Research On Effectiveness Of Agricultural Commodity Promotion

Proceedings from Seminar
Arlington, Virginia

April 9-10, 1985

Sponsored by

Farm Foundation
Agricultural Marketing Service, USDA
Economic Research Service, USDA
Foreign Agricultural Service, USDA

AWARENESS, RECALL AND ADVERTISING EFFECTIVENESS

William J. McEwen
McCann-Erickson, Inc.

The Interest in Measuring Advertising

During 1984, people with products, services, or ideas to sell spent an estimated $87.4 billion on advertising in the United States alone [3]. That represents approximately 2.37% of our Gross National Product (GNP), a percentage which has been rather continually on the rise for at least the past ten years. In 1975, advertising expenditures were 1.85% of total GNP — a large sum of money obviously, but in both relative and absolute terms, less than the current figure.

A simple conclusion may be drawn from even a casual glance at numbers such as these. The belief that advertising works is strong, and seems to be growing.

Marketers clearly behave as though advertising has impact. Given that advertising makes a difference, that there is some "impact," and there is value derived from these expenditures, it stands to reason that advertising's contribution can be *measured.*

This leads to marketers' key belief #1:

Advertising does something, and that something can be measured.

Obviously there are also certain pragmatics in this situation. Not only is it *possible* to measure the impact of advertising expenditures, given that advertising is somehow "working," it is *important* to measure this impact. It is important for at least two reasons.

First, since marketers are spending billions of dollars in an attempt to achieve explicit/implicit objectives, the sheer level of those expenditures is sufficient to generate considerable interest in establishing accountability. The fact that expenditures have been increasing in real terms makes this need even more strongly felt. Marketers (and stockholders) are not terribly fond of devoting large sums of monies to activities which produce no return.

Second, in addition to the fact that the number of dollars is clearly sufficient to attract the interest of most marketers, there is a particularly powerful motivator stimulating interest in measuring advertising impact: marketers firmly believe that *all advertising does not work equally well.* Some advertising works better than other advertising. Some advertising contributes more, or returns more, just as some salespeople outperform others and some managers are more effective than others.

This leads to marketers' key belief #2:

The difference between advertising that's working well and advertising that's not, can be measured.

In a highly competitive marketing environment, the desire (and need) is strong to outperform competitors in *all* areas which impact on sales and profitability. Advertising is one such area.

Marketers thus have strong pragmatic and competitive reasons for measuring their advertising, and for monitoring its impact in a competitive and sometimes rapidly changing marketplace.

The measurement task may seem deceptively simple and straightforward: establish reliable and valid measurement systems that can provide marketers, planners, and evaluators with data which reflect what the advertising is contributing. If there's discernable impact, it *can* be measured. If there's a need and an interest, it *will* be measured.

Measurement and a Theory of Advertising Impact

Most marketers undertake advertising with fairly specific action objectives in mind. Their aim is to "sell" more of their "product." "Sales" may be expressed in dollars, votes, visits to the dentist, or a wide number of other consumer behaviors. "Products" may be bars of soap, checking accounts, airline tickets, or political candidates. In common among all these cases is the fact that the advertising is intended to impact on some consumer decision process and impel some action desired by the advertiser.

Several factors operate, however, to make the measurement task decidedly less simple and straightforward than it might at first appear.

First, *it is expensive* to measure impact via the use of ultimate "sales" measures of advertising. It is expensive in actual *dollars* required to test advertising in this manner. Advertising must be finished and produced, and must be aired or placed, before any determination of "effectiveness" could be achieved. Clearly that implies a rather long, and not inexpensive, process before any data would be available to suggest whether the advertising is working. That's unacceptably inefficient for many marketers.

More importantly, measurement via "sales" is expensive in terms of the *risk* involved to the marketer. Lost sales and lost elections are not easily recouped. An alienated consumer who has turned to a competitor may not easily be won back, and some unintended and/or undesirable actions are not easily undone. In a competitive world it is frequently essential as well as desirable to look before you leap. A measurement system, to be useful and usable, must take the marketer's needs for efficiency into account.

Second, *advertising* — as with all communication — *is complex* with regard to how it operates, and how it effects consumer behavior. All actions and reactions do not occur immediately. Advertising may function to stimulate consumers to interact, to seek additional information, to begin what may be a long process of deliberation prior to commitment to the "final" action of ultimate interest to the marketer. Advertising may function indirectly, encouraging dealers and stores to stock or to feature products and brands for eventual consumer purchase. Advertising may interact with other advertising messages in producing a cumulative effect which is not predictable from, or attributable to, the effect of a single campaign. Again, measurement systems must take this complexity into account.

Third, advertising is obviously only a part of the "marketing mix." *Other factors* can, and do, overwhelm the impact of advertising — and thus make "sales" in many cases an inappropriate or at least unreadable measure of what the advertising may or may not be contributing. Changing the price of a brand and/or that of its competitors, changing product availability or placement or the distribution systems used, and unforeseen and uncontrollable marketplace activities (ranging from new competitive products to legal decisions impacting marketers or competitors) are but some of the well-documented "other factors" which can, and will, impact on the "sales" measures originally intended as indicators of the effectiveness of the advertising alone. Once again, an adequate system must take this reality into account.

What, then, should be the measures used to assess the effectiveness of advertising efforts? If "sales" are expensive and, without fairly elaborate controls, insufficient or unclean indicators of how well the advertising is working, what alternatives are there? The answer is: lots. There are, if anything, too many.

It's possible to consider an extremely large number of consumer "responses" or "reactions" to advertising, and, at least theoretically, one could develop measures which reliably tap any of these responses. A glance through the enormous diversity of currently available advertising testing and evaluation services would reveal systems that measure all manner of permutations and combinations of "consumer response:" attitude shift, coupon redemption, galvanic skin response, message recall in the face of clutter, resistance to distraction, voice pitch, pupillary dilation, purchase intention, liking/disliking of the ad, product attribute desirability, top-of-mind brand or advertising awareness, brand-attribute association and even brain waves. All have been proposed, and all have been used at one time or another as measures of how well the advertising is doing its job. It doesn't appear that more measures are needed.

How should a marketer select the best measure from among these alternatives? On the surface, the task seems rather simple: find out which measure best predicts the "sales" response the marketer is seeking. A simple solution — but a wrong one. "Sales," as discussed earlier, is sometimes an inappropriate index of what the advertising is achieving, or even should be aiming to achieve. Measures that correlate with "sales" may, therefore, not be sensitive, or even especially pertinent, indices of advertising impact.

How, then, should a marketer select a measure, or a set of measures, to use in monitoring/evaluating the advertising efforts being undertaken? Sorting out the measures implies some sort of logic, and a theory.

In an attempt to help separate the advertising that works from that which doesn't (or from that which works less well), diverse testing and evaluation/monitoring systems have been developed over the years. The need to measure the return flowing from advertising investments has been felt for some time. A recent review [12] points out that advertising copy testing has been ongoing since at least the 1920s.

Since we've been spending time, money, and considerable grey matter on an admittedly important task for more than sixty years, one would expect we would have gotten quite good at it by now.

One would probably be a bit disappointed.

While we certainly don't lack competent and objective measurers, we do clearly lack a coherent *theory* regarding how advertising achieves its ultimate "sales" objectives. Lacking a theory, we have no universally accepted system, or set of systems, for measurement. There are some research *tools* which have been fairly commonly employed. Tools without a theory, however, have much potential for misuse. Tools with an inappropriate, or inadequate, theory are no better.

The measurement tools/approaches that have developed over the past sixty-plus years essentially fit within a simple model of impact posited in the 1920s and commonly referred to as **AIDA** [14, 18]. This model states that advertising works in a *hierarchical* fashion: creating

"**Attention**," then

"**Interest**," then

"**Desire**," and finally

"**Action**."

In many ways this is a very tempting model. It's logical (or at least moderately so). It's fairly simple. It indeed does describe how communications impact occurs in a number of consumer decision situations near and dear to many marketers. It also clearly implies a *measurement* system for anyone interested in assessing the effectiveness/impact of advertising short of difficult-to-measure (and risky to wait for) sales response measures.

It's also wrong.

Not because AIDA doesn't fit any situations, but because it does not — and should not be used to — fit *all*. AIDA oversimplifies the process through which consumers make decisions, and posits a linear sequence that exists only infrequently [e.g., see 15]. More about that later. First we can take a quick look at how AIDA has been "improved" over the past half century.

Lavidge and Steiner [10] expanded this AIDA approach, while still maintaining its fundamental errors, in proposing that consumers proceed toward a decision — and advertising communications have impact — in a stepwise linear sequence progressing from "**conative**" responses (**awareness** and **knowledge**) to "**affective**" responses (**liking**, **preference** and **conviction**) and finally to "**conative**" responses (**intention** and **purchase**). Lavidge and Steiner updated the AIDA model by tying it more directly to a variety of then-popular psychological constructs. Basically, however, they proposed a very similar view of consumer decision processes to that which had been presented twenty years before.

Skipping rapidly to more current inquiry into consumer decision making, it is perhaps surprising that a fair amount of research and model/theory construction activity continues to present a picture of what is essentially the same linear, sequential consumer Lavidge and Steiner envisioned — and, while offering what seems to be a rather sophisticated lexicon of terms, notational devices, and subscripts, continues to stipulate the same linear sequences (and thus to imply the same basic set of measurement tools) as the AIDA model.

For example, cognitive psychologists [e.g., 13] present consumer choice and decision models that talk about "affective" responses as "utility adjustments," yet continue to posit the same comfortable stages, wherein hypothetical consumers first seek/obtain/inspect information, after which they then readjust utilities/values for choice alternatives, and then finally select an option. While we now may employ mathematical symbols to represent the process, it looks an awful lot like AIDA from here.

Advertising and Decision Making: An Improved Model

While stepwise sequential models of consumer decision making — which proceed from "cognition" to "affect" to "behavior" — are perhaps the norm which, either implicitly or explicitly, seems to guide the advertising effectiveness measurement systems being used by United States marketers, improvements in the basic AIDA-derived models have been discussed for some time. For example, there has been a fair amount of work since Krugman's [9] initial explorations focusing on the concept of "**involvement**." Essentially, this area of research places emphasis on what seems to be a rather self-evident, if often ignored, fact: *consumers don't approach all decisions in the same way*. Instead, it depends on a variety of factors. And, one of the most important factors on which it depends has to do with the extent to which consumers feel personally "involved" in the decision situation.

Some decisions are quite high in involvement; consumers attach a high degree of personal importance to the decision and its outcome. Some decisions, in contrast, are rather unimportant and low in felt involvement. All must be made — but it hardly stands to follow that all must be, or will be, made in the same way. Selection of a new car, or of a university, is for most people a rather different event from the selection of a brand of canned tomatoes or of a beverage to consume with lunch.

An adequate theory of "decision making" must acknowledge these differences; and an adequate measurement system, it further follows, must also.

The *importance* of the decision outcome, the degree of actual or perceived *risk* involved, and the degree of felt *interest* in the subject matter are all held to affect the extent to which consumers feel "involved" in purchase/action decisions. As Vaughn [19] has pointed out, all three aspects of "involvement" affect the manner in which consumers will approach making the decision. Of greater import, all will affect the role and nature of information seeking, the way in which advertising communications may impact that decision process — and, therefore, the way(s) in which the effectiveness of advertising should be measured.

If "involvement" is an important determinant of the manner in which consumers approach decisions (and there is evidence that it is), then there is perhaps not a single sequence of decision making, but two *different* sequences: one for "high involvement" decisions (wherein information search may be a rather deliberate, active, and time-consuming "first step") and one for "low involvement" decisions (routine decisions with little apparent or perceived risk, wherein "information" is gained as a result of, rather than as a precursor to, experience with a product or brand).

In other words, identifiable information-search and selection activities may precede the final selection of an alternative when one is buying a car or opening an IRA account. Such situations may reflect the AIDA-related concept of a logical, linear consumer, who first obtains information about alternatives in light of the information obtained, and then finally acts in accord with his/her information-based preferences.

This model may well *not* apply, however, for many of the decision situations in which consumers frequently find themselves, and where advertising is expected to have impact and achieve results. When consumers are making some of the hundreds of decisions made within the average grocery store — selecting a brand of soup, a flavor of yogurt, a roll of paper towels, or a sauce to add zest to a hamburger — identifiable information search is minimal at best. Consumers frequently act ("behave") and make decisions about future purchases based on the results of that action (e.g., trying a product to see if it's acceptable).

A separate model is thus implied by the second type of situation. Advertising would be expected to "work" in a different way. And measurement of how well the advertising is working would then (or should then) follow suit.

A *second* major factor affecting how consumers make decisions had also been proposed, however. This further complicates the model, and our view of how advertising works and of the measures we should be using in attempting to specify how well the advertising is working. This second factor also derives from some seminal work undertaken by Krugman [8] and focusing on so-called "left brain" vs. "right brain" differences. This second factor is frequently described as **emotional-rational**.

According to several researchers [e.g., 11, 19], there are some decision situations that are made based more strongly on sensory/emotional factors than on logical/rational concerns. Buying a bottle of perfume, a birthday card for a spouse, or a brand of imported beer is, for the typical consumer, a very different situation from the purchase of a spot remover, or the selection of an overnight express mail service. "Affect" becomes a much stronger driving force in the former than in the latter.

Thus, it is entirely possible, as Ray [16] and Leckenby and Plummer [11] have emphasized, that there is not one "hierarchy of effects," but many. A more complicated world, perhaps, but a more realistic one.

Vaughn [19] summarized the evidence and theories regarding how advertising impacts consumer decisions by means of a simple 2×2 matrix that has been termed the "**Vaughn Grid**." The "Grid" appears basically as follows:

	Rational	**Emotional**
High Involvement	Model: Learn-Feel-Do	Model: Feel-Learn-Do
Low	Model: Do-	Model: Do-

Involvement	Learn-Feel	Feel-Learn

[adapted from 19]

While it's certainly possible - and even likely - that the world of consumer decision making is even more complex than the above would indicate, the Vaughn Grid serves as at least a very useful first step toward a more complex (yet more accurate) conceptualization of this process.

Clearly, a different role for advertising, and even a different "type" of advertising, is implied for each of the four "quadrants" indicated in the Vaughn Grid summary. Of key import, different types of advertising *measurement* systems are also implied. If the task of the advertising is to develop a strong emotional attachment or create positive feelings (for example, for a brand of greeting card), then measures that focus simply on "cognitive" response factors (such as brand name recall or brand-attribute communication) would be less relevant. And, of perhaps greater concern, they would be potentially misleading, as these measures would presume to assess "effectiveness" through reliance on a factor not related to the objective that should have been established for the advertising.

It would thus appear that an appropriate theory of how advertising has "impact" must take into account, at a minimum, the degree to which consumers feel the decision is personally involving *and* the degree to which the decision is driven by "emotional" or "rational" factors. As advertising measurement should flow from, rather than drive, advertising objectives, the determination of an appropriate system for assessing advertising effectiveness must consider the nature of the decision task faced by the consumer and, hence, the role of advertising.

This has not always been the case. In fact, in many cases, it appears that the *measurement tool* has been the determining factor. Because some response to advertising *could* be accurately measured, it *has been*. And that response has thus frequently become the key criterion used for determining advertising effectiveness — regardless of the relevance the measure might have to the nature of the decision situation faced by the consumer or to the function which advertising should be performing.

Too frequently, responses are measured simply because it is possible to measure them. *Reliability* of measurement has thus been the main concern. While reliability is clearly a key measurement concern, it is obviously not the only one. Availability of a measure is an insufficient reason for continuing to collect it, or for attempting to make use of it.

Advertising "impact" measurement must flow from theory, and the theory must be an adequate one.

Advertising Measurement: Campaigns and Executions

Assuming that advertising effectiveness measures are viewed, as they clearly must be, from a perspective of the appropriate role of advertising (given the nature of the decision faced by a consumer), an additional question must be faced.

There are at least two needs which the marketer has — two "aspects" of advertising impact to be addressed. There is a need to assess the impact/effectiveness of:

Advertising Executions, and

Advertising Campaigns.

While there are obviously relations between these two, and "executions" are what make up "campaigns," there are also *differences*, and a need to measure the two separately.

Not all advertising campaigns (consisting of numbers of advertising executions with a fairly common strategic thrust) perform equally well. Not all executions, even within the same campaign, perform the same. Some "contribute" more than others. Detecting those differences, becomes a key task for advertising researchers.

Execution Effectiveness Measures

As indicated previously, a rather wide range of potential measures have been proposed, and used, as indices of how well an individual advertising execution "performs." Advertising testing companies have for some time offered and promoted an extensive selection of cognitive, affective, and conative measures in order to provide marketers with a glimpse at how well their advertising efforts "stack up" versus their earlier efforts and/or versus competitive efforts.

Cognitive Measures. Perhaps the most commonly used measure of executional performance has been what is often termed "**day after recall**" (or, more commonly, DAR). These types of measures typically tap the percentage of a "program audience" (those consumers who supposedly have an opportunity to see a given commercial execution) who can play back "enough" of the execution after some passage of time (generally 24 hours) to prove that they remembered something — and that what they remembered relates in some general way to the brand of the product which was advertised.

While "DAR" is a measure of TV execution effectiveness, close counterparts also exist for print ad measurement, billboard ad measurement, radio commercial measurement, et cetera. The logic remains essentially the same, while certain aspects of the data gathering methods may change.

There has for some time been considerable debate over "DAR"-type measures [e.g., 1, 5, 7, 17, 20]. The arguments have either centered on the situations under which the data are collected (e.g., in-home viewing versus simulated "theatre" viewing; individual viewing versus group exposure to ads/commercials; pre-recruited versus non-pre-recruited consumer samples; etc.) or have explored whether "day-after-recall" is a better (or poorer) measure of commercial impact than is some sort of "*persuasion*" measure.

Such arguments, however, often skirt the real issue: *is "advertising recall" a relevant and reasonable objective for the execution*? Sometimes yes; sometimes no. It depends, for example, on the "quadrant" of decision "type" and the model of impact — which is appropriate for the decision situation as viewed by the consumer.

Proponents of "day-after-recall" measures have argued that, in order for an advertising message to have any impact, it must first, at a minimum, break through the considerable sea of clutter and effectively register a message with consumers. Simply put: *the message must first be "noticed."*

While that certainly appears as a tempting and seemingly straightforward argument, it's wrong. For some decision situations, that is. As has been amply demonstrated in several studies [e.g., 2, 20], "emotional" executions, while entirely appropriate for certain types of consumer decisions, are unduly penalized by "DAR"-types of measures. Measures that stress cognitive learning as an index of performance may overlook consumer responses that would provide indices of both greater reliability and greater validity. For example. Berger [2] contends that "*recognition*" measures (wherein a visual/auditory advertising prompt is presented, and cognitive recall task thus lessened greatly) are considerably more appropriate, and less misleading, as effectiveness measures for "emotional" advertising.

All of this, however, should not imply that "DAR" measures are neither useful nor appropriate. Quite the contrary. Rather, such measures should be employed when there's a rationale for assuming that they're relevant — not simply because a marketer has an extensive set of testing "norms" derived from previous "DAR" testing. It appears that "DAR" can be quite useful as one measure of the executional performance of "rational" advertising. The reliability of "DAR" has nothing to do with its appropriateness as a/the measure of "emotional" execution performance.

Again, *the tool must relate to the task*. And the task must relate to a defensible theory.

Affective Measures. Again, the question should not be (although it often has been) whether so-called "persuasion" measures are "better" than "recall" measures. Clearly, sometimes they are. Sometimes they are not. Rather, the questions should focus on the most valid and sensitive measures of affective response when — and only when — such measures are called for.

Researchers have for some time pointed out the lack of relationship between "recall" and "persuasion" or between "recall" and "sales" [e.g., 5, 7]. High recall does not imply high persuasive impact. Or vice versa. They are separate responses. That does not imply, however, that either is irrelevant, or useless. Rather, it underscores the importance of first determining the measure most closely related to the task set forth for the advertising (again, keeping in mind the task the advertising should be accomplishing).

Conative Measures. While there's more than ample diversity in the world of "behavior" measures, there's also more than considerable disagreement. Since, as stated earlier, "sales" are a difficult, and often indirect, measure of advertising effectiveness, other measures of behavior have been employed. As behaviors are limitless, so are these "other measures." Such measures range from surrogate/simulation "sales" measures (e.g., coupon redemption or stated purchase intent) to more basic "arousal" measures (such as pupillary dilation, voice pitch and galvanic skin response).

While each measure appears to have its proponents, the face validity (and interpretability) of more distal approximations of purchase (e.g., autonomic physiological responses) seems a stumbling block for many marketers. Message playback (a cognitive measure) and persuasive impact (an affective measure) often seem more comfortable — though, as emphasized previously, that should not mask the utility, or the appropriateness, of conative impact indices.

Rather, measures should be used when theory suggests they are appropriate. Drawing on the Vaughn Grid [19] mentioned earlier, examples of "effectiveness" measures would array something as follows:

	Rational	**Emotional**
High Involvement	Measures: recall; learning; communication	Measures: persuasion; image or attitude shift
Low Involvement	Measures: coupon redemption; awareness; arousal	Measures: coupon redemption; recognition; arousal

Campaign Effectiveness Measures

As stated previously, there is a clear need to assess advertising *campaigns*, as well as individual executions within a campaign.

Once again, it's essential that the key response measures follow directly from, and relate directly to, the task appropriate for the advertising. It's possible to collect all sorts of data from consumers over the course of a campaign: it's possible to assess *cognitive* responses (brand and advertising awareness; advertising message/element recall; etc.) *affective* responses (image and/or attitude shift; brand/product preference; etc.) and *conative* responses (brand last/most frequently purchased; stores visited; etc.).

Whether such measures are reliable is, of course, crucial. Whether they are valid should be no less crucial. A fair amount of published and proprietary research indicates [e.g., 4, 6] that certain of these "tracking" measures — conducted in the "real world" marketplace to assess responses over time — can be both pertinent and useful. They can, more importantly, be used for planning as well as evaluation/monitoring purposes.

The appropriate focus and the measures of key concern for such studies should, just as in the case of advertising execution measures, reflect the objectives of the advertising. Campaigns have objectives; campaign measurement should reflect these (and, of course, should reflect the nature of the decision the consumer confronts).

As campaigns occur over time, however, there is an additional, special requirement for campaign tracking: the *measures* (be they cognitive, affective, and/or conative) *should be continuous.* This point has been made before by Haley [6], among others, but it bears repeating especially since it is the *time* dimension, and the cumulative impact of combinations of messages sent and received over time, that so uniquely defines a "campaign." Failing to include sufficient time intervals (whatever the measures employed) makes difficult or impossible the task of stating or concluding precisely what went on in the interim.

The shortest distance between two points in time may be a straight line, but that may not be the most accurate representation of what in fact occurred. Without more than two points, one would be hard put to conjecture about the shape/nature of the function describing the relationship(s) — and, more importantly, one might easily be misled. That's clearly unfortunate. Especially since it's unnecessary. Continuous measurement (tracking) is certainly achievable, and frequently costs no more than discrete measurement.

One more time, however, the measures must — no matter how reliably they're measured or how frequently they're obtained — relate to the tasks the advertising should be seeking (and should be expected) to accomplish.

This may well, by now, appear to be an overused "caveat." If industry practice is any indicator, however, it's not.

Summary: Where Do We Go From Here?

Advertising measurement may appear to be a fairly straightforward task. It's nothing new, and it's certainly not unimportant. Smart people have been wrestling with the need for some time.

However, no universally acceptable tool has been found. To some that's surprising; even frightening.

Carpenters, however, don't spend a lot time debating over the relative merits of a screwdriver and a hammer. Both are useful. Not, however, for the same tasks. One is better than the other — but only at certain times, when the objective is appropriate to the tool.

Whether we're attempting to assess the performance of an individual ad, or of some combination of ads under a campaign umbrella, our goal should be the same as the carpenter's: use the appropriate tool. There's no universally "best" tool. And it's unclear that the world needs more tools.

Just better carpenters.

REFERENCES

[1] Arnold, Stephen J. and J. Richard Bird. "The Day-After Recall Test of Advertising Effectiveness: A Discussion of the Issues." *Current Issues and Research in Advertising*, ed. J. H. Leigh and C. R. Martin, pp. 59–68. Ann Arbor MI: University of Michigan, 1982.

[2] Berger, David. "A Retrospective: FCB Recall Study." *Advertising Age*, Oct. 26, 1981, pp. 536–538.

[3] Coen, Robert. *Estimated U.S. Advertising Expenditures for 1984*. New York NY: McCann-Erickson, Inc., 1985.

[4] Donius, James F. "Market Tracking: A Strategic Reassessment and Planning Tool." *J. Adv. Res.*, no. 25 (Feb./Mar. 1985), pp. 15–19.

[5] Gibson, Lawrence D. "Not Recall." *J. Adv. Res.*, no. 23 (Feb./Mar. 1983), pp. 39–46.

[6] Haley, Douglas F. "Advertising Tracking Studies: Packaged-Goods Case Histories." *J. Adv. Res.*, no 25 (Feb/Mar. 1985), pp. 45–51.

[7] Haskins, Jack B. "Factual Recall as a Measure of Advertising Effectiveness." *J. Adv. Res.*, no. 4 (Mar. 1964), pp. 2–7.

[8] Krugman, Herbert E. "Brainwave Measures of Media Involvement." *J. Adv. Res.*, no 11 (Feb 1971), pp. 3–9.

[9] ————. "The Impact of Television Advertising: Learning Without Involvement." *Pub. Opin. Quart.* 29 (1965):349–356.

[10] Lavidge, Robert C. And Gary A. Steiner. "A Model for Predictive Measurements of Advertising Effectiveness." *J. Mkting.*, no 25 (Oct. 1961), pp. 59–62.

[11] Leckenby, John D. and Joseph T. Plummer. "Advertising Stimulus Measurement and Assessment Research: A Review of Advertising Testing Methods." *Current Issues and Research in Advertising*, eds. J.H. Leigh and C.R. Martin, pp. 135–165. Ann Arbor MI: University of Michigan, 1983.

[12] Lipstein, Benjamin. "An Historical Perspective of Copy Research." *J. Adv. Res.*, no 24 (Dec./Jan. 1985), pp. 11–14.

[13] Meyer, Robert J. "A Descriptive Model of Consumer Information Search Behavior." *Mkting. Sci.* 1 (1982):93–121.

[14] Moriarty, Sandra E. "Beyond the Hierarchy of Effects: A Conceptual Framework." *Current Issues and Research in Advertising*, eds. J.H. Leigh and C.R. Martin, pp. 45–55. Ann Arbor MI: University of Michigan, 1983.

[15] Palda, Kristian S. "The Hypothesis of a Hierarchy of Effects: A Partial Evaluation." *J. Mkting. Res.*, no 30 (Feb. 1966), pp. 13–24.

[16] Ray, Michael L. *Advertising and Communication Management*. Englewood Cliffs NJ: Prentice-Hall, 1982.

[17] Ross, Harold L. "Recall Versus Persuasion: An Answer." *J. Adv. Res.*, no. 22 (Feb./Mar. 1982), pp. 13–16.

[18] Strong, E.K., Jr. *The Psychology of Selling and Advertising*. New York NY: McGraw-Hill, 1925.

[19] Vaughn, Richard. *How Advertising Works: An FCB Strategy Planning Model*. Chicago: FCB Communications, 1979.

[20] Zielske, Hugh A. "Does Day-After Recall Penalize 'Feeling' Ads?" *J. Adv. Res.*, no. 22 (Feb./Mar. 1982), pp. 19–24.