

REALITY AND NEW PRODUCT DECISION MAKING

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This paper examines the factors that influence human decision making for the purpose of explaining how marketing managers can improve the process of new product decision making. To do this, a comprehensive model of decision making is presented that offers a way to reconcile optimism, pessimism and realism through a concept called viewpoint. By understanding the mechanics of “reality,” product teams can be formed and outside views obtained that reduce bias and enhance the chance for product success.

January, 2002

Why is the failure rate for new consumer products so high and why has it not changed in so many years? One explanation is that managers overestimate demand because of their ego involvement with new products, setting off a chain of events that results in actual or relative product failure (Schultz 1999). There is considerable anecdotal and some empirical evidence (e.g., Schultz and Braun 1997) that “pet projects” do cause managers to lose sight of “reality,” where reality is defined as what consumers really want. The remedy for this situation may be an “outside view” (cf. Kahnemann and Lovallo 1993) that provides a check on managers’ wishful thinking. But before such remedies can be argued to have practical effect, it is important to see how the outside view itself would be interpreted by the decision maker. In other words, what is to prevent the manager from discounting a bearer of bad news?

This paper amplifies the notion that ego involvement affects marketing decisions in two ways. First, it considers not only the effect of ego involvement on the interpretation of market data, but also on evidence from devices (such as consultants) used to minimize bias. Second, it places ego-involved decision making in a larger context of decision making based on the key factors that moderate all human decisions. The premise is that, if marketing managers are to recognize and deal with ego-involved decision making, they must also recognize and deal with the factors that are so similar in effect. This will take us into the areas of selective perception, confidence, vested interest, illusion of control, risk preference and hubris. In addition, we will introduce a concept called “viewpoint” that incorporates optimism, pessimism and reality. With this rich description of decision making, we then can see how marketing managers can best deal with the tricky business of marketing successful new products.

HUMAN DECISION MAKING

Any attempt to explain an action based on a decision must take into account both the process of decision making and the state of the decision maker that may mediate the action. This is the reason different decision makers can reach different decisions even though they appear to follow the same process and perhaps use highly similar or even identical information. One marketing manager, for example, could decide to launch a new product while another decides not to launch although, superficially, it may appear that there is no difference in the decision situation. These different outcomes are often attributed to personalities or corporate politics when in fact they may be rooted in the actual behavior of the decision makers. In other words, it is just the combination of decision process factors interacting in unique ways. On closer inspection, the decision process is *different*, not the same as we may have thought.

One starting point for understanding this complexity is with ego involvement since ego is intrinsic to all decisions. Here we can tap the findings of decision research, in particular the findings that involvement leads to bias (Becker 1987; Malone, Russ and Lepper 1985; Lord, Ross and Lepper 1979; Mahoney 1977; Hastorf and Cantril 1954). Briefly, involvement leads to: (1) bias toward preferences, in part because of selective perception and wishful thinking (Babad 1993, 1987; Surlin and Gordon 1976); (2) distortions of evidence toward beliefs, as in ego protection or perceptual defense and impression management (Weary 1979; Greenberg 1991; Massad 1979; Senger 1974; Sherif and Sherif 1967; Cialdini 1973; Kassarian and Cohen 1965) and (3) bias toward past actions or choices, which is supported by research on cognitive dissonance

(Festinger 1957; Freedman and Sears 1965; Wicklund and Brehm 1976), commitment (Stimpson 1970; Brehm and Cohen 1962) and self perception (Bem 1967, 1972).

Although seminal studies have been completed on individual factors that moderate the ego-perception-bias continuum and many papers have been written discussing some or all of the factors together, there is no model of the phenomena that integrates the factors. In addition, no single model accounts for the logical counterparts of the main subjects of research. For example, there is much research on overoptimism and overconfidence, but relatively less on, say, pessimism or underconfidence. While it may be true that marketing managers seldom exhibit the latter feelings (and perhaps for good reasons, since these are not characteristic of leadership), any complete analysis of the decision milieu should account for their possible presence.

INGREDIENTS OF DECISIONS

There are a number of findings from research on judgment and decision making that must be taken into account because they are related to the key variables in the ego-perception-bias continuum. These include optimism, overconfidence, vested interest, illusion of control, risk preference and hubris (Kahneman and Lovallo 1993). Although there is evidence that each of these can produce similar effects in isolation from ego involvement, we will show that they are complementary and can be thought of as factors moderating the basic relationship. Since the literature supporting these factors is vast, we describe each effect briefly, cite representative studies and then offer an interpretation of their joint effects integrated into one model. Because many of these factors are

indeterminate when added together, we first develop the viewpoint concept that clarifies their interaction.

Moderating Factors

Although there must be a close relationship between optimism, realism and pessimism, most research on judgment and decision making focuses on the optimism bias where decision makers hope for the best outcome out of a set of outcomes and indeed forecast the best (or a very good outcome). This finding lends itself very well to an analysis of new product decisions since, as we have seen, the new product teams are typically very optimistic about the potential success of their efforts. Nevertheless, a manager could be pessimistic and perhaps (as we have alluded to) ought to be realistic. Indeed, marketing decisions based on reality must necessarily be the best.

Viewpoint. We define viewpoint as the valence of a judgment about information or evidence. If J is a judgment on evidence e , then the valence of the judgment can be either positive, neutral or negative, viz.

$J(e) > e$, which we will call optimism,

$J(e) = e$, which we will call realism, and

$J(e) < e$, which we will call pessimism.

Seen in this way, viewpoint could have an effect on the judgment of evidence that is independent from selective perception. Thus, it may moderate the relationship between selective perception and bias. For example, the positive effect of selective perception on bias would be magnified by optimism. In this way, a marketing manager who just “sees” favorable market data could compound his or her bias by also being optimistic. But, by

the same token, a marketing manager who seeks an outside view through, say, consultants may have his or her bias reduced by the countervailing realism (or pessimism) of the more objective party. Note that “winner’s curse” may also come into play in that the favored product could have been favored due to excessive optimism.

Confidence. Like viewpoint, most research in judgment and decision making focuses on overconfidence although underconfidence is also possible. As Kahneman and Lovallo (1993) state, “There is massive evidence for the conclusion that people are generally overconfident in their assignments of probability to their beliefs” (p. 26). (See also Henry 1994; Pfeifer 1994.) As it is typically operationalized, the term overconfidence refers to a general condition for decision makers who believe a set of statements to be true at a higher rate than they actually are (Lichtenstein et al. 1982). For any particular statement, such as “there is a consumer need for this product,” a person would be overconfident if their assessment of the probability that the statement is true exceeded some “objective” evidence that the statement was true. In studies of overconfidence, overconfidence is measured ex post. Yet for marketing decisions involving new products and new strategies, decisions must be made ex ante. Nevertheless, overconfidence could have an impact on plans like willingness to proceed with a new product, although overconfidence could only be “measured” after the fact.

Confidence, like viewpoint, could have an effect on plans that is independent of bias. Thus, it also may serve to moderate the relationship between selective perception and bias. For example, overconfidence would magnify the positive effect of selective perception on bias. Unlike viewpoint, however, the outside view would here necessarily serve to bring confidence more toward its “proper” level since it would force managers

toward objective evidence. Of course, this assumes that the outside report itself is not misperceived.

Vested interest. The concept of vested interest is also a potential moderating factor of bias on action. Who has more of a vested interest in a favorable new product outcome than the manager(s) responsible for the product? As for the effect of outside views, if a manager has hired a consultant, his or her vested interest may be even higher since there is now the appropriateness of that (visible) decision to be taken into account.

Illusion of control. Similarly, illusion of control in which a manager feels more control over a situation that he or she really has can moderate the effect of bias on action. An outside view in this case could serve to either increase or decrease illusion of control depending on the view itself. Consultants who flatter their clients, for example, no doubt increase the client's self-importance and thus illusion of control.

Risk preference. The effect of bias on action can also be moderated by risk preference, risk takers being able to "tolerate" more bias. With outside views, the risk preferences of all of the parties may have to be taken into account. One hopeful result would be movement toward a risk-neutral environment.

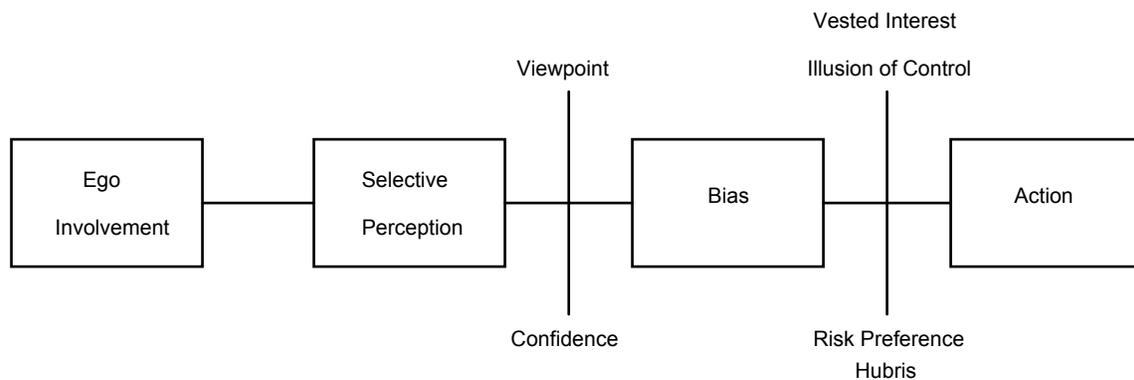
Hubris. Finally, hubris can moderate the effect of bias on action through an accounting for arrogance (or modesty) of the responsible executives. But, once again, outside views that merely serve to stroke the ego of managers would increase, not diminish hubris.

Taken together, these well-known factors that influence human decision making—and the new concept of viewpoint—allow us to posit a model of decision making rich enough to explain how the "simple" effect of ego involvement is amplified

in reality by other factors that are similar in effect but different in origin. This insight will help us define a plan to deal with the reality of new product decision making.

A MODEL OF THE EGO-PERCEPTION-BIAS CONTINUUM

The relationship of the moderating factors to the key variables in the ego-perception-bias continuum is shown in the following schematic:



Here ego involvement has a direct effect on selective perception and, in turn, selective perception affects bias and bias affects action. The action of interest in this paper is willingness to proceed with a new product, the nominal new product decision. Viewpoint moderates the selective perception-bias relationship, for, as we have seen, only realism would be expected to have no influence on how things are perceived (by argument and virtually by definition). And confidence, with its probabilistic interpretation, could also moderate the selective perception-bias relationship by hardening (or softening) the managers' view of market data.

The other four factors (vested interest, illusion of control, risk preference and hubris) can moderate the bias-action relationship, but not in ways that are entirely determinant. This indeterminacy is due to both the number of ways that these variables can interact with each other (and with the possible effects of outside views) and the fact that, even if they were, magnitudes of effects could compound or cancel. What we have, then, is realism minimizing bias but practical effects of other influences raising doubts.

Using the Model

This model helps to clarify real decision making where many factors interact at once and some of the factors are logical counterparts of leading variables in experimental research. Consider the following examples, the first about a personal decision (to further illustrate the concepts) and the second about the marketing decision to launch a new product.

Suppose your daughter is getting married tomorrow in an outdoor wedding and the forecast is a 60% chance of rain. You can either set up for the outside wedding or set up for an inside wedding but not both, and once you set up you cannot change these plans. What could you do? First, you could decide to set up outdoors on the belief that it will not rain. If you believe it will not rain (a state of nature), you must believe that the probability of no rain is greater than 40%—you are *optimistic* that it will not rain. You have made a judgment in the face of evidence that differs from the evidence. We will consider why you might do this later.

Although we might guess that you are overconfident in your judgment that it will not rain, this is not the same as optimism since overconfidence refers to the certainty that

you think you are right while optimism refers to the judgment itself. And we have already noted that overconfidence is measured empirically only *ex post* and usually over a series of judgments.

Of course, you could also believe that it will rain and set up indoors. In this case, since the estimated probability of rain is .6, you could either be a *realist* or a *pessimist*. We could say that you are realistic if you believe that it will rain with probability .6 and pessimistic if you believe the chance of rain is greater than 60%. The important point here is that optimism, realism or pessimism is governing the decision you make based on your belief.

For a marketing manager considering the launch of a new product, we could consider an analogous situation. The decision to be made is to go ahead with the next step in the product development process or not to go ahead. For convenience, suppose the step is the last one before actual marketing and that test market information encompasses all relevant information on consumer need. Suppose further that consumer need is measured as a 4 on a 10-point scale that ranges from 1 = very little need and 10 = very much need. What could the manager do? First, the manager could decide to launch the product on the belief that it will succeed. If the manager believes that it will succeed, the manager must either believe that a “4” is a good-enough indication of the product’s need-satisfying ability or that the “true” value is greater than 4 and that that level is good-enough. Since in this case we do not know the probability of success for any level of need (although in theory this could be calibrated), we can only ask the manager to estimate the product’s need-satisfying ability after taking the consumer “evidence” into account.

If the manager believes that the product meets consumer needs (a state of nature), the manager must believe that the level 4 (recall this is not a probability) is good or that the level is underestimated and that the true level is higher (and good); in either case the manager is *optimistic*. This optimistic manager would be expected to go ahead with the product. If the manager believes that the product does not meet consumer needs (in which case the evidence must be interpreted as accurate, lower or bad), the manager could be either a *realist* or a *pessimist*. We could say that the manager is realistic if the evidence is seen as it stands or pessimistic if it is seen as worse than it stands. As with the wedding example, the important point is that optimism, realism or pessimism is governing the decision.

From these examples, we can see that some of the ambiguity is dissipated by using the concept of *viewpoint* because it connects confidence, optimism, realism and pessimism. Our argument is that, for any viewpoint, a decision maker could be overconfident or underconfident. Decisions are made, however, on the basis of judgments on states of nature. A marketing manager who decides to launch a new product because he or she believes that consumers need this product may indeed be overconfident (or underconfident), but the decision to launch would have been based on optimism or realism, not confidence.

It is not sufficient, however, to simply say that some people or managers are optimistic. Optimism is speculated to result from a variety of causes. It is not an explanation of bias (nor is overconfidence), but can occur with bias. This is why it should not be studied or explained in isolation from other factors.

Other Considerations

There are a number of highly-related possible explanations for a phenomenon like bias that are not in this model. We have already considered overconfidence and concluded that it is a separate aspect of judgment having to do with the probability of any belief about a state of nature being correct. Optimism could explain a bias in judging the marketability of a product if it were regarded as a personal characteristic that affected some or all of a manager's judgments (a "cockeyed optimist") or if it was merely associated with a particular judgment. For new product decisions, such optimism could result from unrealistically positive self-evaluations, unrealistic optimism about future events and plans or an illusion of control (Taylor and Brown 1988).

In addition to these possible explanations, Kahneman and Lovallo (1993) offer a rich description of "bold forecasts" which amount to overoptimism. It is worth considering their major point: that decision makers have a strong tendency to consider problems as unique by neglecting historical (perhaps statistical) evidence from the past. They offer a fascinating discussion of how inside views produce an optimism that belies the (usually) more accurate forecasts based on outside views. Since this deals with group decisions, it is not strictly appropriate to our interest. But the hope that outside views can help is worth considering, especially since new products are often launched through team efforts.

More directly related to our interest are the ideas of illusion of control and of risk as a challenge. There is ample evidence that managers come to believe that they can control outcomes like product success through plans of their own making, thus avoiding risk or challenging risk, i.e., beating the odds (March and Shapira 1987; Salancik and

Meindl 1984). Together with more general findings that most individuals underestimate risk as it applies to them personally —“This will not happen to me”—(MacCrimmon and Wehrung 1986), these factors suggest that we also account for illusion of control and risk.

Finally, there are explanations that are beyond the scope our analysis because they refer to the motivations for optimism and not the conditions for optimism. For example, in the real world of organizational decision making, it may be prudent for a manager to overestimate demand because this is a way to increase the project’s chance of success in getting funding and support. This recalls the “winner’s curse” where the winning project is more likely than others to be associated with optimistic errors (Kahneman and Lovallo 1993). Kahneman and Lovallo also discuss how pessimism (or realism we would add) can be interpreted as disloyalty and how hubris can be behind overoptimism. Marketing managers who are not “on board” or who are “too negative” may be less successful than those who are “team players” and who are “positive thinkers” despite the fact that they just may be trying to be realistic. Thus, marketing managers may be optimistic because it is politically correct and not because there necessarily is evidence that supports their optimism. And hubris comes up as an explanation of paying too much in corporate takeovers (Roll 1986) and even why newly-built corporate headquarters or monumental retail stores often predict stock price declines (*Wall Street Journal*, January 25, 1996). The motivation for overoptimism in this case is arrogance, although it is also closely related to illusion of control.

What remains is a way to connect our model of human decision making with the nature of marketing decision making and in the context of new products. Having done

that we will have a way of arguing just how, if not why, outside views are essential in reducing the new product failure rate by imposing reality on marketing decisions.

NEW PRODUCT DECISIONS

Against this backdrop of human decision making we can see that marketing managers face several obstacles in making good marketing decisions with respect to new products. It seems facile to say reduce your bias and oversimplified to say get an outsider's view through third-party counsel—and yet that is precisely what managers should do. So the question is not so much why do these things (you would do it to improve your chance of success), but how. It turns out that we can use the very same findings from research on human decision making to affect change in new product decision making precisely because it is selective perception that determines bias *and we can control factors that influence selective perception*. Furthermore, we can *monitor* the factors that moderate the bias-action relationship with the goal of adjusting bias to take better actions.

We can control ego involvement through the makeup of product teams and control viewpoint and confidence through outside views. When combined with a better recognition of the effects of vested interest, illusion of control, risk preference and hubris, the end result can be a process for making marketing decisions that considerably reduces the chance of product failure.

PRODUCT TEAMS

Few things in marketing are as well established as product teams. Companies that use brand or product management systems have well-defined hierarchies of job positions from brand manager to associate and assistant brand managers. Even a newly-hired “brand assistant” is considered a part of the product team. Such teams typically develop an esprit de corps that augers well for their smooth functioning. Indeed, conflicts seem to occur more often between teams than within teams. So, what is the problem with teams?

Consider the following new product decision grid and interpretation suggested by Kathryn Braun:

| | Product Uniqueness | |
|-----------------------------|---------------------------|-----------|
| Management structure | Low | High |
| Team | No ego | Group ego |
| Solo manager | Low ego | Hubris |

Many companies have attempted to reduce ego involvement by relying on teams of managers to develop products (row 1). This is most likely to be effective when product uniqueness is low. Managers have no need to feel ego-involved because the new product is an extension of an existing idea, thus they can't lay claim to it as their own. Further, working in teams would reduce the ownership of the product idea. However, when the product is more unique, the group may exhibit ego-involved tendencies where together they reject disconfirming evidence and "see" only success. In this circumstance third-party counsel is needed.

When one manager is responsible for a product, that manager will exhibit ego-involvement under both levels of product uniqueness (row 2). Under low product uniqueness, the company may be able to bring in their own staff to counsel the manager and use past benchmarking information to set reasonable projections. Under high product uniqueness, the company may not have the background to lend counsel and thus third-party consultation is needed.

For both the “group ego” and the “hubris” manager this third party would provide objective interpretation of existing data and market-size projections. Management should prepare for the fact that the third party may not be readily accepted by managers. This could be avoided by including a session on the importance of objective counsel in new product decision making as part of their managerial training. With the knowledge that ego-involvement is a natural everyday phenomena, managers may be less resistant to accept outside suggestion. The third party should also undergo their own training in order to better understand the managers' mindset. However, some distance is needed to maintain objectivity; e.g., retreats with managers and the third party are *not* recommended.

CONSULTANTS

It is natural to think that the third-party or outside view that we have in mind could be supplied by consultants. But all consultants are not created equal. The compromised advice given by accounting consultants to companies audited by the same firm should be warning enough that objectivity—or more precisely bias—can be bought. Indeed, consultants are subject to the same ego-perception-bias continuum as managers.

Consultants can often maximize their income by never being the bearer of “too bad” news and certainly by providing support for management’s existing views. Where, then, can the unbiased outside view be obtained?

The first alternative is to use independent third parties, where independence is defined by lack of remuneration. Universities, for example, are in a very good position to provide outside views as departmental projects or even class projects. Faculty and students can examine market research data, with appropriate confidentiality agreements, and give unbiased opinions. They can even give opinions without knowing the client’s identity, something not possible with traditional paid consulting.

The second alternative is paid consultants who create organizational entities that review market research data without a direct connection to the client. Under this plan clients may subscribe to the consultant’s services, but not pay directly for each project reviewed. However, this alternative would require stronger ethical standards than now exist at many consulting organizations.

The third alternative is for the company to try to create an objective unit within its own organization. Rather than regarding realists as pessimists, negativists, poor team players or turncoats, the organization could give credit to those individuals who can see the forest for the trees. After all, most of the time product mistakes are so “obvious” (in the sense that they could have been predicted) that a good organization would be better off with product realists than product champions.

Although this paper has gone to some length to outline a new view of human decision making, it is the practical impact on new product decision making that has been its ultimate purpose. New products fail as much for bad marketing decisions as for bad

products. And if the products themselves are bad, then they should not be marketed in the first place.

The biggest danger of the insight that this paper provides is that it is regarded as “obvious.” Who doesn’t realize that managers have egos and are thus biased? Who hasn’t heard of poor team players and product champions? The answer is hardly anyone.

But if you ask yourself why the new product failure rate is so high, why new marketing research techniques do not seem to help reduce it over time (cf. Schultz, 1999) or why marketing managers are rewarded as much for product failure as product success, you know that something has to change. This thing is realism or reality. It’s time for marketing managers to get real.

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