the receiver to incoming information that does not conform with what is already known. If this were true, a knowledgeable product manager might be less likely to devise creative marketing programs because he or she would tend to ignore the very information that could spark ideas for new ways to market a product. However, Amabile (1983) notes that the inability to make use of incoming information is more a matter of the organization of a person's knowledge than the quantity possessed.

H₁: The greater a product manager's knowledge of (a) the operating environment and (b) the macroenvironment, the greater the creativity of the marketing program.

Diversity of experience and diversity of education. For a product manager's experience to be diverse, it must include exposure to product categories other than those to which he or she is currently assigned. Regarding education, because we examine creativity within a business context, diversity is introduced through education that does not center on business.

Exposure to areas outside a person's current focus enriches his or her pool of knowledge, which increases the "network of possible wanderings" (Newell and Simon 1972, p. 82). A diverse base of knowledge also facilitates the use of metaphor—a springboard for generating creative solutions (Tardif and Sternberg 1988). Thus, it is not surprising that diverse experience and education have a positive impact on creativity (Kasperson 1978).

Product managers with diverse education and/or experience also may be better equipped to frame standard problems in new ways. For example, a product manager who was a student of anthropology may understand the behavior of consumers and competitors in terms of culture and rituals instead of (or in addition to) economic utility. Similarly, it may be easier for a manager with diverse experience to identify or ignore assumptions that are implicit to a product category (Amabile 1983). This, in turn, increases the chances for devising ideas that differ from industry norms. Because of the benefits of having diverse experience and education, we predict that

- H₂: The more diverse a product manager's experience, the greater the creativity of the marketing program.
- H₃: The more diverse a product manager's education, the greater the creativity of the marketing program.

Motivational Factors

Intrinsic motivation. An intrinsically motivated person performs a task for the positive feelings of accomplishment, fun, and challenge derived from engaging in that task (e.g., Spiro and Weitz 1990). Intrinsic motivation is best defined in terms of a specific task (Amabile 1983; Thomas and Velthouse 1990). Because marketing initiatives typically emerge from a marketing planning process, we discuss intrinsic motivation in terms of marketing planning.

Contrary to popular myth (e.g., Newton and the apple), though creative ideas may appear in a flash of insight, they come only to those who have spent a great deal of conscious and unconscious time pondering the problem (e.g., Hogarth 1980; Osborn 1963). Compared with a product manager who has little intrinsic motivation to create marketing programs, the intrinsically motivated product manager is likely to dedicate more time and effort (both conscious and unconscious) to the task, generate and examine a larger number of alternatives, and use a nonroutine approach to generate these ideas (Amabile 1990). Because creative ideas tend to be the product of both a great deal of effort and a nonroutine idea generation process, we hypothesize that

H₄: The greater a product manager's intrinsic motivation to develop marketing plans, the greater the creativity of the marketing program.

Willingness to take risks. A person perceives risk when the outcome of an action is not certain (Bauer 1960). In marketing planning, the outcome of proposing a change to the marketing program is unknown (e.g., Will the proposed ideas be accepted or rejected by management? Will consumers be drawn to the product as expected?). Thus, such a change is risky. Not surprisingly, willingness to take risks is a key contributor to creativity, because it provides motivation to entertain ideas that deviate from the status quo (e.g., Amabile 1983; Amabile and Gryskiewicz 1987). Willingness to take risks provides the perspective or orientation that guides a product manager's idea generation efforts. The product manager who is oriented toward taking risks is more likely to consider nontraditional ways to market the product than are his or her risk-averse counterparts. This manager also tends to generate a larger number of ideas and depart from familiar algorithms for generating those ideas. Therefore,

H₅: The greater the product manager's willingness to take a risk, the greater the creativity of the marketing program.

Situational Factors

Planning process formalization. A key characteristic of the marketing planning process is its formalization-the degree of emphasis placed on rules and procedures (Zaltman, Duncan, and Holbek 1973). We expect a curvilinear (inverted U-shaped) relationship between planning process formalization and creativity. Under a highly formalized process, creativity may be adversely affected in two ways. First, rigid rules and procedures may restrict the sources of information consulted in formulating ideas (Zaltman, Duncan, and Holbek 1973). Because diverse information inputs are a key ingredient to creativity, a planning process that limits information sources is likely to produce less creative plans. Second, even if information sources are not restricted, the lockstep nature of a highly formalized planning system may stifle innovation. Specifically, high formalization can create a ritualized orientation toward marketing planning in which planning is performed to satisfy senior management. In contrast, to produce something creative, a person must engage in thoughtful reflection and have the freedom to decide how a task will be performed (Amabile 1988). Therefore, under a highly formalized planning process we expect relatively little creativity in the resulting marketing program.

At the same time, without a codified procedure for developing marketing plans, creativity also is likely to be low. People tend to perform activities for which they are explicitly measured and rewarded (Anderson and Chambers 1985). In firms without a formal marketing planning process, management sends an implicit message that indepth thinking about how to market a product is not a high priority. Under such conditions, ideation is likely to receive little attention. Because creative marketing programs require considerable time and effort to develop, we expect relatively little creativity in programs developed under an

informal process. Similarly, informal planning processes do not lend themselves to proactive thinking. Rather, under informal conditions, initiatives tend to emerge in an ad hoc fashion in reaction to changes in the competitive environment. This mind-set is inconsistent with one necessary to develop creative initiatives.

In contrast, a moderate level of formalization should promote creativity. Under a moderately formal planning process some degree of emphasis is placed on thinking about a product's future, yet formalization is not so great that a manager feels inhibited from seeking unusual information or using nonroutine methods to generate ideas. Therefore,

H₆: Marketing program creativity is greatest when planning process formalization is moderate.

Interaction with others. Interaction with people outside of product management (e.g., personnel in sales, research and development, operations) contributes to creativity by drawing on the unique perspectives of other functional areas. People in nonmarketing areas tend to focus on issues or problems that differ from those identified by their marketing colleagues. They also tend to structure their product-related knowledge differently and are likely to employ problemsolving approaches that deviate from a marketing approach. In short, the more people with whom a product manager interacts when developing a marketing program, the larger and more diverse is his or her set of ideas with which to work (Stasch and Lanktree 1980). Therefore,

H₇: The more a product manager interacts with members of other functional areas, the greater the creativity of the marketing program.

Time pressure. Exploratory interviews conducted with product managers revealed that most were busy "fighting fires" and felt at least a modest limitation on their time. This is consistent with Mintzberg's (1980) findings that the job of a manager is characterized by brevity, variety, and fragmentation. As time pressure increases beyond a moderate level, a point is reached at which there simply is not enough time to incubate a problem and synthesize diverse information into a creative marketing program. One way people cope with time pressure is by using a familiar algorithm to complete the task (Simon 1960). For example, in searching for ideas to market a product, a manager under a great deal of time pressure is more likely to turn to ideas that have been used before. By definition, the resulting marketing program is not creative. Therefore, we expect,

H₈: The greater the time pressure perceived by a product manager, the less the creativity of the marketing program.

The Role of Motivational and Situational Factors in Moderating the Problem-Solving Input—Creativity Relationship

Individual motivational factors. Generating creative ideas often requires analytic processing in which a person explores the depths of his or her knowledge to access everything that may be useful. Analytic processing requires a great deal of effort and a person must be motivated to put forth such effort (Alba and Hutchinson 1987). The greater a

manager's intrinsic motivation to plan, the more likely he or she is to engage in analytic processing. This should actualize the latent potential of his or her knowledge, thereby heightening its impact on creativity.

Intrinsic motivation can enhance the value of a product manager's knowledge even when ideation has been pushed to the "back of the mind." During the daily routine, a product manager continually is exposed to new information, which, if attended to, can trigger associations with existing knowledge and result in novel marketing ideas. But with so much information available, much is ignored, especially when a person is not thinking actively about new ways to market a product. Relative to less intrinsically motivated product managers, the intrinsically motivated manager is more likely to attend to unique aspects of the environment and collect new information that, when combined with existing problem-solving inputs, may enhance their effect on creativity (Amabile 1983). Hence, we expect,

H₉: The effects of (a) knowledge of the operating environment, (b) knowledge of the macroenvironment, (c) diversity of experience, and (d) diversity of education on marketing program creativity are greater when intrinsic motivation to plan is high than when it is low.

As we previously noted, to devise a novel marketing program, a product manager must use a nonroutine idea generation process and develop and evaluate many alternatives. This requires extensive use of his or her existing problemsolving inputs. However, there can be considerable risk in devising new ways to market a product (e.g., rejected ideas, disapproval of superiors). A product manager who is willing to take this risk is more likely to engage in the previously noted activities and thus should more fully utilize his or her problem-solving inputs. Conversely, the risk-averse product manager is not likely to stray far from the comfort of conventional thinking. Even though such a manager may be rich in problem-solving inputs, these resources are not likely to be translated into creative marketing ideas. Therefore,

H₁₀: The effects of (a) knowledge of the operating environment, (b) knowledge of the macroenvironment, (c) diversity of experience, and (d) diversity of education on marketing program creativity are greater when willingness to take a risk is high than when it is low.

Situational factors. Because synthesis of diverse problem-solving inputs into creative marketing initiatives requires a great deal of time and effort, we explore the extent to which (1) time pressure undermines the effect of problem-solving inputs on creativity and (2) intrinsic motivation can offset the adverse effect of time pressure on marketing program creativity.

As time pressure increases, a product manager may use a time-efficient algorithm to develop marketing programs. Instead of engaging in the time-consuming process of generating a variety of alternatives, a product manager may choose to extend the previous marketing program or copy ideas that have been successful for competitors. The use of simple algorithms such as these to create a marketing program does not require the manager to probe the depths of his or her personal knowledge. Thus, when working under time constraints, though a product manager may possess a

diverse set of problem-solving inputs, these resources may go largely unused. Therefore,

H₁₁: The effects of (a) knowledge of the operating environment, (b) knowledge of the macroenvironment, (c) diversity of experience, and (d) diversity of education on marketing program creativity diminish as time pressure increases.

Can the detrimental effects of time pressure be overcome? Intrinsic motivation has the potential to diminish the effect of time pressure on creativity, because intrinsically motivated people are more likely to make time for a task they enjoy. Simply stated, intrinsic motivation may help a person create time where it currently does not exist (Amabile 1988). This, in turn, may offset the negative effect of time pressure on marketing program creativity.

Although intuitively appealing, the interaction between time pressure and intrinsic motivation may not be as straightforward as we discussed previously. When a highly intrinsically motivated person must work under time limitations, he or she may become frustrated and unable to focus on ideation (Amabile, DeJong, and Lepper 1976). Instead of offsetting the effect of time pressure, such frustration could increase the negative effect of time pressure on creativity. In contrast, a less intrinsically motivated person may not devote much time and effort to idea generation in the first place; hence, for such a manager, there may be no relationship between time pressure and creativity. Therefore, though we expect a significant interaction between time pressure and intrinsic motivation to plan, we do not offer a directional hypothesis.

METHOD

Data Collection

Data to test our hypotheses were gathered using questionnaires mailed to consumer goods product managers. Product managers were asked to focus on a single product for which they had been highly involved in developing the most recent marketing program. Names and addresses were obtained from the American Marketing Association's membership directory (192) and a purchased mailing list (459). After removing names of people who were no longer with the company or whose addresses were incorrect, the sampling frame included 578 names. We received 193 completed questionnaires, yielding a 33.4% response rate. Subsequent analyses revealed no differences in the responses from each mailing list.

To assess the degree of nonresponse bias, responses were divided into two groups (returned before and after two weeks after mailing; 76.2% and 23.8%, respectively). Ttests to examine differences between groups in mean response to each variable revealed that there were no significant differences between groups. Therefore, we can assume that product managers who responded did not differ greatly from those who did not (Armstrong and Overton 1977).

Presumably, our respondents were product managers who played a major role in creating marketing programs for their products. To check this assumption, we included a 7-point item that assessed the extent to which the ideas in the marketing program were those of the respondent (1 = ideas mostly provided by someone else, 7 = mostly my ideas).

Consistent with our assumption, 168 respondents (87%) selected four or greater on this item, which indicates that respondents have a substantial impact on the ideas in their marketing program. Because the remaining 13% (25 respondents) were less responsible for the ideas in the marketing program, including them in our analysis would have introduced noise into the data. Therefore, these 25 cases were excluded. A review of those excluded revealed that 2 were from very large groups (15 to 17 members) in which a person's impact likely is diffused. The balance (23) should not have completed the questionnaire, because they held junior positions in product management (e.g., assistant or associate product manager) or were not in product management. These people received the questionnaire as a result of ambiguities in the titles on the mailing list.

A growing number of companies are using groups to devise marketing programs. To examine the representativeness of our sample along this dimension, we asked respondents to indicate whether a group was involved in creating the marketing program and if so, how large it was. We found that 77% of respondents used groups to develop marketing programs, whereas 23% created their marketing programs alone. Within the portion who used groups, the median and modal group size was four persons. Furthermore, respondents averaged 5.2 years of experience with their present product category and 6.9 years of experience with their current firm, both of which are indicative of someone who has moved beyond the ranks of assistant or associate product manager to the relatively more senior status of product manager. These findings suggest that groups are well represented in our sample, they are of a fairly small size in which the product manager could have an impact, and our respondents likely are in positions of relative seniority within their group such that they would have an impact on the marketing program.

Measures

When available, existing measures of the constructs were used. For constructs that did not have existing measures, items were generated through discussions with product managers. Following a pretest using six product managers, the questionnaire was modified and administered to the full sample. After data collection, each measure was purified by deleting items that had low item-to-total correlations and subsequently were judged not to tap the domain of interest. The remaining items were subjected to maximum likelihood factor analysis and were found to load highly on a single factor. Descriptive statistics and reliabilities for each scale are presented in Table 1. The items remaining after measure purification appear in the Appendix.

Marketing program creativity was defined as the extent to which the ideas developed for a product's most recent marketing program deviated in a meaningful way from industry practice. This definition, which is based on traditional work in creativity (e.g., Jackson and Messick 1965) and more recent work in business creativity (Ray and Myers 1986), consists of two dimensions. First, *novelty* refers to the degree of difference between a product's most recent marketing program and the competitors' programs. Second, *meaningfulness* refers to the extent to which the marketing

Interaction with others

Creativity of the marketing program

DESCRIPTIVE STATISTICS AND RELIABILITIES FOR THE PURIFIED MEASURES								
Measures	Items	Mean	Standard Deviation	Alpha				
Knowledge of the operating environment	4	4.90	1.53	na				
Knowledge of the macroenvironment	4	4.60	1.20	na				
Diversity of experience	na	1.37	1.06	na				
Diversity of education	na	.82	.73	na				
Intrinsic motivation	4	6.18	.65	.60				
Risk taking	3	5.17	1.05	.69				
Planning process formalization	4	3.37	1.53	.78				
Time pressure	6	5.17	1.07	.81				

4.72

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Table 1 ID DELIABILITIES EOD THE DUDIELED A

initiatives are thought to be attractive or valuable to the group for which they were devised (e.g., consumers, retailers). When an initiative is truly attractive to a key group, such as consumers or retailers, competitors are likely to react by wondering, "Why didn't we think of that?" Thus, meaningfulness is operationally defined as the extent to which a respondent believes that the marketing program could set a trend in the industry.2

The primary measure of marketing program creativity was a 10-item, 7-point semantic differential scale that assessed the novelty within the product category (seven items) and the meaningfulness (three items) of a product's most recent marketing program (see the Appendix, part A). The adjectives were derived in part from the creative product semantic scale (Besemer and O'Quin 1986). A marketing program can be thought of as a gestalt in which marketing actions (e.g., product changes and consumer promotions) must work together to produce the desired impact.³ Thus, respondents were asked to judge the novelty and meaningfulness of the marketing program as a whole. Coefficient alpha for the 10-item scale was .91.

Maximum likelihood factor analysis confirmed that the semantic differential scale had two dimensions: one representing novelty and the other representing meaningfulness. Although the dimensions are conceptually and empirically distinct, they must be considered in unison, because creativity requires the presence of both. A second-order confirmatory factor analysis supported the conceptual arguments for combining dimensions. Fit for the model was good ($\chi^2_{(34)}$ = 90.8, p < .01; CFI = .941; AOSR = .046) and the two dimensions of creativity loaded on a single higher-order factor. To construct a measure of marketing program creativity, we weighted novelty and meaningfulness equally,

because there is no a priori reason to give greater weight to either dimension. Finally, we found that the semantic differential measure correlated highly with a 7-point Likert-type scale (r = .73, p < .001) and a single-item, 7-point global measure of marketing program creativity (r = .63, p < .001), which provided evidence of convergent validity.

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The use of product managers as a source of data on the creativity of their own marketing programs created two concerns. First, responses might have been biased upward because of the socially desirable nature of devising innovative ways to market a product. However, the descriptive properties of the measure of marketing program creativity suggest that social bias was not present. The mean was near the midpoint ($\bar{x} = 4.72$) and responses covered the full range of the scale. We also examined the correlation between respondents' assessments of the extent to which their marketing program contained their own ideas and how creative they judged their program to be. If responses were socially biased, we would expect this correlation to be high. Our findings (r = -.02, p < .8) again suggest that the responses were not biased upward.

Second, we were concerned with the extent to which product managers' judgments of novelty and meaningfulness reflected the ratings of consumers—the ultimate judges of the creativity of consumer-focused marketing initiatives. To make this assessment, we collected additional data from product managers and consumers. Descriptions of eight recent marketing programs were obtained through telephone interviews with eight consumer goods product managers.⁴ Each manager also rated the novelty and meaningfulness of his or her program on the 10-item semantic differential scale discussed previously.

Next, descriptions of the marketing programs provided by the product managers were presented to consumers in a brief written format. The written statements noted the actions that would be taken to market the product in question in the coming year (e.g., changes to the product, its packaging, attributes that would be emphasized, distribution changes,

²We do not suggest that competitors will copy meaningful initiatives. Competitive reaction depends on many factors, such as product and business unit objectives, capabilities and resources, and degree of threat perceived in a competitor's actions.

³A holistic appraisal of the creativity of the marketing program was selected over a compositional method, because the latter assumes that creativity is a function of the number of changes that are made to a marketing program. It is not clear, however, that a program that is particularly creative on only one mix element is any less creative than a program that calls for meaningful changes on multiple mix elements. Also, to implement a compositional method, the researcher must determine how finely mix elements should be broken down. For example, should labeling be separated from packaging?

⁴There was a gap of more than a year between the first survey of managers and the collection of consumer data. Because marketing program development is often an annual activity, the marketing programs rated by product managers in the initial survey were likely to have been revised by the time the consumer survey was administered. Therefore, we collected new data from a different set of product managers on their most recent marketing program.

couponing and other promotions). After reading a description, consumers rated the novelty and meaningfulness of that marketing program on the scale used by product managers (adapted slightly for consumers).

Consumer respondents were prescreened for familiarity with the eight product categories. Four product categories were then randomly assigned to appropriate respondents. A total of 240 observations were collected from 60 respondents ([30 respondents per product × eight products] / four questionnaires per respondent). The correlation between managers' ratings and the average consumer ratings for each marketing program statement was .93 (p < .001). In summary, the semantic differential measure of marketing program creativity demonstrates good reliability and convergent validity, does not appear to suffer from social bias, and corresponds favorably with consumer assessments of marketing program creativity.

Knowledge of the marketing environment was defined as the extent of a product manager's knowledge of the operating environment (channel members, customers, and competitors) and macroenvironment (political/legal, economic, technological and demographic trends) for his or her product (e.g., Lehmann and Winer 1994). To gain greater insight into the impact of each dimension of knowledge, we considered the two separately in subsequent analyses.

Knowledge of the operating environment and knowledge of the macroenvironment were assessed with four items each. Responses were recorded on 7-point scales (1 = I)wish I knew more about this; 7 = I know plenty about this). A fifth item pertaining to the operating environment (knowledge of direct competitors' strategies) was included as a covariate in the analysis. This was done to minimize noise in the dependent variable, the measure of which assumes some degree of knowledge of competitors. A maximum likelihood factor analysis that included all nine items yielded two distinct factors, one reflecting knowledge of the operating environment and the other knowledge of the macroenvironment. In the knowledge scales, each item on each dimension represents a single subdimension whose response need not be related to responses on other items. For such a measure, it is not appropriate to assess reliability using coefficient alpha (Howell 1987).

To minimize social desirability bias, we labeled the endpoints of the knowledge scale "I wish I knew more about this" instead of "I know very little (or nothing) about this." This wording does not require respondents to report that they have low knowledge, but instead captures a belief that there is more to know. As can be seen in the descriptive statistics for these scales, responses did not appear to be biased toward the upper end of the scales. Because respondents had worked with their respective product categories an average of 5.2 years, it is not surprising that the mean for each 7-point scale (4.9 for knowledge of the operating environment and 4.6 for knowledge of the macroenvironment) was above the midpoint. Responses for both types of knowledge covered the full range of the scales.

Diversity of experience was operationalized as the number of product categories with which a respondent had worked other than the present category. Respondent experience ranged from zero to five additional product categories, with a median experience of one additional product category.

Diversity of education was defined as the extent of a respondent's exposure, through formal education, to non-business disciplines. A measure of diversity of education was constructed by summing the number of nonbusiness degrees and nonbusiness subjects in which the respondent had completed several years of study. Diversity of education ranged from zero to three nonbusiness degrees or subjects, with a median of one nonbusiness degree or subject.

Intrinsic motivation to plan was defined as the extent to which the respondent engaged in ideation and marketing planning for the positively valued experiences derived from the task. A 4-item, 7-point Likert-type scale was developed by modifying previous scales (Lawler and Hall 1970; Spiro and Weitz 1990) to reflect the task of marketing planning. Coefficient alpha for the measure was .60.

Risk taking was defined as the extent to which the respondent was willing to engage in the development of new ideas despite the unknown nature of the outcome (e.g., the potential for failure). A 3-item, 7-point Likert-type scale was developed through discussions with product managers. Coefficient alpha was .69.

Planning process formalization was defined as the degree of emphasis placed by the organization on rules and procedures when developing marketing plans. A 4-item, 7-point Likert-type scale was used, based in part on John and Martin's (1984) work. Coefficient alpha for the measure was .78.

Interaction with others was defined as the extent to which the respondent interacted with members of areas outside product management when developing the marketing program. The extent of interaction with nine groups (e.g., production, sales force) was measured on 7-point scales (1 = 100 no interaction, 1 = 10 a great deal of interaction). Similar to environmental knowledge, because the items are separate subdimensions, coefficient alpha was not calculated (Howell 1987).

Time pressure was defined as the degree to which the respondent believed there was limited time to complete tasks. A 6-item, 7-point Likert-type scale based on Reilly's (1982) work and on interviews with product managers was used. Coefficient alpha for the measure was .81.

RESULTS

Hypotheses were tested with multiple regression in which the main effects and interactions of interest were estimated simultaneously. Significant interactions were further analyzed with simple slope analysis, a technique that overcomes the need to create subgroups from continuous independent variables (Aiken and West 1991). Prior to hypothesis testing, the independent variables were mean-centered to reduce multicollinearity between the interaction terms and their constituent variables (Cronbach 1987). Correlations between independent variables appear in Table 2. An examination of the correlations among interaction terms indicates that multicollinearity was not a major concern. Most correlations fell between .002 and .30. The exceptions includes correlations between three pairs of interaction terms constructed with the dimensions of environmental knowledge

	1	2	3	4	5	6	7	8	9
Marketing progam creativity	1.00				WALTER!	THE ASSESSMENT	7 L L L	a reducin	The second
2. Knowledge of operating environment	.04	1.00							
3. Knowledge of macroenvironment	.13*	.57***	1.00						
4. Diveristy of experience	03	05	04	1.00					
5. Diversity of education	13	03	.03	.001	1.00				
6. Intrinsic motivation	.29***	.01	03	.01	.04	1.00			
7. Risk taking	.33***	07	06	.15*	.11	.28***	1.00		
8. Formalization	.15*	.09	.10	.11	05	.04	.01	1.00	
9. Interaction with others	.30***	.24***	.27***	16**	004	.17**	.03	.16**	1.0
0. Time pressure	13	07	01	.17**	11	05	.03	01	0

(r = .53 to .67). The adjusted R^2 for the model was .34, and the F-statistic was 4.52 (p < .001). Regression coefficients and t-statistics appear in Table 3. The results of simple slope analysis appear in Table 4.

Main Effects of Personal Factors on Marketing Program Creativity

Problem-solving inputs. Knowledge of the operating environment (H_{1a}) and of the macroenvironment (H_{1b}) were expected to have a positive effect on marketing program creativity. The coefficient for knowledge of the operating environment is not significant ($\beta = -.001$, t = -.02, p < .99). H_{1a} is not supported. However, knowledge of the macroenvironment is positively related to marketing program creativity ($\beta = .13$, t = 1.96, p < .05). H_{1b} is supported.

Diversity of experience and diversity of education were expected to have a positive effect on creativity (H_2 and H_3 , respectively). The coefficient for diversity of experience is not significant. Diversity of education has a significant but negative coefficient, the opposite of what was expected ($\beta = -.23$, t = -2.74, p < .01). In other words, people with a business education devise more-creative marketing programs than those with nonbusiness degrees. Neither H_2 nor H_3 are supported. Both findings will be addressed in the Discussion section.

Motivational factors. As we predicted in H_4 and H_5 , both intrinsic motivation to plan and risk taking have a positive impact on creativity (for intrinsic motivation to plan, $\beta = .24$, t = 2.35, p < .01; for risk taking, $\beta = .31$, t = 4.94, p < .01).

Main Effects of Situational Factors on Marketing Program Creativity

 H_6 predicts that marketing program creativity is greatest under moderate planning process formalization. Two terms were used to test for the nonlinear relationship—one for formalization and one representing the squared value of formalization. Formalization has a significant positive coefficient ($\beta = .09$, t = 2.15, p < .05), and the squared value of formalization has a significant negative coefficient ($\beta = -.04$, t = -1.96, p < .05), which indicates that there is an inverted U-shaped relationship. H_6 is supported.

As we predicted in H_7 , interaction with others has a positive effect on marketing program creativity ($\beta = .21$, t = 2.69, p < .01). Likewise, as we predicted in H_8 , time pressure has a negative effect on marketing program creativity ($\beta = -.12$, t = -1.96, p < .05).

The Role of Motivational and Situational Factors in Moderating the Problem-Solving Input—Creativity Relationship

Intrinsic motivation to plan. H_9 suggests that the effects of (a) knowledge of the operating environment, (b) knowledge of the macroenvironment, (c) diversity of experience, and (d) diversity of education on creativity are greater when intrinsic motivation to plan is high than when it is low. As shown in Table 3, only the diversity of education \times intrinsic motivation interaction is significant ($\beta = -.53$, t = -3.70, p < .01). It can be seen from Table 4 that the effect of diversity of education on creativity is greater as intrinsic motivation increases. However, recall that the relationship between diversity of education and creativity is negative (opposite of the predicted main effect). Thus, H_{9d} receives qualified support, but H_{9a-c} are not supported.

Risk taking. According to H_{10a} and H_{10b}, the effects of knowledge of the operating environment and knowledge of the macroenvironment on creativity should be greater when risk taking is high than when it is low. The interactions between each dimension of knowledge and risk taking are significant (for knowledge of the operating environment X risk taking, $\beta = -.09$, t = -1.76, p < .05; for knowledge of the macroenvironment \times risk taking, $\beta = .10$, t = 1.61, p <.10). H_{10b} is supported. With respect to the interaction between knowledge of the operating environment and risk taking, it is important to note that the negative sign is due to the negative main effect of knowledge of the operating environment on creativity. Although this main effect was not significant, the effect of knowledge of the operating environment on creativity becomes significantly more negative as risk taking increases (see Table 4). This elevated effect is consistent with the proposed relationship and, thus, H_{10a} is supported. This finding will be treated in more detail in the Discussion section.

The effects of diversity of experience and diversity of education on creativity were expected to be greater when

risk taking was high than when it was low (H_{10c} and H_{10d} , respectively). As we show in Table 3, the diversity of experience \times risk taking interaction is not significant. H_{10c} is not supported. Although the diversity of education × risk taking interaction is significant ($\beta = .17$, t = 1.99, p < .05), the impact of diversity of education on creativity decreases as risk taking increases (see Table 4). H_{10d} is not supported.

Time pressure. H₁₁ proposed that the effects of (a) knowledge of the operating environment, (b) knowledge of the macroenvironment, (c) diversity of experience, and (d) diversity of education on creativity diminish as time pressure increases. Because neither of the knowledge × time pressure interactions are significant, H_{11a} and H_{11b} are not

Table 3 EFFECTS OF PERSONAL AND SITUATIONAL VARIABLES ON MARKETING PROGRAM CREATIVITY

Main Effects	Unstand Coeff	t-statistic	
Knowledge of the operating		The last	
environment	001	(.06)	02
Knowledge of the macro-			
environment	.13	(.07)	1.96**
Diversity of experience	01	(.06)	11
Diversity of education	23	(.09)	-2.74***
Intrinsic motivation	.24	(.10)	2.35***
Risk taking	.31	(.06)	4.94***
Planning process formalization	.09	(.04)	2.15**
(Formalization) ²	04	(.03)	-1.76**
Interaction with others	.21	(.08)	2.69***
Time pressure	12	(.06)	-1.96**
Knowledge of competitors			
(covariate)	01	(.04)	31
Interaction effects			
Moderator: Intrinsic Motivation		Fra di la	
Knowledge of the operating			
environment	12	(.09)	-1.36
Knowledge of the macro-			
environment	11	(.11)	97
Diversity of experience	.06	(.10)	.65
Diversity of education	53	(.14)	-3.70***
Time pressure	14	(.09)	-1.62*b
Moderator: Risk Taking			
Knowledge of the operating			
environment	09	(.05)	-1.76**
Knowledge of the			
macroenvironment	.10	(.06)	1.61*
Diversity of experience	06	(.06)	97
Diversity of education	.17	(80.)	1.99**
Moderator: Time Pressure			
Knowledge of the operating			
environment	03	(.05)	54
Knowledge of the			
macroenvironment	.05	(.06)	.87
Diversity of experience	09	(.05)	-1.69**
Diversity of education Adjusted R ² = .34 F = 4.52***	04	(.07)	51

aValues in parentheses are standard errors of the coefficients.

supported. The diversity of experience × time pressure interaction is significant and in the expected direction (β = -.09, t = -1.69, p < .05). Therefore, H_{11c} is supported. Finally, the interaction between diversity of education and time pressure is not significant. Therefore, H_{11d} is not supported.

We also examined the interaction between time pressure and intrinsic motivation to plan. No hypothesis was offered concerning the direction of the effect of intrinsic motivation on the time pressure-creativity relationship, though a significant interaction was expected. As we show in Table 3, the interaction is significant ($\beta = -.14$, t = -1.62, p < .10). The impact of time pressure on creativity becomes increasingly negative as intrinsic motivation increases (see Table 4). Thus, time pressure seems to be particularly detrimental to intrinsically motivated product managers.

CONCLUSIONS AND DISCUSSION

Marketing program creativity is a function of both individual and situational factors. It is related positively to a manager's level of macroenvironmental knowledge but, in general, is not related to knowledge of the operating environment. Diversity of experience generally does not affect marketing program creativity, but diversity of education has a negative impact. In addition, both intrinsic motivation to plan and willingness to take risks have a positive impact on marketing program creativity. With respect to situational factors, interacting with others and working under a planning process that is perceived to be moderately formal are conducive to creativity, whereas working under the perception of time pressure has a negative effect. Several of these relationships are moderated by motivational and situational factors. Both knowledge of the operating environment and macroenvironment have a greater effect on marketing program creativity when risk taking is high than when it is low. Diversity of education has a greater effect on creativity (1) when intrinsic motivation to plan is high than when it is low and (2) when risk taking is low than when it is high. The effect of diversity of experience on creativity diminishes as time pressure increases, and the adverse effect of time pressure on creativity is greater when intrinsic motivation to plan is high than when it is low.

Table 4 SIMPLE SLOPE RESULTS FOR SIGNIFICANT INTERACTIONS

	Regression Coefficient for Various Levels of the Moderator Variable				
Interaction	Low	Moderate	High		
Problem-Solving Inputs × Motivational Factors					
Diversity of education × Intrinsic motivation	.112	235	582		
Knowledge of operating environment × Risk taking	.096	001	098		
Knowledge of macroenvironment × Risk taking	.027	.129	.231		
Diversity of education × Risk taking	409	235	061		
Problem-Solving Inputs × Situational Factors					
Diversity of experience × Time pressure	.091	007	105		
Situational Factors × Motivational Factors					
Time pressure × Intrinsic motivation	023	115	207		

bTwo-tailed test of significance.

p < .10.p < .05

p < .01

Two unexpected findings emerged concerning the effects of diversity of education on marketing program creativity. First, the main effect, which was negative, was opposite of what was hypothesized. This finding suggests that creativity is enhanced more by a business education than by a more diverse education. One explanation for this finding is that though a business education may lend little breadth to a product manager's stock of problem-solving inputs, it provides deep knowledge of the general field—business—and deep knowledge is also critical to creativity (Amabile 1983; Osborn 1963). The product manager who has a more substantial grounding in business (e.g., the importance of differentiation) is expected to develop more-creative marketing programs.

Second, we expected that the effect of diversity of education on creativity would increase as risk taking increased. Because the main effect of diversity of education on creativity was negative (i.e., business majors were more likely to produce creative marketing programs than were nonbusiness majors), risk taking should have enhanced the ability of business majors to devise creative marketing programs. Instead, the negative relationship between education and creativity diminishes as risk taking increases (see Table 4). In effect, risk taking seems to release the creative potential thought to be associated with a more diverse education.

Another interesting finding is the negative effect of the knowledge of the operating environment on creativity. Although we reported a negative but nonsignificant main effect of knowledge of the operating environment, risk taking appears to heighten the impact of any problem-solving input. Thus, when considered in conjunction with risk taking, the effect of knowledge of the operating environment on creativity becomes significant and increasingly negative as risk taking increases. One explanation stems from the nature of the knowledge that can be gleaned from the operating environment (i.e., channel members, customers, and competitors). In other words, when managers focus on the operating environment, they see what currently exists in their markets. Because creative ideas, by definition, must depart from what exists in the product category, knowledge of the operating environment does not appear to be the most fruitful source of creative ideas. This finding is consistent with conjecture that creative ideas for marketing established products seldom come from the study of direct competitors (e.g., Park and Smith 1990).

Finally, because diverse input is at the foundation of the creative process, we were surprised that neither the main effect of diversity of experience nor the interactions with intrinsic motivation or risk taking were significant. Perhaps, managers are so focused on their present product category that they do not capitalize on their knowledge of other categories. This may be particularly true under time pressure. Recall that the effect of diversity of experience on marketing program creativity diminished as time pressure increased. When we consider that the product managers in our sample averaged 5.2 years of experience with their current product category (which suggests that they may have been away from their other product categories for several years), this explanation becomes even more plausible. An additional explanation for the diversity-of-experience find-

ings resides in the way the construct was measured. Information was not gathered on the degree to which a manager's current product category differed from those with which he or she had previous experience. Thus, a product manager might have had experience in multiple categories, but the categories may not have been substantively different in terms of the marketing practices found in those areas.

Implications for Theory and Practice

Our study has several implications for marketing theory. Research in marketing often attempts to draw a link between marketing strategy and financial performance. Yet, performance reflects myriad influences that may obscure the effects of marketing variables. Thus, it would be beneficial to understand factors that affect key determinants of performance. Our research provides a step in this direction by investigating factors that affect differentiation, an important driver of the profitability of established products.

Another implication concerns the need to bridge the gap between normative theory and marketing management. Marketing textbooks are filled with normative guidance on the practice of marketing management, and it is implicitly supposed that such advice is easily translated into managerial action. Consider the widely applied prescription to differentiate. Differentiation requires ideas that depart from the competition. In reality, however, for both personal and situational reasons, managers differ greatly in their abilities to generate such ideas. By identifying factors that promote or inhibit the development of creative marketing programs, this research provides more concrete guidance on the normative theory of differentiation.

Our findings also have several practical implications. Of particular concern is the adverse effect of perceived time pressure on creativity. This effect suggests, for example, that the quest for efficiency by downsizing the ranks of middle management may be accompanied by subtle long-term costs. Undoubtedly, many organizations could benefit by thinning middle management. However, beyond some point, personnel cuts at this level are likely to increase time pressure, thereby resulting in less creative marketing programs and, ultimately, in a loss of differentiation.

Regarding formalization of the marketing planning process, planning has been described as a necessity for firms operating within diverse industries and markets (Abell and Hammond 1979). Our results suggest that firms that do no formal marketing planning should consider imposing enough structure to signal the importance of thinking about a product's future. Such structure should facilitate consideration of a diverse set of information sources, including macroenvironmental information and input from people in functional areas outside marketing. At the same time, management must resist the temptation to implement a planning process that product managers perceive as overstructured, because it can reduce planning to a mechanical exercise, which, in turn, tends to hamper creativity.

Finally, business schools have been criticized for producing narrowly focused, overly analytical managers (Hayes and Abernathy 1980). Our results, however, suggest that business knowledge can facilitate development of creative marketing programs. Although it may be premature to con-

clude that business education is necessary for creativity, our findings suggest that it does not hinder creativity to the extent that some believe.

Limitations and Directions for Further Research

There are several caveats to our study. First, the caveat regarding causation, which accompanies all cross-sectional research, applies here. Also, the motivation for our study is based on the assumption that differentiation, and hence creativity, is inherently a desirable goal. However, the creation of meaningful differentiation often requires incremental investment. Just as many new products are overengineered, there are also likely to be situations in which consumers find enhancements to established products appealing but are unwilling to pay an incremental price sufficient to cover the associated marginal cost.

Although the model of creativity developed here includes variables commonly cited in social science and business literature, it is clear from the level of explained variance (adjusted $R^2 = .34$) that additional variables must be examined. One key personal variable that should be explored is cognitive complexity—the ability to process divergent information and evaluate numerous alternatives (Hellriegel, Slocum, and Woodman 1989). Other situational factors also are likely to affect the creativity of a marketing program. One intuitively important situational factor is the firm's method of rewarding its employees. In the popular press, rewards are often cited as a key to developing and maintaining an environment conducive to innovation (e.g., Snyder 1988). People who are rewarded for taking risks are

thought to be more willing to do so in the future, which would increase the likelihood that they can develop creative marketing programs. However, in nonbusiness contexts, extrinsic rewards have been found to undermine intrinsic motivation, which, in turn, dampens the creativity of outcomes (Hennessey and Amabile 1988). Thus, the impact of rewards is not as simple as it may appear and is well worth studying.

Finally, as we previously noted, understanding factors that promote the development of meaningfully unique ideas is also critical in new-product development. Our study emphasizes individual-level theory, because individual product managers are pivotal in managing established products. There is also a rich literature dealing with creative processes in a group setting. Because new-product development projects often involve cross-functional teams, the creative-groups literature could be particularly useful. Curiously, variables that have been judged as important to the success of new-product teams may actually work against the development of creative product concepts. For example, group cohesion may have a positive effect on creativity to the extent that it facilitates the surfacing of alternative ideas (Keller 1986). Yet, at some point, cohesion may create an environment that could foster groupthink. Under such conditions, the assumption-challenging processes needed to surface creative ideas are not likely to occur. In short, many of the principles that underlie our hypotheses (e.g., the need for diverse, cross-functional input) should provide a useful starting point for theory development in new-product research.

Appendix MEASURES

A. Marketing Program Creativity

Novelty

The following adjectives can be used to describe marketing programs. Please rate your product's MOST RECENT marketing program on each set of adjectives.

Compared to what your competitors were doing last year, your product's most recent marketing program is:

Dull	1	2	3	4	5	6	7	Exciting
Fresh	1	2	3	4	5	6	7	Routinea
Conventional	1	2	3	4	5	6	7	Unconventional
Novel	1	2	3	4	5	6	7	Predictable ^a
Usual	1	2	3	4	5	6	7	Unusual
Unique	1	2	3	4	5	6	7	Ordinary ^a
Commonplace	1	2	3	4	5	6	7	Original

Meaningfulness

The most recent marketing program for your product is:

	J F							
Trendsetting	1	2	3	4	5	6	7	Warmed Overa
Average	1	2	3	4	5	6	7	Revolutionary
Nothing Special	1	2	3	4	5	6	7	An Industry Model

B. Knowledge of the Marketing Environment

How knowledgeable do you feel about each of the following items as they apply to your product? (7 = I know plenty about this; 1 = I wish I knew more about this)

1. Knowledge of the Operating Environment

N

- a. Channel member behavior/motivation
- b. Customer motivation to purchase this product
- c. Customer purchase behavior
- d. Customer usage behavior
- e. Direct competitors' strategies

- 2. Knowledge of the Macroenvironment
- a. Political/legal trends
- b. Economic trends
- c. Technological trends
- d. Demographic trends

Appendix CONTINUED C. Intrinsic Motivation to Planb a. I feel a real sense of accomplishment when I come up with a good marketing program. b. Creating marketing strategies for this product is challenging. c. I don't especially enjoy coming up with marketing strategies for this product.a d. Developing marketing programs Developing marketing programs is one of my least favorite tasks is one of my most favorite tasks D. Willingness to Take Risksb c. I prefer to think conservatively when I develop ideas for this product's a. I like to play it safe when I'm developing ideas to market this product.a b. I am a risk-taker when it comes to proposing ideas to market this product. marketing program.a E. Planning Process Formalization^b a. In my company, marketing plans have a specific format that is used by c. We are told exactly which information sources must be used to develop the marketing plan. everyone. b. We have clearly defined procedures for completing each section of the d. We have a precise timetable for completing marketing plans. marketing program. F. Interaction With Othersb To what extent did you interact with members of each of the following areas when generating ideas for your product's most recent marketing program? a. Research and development d. Market research g. Consultants e. Channel members h. Advertising agency personnel b. Production c. Finance f. Sales force/Sales managers i. Customers G. Time Pressureb a. I need more hours in the day to get my work done. b. I don't have to overextend myself to find the time to get my work done.a c. I feel like I'm always "fighting fires." d. I seldom have to take shortcuts to get my work done on time.a e. I never have enough time to think ahead. f. I feel like I have a lot of time I feel like no matter how hard I work, on my hands I'll never get caught up aReverse coded. b7 = strongly agree; 1 = strongly disagree.

REFERENCES

- Abell, Derek F. and John S. Hammond (1979), Strategic Market Planning: Problems and Analytic Approaches. Englewood Cliffs, NJ: Prentice Hall.
- Adams, Daniel N., Jr. (1993), "Brand Management System in Need of a Big Shake-up," *Marketing News*, 27 (April 26), 4, 8.
- Aiken, Leona S. and Stephen G. West (1991), Multiple Regression. Newbury Park, CA: Sage Publications.
- Alba, Joseph W. and J. Wesley Hutchinson (1987), "Dimensions of Consumer Expertise," *Journal of Consumer Research*, 13 (March), 411-54.
- Amabile, Teresa M. (1983), *The Social Psychology of Creativity*. New York: Springer-Verlag.
- Organizations," in *Research in Organizational Behavior*, Vol. 10, Barry M. Staw and L. L. Cummings, eds. Greenwich, CT: JAI Press, 123–67.
- ——— (1990), "Within You, Without You: The Social Psychology of Creativity, and Beyond," in *Theories of Creativity*, Mark A. Runco and R. S. Albert, eds. Newbury Park, CA: Sage Publications.
- ——, William DeJong, and Mark Lepper (1976), "Effects of Externally Imposed Deadlines on Subsequent Intrinsic Motivation," *Journal of Personality and Social Psychology*, 34 (1), 92–98.
- ——— and Stanley S. Gryskiewicz (1987), "Creativity in the R&D Laboratory," Technical Report Number 30, Greensboro, NC: Center for Creative Leadership.

- Anderson, Paul F. and Terry M. Chambers (1985), "A Reward/Measurement Model of Organizational Buying Behavior," *Journal of Marketing*, 49 (Spring), 7-23.
- Armstrong, J. Scott and Terry S. Overton (1977), "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research*, 14 (August), 396–402.
- Bauer, R. A. (1960) "Consumer Behavior as Risk-Taking," in *Dynamic Marketing for a Changing World*, R. S. Hancock, ed. Chicago: American Marketing Association, 389–98.
- Besemer, Susan and Karen O'Quin (1986), "Analyzing Creative Products: Refinement and Test of a Judging Instrument," *Journal of Creative Behavior*, 20 (2), 115–26.
- Buzzell, Robert and Bradley Gale (1987), *The PIMS Principles*. New York: The Free Press.
- Cooper, Robert G. (1986), Winning at New Products. Reading, MA: Addison-Wesley.
- Cronbach, Lee J. (1987), "Statistical Tests for Moderator Variables: Flaws in Analyses Recently Proposed," *Psychological Bulletin*, 102 (3), 414–17.
- Day, George S. (1994), "Significant Issues for the Future of Product Innovation: Enhancing the Ideation Capability," *Journal of Product Innovation Management*, 11 (January), 69-71.
- The Economist (1992), "Procter's Gamble," 324 (July 25), 61-62.
 Haberland, Gabriele and Peter Dacin (1992), "The Development of a Measure to Assess Viewers' Judgments of the Creativity of an Advertisement," in Advances in Consumer Research, Vol. 19, John F. Sherry, Jr. and Brian Sternthal, eds. Provo, UT: Association for Consumer Research, 817-25.

- Hayes, Robert H. and William J. Abernathy (1980), "Managing Our Way to Economic Decline," *Harvard Business Review*, 58 (July/August), 67-77.
- Hellriegel, Don, John W. Slocum, Jr., and Richard W. Woodman (1989), *Organizational Behavior*, 5th ed. St. Paul, MN: West Publishing Company.
- Hennessey, Beth A. and Teresa M. Amabile (1988), "The Conditions of Creativity," in *The Nature of Creativity*, Robert J. Sternberg, ed. Cambridge: Cambridge University Press.
- Hogarth, Robin (1980), Judgment and Choice. Chichester, England: John Wiley & Sons.
- Howell, Roy D. (1987), "Covariance Structure Modeling and Measurement Issues: A Note on 'Interrelations Among a Channel Entity's Power Sources," Journal of Marketing Research, 24 (February), 119–26.
- Jackson, Phillip W. and Samuel Messick (1965), "The Person, the Product, and the Response: Conceptual Problems in the Assessment of Creativity," *Journal of Personality*, 33 (September), 309–29.
- John, George and John Martin (1984), "Effects of Organizational Structure of Marketing Planning on Credibility and Utilization of Plan Output," *Journal of Marketing Research*, 21 (May), 170–83
- Kasperson, Conrad J. (1978), "Psychology of the Scientist: XXXVII. Scientific Creativity: A Relationship with Information Channels," Psychological Reports, 42 (June), 691–94.
- Keller, Robert T. (1986), "Predictors of the Performance of Project Groups in R&D Organizations," *Academy of Management Journal*, 29 (December), 715–26.
- Kim, Steven H. (1990), Essence of Creativity. New York: Oxford University Press.
- Koestler, Arthur (1964), The Act of Creation. New York: Dell.
- Lawler, Edward and Douglas Hall (1970), "Relationship of Job Characteristics to Job Involvement, Satisfaction, and Intrinsic Motivation," *Journal of Applied Psychology*, 54 (4), 305–12.
- Lehmann, Donald and Russell Winer (1994), Product Management. Homewood, IL: Richard D. Irwin.
- Levitt, Theodore (1986), *The Marketing Imagination*. New York: The Free Press.
- Mintzberg, Henry (1980), *The Nature of Managerial Work*. Englewood Cliffs, NJ: Prentice Hall.
- Miyake, Naomi and Donald Norman (1979), "To Ask a Question, One Must Know Enough to Know What is Not Known,"

- Journal of Verbal Learning and Verbal Behavior, 18 (June), 357-64.
- Newell, Allen S. and Herbert A. Simon (1972), *Human Problem Solving*. Englewood Cliffs, NJ: Prentice Hall.
- Osborn, Alex F. (1963), *Applied Imagination*, 3d ed. New York: Charles Scribner's Sons.
- Park, C. Whan and Daniel C. Smith (1990), "Product Class Competitors as Sources of Innovative Marketing Strategies," *Journal of Consumer Marketing*, 7 (Spring), 27–38.
- Ray, Michael and Rochelle Myers (1986), *Creativity in Business*. New York: Doubleday.
- Reilly, Michael D. (1982), "Working Wives and Convenience Consumption," *Journal of Consumer Research*, 8 (March), 407-18.
- Rice, Faye (1986), "The King of Suds Reigns Again," Fortune, (August 4), 130-34.
- Rogers, Everett (1983), *Diffusion of Innovations*, 3d ed. New York: The Free Press.
- Simon, Herbert A. (1960), The New Science of Management Decision. New York: Harper.
- Snyder, Neil (1988), "Motivating People to Build Excellent Enterprises," *Business*, 38 (3), 14–19.
- Spiro, Rosann and Barton Weitz (1990), "Adaptive Selling: Conceptualization, Measurement, and Nomological Validity," *Journal of Marketing Research*, 27 (February), 61–69.
- Stasch, Stanley F. and Patricia Lanktree (1980), "Can Your Marketing Planning Procedures Be Improved?" Journal of Marketing, 44 (Summer), 79–90.
- Tardif, Twila Z. and Robert J. Sternberg (1988), "What Do We Know About Creativity?" in *The Nature of Creativity*, Robert J. Sternberg, ed. Cambridge: Cambridge University Press.
- Tellis, Gerard J. and C. Merle Crawford (1981), "An Evolutionary Approach to Product Growth Theory," *Journal of Marketing*, 45 (Fall), 125–32.
- Thomas, Kenneth and Betty Velthouse (1990), "Cognitive Elements of Empowerment: An Interpretive Model of Intrinsic Task Motivation," *Academy of Management Review*, 15 (4), 666–81
- Webster, Frederick E., Jr. (1981), "Top Management's Concerns About Marketing: Issues for the 1980's," *Journal of Marketing*, 45 (Summer), 9–16.
- Zaltman, Gerald, Robert Duncan, and Jonny Holbek (1973), Innovations and Organizations. New York: John Wiley & Sons.