

THE POWER OF POSTERS

EXAMINING THE EFFECTIVENESS OF 30-SHEET POSTERS

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INTRODUCTION

As the last mass medium, outdoor is uniquely positioned to offer the one thing that none of the 'hot' new media can: big bang for the buck. Reagan has been assessing just how powerful that bang is in local markets.

Local markets are unique. The character, geography and culture of a local market make it difficult to apply generalized findings either from national studies, or from studies of other local markets. This leaves local advertisers, national brands and outdoor providers all eager for accurate and specific information about the actual effectiveness of the medium in a given locale.

With competitive pressures increasing, especially at the local level, the need to focus advertising dollars has become increasingly more urgent. Since recent evidence implies that all subsequent advertising effects (e.g. liking and brand salience) begin with recognition and awareness (Stapel, 1998), national brands and retail advertisers alike have renewed incentive to spend their budgets in the media that best achieves those goals. By examining the relationship between exposure to outdoor boards and consumer recognition, recall and awareness, Reagan's most recent study provides the insight that can help advertisers make local media choices.

The objective of this study was to provide meaningful information about the effectiveness of 30 sheet posters in the Austin, Texas market. Effectiveness was assessed by measuring the percentage of the adults who could recall a specific fact after exposure to a typically distributed outdoor campaign. A concurrent assessment of effectiveness, based on website 'hits' was also conducted, however, the results of the web activity log are not included in this report. The following report outlines the Austin market, the study methodology, pretest and post-testing procedures and summarizes the findings. Practical implications are included as well as recommendations for further study.

AUSTIN, TEXAS

Located in the Central Texas Hill Country, Austin is approximately 230 miles from Mexico and less than 200 miles from 3 to 10 largest U.S. cities (192 miles from Dallas to its north, 79 miles from San Antonio to its south, and

162 miles from Houston to its southeast). According to the 1990 census, Austin's population was 465,622 -- 61.7 percent white, 23.0 percent Hispanic, 11.9 percent black, and 3.4 percent Asian and other. The current population of Austin (September, 1999) is approximately 785,000 according to the Texas Department of Transportation (1,026,299 in the Austin Metropolitan Statistical area) with approximately the same ethnographic breakout as the census data. Austin averages 300 days of sunshine each year about 33.78 inches of rainfall, and it rarely snows.

Listed as one of the Top 10 places to live in America based on climate, income potential, education and crime statistics, Austin is known as an entertaining city, often called the "Live Musical Capital of the World." Austin, also on the Fortune 500's 'Top Places to Do Business' list, has become a Mecca for the worlds' fastest developing industries (e.g.; computers, software, semiconductors, film, music, telecommunications, multimedia and bioscience). Industries like transaction services and logistics and distribution are keeping pace to supporting this rapid, regional growth. Austin is one of the most "wired" cities in the world, with a digital infrastructure and access to the highest level of commercial and private information technology services available in the world. According to MRI, more than 61% of Austinites actively use the internet to access the World Wide Web.

Austin is also the state capital. At the hub of Texas politics, Austin natives are politically vocal, typically liberal and every interested in the preservation of its natural beauty.

METHODOLOGY

MEASURING EFFECTIVENESS

The majority of published research has been limited to examinations of billboard installations and provides little insight or help for predicting the effectiveness of 30-sheet posters. However, there is a great deal of information about survey techniques and measurement methods that provided valuable assistance for creating the current study

(Table 1). All of the published research addresses two questions: (1) Is outdoor advertising effective? and (2) How long do the effects of outdoor exposure endure? These questions framed our inquiry.

Addressing the first question, this study examined the exposure effectiveness of 30-sheet poster boards. Three methods were used to assess medium effectiveness: unaided recall, aided recall and ad recognition. The second question was addressed by adding a second post-test data collection wave 10 days after the first using identical methodology.

In the academic literature, advertising effectiveness studies often use unaided recall as the best method of assessing audience exposure. Unaided recall measures what audiences remember about an ad through open-ended inquiries without verbal or visual prompting (Wells, Burnett and Moriarty, 1995). Unaided recall has been used in several major, nationally published, research studies. However, it is often avoided by practitioners due to its rigor. Consumers must exert significant effort to process information, and advertising messages are often considered too immaterial to warrant any attention. To remember anything, consumers must store the information, rehearse it enough times to make it readily accessible and then be able to sort through all the knowledge nodes and actually recall it when asked. This amount of cognitive effort typically deflates recall scores, which most practitioners find unflattering and counter-productive. However, Reagan's faith in the power of posters, and the desire to provide meaningful information that even the most hardened skeptics could respect, required that this method of assessing the medium's effectiveness be included.

Aside from the academic issue of "rigor", unaided recall is not the best-suited method to assess ad effectiveness for most brands in most product categories (see Bettman, 1979). Very few purchasing decisions are actually made without a visual or verbal cue. No one buys a car based on "unaided brand recall." Most people buy cars based on a hundred other considerations. Aided recall and ad recognition are considered more accurate assessments of advertising effectiveness for most types of products. Aided recall questions include a verbal retrieval cue.

Consumers are asked if they have seen an ad that contains a specific characteristic. Recognition is ascertained, typically as part of a face-to-face interviewing technique, by showing a picture of the ad or the campaign.

Previous studies indicate that there are two primary considerations that influence consumers' recall and recognition of outdoor campaigns. Age is thought to have the most significant and widespread impact on the recall of outdoor ads. Younger audiences always remember more ads than older audiences. Age was included in each survey to assess its effect in the Austin market. Another pervasive factor influencing advertising recall is consumer attitude toward billboard advertising. This is especially relevant given the strong ecological sentiments of the market as well as the historical regulatory bias against the medium. Attitude toward billboards was measured in T2 using a single item scale and during the mall interviews as a self-administered three item scale.

STUDY DESIGN

A pre-test with comparison group design was selected to maximize the strength and generalizability of these findings. The effectiveness of the 30-sheet poster campaign was assessed by comparing pre-test recall scores with results from post-test surveys taken after the campaign had been posted for 60 days. Using both randomized telephoning and mall intercept methodologies, the Austin market was surveyed a total of four times. The pre-test levels of awareness were assessed by telephone survey (n = 350). The post-test levels were assessed in three waves: two telephone polls (T1 n = 350 and T2 n = 300) and one mall intercept survey (n = 300). Each sample was unique to prevent multiple responses, and limited to adults, 18+ who traveled about the city. The metro area was defined by zip code (Table 2).

Table 2. Metro Area Zip Codes

78701-78705	78727-78729	78735	78744-78746	78751-78753
78721-78723	78731	78741	78748-78749	78756-78759

Each telephone survey was conducted using a random sampling of LAN service subscribers, with age, residence and gender quotas. Pre-test phone numbers were selected by taking every twelfth from the third column of odd

numbered pages from the Austin SWBYP Directory. Post-test numbers were selected from the even numbered pages. Telephone interviewing was chosen as the optimal data collection method due to several specific characteristics of this study. The short, specific nature of the questions assured minimal intrusion and were considered likely to maximize quick response rates. Recent publication of the local telephone directory assured list quality, a difficult achievement in a highly transitory marketplace such as Austin. The telephone survey technique is often considered an excellent method for eliciting reliable responses to open ended interview questions. An added benefit of the telephone survey technique was the specificity of information it provided about respondents. The data sheets include names, phone numbers and zip codes. These data permit test-retest opportunities for sample matching and a wider variety of study design options for future research.

The concurrent mall intercept study was run in an attempt to corroborate the telephone survey results, calibrate the relationship between methodologies and ascertain campaign recognition. While mall intercepts are known to under represent men, and be skewed to a slightly more affluent consumer, these limitations have not been demonstrated to reduce the reliability, validity or generalizability of the findings. Relying on the most recent Nielson Station Index universe estimates, age and gender guidelines were set for T2 and the MI (Table 3) to minimize sampling error and better understand metro residents awareness levels.

Table 3. Age and Gender Guidelines for Secondary Post-Tests

Age Guidelines: 18-49 = 100% with 18-34 = 55% 35-49 = 45%
Gender Guidelines: 49% male, 51% female (51% working outside the home).

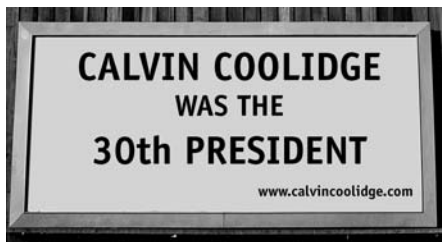
The pretest interviews were conducted between March 10 and March 20, 1999 to measure the percentage of Austin's population who could recall two factual items. The first was the name of Texas Lieutenant Governor, Rick Perry. The second fact respondents were asked to recall was the name of the 30th President of United States. Pre-test interviewing instrument is included in Appendix I.

The demographics of our respondents were explored in greater depth using an on-line component to the study. A URL (www.calvincoolidge.com) was included on every board. The site was posted on April 21st. Site traffic and registration data was collected using Web Trends logue file analysis software to provide more information about the audience members who actively responded to these boards.

Post-test surveys were conducted between June 20, 1999 and July 12, 1999. The first telephone post-test (T1) was a randomized general population sample without quotas. The follow-up telephone survey (T2) included the metro population with age, gender and employment status guidelines.

Almost 85% of those called agreed to participate. An average of 40 dials resulted in 8 completed calls an hour. The reason most consistently offered for declining to participate was lack of time. Interviewers were provided with a list of “solutions” that were for use answering respondent questions about the survey while maintaining the integrity of the research. Rude or irate respondents were politely disengaged and always provided with Dr. Tucker’s phone number. Three calls were received from participants, all requesting additional information about the project.

OUTDOOR SCHEDULE



A 100 showing on 30 sheet posters boards with the short declarative copy statement: “Calvin Coolidge was the 30th President.” Centered under these words was the associated url: www.calvincoolidge.com. The boards were yellow with black text and no graphics. The boards were posted on April 20th and the entire 100 showing was up within the first week. A ‘100 showing’ is the term used to describe the pattern and number of installations selected that is estimated to expose 100% of the audience to a message at least once per day for the entire day. Boards

were rotated after 30 days to reflect a typical (rather than premium) two month schedule. The boards started coming down on June 21st and were completely removed from the market by July 1, 1999.

ERROR RANGE

Survey research estimates the responses of a population from a sample. To generalize findings from a sample to a population, the first step is to evaluate the amount of error that is likely to distort the estimate. Sampling error is calculated using sample size and the standard deviation for each finding (Table 4). The data indicate minimal error effects that are consistent across all telephone samples (2.3% - 2.7%). This sampling error indicates that “true” awareness levels are within 3% of the findings reported in Table 4 (plus or minus). Sample characteristics and results are also reported in Table 4.

RESULTS AND FINDINGS

PRE-TEST SURVEY RESULTS: CONTROL QUESTION

The pretest control question was stated, “Can you please tell me the name of Texas’ Lt. Governor? A yes or no was marked and the name offered was included on the survey instrument. For any name other than Mr. Perry’s the answer was recorded as ‘No’.

Table 5. Recall of Lt. Governor Perry’s Name

	#	%
No	231	66.0
Yes	119	34.0
Total	350	100.0

The purpose of this control question is to evaluate the comparability of the pre-test and post-test samples. As long as no unforeseen events place the Lt. Governor in the public’s eye, the portion of audience members who can

correctly answer the control question should remain consistent between samples. It is clear from the large percentage that Austin is a politically active city.

PRE-TEST SURVEY RESULTS: TEST QUESTION

The test question was “Can you name the 30th President of the United States?” A yes or no was marked and the name offered was included on the survey instrument. For any name other than Calvin Coolidge’s the answer was recorded as ‘No’.

Table 6. Recall of Calvin Coolidge’s Name

	#	%
No	349	99.7
Yes	1	.3
Total	350	100.0

The test question was selected because it is an obscure historical fact. The use of little known historical facts has a long history in outdoor research. Previous studies have employed identical methodology (King and Tinkham, 1989). Since no organization exists that is likely to add other marketing variables into the mix during the research period, any observed changes must be considered as directly related to outdoor campaign efforts. The historical nature of the fact also indicates that accidental exposure to other information about Calvin is highly unlikely.

The results of the survey indicated only one person in the Austin marketplace could name the 30th president. Finding such an extremely small number in the pre-test improves our ability to evaluate the findings from the follow-up surveys. By maximizing the potential for contrast, the test question should provide a clear, reliable and efficient estimate of the power of posters.

POST-TEST SURVEY RESULTS

TELEPHONE SURVEY #1: CONTROL QUESTION

After the boards had been up for 60 days, telephone interviewers began the first post-test (T1). Identical to the pre-test, the control question was stated, "Can you please tell me the name of the Texas' Lt. Governor? A yes or a no was marked and the name offered was included on the survey instrument. For any name other than Mr. Perry's the answer was recorded as 'No'.

Table 7. Recall of Lt. Governor Perry's Name (T1)

	#	%
No	232	66.3
Yes	118	33.7
Total	350	100.0

This was the single respondent difference between the pre-test and the first telephone post-test. This is not a significant difference. These findings reassure us that the pretest sample and the post-test samples are comparable and that no unusual history, maturation or selection effects are likely to bias the results.

TELEPHONE SURVEY #1: TEST QUESTION

After the boards had been up for 60 days, response to the test question "Can you name the 30th President of the United States?" was astonishingly different. As in the pre-test, interviewers marked either yes or no and then wrote the name offered on the survey instrument. For any name other than Calvin Coolidge the answer was recorded as 'No'.

TELEPHONE SURVEY #1: TEST QUESTION

Table 8. Recall of Calvin Coolidge's Name (T1)

	#	%
No	293	83.7
Yes	57	16.3
Total	350	100.0

Unaided recall had increased from 1 to 57 people. This increase is projectable to 127,517 local Austinites (based on the metro population of 783,000). From almost zero to a full 16%, the change in awareness is statistically significant as well as substantive. Comparable results from the literature reinforce the validity and reliability of these findings. Further investigation of the data indicated that a higher percentage of metro residents could recall Coolidge's name without prompting.

Table 9. Recall of Calvin Coolidge's Name Among Austin Metro Residents (T1)

	#	%
No	196	81.3
Yes	44	18.3
Total	240	100.0

TELEPHONE SURVEY #2: CONTROL QUESTION

A second post-test followed the first approximately ten days later (T2). Identical to the other surveys, both the control question and the test question were recorded and checked. This follow-up survey provides corroborating evidence and greater assurance that 30 sheet posters are powerful agents of awareness.

TELEPHONE SURVEY #2: CONTROL QUESTION

Table 10. Recall of Lt. Governor Perry's Name (T2)

	#	%
No	202	67.3
Yes	98	32.7
Total	300	100.0

TELEPHONE SURVEY #2: TEST QUESTION

Table 11. Unaided Recall of Coolidge's Rank Among Austin Metro Residents (T2)

	#	%
No	240	80.0
Yes	60	20.0
Total	300	100.0

Results indicate that unaided recall of Calvin Coolidge's presidential order was maintained at the 20% level among metro residents for as many as 20 days after the boards came down. Data collected on aided recall are even more startling. When asked, "Have you ever seen a billboard that said Calvin Coolidge was the 30th president of the United States," a full 60% of Austinites said yes. More than 180 of the 300 surveyed recall seeing a Calvin Coolidge billboard sometime in the previous 60 days.

Table 12: Aided Recall of Coolidge's Rank Among Austin Metro Residents (T2)

	#	%
No	119	39.7
Yes	181	60.0
Total	300	100.0

ATTITUDE TOWARD BILLBOARDS

T2 included a single item, seven-point scale to assess "general attitude toward billboard advertising". The question was stated: "Please rate your attitude toward billboard advertising on the following scale where one is Favorable and seven is unfavorable." This semantic differential scale was used to increase measurement validity, reduce response error, minimize the duration of the interview and avoid confusion.

The data show that, on average, general attitudes toward billboards are much more favorable than might have been expected. The mean of 4.13 is significantly higher than the mathematical mean of 3.5. A full 41% of the population responded above the scale mid-point of 4.

Attitude Toward Billboards

	Value	#	%	Cume Percent
Unfavorable	1	28	9.3	9.5
	2	27	9.0	18.6
	3	54	18.0	36.8
	4	62	20.7	57.8
	5	55	18.3	76.4
	6	34	11.3	87.8
Favorable	7	36	12.0	100.0
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	Total	300	100.0	100.0

Valid cases 296 Missing cases 4

ON-LINE DATA ANALYSIS

SITE TRAFFIC AND REGISTRATION

The www.calvincoolidge.com site was posted the day the boards went up. The site contained three main pages; the index page, a registration form and a general information page about Calvin Coolidge. The server log file was analyzed to provide general traffic information as well as specific demographic data. A total of 36,596 unique users accessed the site. That is equivalent to 5% of the Austin population. This response is twice the national average for direct mail.

The registration form provided age and gender demographics. Ten percent of unique users actually registered, agreeing to provide demographic data. While more men than women, 66% versus 35% visited the site, the rate at which women began accessing the site increased over the course of the campaign. The 25-35 year olds visited the site more than any other group. (0-17 year olds = .02%; 18-24 year olds = 26%; 25-35 = 33%; 36-45 = 16%; 45-55 = 8%; 56+ = 2%; and 13% of the site registrants did not disclose their ages.) Approximately half of the responses were from outside the metro Austin market.

DISCUSSION AND CONCLUSIONS

The results of the Austin study clearly, irrefutably, demonstrates the power of 30-sheet posters. The fact that an average of 18% of the population was able to recall Calvin Coolidge's name as the 30th president with no prompting indicates that consumers were exposed, attended to the message, actively rehearsed it and stored it in readily accessible memory. As a professor, my experience indicates that even people who pay to attend my lectures (which include both verbal and visual reinforcement of the same topics), people who actively take notes and then read even more in their expensive text book, are often surprised by how difficult it is to recall any of that information, even after studying for an exam. The findings presented by this study provide strong evidence that, when called upon to make a choice, Austinites are likely to become Reagan client customers.

Reagan clients also can expect to see huge increases in awareness (from 0-60%). The extent of this message dispersion suggests that no one can hide from a Reagan 30 sheet poster campaign. And with the positive attitudes Austin area residents reported, the crucial "likeability" factor so necessary to advertising success is likely to be enhanced by use of the medium.

The on-line component offered a great deal of insight into the demographics of who was exposed. It also provided solid evidence about how well outdoor delivers a mass audience to web based businesses. Findings that women entered the site in increasing numbers as the campaign ran suggests that women are motivated by higher levels of frequency, or that men might be more impulsive webnauts. Both suggestions offer insight for targeting and tactics for web-based brands seeking to build site traffic. The zip code analysis suggests that many people outside the primary installation proximity were exposed to the campaign a sufficient number of times to motivate action.

This study found three strong indicators of outdoor advertising effectiveness. A phenomenal increase in consumer awareness is first. The wide distribution of message exposure (as indicated by website registration) is second. Third is the fact that 5% of the population was motivated to visit the site. These findings provide powerful evidence

that outdoor advertising is among the most powerful media weapons for building brand awareness in a metropolitan marketplace.

Table 4. Results Summary

Sample	Pre-Test n = 350	PT-Metro n = 198	T1 n = 350	T1-Metro n = 240	T2 n = 300	MC n = 300
Age						
18-34	43%	48.7%	35.1%	36.7%	45%	67%
35-49	57%	51.3%	34.3%	31.6%	55%	33%
Gender	Pre-Test n = 350	PT-Metro n = 198	T1 n = 350	T1-Metro n = 240	T2 n = 300	MC n = 300
Males	42.3%	42.9%	43.7%	45.8%	48.7%	49%
Females	57.7%	57.1%	56.3%	54.2%	51.3%	51%
Control Question	Pre-Test n = 350	PT-Metro n = 198	T1 n = 350	T1-Metro n = 240	T2 n = 300	MC n = 300
Unaided Awareness	34%	32.8%	33.7%	34.6%	32.7%	21%
Sampling Error					2.7%	2.4%
Test Question	Pre-Test n = 350	PT-Metro n = 198	T1 n = 350	T1-Metro n = 240	T2 n = 300	MC n = 300
Unaided Awareness	.3%	0.0%	16.3%	18.3%	20%	16.0%
Sampling Error	.002%	0.0%	2.4%	2.9%	2.7%	2.4%
Aided Awareness					60%	43%
Sampling Error					2.8%	5.2%
Recognition						47.7%
Sampling Error						5.4%
Attitude Toward Billboards	Pre-Test n = 350	PT-Metro n = 198	T1 n = 350	T1-Metro n = 240	T2 n = 300	MC n = 300
Single Item Average					4.13	
Scale - Average						4.92

Pre-test: March 9-16, 1999 Telephone Post-tests: T1-June 21 - June 28, 1999; T2-July 8 - July 12, 1999; Mall Intercept July 11-12, 1999

Note: Interpreting sampling error: for the aided recall score calculated from T2 is 2.8% (plus or minus). This indicates that the true number of people who are likely to have remembered seeing a board proclaiming Calvin's presidential order is between 178 and 184. With 60% of the sample reporting to remember the campaign, and the small error term, the finding implies that an estimated 470,000 local consumers are aware of the Calvin Coolidge poster campaign (based on Metro population of 785,000).