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CONSUMER RESEARCH:

How valid and useful are all our consumer behavior research findings?

A State of the Art Review¹

WHETHER one does, sells, and/or buys consumer research, it stands to reason one should be able to critically evaluate and distinguish that which is acceptable from that which is junk. However, judging from papers which continue to be published in our most prestigious journals and from research reports which often form the basis for important marketing management and public policy decisions, it is all too apparent that *too large a proportion of the consumer (including marketing) research literature is not worth the paper it is printed on or the time it takes to read.*

Nearly a decade ago, Kollat et al. wrote:

The consumer behavior literature has doubled during the last five years. This constitutes a remarkable achievement by almost any standard. Unfortunately, however, it would not be surprising if 90% of the findings and lack of findings prove to be wrong . . .²

Unfortunately, the same frank evaluation can be made today. Unless we begin to take corrective measures soon, we stand to all drown in a mass of meaningless and potentially misleading junk! This assertion can be documented by considering five broad categories of problems: the contemporary the-

ories (and comprehensive models), *methods, measures, statistical techniques, and subject matter* in consumer research. Before doing so, a brief digression is needed to make three points:

1. The evaluation of consumer research should logically be predicated upon a definition of consumer behavior. Such a definition has been presented and described at length elsewhere.³ In essence, it holds that *consumer behavior* encompasses the acquisition, consumption, and disposition of goods, services, time, and ideas by decision-making units (e.g., individuals, families, organizations, etc.). *Consumer research*, then, is simply research addressed to studying some aspect of consumer behavior.
2. I shout at the outset: MEA CULPA! I have committed many of the sins about to be described. No doubt, I will continue to commit at least some of them long after this is published and forgotten. No one of us who is a researcher is without guilt. This does not mean, however, that we should passively accept the status quo and thereby stifle the impetus toward improvement.
3. Except in one instance, naming names and citing specific articles as illustrations of the problems being iterated would probably serve few, if any, positive ends. The interested reader has only to examine the articles in our leading journals to find

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numerous suitable examples. On the other hand, because they may serve a guidance function for some, names are named and specific articles cited in order to illustrate *positive* examples addressed to the issue under consideration. However, citing an article as being positive in one respect does not mean that it is void of other deficiencies.

Theories, Models & Concepts

Over the past decade, an increasing amount of attention has been devoted to the development, presentation, and discussion of relatively comprehensive theories and models of consumer behavior.⁴ Five years ago, Kollat et al.⁵ noted: "These models have had little influence on consumer behavior research during the last five years. Indeed, it is rare to find a published study that has utilized, been based on, or even influenced by, any of the models identified above." Unfortunately, not much has changed since then.

"Look Ma—No Theory"

Despite the availability of consumer behavior theories and models, the impetus and rationale underlying most consumer behavior research seems to rest on little more than the availability of easy-to-use measuring instruments, the existence of more or less willing subject populations, the convenience of the computer, and/or the almost toy-like nature of sophisticated quantitative techniques. Little reliance is placed on theory, either to suggest which variables and aspects of consumer behavior are of greatest importance and in need of research or as a foundation around which to organize and integrate findings. It is still true that nothing is so practical as a good theory. However, while researchers (particularly in academia) talk a good game about the value and need for theory, their actions loudly speak otherwise.

The Post Hoc, Atheoretic, Shotgun Approach

By neglecting theory, the researcher increases the likelihood of failure to understand his own data and/or be able to meaningfully interpret and integrate his findings with findings obtained by others. This problem has elsewhere been referred to as "the atheoretical shotgun approach" to conducting research.⁶ These papers tried to illustrate the nature of this problem by considering empirical attempts to relate personality variables to consumer behavior. The most frequently quoted passage is as follows:⁷

Investigators usually take a general, broad coverage personality inventory and a list of brands, products, or product categories, and attempt to correlate sub-

jects' responses on the inventory with statements of product use or preference. Careful examination reveals that, in most cases, the investigators have operated without the benefit of theory and with no *a priori* thought directed to *how*, or especially *why*, personality should or should not be related to that aspect of consumer behavior being studied. Statistical techniques, usually simple correlation of variants thereof, are applied and anything that turns up looking halfway interesting furnishes the basis for the Discussion section. Skill at *post-diction* and *post hoc* interpretation has been demonstrated, but little real understanding has resulted.

These papers went on to illustrate why it was necessary to use theoretically derived hypotheses for specifying variables and relationships in advance. That is, they called on consumer researchers to (1) make specific predictions of both expected differences and *no* differences, (2) explain the reasoning underlying these predictions, and (3) do both *prior* to conducting their research. To illustrate:

You're sitting with a friend watching Pete Rose at bat. Rose hits a home run and your friend says: "I knew he was going to hit that home run. He always hits a home run off right-hand pitchers when he holds his feet at approximately a 70° angle to each other and his left foot pointing directly at the pitcher."

Think of how much greater confidence you would have had in your friend's forecast if he had made this as a *pri* diction just as Pete Rose was stepping into the batter's box. (Anticipating another issue raised below, replication, think of how much greater confidence you would have if your friend had predicted Rose would hit home runs on two subsequent occasions just before Rose actually hit home runs, and also predicted Rose would *not* hit a home run on eight other instances, and he did not.

Although considered in the context of relating personality variables to consumer behavior, it is clear that almost every aspect of consumer research reflects the atheoretic shotgun approach, particularly when it comes to utilizing concepts borrowed from the behavioral sciences. Most consumer researchers are still pulling shotgun triggers in the dark.

"Whoop! Did you Happen to See Where My Concept Went?"

Even in those instances where consumer researchers seem to be sincerely interested in conducting research based upon a firm conceptual foundation, they sometimes manage to misplace their concepts when it gets down to the nitty gritty. For example, Gardner states:⁸

It is imperative that any definition of deception in advertising recognizes the interaction of the advertisement with the accumulated beliefs and experience of the consumer.

Two paragraphs later he provides a definition which *ignores* this imperative, and subsequently goes on to propose procedures which completely disregard the fact that deception may occur as a function of the prior beliefs of the consumer and not as function of the ad (or ad campaign) in question. The reason why we cite this paper here (and below) is because it has already been cited by others—receiving the 1975 Harold H. Maynard Award “for its contribution to marketing theory and marketing thought.”⁹

Another equally frustrating example is provided by those who define brand loyalty as an hypothetical construct predicted upon the cognitive dynamics of the consumer—and then proceed to base their measure of brand loyalty *solely* on the buyer's overt behavior. The consumer behavior literature contains numerous such examples of our inability to have our measures of concepts correspond to these concepts.

The “Theory of the Month” Club

Interestingly, the failure to use existing models and theories has not discouraged some from proposing new models and theories, thereby generating a different kind of problem. Several of our most respected scholars seem to belong to a “theory of the month” club which somehow requires that they periodically burst forth with new theories and rarely, if ever, provide any data collected specifically to support their theories. Perhaps those with a new theory or model should treat it like a new product: either stand behind it and give it the support it needs (i.e., test and refine it as necessary)—or take it off the market!

Single-Shot vs. Programmatic Research

Another theory-related problem is the widespread avoidance of programmatic research. Judging from the published literature, there are fewer than a dozen individuals who have conducted five or more separate investigations in systematic and sequentially integrated fashion designed to provide incremental knowledge regarding a single issue. Instead, we have a tradition of single-shot studies conducted by what one scholar has termed “Zeitgeisters-Shysters.”¹⁰

Rarely do single-shot investigations answer all the questions that need to be answered or make definitive contributions on any subject of importance. Yet many consumer researchers seem to operate under the mistaken belief that such studies are capable of yielding payout of substance and duration. I am not advocating that we do *only* programmatic research. I appreciate the allure, excitement, and challenge often inherent in such studies and the potential that they *sometimes* have for providing resolution to a problem of immediate concern.

However, to make contributions of substance, it is necessary that a greater proportion of our research efforts be programmatic.

Procedures & Methods

The Ubiquitous Verbal Report

By far, the most prevalent approach to collecting consumer data involves eliciting verbal reports via interviews or through self-administered questionnaires.

Typically, verbal reports assess either (a) recall of past events, (b) current psychological states (including attitudes, preferences, beliefs, statements of intentions to behavior, likely reactions to hypothetical events), and/or (c) sociodemographic data. Of the 44 empirical studies in Schlinger,¹¹ 39 (87%) were based primarily or entirely on verbal report data. Of the 36 empirical studies in the first six issues of the *Journal of Consumer Research*, 31 (more than 85%) were also based primarily or solely on verbal reports. Given the numerous biases in verbal reports and the all-too-often demonstrated discrepancy between what people say and what they actually do, it is nothing short of amazing that we persist in our slavish reliance on verbal reports as the mainstay of our research.

The problems inherent in the ubiquitous verbal report approach can be organized into three categories: (1) interviewer error, (2) respondent error, and (3) instrument error.

Interviewer Error. We will disregard consideration of interviewer errors, since more than 75% of the published verbal report studies are based upon the self-administered questionnaires.

Respondent Error. Verbal report data are predicated upon many untested and, in some cases, invalid assumptions. Many of these concern the respondent. As examples, consider the following assumptions underlying attempts to elicit recall of factual information:

- ▶ Prior learning (and rehearsal) of the information has actually taken place; that is, something actually exists in memory to be recalled.
- ▶ Once information is stored in memory, it remains there in accurate and unmodified form.
- ▶ Said information remains equally accessible through time.
- ▶ There are no respondent differences in ability to recall which would be controlled or accounted for.

▶ Soliciting a verbal report is a non-reactive act; that is, asking questions of respondents is unlikely to have any impact on them and on their responses.

Analogous assumptions exist with respect to assessing psychological states (e.g., attitudes, preferences, intentions, etc.) via verbal reports. For example, Bogart noted that asking the respondent a question often "forces the crystallization and expression of opinions where (previously) there were no more than chaotic swirls of thought."¹² Actually, the assumptions underlying recall of factual material are few and simple relative to assumptions underlying verbal reports used as indicants of psychological states. Perhaps the most effective way to summarize the state of affairs is to say that many of the fundamental assumptions which underlie the use of verbal reports are completely invalid. The reader is asked to cogitate regarding the ramifications of this fact.

Instrument Error. Consider further the fact that instruments for collecting verbal reports often contribute as much error variance as do interviewers or respondents, or even more. In general, a large proportion of our questionnaires and interview schedules impair rather than enhance efforts to collect valid data. More often than not, we employ instruments which, from the respondent's perspective, are ambiguous, intimidating, confusing, and incomprehensible. Developing a self-administered questionnaire is one of the most difficult steps in the entire research process. Unfortunately, it is commonly the most neglected.

Formulating questions and questionnaires seems like such an easy thing to do that everyone is assumed to be an expert at it, or at least adequately capable. Yet many never become aware of the literally hundreds of details that should be attended to.¹³ We assume that because we know what we mean by our questions and we are not confused by the layout and organization of our instrument, data collected using this instrument will naturally be valid; i.e., any errors which result are obviously a function of the respondent and not a function of our instrument. As a consequence, we are often left with what computer technicians refer to as GIGO—Garbage In, Garbage Out. In most instances, the investigator is hardly even cognizant of the fact that this has occurred.

Please note that I am NOT proposing that we do away with verbal reports (i.e., interview and self-administered questionnaires). They are a valid and vital part of our methodological armamentarium. However, if we are to continue placing such great reliance on verbal reports, the least we ought to do is

devote greater attention to the basics; i.e., learn how to formulate questions and structure questionnaires. What does it mean if a finding is significant, or that the ultimate in statistical analytical techniques have been applied, if the data collection instrument generated invalid data at the outset?

But do we actually have to place slavish reliance on the verbal report? Certainly not! One alternative is to devote less time to studying what people say they do and spend more time examining what it is that they do *do*. In other words, we can place greater emphasis on studying actual behavior relative to the amount of effort we place on studying verbal reports regarding behavior.

There have been several recent developments in this regard.¹⁴ We would be well advised to begin using these as alternatives and/or supplements to the ubiquitous verbal report. As Platt notes: "Beware the man of one method or one instrument . . . he tends to become method oriented rather than problem oriented."¹⁵

Static Methods for Dynamic Process

We also need to begin studying consumer behavior in terms of the dynamic process that it is. Virtually all consumer researchers tend to consider consumer behavior as a dynamic, information processing, decision-making, behavioral process. Yet probably 99+% of all consumer research conducted to date examines consumer behavior via static methods administered either before or after the fact. Instead of being captured and studied, the dynamic nature of consumer decision making and behavior is squelched and the richness of the process ignored. Our static methods are inappropriate for studying our dynamic concepts. This issue is treated in greater detail elsewhere.¹⁶

Roosters Cause the Sun to Rise

Consider, also, the necessity for greater reliance on the experimental method, particularly in those instances where cause-effect assertions are made or alluded to. Examination reveals a surprising number of instances in which causation is implied or actually claimed on the basis of simple correlation. It bears repeating: no matter how highly correlated the rooster's crow is to the sun rising, the rooster does not cause the sun to rise.

More and Richer Variables

A final set of methodological issues concerns the need for research which (1) incorporates measures of a variety of dependent variables, (2) explores the combined and perhaps interacting impact of a variety of independent variables, and (3) uses multiple measures of the same dependent variable.

With respect to the former, it is often possible to measure a variety of different dependent variables at little additional cost (e.g., decision accuracy, decision time, and subjective states).¹⁷ Unfortunately, opportunities for substantially enhancing understanding through the inclusion of a variety of dependent variables are generally ignored. Equally important, we live in a complex, multivariate world. Studying the impact of one or two variables in isolation would seem to be relatively artificial and inconsequential. In other words, we need more research which examines and is able to parcel out the impact of a variety of factors impinging in concert.

It is also too often true that conclusions are accepted on the basis of a single measure of our dependent or criterion variable. The costs involved in incorporating a second or third measure of that same variable are usually negligible, particularly when considered in terms of the increased confidence we could have in both our findings and our concepts if we routinely used a variety of indices and found that all (or substantially all) provided the same pattern of results.¹⁸ This second issue (namely, using multiple measures of the same variable) relates more to the validity of our measure than to our methods, and is elaborated upon below.

Measures & Indices

Our Bewildering Array of Definitions

Kollat, Blackwell, and Engel¹⁹ have referred to the "bewildering array of definitions" that we have for many of our core concepts.

As one example, at least 55 different and distinct measures of brand loyalty have been employed in the more than 300 studies comprising the brand loyalty literature.²⁰ Virtually no attempt has been made to identify the good measures and weed out the poor ones. Almost everyone has his own preferred measure and seems to blithely and naively assume that findings from one investigation can easily be compared and integrated with findings from investigations which use other definitions.

The same horrendous state of affairs exists with respect to many of our other core concepts. There are at least four different types of "innovator" definitions²¹ and three different categories of "opinion leadership" definitions (i.e., self-designating, sociometric, and key informant). Each one of these categories is usually broken out into several specific forms. As examples, Rogers and Catano,²² King and Summers,²³ and Jacoby²⁴ all provide different operationalizations of self-designating opinion leadership.

More stupefying than the sheer number of our measures is the ease with which they are proposed and the uncritical manner in which they are accepted. In point of fact, most of our measures are only measures because someone says that they are, not because they have been shown to satisfy standard measurement criteria (validity, reliability, and sensitivity). Stated somewhat differently, most of our measures are no more sophisticated than first asserting that the number of pebbles a person can count in a ten-minute period is a measure of that person's intelligence; next, conducting a study and finding that people who can count many pebbles in ten minutes also tend to eat more; and, finally, concluding from this: people with high intelligence tend to eat more.

Wanted Desperately: Validity

A core problem is the issue of validity: Just how valid are our measures? Little attention seems to be directed toward finding out. Like our theories and models, once proposed, our measures take on an almost sacred and inviolate existence all their own. They are rarely, if ever, examined or questioned.

Several basic types of validity exist, although often described with somewhat varying terminology.²⁵ In a highly readable and almost layman-like presentation of the subject, Nunnally writes of three basic types:²⁶ (1) content validity which is generally irrelevant in consumer research, (2) predictive validity, (3) construct validity. Face validity, a non-psychometric variety, refers to whether a measure looks like it is measuring what it is supposed to be measuring. Examination of the core consumer behavior journals and conference proceedings since 1970—a body of literature consisting of approximately 1000 published articles—reveals the following:

Face Validity. First, there are numerous examples of face validity. The measures used almost always look like they are measuring that which they are supposed to be measuring. However, the overwhelming majority of studies go no further, i.e., provide no empirical support. Thus, face validity is often used as a substitute for construct validity.

Predictive Validity. There are also a sizable number of studies which suggest the existence of predictive validity, that is, the measure in question seems to correlate, as predicted, with measures of other variables. Unfortunately, many investigators do not seem to recognize that predictive validity provides little, if any, understanding of the relationship. One can have a predictive validity coefficient of .99 and

still not know why or what it means—other than the fact that the scores on one variable are highly predictive of scores on a second variable. The relationship may even be meaningless. As one example, Heeler & Ray note that Kuehn in 1963 comments that he:²⁷

... improved the ability of the Edwards Personal Preference Schedule (EPPS) to predict car ownership. He did it with EPPS scores computed by subtracting 'affiliation' scores from 'dominance' scores. Such a difference really has no psychological or marketing significance; it is just a mathematical manipulation that happened to work in one situation.

Obviously, high predictive validity doesn't necessarily have to be meaningful.

Cross-Validity. One type of predictive validity, however, receives too little attention, namely, cross-validity. "Whereas predictive validity is concerned with a single sample, cross-validity requires that the effectiveness of the predictor composite be tested on a *separate* independent sample from the *same* population."²⁸ It should be obvious that unless we can cross-validate our findings, we may really have no findings at all. Again, examination of the literature reveals few cross-validation studies.²⁹

Construct Validity. The most necessary type of validity in scientific research is construct validity.

Examination of the recent literature indicates that a negligible proportion of our productivity has been directed toward determining construct validity. A large part of the problem lies in the fact that many researchers appear to naively believe that scientific research is a game played by creating measures and then applying them directly to reality. Although guided by some implicit conceptualization of what it is he is trying to measure, the consumer researcher rarely makes his implicit concepts sufficiently explicit or uses them as a basis for developing operational measures. Yet virtually all contemporary scholars of science generally agree that the concept must precede the measure.³⁰

It is not our intention to provide a lengthy dissertation of the nature of scientific research. We simply wish to point out here that many of our measures are developed at the whim of a researcher with nary a thought given to whether or not it is meaningfully related to an explicit conceptual statement of the phenomena or variable in question. In most instances, our concepts have no identity apart from the instrument or procedures used to measure them.

As a result, it is actually impossible to evaluate our measures. "To be able to judge the relative value of measurements or of operations requires criteria beyond the operations themselves. If a concept is

nothing but an operation, how can we talk about being mistaken or about making errors?"³¹ In other words, scientific research demands that clearly articulated concepts (i.e., abstractions regarding reality) intervene between reality and the measurement of reality.

Probably the most efficient means for establishing construct validity is the Campbell and Fiske *multi-method* × *multi-trait* approach.³² Despite the fact that numerous papers refer to this approach as something; that "could" or "should" be applied, considerably less than 1% of our published literature has actually systematically explored construct validity using this approach.³³ "Before one can test the relationship between a specific trait and other traits, one must have confidence in one's measure of that trait."³⁴ If we cannot demonstrate that our concepts are valid, how can we act as if the findings based upon measures of these concepts are valid?

Convergent Validity. A basic and relatively easy-to-establish component of construct validity is convergent validity. This refers to the degree to which attempts to measure the same concept using two or more different measures yield the same results. Even if few construct validity investigations are available, it seems reasonable to expect that, since many of our core concepts are characterized by numerous and varied operationalizations, we should find many studies to demonstrate convergent validity.

Surely there must be many investigations which have concurrently used two or more measures of these concepts, thereby permitting us to assess convergent validity. Examination of the literature reveals that such is not the case. Somewhat incredibly, only two (out of more than 300) published studies have administered three or more brand loyalty measures concurrently to the same group of subjects, thereby permitting an examination of how these measures interrelate.³⁵

Our other core concepts fare equally poorly. Data that are available often indicate that different ways of measuring innovators are negligibly related to each other.³⁶ Given that we cannot demonstrate adequate convergent validity, it should be alarmingly obvious that we have no basis for comparing findings from different studies or making generalizations using such measures. More widespread use of multiple measures is urgently needed so that we can begin the relatively simple job of assessing convergent validity. We are being strangled by our bad measures. Let's identify and get rid of them.

Reliability & Replication

Another fundamental problem with our measures is that data regarding their reliability, particularly test-

retest reliability, are rarely provided. As an illustration, only a single study appears in the entire brand loyalty literature which measures the test-retest reliability of a set of brand loyalty measures.³⁷ A similar state of affairs exists with respect to indices of other core constructs.

Consider also the case of the test-retest reliability of recall data. In the entire advertising literature, only two published articles can be found which provide data on the test-retest reliability of recall data.³⁸ Young notes that results obtained in ten retests were the same as those in the initial test in only 50% of the cases.³⁹ Assuming we were ill and actually had a body temperature of 103° Fahrenheit, how many of us would feel comfortable using a thermometer if, with no actual change in our body temperature, this thermometer gave us readings of 97.0°, 100.6°, 98.6°, and 104.4°, all within the space of one 15-minute period. Yet we persistently employ indices of unknown reliability to study consumer purchase decisions and behavior. More sobering, we often develop expensive nationwide promotional strategies and wide-ranging public policies based on findings derived from using such indices.

There is a strong necessity for replicating our findings using different subject populations, test products, etc. The name of the game is confidence in our findings.

Measurement Based on House-of-Cards Assumption

Another frequently appearing problem is the tendency to have one's measures (or proposed measures) rest on an intertwined series of untested and sometimes unverifiable assumptions so that the measures used are sometimes five or more steps removed from the phenomenon of interest. In such cases, if a single one of the many assumptions is rendered invalid, the entire measurement system must necessarily come cascading downward. Such is the case with the logic developed in the article on deceptive advertising noted above.⁴⁰

The Folly of Single Indicators

A final measurement problem is easily illustrated by posing the following question: "How comfortable would we feel having our intelligence assessed on the basis of our response to a single question?" Yet that's exactly what we do in consumer research. Brand loyalty is often "definitively assessed" by the response to a single question; the same is true with respect to virtually all of our core concepts. The literature reveals hundreds of instances in which responses to a single question suffice to establish the person's level on the variable of interest and then serves as the basis for extensive analysis and entire articles.

Just as is true of such concepts as personality and intelligence, most of our core concepts (e.g., opinion leadership, brand loyalty, innovation proneness, perceived quality, perceived risk, etc.) are multi-faceted and complex. Intelligence and personality are generally measured through a battery of different test items and methods. Even single personality traits are typically assessed via 30 or 40 item inventories. Given the complexity of our subject matter, what makes us think that we can use responses to single items (or even to two or three items) as measures of these concepts, then relate these scores to a host of other variables, arrive at conclusions based on such an investigation, and get away calling what we have done "quality research?"

Statistics, Statistics

In general, our statistical techniques for analyzing data reflect the fewest number of problems and, in recent years, probably the greatest number of advances. However, at least four major problems remain.

Number Crunching

I have finally reached the point where I am no longer automatically impressed by the use of high-powered and sophisticated statistics. Why? Because too often the use of these statistics appears *not* to be accompanied by the use of another high-powered and sophisticated tool, namely, the brain. For example, what does it really mean when the fourteenth canonical root is highly significant and shows that a set of predictors including size of house, purchase frequency of cake mix, and number of times you brush your teeth per day is related to age of oldest child living at home, laundry detergent preference, and frequency of extra-marital relations? Examination of the recent consumer research literature reveals many more instances of such mindless applications.

Multi-Layered Madness

In its most sophisticated form, number crunching involves the multi-layering of statistical techniques so that the output from one analysis provides the input for the next analysis. Sometimes, this statistical version of musical chairs involves five to ten different techniques used in series. Again, given the nature of the data collected in the first place, what does the final output actually mean?

Measuring Giant Icebergs in Millimeters and Using Calipers to Measure Melting Marshmallows.

Perhaps what is most surprising about this number crunching is the fact that the data being crunched are usually exceedingly crude and coarse to begin

with. As already noted, the large majority of our data are collected using the self-administered questionnaire. Yet many researchers haven't the foggiest idea about the basic DOs and DON'Ts of questionnaire construction. Consider also the fact that the reliability and validity of the data we collect are often assumed, not demonstrated.

Finally, consider the fact that trying to measure diffuse, complex, and *dynamic* phenomena such as attitudes, information processing, decision-making, etc., may be like trying to measure melting marshmallows with Vernier calipers. In other words, what are we doing working three and four digits to the right of the decimal point? What kind of phenomena, measures, and data do we really have that we are being so precise in our statistical analyses?

Substantial developments in both our methodology (particularly in regard to questionnaire construction) and the psychometric quality of our measures (particular in regard to validity and reliability) are needed before use of high-powered statistics can be justified in many of the instances where they are now being routinely applied.

Static State Statistics

There is one area, however, in which our statistics can use improvement. By and large, most of our statistics are appropriate only for data collection using traditional, cross-sectional, static methodologies. Just as we have a need for the further development of dynamic methodologies, we need further development of statistics for analyzing the data collected using such methods. That is, we need statistics which do not force dynamic process data to be reduced to static-state representations. Trend analysis and cross-lagged correlations can and have been used in this manner. However, our repertoire of statistical techniques for handling dynamic data needs to be expanded, either by borrowing from disciplines accustomed to dealing with dynamic data, or through the creative efforts of statisticians working within the consumer research domain.

Subject Matter

Many (including Cohen⁴¹) have called much consumer research "trivial." In all too many ways, they are right.

Systematically Exploring the Varieties of Acquisition

Most definitions of consumer behavior shackle us by confining attention to purchase. Aside from the fact that purchase can itself take a variety of forms (e.g., buying at list price, bargaining, bidding at auction), purchase is only one form of acquisition. There are

others (e.g., receiving something as a gift, in trade, on loan, etc.), each of which can have important economic, sociological, and psychological consequences and dynamics different from purchase. For example, if one million more Americans this year than last suddenly decided to borrow their neighbor's rake to handle their fall leaf problems, the impact on the rake industry could be enormous.

What are the dynamics underlying being a borrower or being a lender? What are the dynamics underlying giving or receiving a gift?⁴² Hardly any published data exist regarding these other forms of acquisition—or how they interact with and affect purchase behavior. Both for scholarly and practical reasons, we must begin to systematically explore the entire realm of consumer acquisition decisions and behavior.

Putting Consumption Back into Consumer Behavior

Although considerable research has focused on actual consumption, particularly by the home economists, this fact is not adequately reflected in the predominant theories and textbooks of consumer behavior. This is surprising inasmuch as what happens during consumption has a strong influence on subsequent acquisition (especially purchase) decisions. Consumption must be given greater salience and be more tightly integrated with the existing consumer behavior literature.

What A-l-out Disposition?

The third major facet of consumer behavior, disposition, appears to have been completely neglected. This neglect should be rectified for at least four reasons:⁴³

1. Many disposition decisions have significant economic consequences for both the individual and society. Some (e.g., when and how to properly dispose of unused or outdated prescription drugs) even have important health and safety ramifications.
2. Since much purchase behavior is cyclical, a variety of marketing implications would most likely emanate from an understanding of the disposition subprocesses.
3. We are entering an age of relative scarcity in which we can no longer afford the luxury of squandering resources. Understanding disposition decisions and behavior is a necessary (perhaps even logically prerequisite) element in any conservationist orientation.
4. There is some evidence that the study of consumer disposition could conceivably provide us with new "unobtrusive" macro-indicators⁴⁴—both leading and trailing—of economic trends and the state of consumer attitudes and expectations.

Consumption & Production

Not only does our conception of what constitutes consumer behavior have to be expanded and its various facets studied, but the relationship between consumption and production should be explored. Consumption and production are integrally related. Studies are needed which examine this interrelationship by considering both domains simultaneously.

Conclusion

This compendium is by no means an exhaustive iteration of the problems in and confronting consumer research. It does, however, cover many of the most frequently occurring and severe problems.

Quite clearly, we think it is important to know that we don't know—important so that we don't delude ourselves and others about the *quality* of our research and validity of our findings as providing sound bases upon which to make decisions of consequence. One thing we most need to learn is that we must stop letting our existing methods and tools dictate and shackle our thinking and research. They are no substitute for using our heads. The brain is still the most important tool we have and its use should precede more than succeed the collection of data.

It is important to recognize that we are in the midst of a consumer research explosion; and unless we take corrective action soon, we stand to become immersed in a quagmire from which it is already becoming increasingly difficult to extricate ourselves. Fortunately, it is not yet too late.

ENDNOTES

1. This article is based on the following presidential address delivered in 1975 to the Association for Consumer Research: Jacob Jacoby, "Consumer Research: Telling It Like It Is," in *Advances in Consumer Research*, Vol. 3, B.B. Anderson, ed. (Atlanta: Georgia State U., 1976), pp. 1-11.

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