

AN EMPIRICAL INVESTIGATION OF ADVERTISING WEARIN AND WEAROUT



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For many years, advertisers and researchers have been debating over the issues of advertising *wearin* and advertising *wearout*.

The *wearin* proponents have held that the power of advertising *builds* over time and with repeated exposures; that there is a "wearing-in" process which occurs between the advertising and the consumer; and, that this effectiveness *cannot* be measured with a single exposure or at a single point in time.

There are at least two sides to the *wearout* debate. One side argues that the selling power of advertising declines, or wears out, over time and exposures; while others suggest that "world class" advertising does not.

This article presents and reviews nearly 100 ARS (the Advertising Research System of research systems corporation) case studies, establishing that:

- (1) The selling power of advertising *can* be measured in the lab, at a single point in time, and with one exposure.
- (2) While the market responses of awareness and sales may build over time, there is virtually no evidence of the advertising building or wearing in over time or exposures.
- (3) The selling power of advertising, in fact, declines or wears out over time related to spending.

Throughout this review some important implications regarding media dollars and how they are

spent will be revealed, but first let's look at the effectiveness of advertising over time and exposures and begin with new-brand case studies.

New Brand Advertising over Time

Many of you will recall our work first published in the early 1970s. We found a strong relationship between our laboratory tests of advertising and subsequent test market trial rates ($r = .85$). Advertising with higher ARS Persuasion generates higher trial rates over time, and low ARS Persuasion advertising generates low trial rates over time. Since that time, this association between our laboratory measure and trial has been verified by a number of client investigations, and laboratory test marketing in general has grown to universal acceptance.

As we moved into the 1980s then, most practitioners bought the notion that the sales effectiveness of *new brand* advertising could be measured with a single exposure, at a single point in time, but certainly not established brand advertising . . . "it works differently . . . and *builds* over time with repeated exposures . . . particularly the softer selling mood, or image approaches."

Multiple Exposure

In 1982 we sought to test the multiple exposure part of the hy-

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pothesis directly by conducting a controlled experiment. As part of the study, we asked our agency friends to submit specific ads *they* thought would most likely improve with more than one exposure. In all, 18 commercials were tested *and* retested under single and double exposure conditions (and some were given even three exposures). While *recall* levels for all ads nearly doubled after two exposures, persuasion results were virtually the same (see "Single versus Double Exposure"; research systems corporation, March 1983). We found plenty of evidence supporting the classic psychological principle of repetition, on memory and learning (recall), but virtually

Table 1
Split-Cable Testing: Twenty Media Weight Studies

Weight difference	Sales difference?
334 GRPs	no
406	no
580	difference
583	difference
695	no
778	difference
800	no
820	no
860	difference
900	no
947	no
1000	no
1198	no
1364	no
1400	no
1400	difference
1800	no
1949	difference
2231	no
4200	no

Table 2
Split-Cable Testing: Twenty Media Studies—Relation to ARS Laboratory Testing

Weight difference	ARS Persuasion	Type of advertising	Sales difference?
334 GRPs	-1.3		no
4200	+0.6	IM	no
406	+1.8		no
1400	+2.6		no
695	+2.7		no
800	+2.8		no
2231	+3.5		no
1000	+3.6		no
900	+3.7	P	no
1800	+4.0	P	no
947	+4.2		no
820	+4.3	IM	no
1364	+4.4		no
1198	+4.4		no
583	+5.9	P	difference
1949	+6.7	P	difference
580	+7.0	IM	difference
778	+7.7	P	difference
1400	+9.0	P	difference
860	+9.3	IM	difference

none to support a unique "building over exposures" theory regarding behavior (persuasion). The ads with the low ARS Persuasion results after *one* exposure produced the low results after two (and three) exposures, and vice versa—regardless of executional format.

Established Brand Advertising over Time

In 1983 we began to observe the effectiveness of established brand advertising *over time* through client-sponsored split-cable testing. While the laboratory measurements have matched the five split-cable copy tests, the

most compelling evidence is seen when examining the twenty media tests we've tracked and been permitted to publish.

As shown in Table 1, we see the familiar but frustrating pattern. Most of the established brand media tests show *no* measurable difference in sales (at the 90 percent C.L.). In our particular set of 20 cases, 70 percent resulted in "no difference," including the two cases at the bottom of the chart, where as much as 2,200 and 4,200 GRPs were added. These GRPs reflect approximately 11 and 21 million dollars of increased media weight yet *no* sales response after a full year. Now let's look at these same studies and display them in

relation to our laboratory testing (see Table 2).

The "no difference" tests employed advertising with low ARS Persuasion scores. In the cases where Persuasion was higher, the weight increases did produce a positive sales response.

Also note the types of advertising run in the tests. "I/M" indicates image or mood advertising, "P" denotes hard-sell product orientation, and the unmarked cases contained a mixture of both approaches. Two of the six ads which produced increases in sales are classified as "image/mood." They *did* increase sales, and the laboratory measure detected the selling power right off the bat. None of the *low* scoring Persuasion ads "built over time," nor did they wear in, regardless of executional format. The ads that pretested in the low, or what we've termed the "inelastic" range, produced no measurable sales increases over a *full* year with as much as 4,200 GRPs added to the media schedule.

Our data base also indicates that 41 percent of all established brand advertising achieves "elastic" Persuasion results—considerably more than the 20 percent to 30 percent taken to split-cable test market. The track record for "successful" heavy-up testing will continue to improve as more advertisers use our laboratory to identify the opportunities *before* going to split-cable.

In summary, our established brand in-market studies parallel the learning from our earlier new-brand work, as well as the multiple-exposure experiment. Collectively they provide:

- Compelling evidence that the selling power of advertising can be measured in our lab (at a single point in time, with one exposure); and
- Virtually no support for the "build over time and exposures" theory.

Advertising Wearin

Despite all of the evidence, we were *still* not entirely satisfied with our position. Far too many seasoned professionals had referred to this "building over time" phenomenon. There had to be *something* to it! And our quest continued until we met (not long ago) with a bright young media manager who put it this way:

I can describe our experience best by contrasting advertising with consumer promotions. When we drop a high value coupon, 90% of the sales response occurs within two weeks. But even the most effective advertising takes *time* to work. Sales don't come immediately. They build over time.

With this explanation, we knew where to find the evidence and how to describe the phenomenon.

When couponing, the "message" can be *delivered* to the desired population within a few days. If the "message" is persuasive, sales go up immediately.

With television, however, the delivery process extends over a longer period of time.

Our new brand ATU tracking studies can serve to illustrate this building over time, or delivery process. Figure 1 shows new-brand awareness, over time, insofar as *time* is related to *spending*, or GRPs.

Awareness increases or builds, over *time*-related-to-*spending*. While it grows faster when the advertising is more memorable, and more slowly when the advertising is less memorable, awareness *does* build as the advertising message effectively reaches (more of) the population.

When the message is Persuasive, reported *trial* builds over a similar time-related-to-spending period, as more and more consumers are *receiving* and acting upon the message. The more Persuasive the message, the steeper the climb, or faster the build (see Figure 2).

Furthermore, our established brand studies have indicated sales curves which build over time, as persuasive advertising

Figure 1

New-Brand Awareness over Time in Relation to GRPs

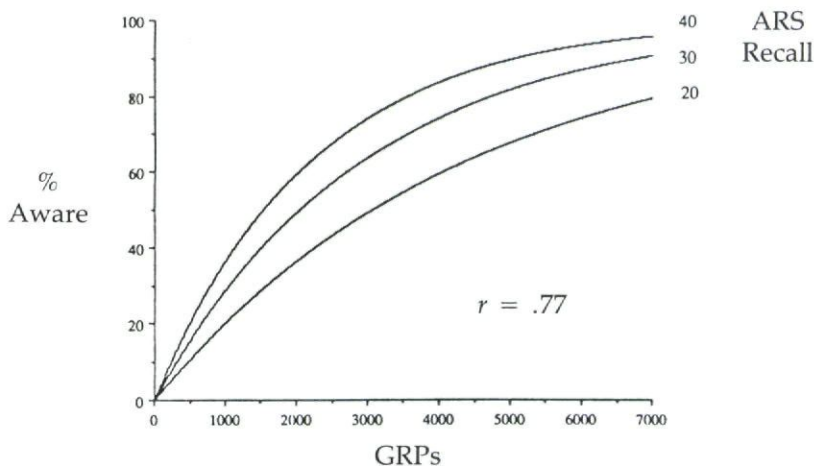
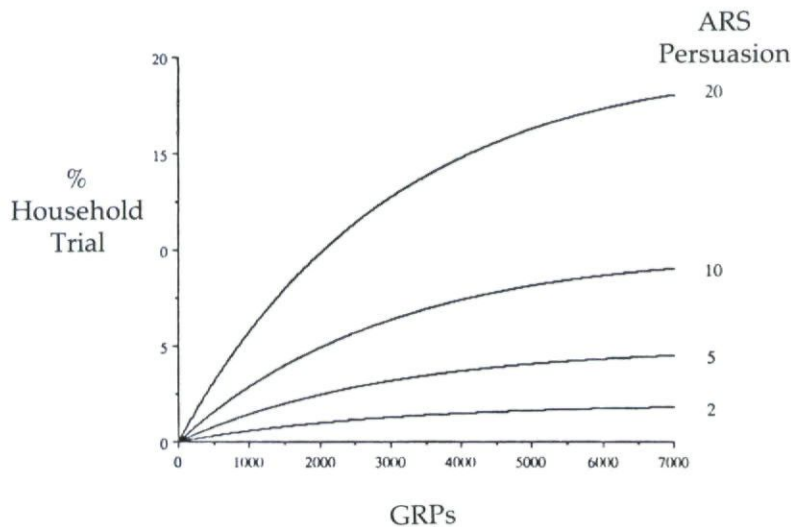


Figure 2

Household Trial in Relation to GRPs



effectively reaches increasing proportions of the population.

The concept of advertising wearin then might be defined as the process of delivering the advertising to the consumer population over time-related-to-spending. An ad might be considered worn-in, once 100 percent of the population has received it.

Build over Time

The idea that advertising builds over time might be descriptive of the market response, (e.g., awareness or sales), as this delivery process takes place over time, related to spending. Also—regarding the origin of the “multiple exposure” part of the theory—the GRPs we buy and summarize represent combinations of household “reaches” and “frequencies.” Several of these household exposures, or “frequencies,” are probably necessary to achieve effective delivery to the consumers in these households.

Thus far we’ve looked at the effectiveness of advertising and subsequent market response over

time and spending but have not addressed the issue of what happens to the advertising during the delivery or wearin process. It’s time to move onto the wearout debate.

Advertising Wearout

In 1984 we began a systematic tracking experiment which addresses the subject:

- We selected six categories of consumer packaged goods and services.
- Identified the competing brands for each category.

- Set up measurement intervals generally between 3 and 6 months apart.
- Asked Radio TV Reports to identify each brand’s current advertising at the specified time intervals and to send us videotapes.
- Began measuring for Persuasiveness in the ARS Lab.

In 1986, we sorted through the tracking data to locate all the cases for which the “current” advertising tested had been the same advertising over more than one measurement period. Twenty-three qualifying pairs were found. We next isolated the cases where the advertising produced inelastic (low Persuasion) results in the first measurement. Nine ads fell into this category, and all nine ads remained inelastic when measured later. Once again we found no evidence of low Persuasion advertising getting better over time or exposures. We then turned to the remaining 14 “elastic,” or Persuasive, ads. As you can see in Table 3, some ads went down in Persuasion over time, and some remained equally Persuasive.

Using BAR network spending data, along with LNA for spot, and Adweek’s Media Cost Guide, we estimated the GRPs associated with each ad during the particular time interval (see Table 4).

Table 3
Examples of Changes in ARS Persuasion in Relation to Time

ARS Persuasion		Change
Time 1	Time 2	
6.1	2.8	-3.3
6.3	3.7	-2.6
7.9	6.2	-1.7
5.9	5.3	-.6
11.9	11.0	-.9
4.9	5.0	+.1

With GRPs in place, a pattern emerges. The decline in Persuasion becomes more severe with more spending. In cases where the ads *retained* their Persuasiveness very little, if any, airing occurred.

Our basic research staff then turned the project over to our forecasting group for further analysis. Their conclusions were:

- (1) The overall Persuasiveness of an ad declines exponentially, as a function of GRPs.
- (2) The association is strong ($r = .81$) and can best be illustrated with a curve, as shown in Figure 3.

Excited by the findings, we shared the information with several clients and were soon challenged to test and verify the model. Our challenging partner selected four ads "currently" running which had achieved elastic Persuasion results before airing, provided the number of GRPs purchased to date, and asked that we estimate the current Persuasion power for each.

Next we tested the ads and found that the wearout model fit the four new cases as well, even though the ads had been airing for 12 to 18 months (see Figure 4). The new observations were added to the data set and the revised correlation remains $r = .81$. In preparing the graphics for presentation to the Advertising Research Foundation (ARF), we were fascinated with the similarity between our "wearout" curve and the awareness curves we looked at earlier when examining the wearin process. In fact, if you simply *flip over* the wearout curve, it looks just like another awareness curve. Advertising wearout then might be viewed as the "flip side" of the advertising wearin phenomenon.

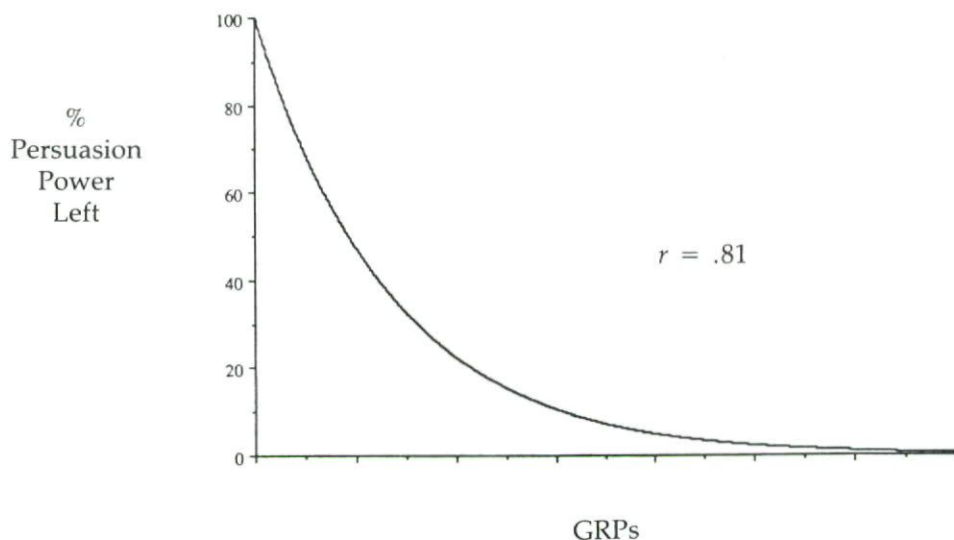
Wearin. Wearin is the process of delivering the advertising to the consumer population (over

Table 4

GRPs in Relation to Examples of Changes in ARS Persuasion over Time

ARS Persuasion		Change	GRPs
Time 1	Time 2		
6.1	2.8	-3.3	1232
6.3	3.7	-2.6	552
7.9	6.2	-1.7	382
5.9	5.3	-.6	11
11.9	11.0	-.9	0
4.9	5.0	+.1	0

Figure 3
Wearout Curve



time-related-to-spending). An ad has worn-in, once it has effectively reached the desired population.

Build. Evidence of the wearing-in is often seen as a "build" in market response as the delivery process takes place over time-related-to-spending. (Awareness climbs and sales climb when the advertising is persuasive.)

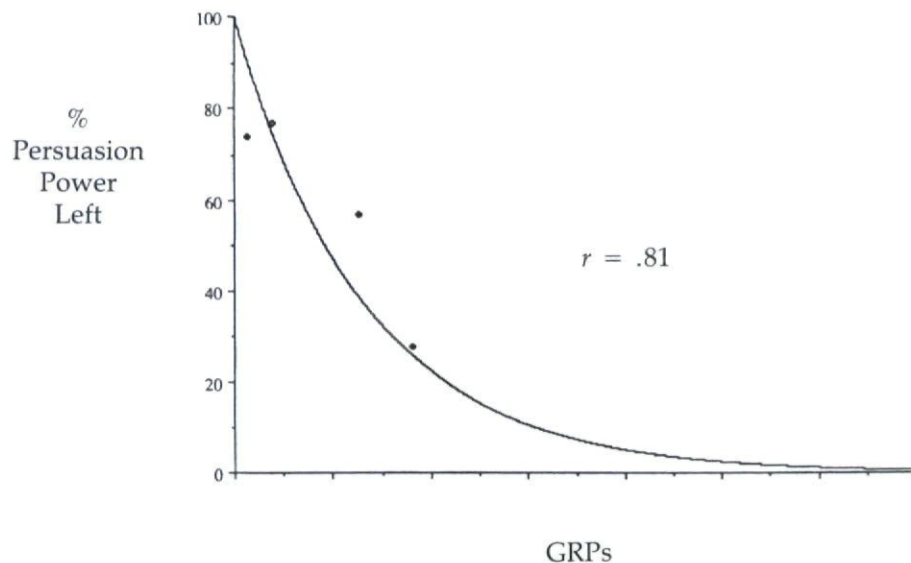
Wearout. Advertising wearout is the decline in an ad's overall

Persuasive power which occurs as effective delivery is achieved. Once the ad has worn-in, or effectively reached the desired population, it will have done its job and no longer be Persuasive among that segment of the population.

A surprise in our study was finding that the slope of the wearout curve is considerably steeper than the slopes of the awareness and sales curves we've examined, thus suggesting that

Figure 4

Wearout Curve Verification



“effective delivery” of television advertising occurs much faster, or with fewer GRPs, than has been indicated through traditional tracking measurements. For example: based on the relationships between wearin and spending, and wearout and spending, the average advertisement achieves 60 percent measured wearout, or effective delivery, with about 1,250 GRPs; on the other hand, more than double that number (~2,700) are required to achieve the 60 percent awareness wearin level. After further reflection, perhaps this finding should not have been surprising at all:

- Measurements of awareness,

like recall, are *verbal* and require learning and memory (which increase with repetition).

- Measurements of sales reflect the time it takes for the consumer to act.

Summary

In summary, our empirical investigation of advertising wearin and advertising wearout indicates that:

- The selling power of advertising *can* be measured in our lab—where 100 percent “effective delivery” and the next purchase occasion are simulated at a single point in time.

- Ads which are *not* Persuasive do not increase sales and do not improve over time-related-to-spending.
- Ads which *are* Persuasive *do* increase sales over time-related-to-spending; and they wearout in the process.
- Advertising wearout (or effective delivery) occurs much like advertising wearin (as measured by awareness or sales), only faster.
- The wearout to spending relationship (or effective delivery) is strong enough to provide useful forecasts for advertising development, refreshment, and media planning.

Implications

This investigation suggests many directions for advertising and research worthy of further experimentation, ranging from the allocation of media weight vis-a-vis Persuasion, to the timing of creative refreshment, to the questioning of verbal measurements, and so on. The most intriguing implication to us, however, is a specific direction related to higher and faster return on advertising investment: when Persuasive or “elastic” advertising has been identified, it may be prudent to buy all the GRPs necessary in the *shortest* period of time to achieve “effective delivery” and subsequent sales quickly, before the competition has time to dilute the impact with pricing, promotion, or other defensive activities. ■

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