Practical Theory

The best research practitioners are the best theorists.

By Terry Grapentine

Many marketing research practitioners view theory as impractical. The author takes the counterview, claiming that theory is the very foundation on which all rational scientific inquiry is based. Theory is practical for researchers in two ways: It guides them in developing measures of psychological constructs and in explaining and predicting consumer behavior.

In his excellent Winter 1997 Marketing Research article, “Start Your Engines,” Jerry Wind of the Wharton School comments on a study he and Vijay Mahajan conducted a few years earlier: “On perceived value, many managers—and especially top executives—gave marketing research a low rating with high variability. And the perceived role of marketing research in many companies is in decline.”

Wind supports this verdict that a negative perception of the quality of marketing research in the corporate environment exists, by reviewing selected findings for his and Mahajan’s earlier work. Additionally, he identifies and elaborates on a number of reasons for this situation. One factor that he attributes to this sad state of affairs is the “questionable validity of [marketing research] findings.”

This article builds on Wind’s excellent treatise and offers another perspective that partially explains why, in some corporate corners, marketing research is not held in high regard. The premise behind my thesis is that often, marketing research practitioners produce a questionnaire without first developing a theoretical framework or model of what they hope to explain through their research project. They err primarily because they don’t understand theory—they view it as something impractical. And if there’s one thing a corporate product manager wants from a marketing research department, it’s practical research.

THE NATURE OF THEORY

Theory has vernacular and scientific meanings that obfuscate the true role it plays in the field of science, including marketing research. In the English vernacular form, theory often implies one of the following: (1) not practical, as in the statement, “That approach is too theoretical, we need something more practical”; (2) a speculation or guess as in, “My theory is that the object is an asteroid, not a comet”; (3) an ideal state or set of circumstances, as in the statement, “In theory, all economies tend toward equilibrium”; (4) a belief, as in the sentence, “The teacher’s motivation is based on the theory that all kids want to be challenged and thus will be stimulated to learn”; or (5) something accepted as true without proof, often referred to as conventional wisdom, as in the statement, “My mother subscribed to the theory, ‘Feed a cold and starve a fever.’”

In the realm of science, a theory is something altogether different. In his 1991 book Modern Marketing Theory, Shelby D. Hunt defines a scientific theory as “...a systematically related set of statements, including lawlike generalizations, that is empirically testable.” Additionally, Hunt states that the purpose of developing scientific theory is to “...increase
scientific understanding through a systematized structure capable of both explaining and predicting phenomena.”

From the marketing researcher’s point of view this scientific concept suggests that theories are a way by which people gain knowledge and an understanding of “how things work.” For example, physicists have grand unification theories (GUTs) about how the four fundamental forces in the universe—the strong and weak atomic force, gravity, and electromagnetism—are related and how they originated.

Paleontologists have theories about how life evolved on our planet. And molecular biologists develop theories on how organisms defend themselves against bacteria.

In summary, a scientific theory, as defined in Random House Webster’s College Dictionary, “is a verified or established explanation accounting for known facts or phenomenon.” Theories evolve and, one hopes, become better at explaining “how things work” and predicting future phenomenon. In the marketing field, psychometric theories help researchers develop construct measures related to consumer behavior. Marketing theories help the practitioner better explain and predict these constructs by formulating functional relationships between them. Without theory, there are no valid customer satisfaction questionnaires.

**MISGUIDED RESEARCH**

To emphasize the importance of theory to improve the quality of marketing research, I’ll give an example of how ignoring theory leads to a misguided research process. This particular example is a classic case of how poor concept definitions diminish the validity of research findings—a point that Wind makes in his MR article. Additionally, I’ll show how theory development principles can aid practitioners (and academics) in developing useful and unambiguous definitions of marketing concepts. The example focuses on the concept of consumer expectations.

**The Expectations Concept**

Originally, the expectations concept was developed within the disconfirmed expectations theory of consumer satisfaction/dissatisfaction (see Exhibit 1). Within this framework, an expectation is defined as a forecast of performance. A customer’s satisfaction or dissatisfaction with a specific transaction is a function of actual performance, as well as the difference between actual performance and forecasted performance.

For example, assume we’re interested in measuring customer satisfaction with a drive-up teller transaction at a bank. One characteristic of this transaction is how long a customer waits in line to be served. If a customer predicts that he or she will wait five minutes, but in reality waits only one minute, the customer’s expectation is disconfirmed positively, having a positive impact on satisfaction. If the wait time exceeds five minutes, the customer’s expectation is disconfirmed negatively, having a negative impact on satisfaction. If the wait time equals the prediction, the expectation is simply confirmed, causing no increase or decrease in satisfaction.

Note that the disconfirmed expectations theory of consumer satisfaction/dissatisfaction has an unambiguous definition of what an expectation is (i.e., a forecast of performance) and that it focuses on a transaction (i.e., a customer purchasing a product) at a specific point in time.

In comparison, more commonly conducted research studies attempt to model constructs such as customer satisfaction on the basis of a customer’s experience with a product (e.g., customer satisfaction with a bank, a particular brand of vehicle, and so forth) over a period of time, and problems arose. A major cause of these problems was not using fundamental principles of psychometric theory to transfer the expectations concept from one theoretical framework (measuring customer satisfaction at the transaction level) to another (measuring customer satisfaction with a product “relationship” over time).

Many different conceptual expectations definitions were offered; when placed under theoretical scrutiny they were found to be ambiguous, if not downright perplexing. Consequently, operational
definitions of these constructs were found to have severe measurement validity problems.

To understand how this happened, why it happened, and why it should not happen, a basic understanding of how to derive theoretical meaning from constructs is needed. Meaning is derived from three realms: the linguistic realm, the conceptual realm, and the physical realm.

The linguistic realm: Generally, conceptual definitions are first derived from the linguistic realm—the realm of everyday language. Unless conceptual definitions are derived within a formal language system, it isn’t easy to define constructs succinctly, precisely, and unambiguously in the linguistic realm. (Parenthetically, formal language systems exist in fields such as physics and mathematics; however, only recently has a formal language system been proposed for the field of marketing.)

For example, consider Randy Brandt’s discussion of expectations in his Oct. 27, 1997, Marketing News article: “Most customer satisfaction and service quality surveys ask respondents to evaluate a company’s performance on various product and service attributes. Such surveys should also include questions that help the company determine what the customer wants or expects regarding the product and service attributes.

“Suppose you tracked the percentage of customers whose expectations and requirements were ‘met or exceeded’ with respect to special requests and obtained similar results across several years. These results could be obtained if customer expectations did not change and the company’s performance did not improve. However, these results could also be obtained if the company actually improved its performance over time, but customers ‘raised the bar’ by expecting more from this service. Without a measure of customer expectations or requirements, it is impossible to determine accurately which of the two situations is prevalent.”

Here are the potential ambiguities in this example: (1) What do the words “wants” and “expects” mean? Is a customer “want” the same as a customer “expectation”? and (2) What do the words “expectations” and “requirements” mean? Is a customer “expectation” the same as a customer “requirement”? How can we translate these ambiguous terms into operational definitions that are not also ambiguous? More about this shortly.

The conceptual realm: The conceptual realm is the realm of thought—and a unit of thought is a concept. Examples of concepts, represented in linguistic terms, include customer satisfaction, perceived quality, brand equity, and purchase intentions. Nominal definitions of these concepts link the conceptual realm with the linguistic realm.

For instance, the following nominal definition of expectations from an August 1983 Journal of Marketing Research article by Robert B. Woodruff, Ernest R. Cadotte, and Roger L. Jenkins links the linguistic realm with the concept of expectations in the conceptual realm: “[Expectations are] predictions of the nature and level of performance the user will receive.” Functional relationships between concepts constitute the theoretical content of a science. In the linguistic realm, such functional relationships are often referred to as “models.”

Since concepts are expressed in words—they can’t be seen as thoughts—why is it useful to conceive of a conceptual realm as opposed to a linguistic realm? Because we use the linguistic realm is a tool to communicate with one another. As a tool, it comprises symbols (i.e., letters of the alphabet) and rules of usage (i.e., English grammar). Through this medium, thoughts have their own objective reality, enabling people to discuss their content and nature. Additionally, we can examine the linguistic realm independently from the conceptual realm by establishing a formal language system (a system that can more precisely define thoughts in the conceptual realm).

The physical realm: Questionnaires and other methods of collecting data make up the physical realm in the field of marketing research. They are the operational definitions of concepts that marketing researchers investigate. Exhibit 2 shows an example of expectations as a concept in the conceptual realm, its definition in the linguistic realm, and its operational definition as it would appear on a questionnaire in the physical realm.

ASSESSING THEORETICAL MEANINGFULNESS

The theoretical meaning and potential usefulness of a concept is maximized when (1) a concept in the conceptual realm is linked to only one unambiguous and unique definition in the linguistic realm, and (2) the operational definition of the concept in the physical realm is valid, as indicated by a variety of psychometric criteria.

Specific Criteria

The following criteria can be used to assess the theoretical meaningfulness of a concept: (1) ambiguity, (2) intensional vagueness (that’s right, intensional not intentional), and (3) extensional vagueness.

Ambiguity: Ambiguity exists because a concept in the conceptual realm can have multiple
definitions in the linguistic realm. For example, in his April 1997 *Journal of Marketing* article, R. Kenneth Teas identifies 18 different definitions for the term "expectations" in the marketing literature. According to Teas, "Ambiguity reduces the theoretical meaningfulness of language used to express theory and, therefore, reduces the degree to which theories can be precisely expressed, interpreted, and empirically tested. Consequently, when ambiguity exists, measures should be taken to resolve it."

For example, researchers Stephen A. LaTour and Nancy C. Peat define expectations as "a consumer's beliefs about the levels of attributes possessed by a product." Woodruff, Cadotte, and Jenkins define the concept as "predictions of the nature and level of performance the user will receive." An additional source of ambiguity comes from the terms used in these definitions—for example, what does the "nature" of performance mean?

**Intensional vagueness:** A concept's intension is a list of properties possessed by the concept. For example, one property of expectations concepts in general is that they involve compensatory attributes. This means that if customer expectations aren’t met on some attributes, they can be compensated for by exceeding customer expectations on other attributes. Generally, however, definitions of expectations concepts fail to explain how this compensation works. So this particular property of expectations concepts is vague.

**Extensional vagueness:** A concept’s extension focuses on the link between the concept in the conceptual realm and how it’s measured in the physical realm (i.e., by the questionnaires and other data collection methods employed by researchers to measure a particular concept). For example, one interpretation of expectations defines a type of performance forecast as a property of expectations—a forecast requires a respondent to focus on “companies that would deliver excellent quality” and whether a particular attribute is “essential” for excellent service.

But what is the nature of this forecast? The term “essential” in the operational definition is vague and contributes to the extensional vagueness of the definition. In terms of service, what does “essential” mean: (1) that a company provides the minimum level of attribute “X” required by a customer in order for the company’s service to be considered, or (2) that a company provides the “ideal” level of attribute “X”? The problem with this particular definition of expectations is the break down in the link between the conceptual and physical realms of meaning.

Teas explored this issue in 1993. His methodology involved administering the SERVQUAL scale in Exhibit 3, which is an operational definition of the expectations construct. Respondents who did not strongly agree with a statement were asked to explain their response. The findings in Exhibit 3 indicate that a considerable proportion of the 432 responses interpreted the question differently—one respondent didn’t strongly agree that a feature was absolutely essential for an excellent company because it was not feasible for an excellent company to do so, whereas another
respondent didn’t strongly agree because the feature or attribute was not important.

This clearly reflects a breakdown in the conceptual definition of expectations—and how it is operationally defined and interpreted by respondents. Consequently, a significant proportion of the variance in the expectation measure is attributable to measurement error.

Theory’s most important role is to guide research practitioners in the development of construct measures so they are valid and reliable. But another role is to guide research practitioners in discovering functional relationships between and among psychological constructs.

**IMPROVING RESEARCH QUALITY**

A frequent activity in the marketing research field is the development of models to explain and predict consumer purchase intentions and behavior. These models, comprising measurements of various psychological constructs such as perceived product quality and price competitiveness (i.e., independent variables), are hypothesized to predict a dependent variable measure such as a consumer’s purchase intentions.

The models are built on a type of experimental design that utilizes conjoint analysis, for example, or on survey research that incorporates regression or discriminate analysis methods to examine the functional relationships between these constructs. In all instances, theory should guide the marketing researcher in specifying the functional relationships between the variables in these models.

Developing models can be quite daunting because many examples of consumer models already exist in marketing literature, not to mention the number of proprietary models developed in the private sector. My goal is not to discuss the role of theory in explaining nuances in particular models, but rather to discuss how theory can help the practitioner develop better, more valid models.

**Independent and Dependent Variables**

Perceived performance is an important predictor of satisfaction in the disconfirmed expectations theory of consumer satisfaction/dissatisfaction. All models in the published literature that purport to explain and predict dependent variables, such as customer satisfaction or customer purchase intentions, have at least one component that’s a measure(s) of a product’s perceived performance. But how do we measure perceived performance?

In my travels as a marketing research practitioner I’ve seen a 10-point scale (with the end points labeled as 10 = “extremely satisfied” and 1 = “not satisfied”) being used to measure independent variables.

The number of points on the scale can change—5-point scales or 7-point scales are often used—but the scale descriptors don’t change radically. Although, a problem arises when we use the same scale descriptors to measure overall satisfaction, as in the question: “Overall, how satisfied are you with [insert product or service description]?” Here the scale used to measure the independent and dependent variables measures them on the same satisfaction continuum. As a result, one measure of satisfaction (i.e., the independent variable) is used to predict another measure of satisfaction (i.e., the dependent variable). This is called a tautology. And it’s tantamount to saying that customer satisfaction is a function of customer satisfaction—which is nonsensical.

How can theory help? A review of marketing theory shows that customer satisfaction with a product is in large measure affected by how the product performs. Consequently, the independent variables in such models need to measure perceived product performance where scale anchors could be “poor” and “excellent.” Or, if the attributes are crafted so they state some aspect of product performance quality, scale descriptors could be “Does not at all describe the product” and “Describes the product extremely well.”

**No Mirror Images**

A large Midwest retail chain developed a model that purported to predict store sales. One independent variable in the model was store size as measured by square feet. If the model held true,
all the company needed to do to increase company sales was to increase the size of its stores.

Sometimes identifying independent variables that are mirror images of dependent variables is not so easy. For example, in the crop protection chemicals market, consider the following attribute: “Recommended by my dealer” (i.e., the crop protection chemical dealer from whom the farmer purchases chemicals). Is this an independent or a dependent variable? It’s a dependent variable because the dealer’s recommendation is so intimately linked with the purchase decision for a particular product, making it an indicator of purchase intentions—which, theoretically, is a dependent variable.

Theory guides the practitioner in making such close calls; however, the answer is not always easily tractable. Thus, we must rely on our judgment, realizing that our judgment can be incorrect.

**Spurious Correlations—Confusing Causation**

Consider the extreme example of a spurious correlation in Exhibit 4. Body weight is a significant predictor of hair length, but body weight is not a cause of hair length. A more theoretically sound predictor of hair length is gender, though gender is correlated to both hair length and body weight.

Theory instructs us to examine such potential relationships in our consumer models. For example, researchers often examine relationships between demographic variables and attitudes toward product usage (e.g., demographic variables are often banner points in cross tabulation tables). Although such analysis can be used to target marketing messages at certain audiences, in many cases, demographics are not a cause of product adoption or rejection. Instead they are often correlated with certain attitudes and beliefs that cause certain consumer behavior. In this regard, the practitioner should keep in mind Louis Walkup’s first three laws of statistics, cited in William G. Zikmund’s 1994 book, *Exploring Marketing Research*:

- **Law No. 1:** Everything correlates with everything, especially when the same individual defines the variables to be correlated.

- **Law No. 2:** It won’t help very much to find a good correlation between the variable you are interested in and some other variable you don’t understand any better.

- **Law No. 3:** Unless you can think of a logical reason why two variables should be connected as cause and effect, it doesn’t help much to find a correlation between them. In Columbus, Ohio, the mean monthly rainfall correlates very nicely with the number of letters in the names of the months!

**Is One Dependent Variable Enough?**

Often in survey research we can obtain more than one dependent variable measure. In Exhibit 5, taken from a Winter 1997 *Marketing Research* article by William R. Dillon et al., a credit card study has two dependent variables: customer satisfaction and card-level spending. The article’s authors explain the theoretical relationship between these two variables as follows: “According to the system, perceptions of customer service and cardmember benefits are viewed as drivers of a customer’s satisfaction with Amex; a unit change in the rating of the

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**Exhibit 4**

*Spurious correlation example*

**Exhibit 5**

*Simple casual system*

\[
\text{Customer service} \quad \alpha_{\text{CusSer}} \quad \text{Customer satisfaction} \quad \beta_{\text{Sat}} \quad \text{Card-level spending}
\]

\[
\text{Cardmember rewards} \quad \alpha_{\text{Rewards}} \quad \text{Customer satisfaction} + \epsilon_{\text{Satisfaction}} + \epsilon_{\text{Card-level spending}}
\]

\[
\text{Satisfaction} = \alpha_{\text{CusSer}} \cdot \text{Customer service} + \alpha_{\text{Rewards}} \cdot \text{Cardmember rewards} + \epsilon_{\text{Satisfaction}}
\]

\[
\text{Card-level spending} = \beta_{\text{Sat}} \cdot \text{Satisfaction} + \epsilon_{\text{Card-level spending}}
\]

*Source: Dillon, et al. (1997).*
quality of customer service will yield an increase in cardmember satisfaction by some amount. Overall satisfaction with Amex is, in turn, viewed as a driver of the level of card spending; a unit change in cardmember satisfaction will increase card-level spending by some amount, and so on.”

**ESTIMATING MODELS**

We can estimate models, such as the one in Exhibit 5, with a number of structural equation modeling software programs (e.g., Amos or those available in SPSS). Here are some suggestions for doing so.

First, be more sensitive to issues surrounding measurement. An excellent reference for every researcher’s desk is Jum Nunnally’s 1994 *Psychometric Theory.* This book has something for everyone—from nontechnical discussions of measurement validity and reliability to technical treatments of advanced methods such as confirmatory factor analysis.

Keep in mind, to paraphrase Nunnally, that we don’t measure consumers, we measure attributes of consumers—it sounds trivial, but it has extremely important implications. To compare and contrast consumers on an attribute, an attribute must measure just one thing. It must be unidimensional. In our example of a fairly popular construct in marketing research—the concept of expectations—this has not always been the case.

Second, think in terms of models. The reason we conduct applied marketing research is to explain customer satisfaction, brand equity, consumer brand loyalty, and so forth. Models specify the relationships between independent and dependent variables. And these relationships are more complex than they sometimes appear.

Third, read academic journal articles. Sure, some can be difficult to understand, but it’s not necessary to completely understand an article in order to benefit from it. Be selective. Identify articles that are applicable to your particular situation. The process, to borrow a marketing term, should be compensatory—reading something interesting and potentially useful should partially compensate for the time and effort it takes to read and understand it.

Fourth, promote basic research studies in your organization. A basic research study involves a measurement or a theoretical modeling issue, and the objective behind it is to improve the measurement method or the theoretical model, not to answer a particular marketing question. For example, there can be differences of opinion in your department about how to measure customer loyalty or how to develop a reliable measure of consumers’ reactions to product concept tests.

A basic research study could reveal alternative ways of measuring loyalty or conducting concept tests by identifying those measures or data collection methods that are the most useful and valid. In short, basic research conducts research on research. Successful companies do product research, so why shouldn’t marketing research departments do their own “product” research?

Fifth, don’t be afraid to use a more difficult, less common research methodology if it’s more theoretically sound and ultimately can generate more useful results. Remember, complex questions have simple, easy-to-understand, wrong answers. Research issues in the field of marketing research are complex because we’re trying to understand human behavior. Consequently, practitioners must advocate promoting the most theoretically sound research procedures and methods.

Sixth, create a document that explains the theory of consumer behavior for a product or market. Over time, many studies are conducted on a particular product or class of products, but never a single document that summarizes: (1) what was learned in these studies, (2) the theoretical reasoning behind the constructs that were measured and how they were measured, or (3) the relationships among these constructs in explaining consumer behavior. Such a document is, dare I say, practical—for a number of reasons:

- **Given the level of turnover in some marketing research departments, it provides a repository of knowledge on how research is conducted in a particular area.**

- **It serves as a resource in reviewing whether changes in the marketing mix are congruent with what is known about the consumer and the market.**

- **It forces someone, perhaps the research manager, to take the time to review all the research that has been done in an area. Results could include finding patterns in historical surveys that can’t be discerned in any single study, or developing hypotheses that can be tested in future projects.**

- **It can help determine whether future research will add to management’s body of knowledge or if the intended research is superfluous.**
Finally, spend more time thinking about how consumers make decisions as opposed to why they make decisions. I don’t mean to downplay consumer behavior—it’s a central concern of marketing management. But, we can’t truly understand why a consumer purchases brand X over brand Y unless we also understand how that decision is made.

Exploring the how behind consumer decision making necessarily expands the field of marketing and marketing research into other venues, such as psychology, neuroscience, philosophy, and physics. Psychology provides insights into human motivation. And neuroscience examines how the brain works (knowing how the brain works will provide invaluable insights into how the brain—the consumer—perceives and processes information). But this accumulated knowledge won’t produce explanatory models with 100% predictability. Or will it?

When we get to this level of how consumers make decisions, we inevitably ask the question: Does free will exist?

That’s where philosophy and physics come in. When we get to this level of how consumers make decisions, we inevitably ask the question: Does free will exist? And free will, some physicists think, is a quantum phenomenon.

A FINAL THOUGHT

Theory plays two important roles in marketing research: It provides guidance in developing measures of psychological constructs, and it helps practitioners discover functional relationships between constructs when investigating consumer behavior. Theories, we hope, become better over time—providing greater insight and understanding of markets and consumers. And the best research practitioners are the best theorists (though the converse is not true).

The upshot—there’s nothing more practical than a good theory.

ADDITIONAL READING


