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ADVERTISING BUDGET REDUCTION IMPACTS ON EFFECTIVE COMMUNICATION: A DESCRIPTIVE ANALYSIS : Evaluation of Virginia State Parks 1994 Advertising Campaign

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

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Abstract

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A descriptive analysis to determine the communication effects of a reduced advertising budget, this study evaluated the 1994 Virginia State Parks advertising campaign. The campaign's objective was to provide Virginians more information about the parks, which in the previous 1992 Virginia Outdoor Survey, was said to be needed.

The author sought to answer questions relative to the overall effect of reducing the advertising budget, as well as the amount and nature of awareness resulting from it.

In order to measure these relationships, the author collected data into two random seven-day periods to compare 1994 versus 1993 for awareness, cost-effectiveness and

effectiveness of media for relating information about Virginia State Parks.

Results showed that more advertising (larger budget) does not absolutely correspond to more awareness. Also the scope of this measurement is insufficient to determine whether eliminating an entire medium's advertising (effect of reduced budget) has any noticeable effect regarding awareness. Evident from data in the random seven day periods is the fact that cable television advertising produced substantially more awareness than newspaper advertising.

For this situation (the nature of the product being advertised and budget), cable television is most cost-effective, especially for the level of awareness it results in. To measure the impact of using different media, a future campaign would need to replace from newspapers advertising with radio. Also, further study is necessary to determine how the information imparted to Virginians via the advertising is used to discover whether it is actually effective.

Introduction

The less information communicated to people, the less information they have available to use for any number of purposes, not the least of which is purchase decisions.

Such is the case for Virginia citizens visiting state parks. According to the 1992 Virginia Outdoors Survey (p. 29), the most compelling reason 40 percent of the respondents cited for not visiting a state park was "lack of information." It is the responsibility of the Virginia Department of Conservation and Recreation (DCR), manager of the state parks, to rectify this situation.

In recent years, DCR has been pressured to increase Virginia State Parks' contribution to the state revenue. State parks are considered magnets for tourism and economic development. They generate approximately $80 million per year to the state's economy (*The 1989 Virginia Outdoors Plan*).

So viable are parks economically that funds were made available in 1993, for the first time, to buy advertising time and space rather than relying solely upon traditional

public information campaigns to communicate to consumers.

The 1992 Virginia General Assembly designated $200,000 in revenue from Virginia's state parks to be used to promote in-state travel to increase Virginians' visits to and use of state attractions and offering.

To best accomplish this task, DCR consulted the Virginia Division of Tourism's 1992 strategic plan. The plan analyzed sociological, technical and economic developments in the travel industry. It also considered increasing competition and environmental concerns related to travel development.

As the plan stated, "Trends in the American travel behavior are closely related to consumer confidence in the economy. People will continue to take trips, but in a slower economy, they will travel closer to home and look for more value-oriented activities." (Virginia's *Tourism Strategic Plan*, 1992, p. 3)

The tourism strategic plan concluded also that automobile/recreational vehicle travel would continue to increase and travelers' desires for expanded outdoor recreation would also increase.

A natural way to promote in-state travel is Virginia's

state parks. With few exceptions, there is a park within an hour's drive from anywhere in the Commonwealth. Additionally, parks are natural resources that embody planned land management, recreation development, and maintenance of wildlife habitats. They appeal to environmentally aware visitors interested in eco-tourism. This represents a new wave in travel, thus there is an opportunity to appeal to yet another market segment.

However, for tourists to visit, they must have information in order to choose specific destinations. In 1993 DCR implemented an awareness campaign developed to support a toll-free telephone number. Advertisements featured state parks with the telephone number as a way to receive free information about them. The objective was to get the attention of those respondents to the 1992 Virginia Outdoors Survey who said they did not have enough information about the parks.

Cable television, radio and newspaper advertisements ran from the end of May until August 1993. The advertisements placed in the three media cost approximately $153,000.

The 1994 advertising budget was significantly less than

the previous year's. The budget was reduced to $58,000. The reduction signifies the need for efficiency and effectiveness.

Decision-makers settled upon continuation of cable television and newspaper advertising. The advertisements began mid-April and ran until mid-July 1994. The earlier schedule was used to try to determine whether, because fewer ads ran, there might be an increased effect due to seasonality.

This analysis will describe negative effects relative to communication resulting from a drastic reduction in advertising budget. Placing less advertising reduces the ability to communicate effectively with an audience. The audience has less opportunity to receive communication, and is likely to be less informed. Budget reduction resulting in fewer ads also impacts particular medium's effects; specifically where a message is communicated and how often.

Following a study of research that addresses the communication problem, telephone call (used to signify awareness) and recall data were collected and analyzed to answer specific research questions relative to possible communication effects.

Literature Review

Advertising is paid mass communication. Its purpose is to influence people to favor a product in order that they will buy it. The effects of this type of communication revolve around at least two concepts. The first is the message, or what is said and how. Second, there is the medium, where it is said and how often.

A third concept that affects communication is perception. Advertisements, like all communications, must be perceived to be effective. Only those who, at the least, perceive the communication can be influenced by it.

And, since the communication is carried by the media, their effects also are important. More recent theory regarding media effects (especially Klapper's limited effects perspective) realized that people are not wholly susceptible to media messages. Audiences have some involvement as to whether or not they will be affected by all communication (Jeffres, 1986).

Advertising evaluation research, which measures communication's effects, includes aspects such as

determining the need to advertise, designing the campaign and measuring the effectiveness of the campaign, in terms of awareness created or sales increases. Advertising is also evaluated to determine potential markets, the effects of various ads, the effect of altering various campaign variables, and as an input to the decision-making process for the next campaign.

Exposing the audience to a product once is not enough; advertisers must satisfy a consumer's need at an unknown moment. Also, media plans must take into consideration profitable return on advertising investment.

> "With impact and frequency in mind, the plan ... covers the market, minds and emotions of those falling within demographic and geographic targets. Can the advertising appear enough times to guarantee exposure at the critical moment when the sale is about to be made?" (Martin, 1988, pp. 75-79)

Exposure has various definitions. Bauer and Greyser conducted a study that was the "first real attempt to measure advertising effectiveness." (Britt, Adams and Miller, 1972, p. 3)

Prior to this attempt, many professionals and researchers relied upon Ebel's admittedly statistically inadequate number. His colleagues' informal testing

concluded people are exposed to 1,518 advertisements per day in four major media: television, radio, magazine and newspaper (Britt, Adams and Miller, 1972, p. 2).

In a successive study, Wachsler considered television, radio, newspaper, magazine and outdoor advertising, and found that males were exposed to 285 advertisements per day and females were exposed to 305.

Britt, Adams and Miller (1972) conducted a similar study and found that males were exposed to between 117 and 285 ads per day, and females were exposed to between 161 and 484 advertisements per day for television, radio, newspaper and magazine.

Bauer and Greyser (1968) refined their definition of exposure. Instead of mere physical coexistence with an ad (opportunity to see an ad), they said exposure constituted some evidence of conscious reaction. Subjects in their study counted advertisements to which they paid attention. In this sense, the authors concluded the average American adult is exposed to 76 ads per day in the major media.

Consumers' decisions to buy moves through several stages, the first of which is awareness/information gathering (Martin, 1988; Baldwin, 1982). It could take

several exposures of a commercial before the consumer even becomes aware that the advertised product exists (Baldwin, p. 8). Baldwin pointed out that more time elapses before awareness grows into preference and even more time before the awareness is converted into action.

In an awareness or information gathering stage, consumers are more influenced by repetition than higher level responses such as evaluation, purchase intention or actual purchase (Hughes and Ray, 1974).

Repetition is key -- and in more ways than one (Martin, 1988; Krugman, 1979; Naples, 1979). Martin cited a study conducted by John Stewart on behalf of A. H. Robins that resulted in an evident optimal frequency schedule for keeping consumers at height of awareness.

Krugman's conclusion was that three exposures (to a television commercial) is the minimum needed.

Naples conducted a study that confirmed that "unaided brand advertising awareness over a four-week period did not attain a sufficiently positive level until three exposures were received." (p. 60). Naples conducted six studies, each dealing with effect of frequency of exposure had on some measure of advertising effectiveness. He concluded that the

first few exposures of an ad are of little value and individuals who see fewer than three are not significantly affected by advertising.

Another study showed more exposures (increased frequency) are needed to achieve similar awareness between high quality and low/average quality [commercials] (Wood, 1988). Wood found that low or average exposure quality requires 13 exposures for awareness, and "only when there are 17 or more exposures of average or lower quality does the propensity to purchase move off the zero mark."

In an Advertising Age article, Hume (1989) compiled a list of top 10 most-recalled advertised brands in a 30-day period (Sept. 1989). In his opinion they weren't "cutting edge," rather slow and steady like the tortoise. His conclusion was that advertisers who were consistent spenders had the best recall. These brands had in common the benefits of "'continuity advertising', relying more on long-term media weight than distinctive, short-term creative approaches." (p. 66)

The amount advertisers spend has an effect on their ability to expose the audience to their products. Craig and Ghosh (1993) derived a model for effective reach. They

examined the maximization of effective reach for three different spending levels.

The third budget amount was almost twice the first, and their model showed larger budgets effectively reached more households (65 percent versus 42 percent). Craig and Ghosh measured effective rating points by multiplying the percentage of households exposed three or more times by the corresponding frequency of exposures. They found the third budget level, which was almost twice the amount of the first level, measured 119 versus 63 -- again almost twice.

When Larkin (1975) studied consumer perceptions of the media and their advertising content, he found that radio ranked second in terms of medium least used, yet it ranked second of four media with which people spent the most time. When categorizing this medium, only three percent of respondents said radio has the "most useful advertising"; only two percent said radio ads are "most informative"; and radio ranked second (11 percent) for most annoying ads.

Yet, according to Carlin (1989), "far too many agencies and clients run radio at weight levels that are just too low." (p. 51)

Spending influences many factors relative to

advertising. Since budget determines how many times a person has an opportunity to see an ad, recall can be affected.

Recalling an advertisement and reacting to an advertisement are two different circumstances. Although advertising cannot make someone buy, it can make them more ready by affecting attitudes toward the product (Baldwin, 1982, p. 8).

Consumers are targeted to be influenced by advertisers and other communicators too numerous to react to. Because of this, they employ selective processes that result in limited effects of mass communications.

They choose to expose themselves to certain communications, but do so with preexisting attitudes and beliefs. Because of selective exposure and perception, a message has to not only attract attention, but hold attention long enough to "permit communication of the intended [selling] message." (Baldwin, 1982, p. 9)

Receivers of messages have active roles in assigning meanings to them. "It should be stressed that meaning is something 'invented,' 'assigned,' 'given,' rather than something 'received.'" (Severin and Tankard, 1979, p. 140)

Advertising audiences assign meanings to the messages

they see in several ways.

Although newspaper advertisements are perceived the most useful, the more exposures a person has to a given medium, the more useful they perceive its ads to be. For example, the more time people spent with broadcast media, they more attention they paid to the commercials (O'Keefe, Nash and Liu, 1981).

As opposed to newspapers, where consumers can screen ads, television audiences are quite captive and hard-pressed to avoid commercials. (Bauer and Greyser, 1968, p. 239)

The purpose of repeating messages is to increase the likelihood that receivers will remember them. Visualization is also important in promoting recall (Pfau and Parrott, 1993).

Although newspaper is visual, television's dynamic (video) stimuli are more memorable than newspaper's static presentation. Rossiter and Percy determined a tentative hierarchy that ranked advertising stimuli in terms of memorability, or awareness. The first four rankings (of 11) are:

#1 = dynamic concrete pictures (video)

#2 = static concrete pictures (print)

#3 = dynamic abstract pictures (video)

#4 = static abstract pictures (print)

(in Harris, ed., 1983, p. 105).

The authors explained the hierarchy in the following terms. Concrete, or realistic, pictures are photographs or line drawings with high iconic similarity to some object, person, place or thing. Advertisers tend to use concrete visuals, especially in television advertising ... whereas print advertisements more often employ abstract pictures (Harris, ed., 1983, p. 106).

Television advertisements are geared for mass market audience. Television viewers are assumed to be more attentive to and involved in programs as well as commercials, while radio listening may often be a more passive form of behavior (O'Keefe, Nash and Liu).

Television is the most pervasive medium; it is regarded as a highly credible form of communication and has excellent mass penetration (Pfau and Parrott, 1993).

More specifically, 50 percent of American homes are wired for cable. Cable attracts as many as 25 to 33 percent of prime-time viewers. And, and it is a less expensive, more efficient vehicle to reach viewers because it can target

audiences with great accuracy (Pfau and Parrot, 1993).

Additionally, Gersh found that 62 percent of people who read a daily newspaper regularly are more likely to be cable subscribers (Gersh, 1988, p. 12).

In terms of effectively reaching an audience, cost per thousand viewers (CPM), is a common measure (divide ad cost by 1,000th of number of viewers). When studying cost-effectiveness, the basis for at least one decision is derived from comparing CPM for one spot on one television program versus a weekly newspaper ad placement. This measurement is always within the context of the number of audience members who will be exposed to the message (Pfau and Parrott, 1993).

As those in the communications field know, cable has dramatically changed Americans' viewing habits in the last 15 years. In 1989 the average subscriber devoted more than one-third of all viewing hours to cable, and advertisers responded by shifting more than $1 billion to the national cable networks (Marks, 1989).

Marks also points out that local cable offers advertisers several advantages: it requires a relatively small amount of out-of-pocket cost, provides ability to

reach targeted audiences and can compensate for broadcast's under-delivery of cable homes.

According to Moloney (1987, p. 55), "A case can be made that by proposing that a client shift 10 or 15 percent of his print advertising budget to television, the result will be increased gross rating points at lower cost-per-thousand-rates."

Often, timing advertisements in a campaign is one of the most important elements. It may be more of a factor when spending less.

May unofficially opens the 'season' for numerous sports activities, from bicycling and jogging to swimming and sailing. Even though some activities, such as swimming and tennis, can be done indoors year-round, there is more incentive to be involved when in nice, warm weather. Moreover, 77 percent of Americans consider outdoor recreation a priority; 52 percent rate outdoor recreation opportunities "very important," and 25 percent consider them "fairly important." (Waldrop and Mogelonsky, 1992)

To get away from it all, instead of one long vacation, more than half of 1990's leisure travelers planned to take short trips, and 25 percent planned to stay closer to home

than they did in the past (Waldrop and Mogelonsky, 1992, p. 257; Virginia Division of Tourism Strategic Plan 1992).

Considering the literature on these various aspects of advertising and its communication effects, the following research questions should be answered to evaluate DCR's Virginia State Parks advertising campaign:

1. Does less advertising overall negatively affect the level of awareness in proportion to the budget reduction? Does eliminating radio from the advertising mix have a noticeable affect on awareness?
2. Although consumers get information from varied advertising sources, is awareness higher from cable television than newspapers?
3. Is cable television advertising a more effective medium than newspaper, not only to communicate this type of message, but in terms of cost?
4. Do frequency and seasonality of ads result in increased awareness?

Data Collection, Analysis and Results

In order to evaluate communication effectiveness, awareness of the state parks advertisements and their recall was measured. Analysis of the data, compared to 1993 results, was used to form conclusions regarding the 1994 advertising campaigns. Results determined any success and will guide future campaigns.

The 1993 advertising campaign comprised cable television, newspaper and radio advertising in the following markets across Virginia: Virginia Beach, Richmond, Northern Virginia, Martinsville (Danville), Staunton, Augusta County/ Valley, Lexington, Buena Vista/Charlottesville, Fairfax, Arlington, Lynchburg, Roanoke/Salem and Bristol.

Cable television advertisements ran several times daily, as did radio, and newspaper ads ran once per week beginning the third and fourth weeks of May until the third week in August. The 1993 budget consisted of $76,260 for cable television, $22,500 for newspaper, and $10,000 for radio.

In 1994, the advertising campaign consisted of cable television and newspaper advertisements. Because of budget reductions, radio was eliminated, and the advertisements were run in fewer markets: Virginia Beach, Richmond, Northern Virginia (no newspaper), Roanoke/Salem, Bristol, Lexington, Buena Vista/Charlottesville, Lynchburg, and Martinsville (Danville).

The advertisements began running the third week in April and continued through mid-July; several ads per day ran on cable, and one ad per week ran in the newspapers. By comparison, the budget consisted of $42,500 for cable television and $14,492 for newspaper.

Data were collected in the form of daily telephone logs completed by telephone service operators contracted by DCR to answer the toll-free telephone number. The operators recorded caller information, such as name, telephone number and address; they also asked callers where they heard about Virginia state parks. Callers' responses were categorized as follows: television; radio (1993 only); newspaper ad; word-of-mouth; and other, and were used to measure advertising recall.

The operators did not answer any questions from

callers. The only information they were prepared to give was a phone number to reach the Department of Conservation and Recreation.

Phone logs were forwarded to DCR on a monthly basis where they names and addresses were transcribed to mailing labels. This was the method used to send callers Virginia state park information.

The author collected and categorized data for total awareness and recall daily for the approximately 100 days of the advertising campaign. This study will use this a more manageable form of the data collected than the three months of phone calls logged.

The author derived two seven-day periods for comparison -- one period to represent 1993 and one to represent 1994. The days for each period were randomly selected by the author from all weeks cable advertisements aired and all newspaper ads ran in 1993 and 1994, plus one day before and one day after. These two days were added for balance so that the number of calls counted was not unusually elevated from simply using actual days newspaper advertisements ran.

For 1994, the seven days consisted of the

following dates: 4/22, 4/23, 4/25, 4/30, 5/1, 5/4, and 5/5. For 1993, these dates were: 5/25, 6/2, 6/10, 6/19, 6/28, 6/30 and 7/8. The variation of dates/months occurs because the advertising began airing/running at different times (the 1994 start date was altered purposely by DCR to try to be more effective -- see research question 4).

For each of the seven-day periods, the number of phone calls answered by the operator service was the awareness measure for consumers having seen the advertisements. The number of phone calls was broken down by recall for television or newspaper, advertisements (and radio in 1993 only), and word-of-mouth and other. Some callers could not recall where they heard about state parks; this number was compiled into a category and titled "no recall." A number of calls came from out of state. Since no advertising was run outside Virginia, these calls were compiled into a category and titled "wrong recall."

Table 1 shows a day-by-day comparison for seven days and a total comparison of the phone calls resulting from the two constructed periods. It enables an analysis of how much awareness resulted. This breakdown shows also the number of cable television advertisements recalled as opposed to

newspaper advertisements.

The Table 1 number for "total recall" enumerates only recall for television and newspaper ads; total awareness is the total number of calls recorded on that day.

TABLE 1
Comparison of ad recall and total awareness
in random seven-day periods

	1993	1994
DAY 1	May 25	April 22
medium		
television	12	32
newspaper	35	19
radio*	8	n/a
wrong recall	0	2
no recall	4	5
word-of-mouth	1	1
other	2	2
total recall (tv, newspaper)	47	51
total awareness	62	61
DAY 2	June 2	April 23
medium		
television	44	0
newspaper	11	0
radio*	8	n/a
wrong recall	1	0
no recall	2	3
word-of-mouth	2	1
other	1	0
total recall (t.v., newspaper)	55	0
total awareness	69	4
DAY 3	June 10	April 25
medium		
television	31	23
newspaper	24	8
radio*	7	n/a
wrong recall	0	2
no recall	6	13
word-of-mouth	1	4
other	2	7
total recall (t.v., newspaper)	55	31
total awareness	71	57

** radio not used in 1994*

	1993	1994
DAY 4	June 19	April 30
medium		
television	47	0
newspaper	16	1
radio*	0	n/a
wrong recall	1	0
no recall	5	2
word-of-mouth	2	2
other	0	0
total recall (t.v., newspaper)	63	1
total awareness	71	5
DAY 5	June 28	May 1
medium		
television	34	1
newspaper	8	0
radio*	3	n/a
other	3	0
wrong recall	0	0
no recall	2	0
word-of-mouth	0	1
total recall (t.v., newspaper)	42	0
total awareness	50	1
DAY 6	June 30	May 4
medium		
television	21	17
newspaper	5	5
radio*	2	n/a
wrong recall	1	4
no recall	2	7
word-of-mouth	0	1
other	2	2
total recall (t.v., newspaper)	26	19
total awareness	33	36

** radio not used in 1994*

	1993	1994
DAY 7	July 8	May 5
medium		
television	32	21
newspaper	7	1
radio*	3	n/a
wrong recall	1	0
no recall	1	10
word-of-mouth	3	2
other	3	1
total recall (t.v., newspaper)	39	22
total awareness	50	35
seven-day totals		
medium		
television	221	90
newspaper	106	34
radio*	31	n/a
wrong recall	4	8
no recall	22	42
word-of-mouth	9	11
other	13	12
total recall (t.v., newspaper)	327	124
total awareness	406	197

* radio not used in 1994

The number of calls derived from the 1994 seven-day period were counted for the markets where the most money was spent on advertising: Virginia Beach, Northern Virginia and Richmond, in that order. Table 2 delineates these figures.

TABLE 2
Level of opportunities to see corresponding to level of awareness in top three markets by amount spent
(1994 seven-day period)

date	awareness by market and dollars spent		
	Virginia Beach ($14,316)	Northern Virginia ($12,221)	Richmond ($11,956)
4/22	19	8	16
4/23	1	0	0
4/25	18	17	12
4/30	0	1	1
5/1	0	1	0
5/4	12	3	10
5/5	10	10	7
totals	60	40	46

The costs for the advertising markets were collected, as was household viewing figures and circulation figures for cable television and newspaper. The first part of the table lists numbers for each individual medium for 1994. The latter half only lists totals for 1993. Cost per thousand (CPM) was calculated to evaluate differences among the two types of advertising, and between budget amounts for the two years (Table 3).

TABLE 3

Cost-per-thousand (CPM) calculated
individual medium and total 1994
total only 1993

	circulation/ households	$ spent	CPM
1994 newspapers			
Richmond (R T-D, Voice)	260,357	$6,408	24.6
VA Beach (Virginian Pilot)	209,629	$4,492	21.4
Roanoke (Times & World News)	114,486	$2,030	17.7
Bristol	45,530	$1,562	34.3
total	630,002	$14,492	23
1994 cable television			
Richmond	172,000	$ 5,548	32.5
Virginia Beach	364,600	$ 9,824	25.5
Northern VA	266,269	$12,221	45.9
Roanoke	87,950	$ 1,300	14.8
Lynchburg	24,736	$ 374	15.1
Martinsville (Danville)	18,500	$ 448	24.2
Lexington, Buena Vista/ Charlottesville	32,000	$12,000	37.5
total	966,055	$42,500	43.9
1993 newspapers			
Richmond			
Virginia Beach			
Northern Virginia			
Roanoke			
Bristol			
total (only)	733,321	$22,500	29.6
1993 cable television			
Richmond			
Virginia Beach			
Fairfax, Arlington			
Roanoke			
Lynchburg			
Lexington, Buena Vista/ Charlottesville			
Martinsville			
Staunton, Augusta/Valley			
total (only)	979,771	$76,260	77.8

Data were also collected daily from phone logs for the six days preceding Memorial Day for each year to analyze resulting effects of altering the timing of the advertisements. Table 4 relates the number of calls, used as a measure of awareness, on each day May 24 through 30. Included in the table is the number of opportunities to see for each year to compare whether more opportunities to see (advertisements run) resulted in more awareness (phone calls to the toll-free number).

TABLE 4

Awareness (number of calls) comparison
pre-Memorial Day relative to opportunities to see

date	1994 awareness 1,814 opportunities	1993 awareness 800 opportunities
May 24	33	58
May 25	28	7
May 26	45	116
May 27	43	80
May 28	18	63
May 29	8	36
May 30	15	21
total	190	370

Results

Comparing the derived seven-day periods for 1994 and 1993, a greater level of awareness resulted in 1993

i.e., more calls were logged.

Three days of seven in the derived time periods showed that the level of awareness was about the same (days 1, 3, and 7), and a fourth day (day 6) showed that the 1994 level was greater than that of 1993. (Table 1)

As for recalling the advertising, the respondents did so more easily when they had more opportunities to see in 1993. (Table 1) Days 2, 4, and 5, especially showed marked differences in the levels of recall. On day 5 in 1994, in fact, there was only one call logged, and that caller heard about Virginia State Parks by word-of-mouth.

An interesting note: in 1993, when more opportunities to see were presented, the level of "wrong recall" and "no recall" was only half that of 1994, when there were fewer opportunities to see. (Table 1)

For total calls, 1993 awareness was more than twice 1994: 406 versus 197 calls. 1993 awareness was not proportionately higher than 1994; the budget for 1993 was almost three times 1994's budget, yet the number of calls -- neither daily nor in total -- was not three times greater in 1993. Therefore, the first part of research question 1 is not supported.

The awareness resulting from radio (in 1993 only) listed daily in Table 1 reveals that recall from this medium was not high in relationship to newspapers and cable television. Although there was far less awareness (fewer calls) in 1994, there is not any way to attribute this to eliminating radio from the advertising mix. Measurement for this analysis is not sufficient to answer the second part of research question 1.

Recall delineated for six of seven days selected in Table 1 shows more recall for cable television ads than newspapers for each year. When all days' awareness is totaled, recall for cable television in 1994 was two and one-half times that of newspapers. Research question 2 can be answered affirmatively.

Most of the awareness came from the three areas where the most was spent on ads. Two of the markets, Virginia Beach and Richmond, also had the highest concentration of ads. In these markets, both cable television and newspaper advertising was used; cable television advertisements alone ran in Northern Virginia for 1994.

On four of the seven random days selected, awareness from this area of the state was greater than that of markets

where two mediums were used (more opportunities to see). (Table 2) However, total awareness was greater in Richmond, although more money was spent on advertisements in Northern Virginia.

Table 3 depicts the cost-per-thousand (CPM) comparison between cable television and newspaper advertising for each year, and compares the totals for 1993 and 1994. Proportional relationships are evident: the larger the budget, the more households reached and the higher the CPM for each type of medium.

The CPM for newspapers was similar -- 23 in 1994 and 29.6 in 1993. The same figures for cable television are very different. In 1993, the budget was more than $76,000 and the corresponding CPM was 77.8 versus $42,500 spent in 1994 for a CPM of 43.9. For cable television, however, approximately the same number of households were reached each year.

For this type of campaign, cable television advertising appears more cost-effective than newspaper, thus suggesting an affirmative response to research question 3.

The data for the weeks before Memorial Day 1994 and 1993 (Table 4) do not support the assumption that altering timing to increase frequency would result in increased awareness. There is no affirmative response for research question 4.

In fact, the data in Table 4 -- opportunities to see and resulting awareness -- demonstrate the opposite to research question 1.

In 1993, there were 800 opportunities to see the advertisements across the state from the advertising start date (early May) until 5/22. In 1994, to make up for fewer opportunities to see, the advertising start date was sooner (April 22). The opportunities to see in 1994, from 4/22 until 5/22, totaled 1,814 (both newspaper and cable across the state); however, the resulting awareness was half that of 1993 -- with more than twice the opportunities to see (Table 4). Research question 4 was not answered affirmatively.

Discussion and Conclusions

Advertising, as paid mass communication, is mass selling. A problem that arises with this form of communication is that "mere exposure to the medium that carries the advertisement without actual perception of the message is of no avail." (Starch, 1966, p. 2) Knowing that potential receivers of messages engage in selective processes of exposure, perception and retention, DCR is communicating to the portion of the audience pre-disposed to visit parks.

Although not directly attributable to awareness created by advertising, where park attendance figures increased in 1993 over 1992 (for 16 of 21 parks), the average increase was 14.7 percent. Fewer opportunities to see advertisements were presented in 1994 and, it was thought this would create less awareness. However, attendance figure increases in 1994 over 1992 (at five of 21 parks) averaged was 16.7 percent.

It is possible the ads could have resulted in awareness for those consumers not presdisposed to message about Virginia state parks -- whom DCR did not target. But, that could easily be disputed. For instance, the greater

awareness was created, according to recall numbers, by cable television ads. However, Wright, in a discussion on media effects on advertising responses, advanced a hypothesis that any effects that content-involvement have on receiver responses will be magnified by the typical print transmission and minimized by the typical broadcast transmission.

Fitzgerald (1987, p. 30) reported that newspaper ads do not suffer the same phenomenon of zipping/zapping of commercials that has devastated television advertising. And Bartos and Dunn (1976) found that people felt differently about ads they encountered in different media: they favor considerably newspaper ads over all other forms of advertising.

Larkin's study concluded that newspapers contained the "most useful" advertising (72 percent of respondents) and the "most informative" ads (56 percent of respondents).

Yet for this situation, cable television advertisements were recalled most often by those consumers phoning the 800 telephone number for information.

Perhaps sheer repetition using a simple stimulus-response design, which works well for television where an

advertiser does not need to know much about the audience (Severin and Tankard, 1979, p. 193) If those consumers who were pre-disposed that they would benefit from state parks information made connections between denotative (object in the real world the word indicates -- here, park) and connotative meanings (emotional association -- here, family fun, outdoor enjoyment).

Or it could be that, as Aaker and Bruzzone found, "Television commercials are perceived to be much more informative than might have been expected." Although they go on to point out that there are three distinct ways a commercial is considered informative, those characteristics might not be relevant. If this audience turns on its selective perception, they feel they will benefit from what the commercial is selling, attention at the most basic level might cause a reaction.

O'Keefe, Nash and Liu state "Television viewers are assumed to be more attentive to and involved in ... commercials, while radio listening may often be a more passive form of behavior."

According to Rossiter and Percy's tentative hierarchy of advertising stimuli ranked in terms of memorability

(awareness), all audio stimuli rank in the middle (5, 6, 7, or 8) on the scale of 1 - 11.

However, dropping radio in addition to dropping a newspaper and a cable market may have a significance that cannot be determined from this data. After all, Carlin said most advertisers do not use radio as they should. It does offer "reach and frequency and efficiency and recall and memorability," and has the same obtrusiveness as television. Additionally, while alone its impact may have been understated, it could possibly served to reinforce the advertisements in the other two media. One way to determine its effect is to devote a similar budget and scheduling in a future campaign to cable television and radio advertisements, eliminating print from the mix.

This may explain results displayed in Table 2. Although more money was spent in Northern Virginia, more awareness resulted in the Richmond market. Perhaps the fact that audiences in Richmond (and Virginia Beach, the other market) benefitted from the reinforcement of advertisements in two media as opposed to just one.

It is evident, from the random days selected for both 1993 and 1994 that recall is much greater from cable

television than newspapers (with the exception of one or two days).

Comparing the seven-day totals, though, shows an even greater disparity in recall -- cable television recall is almost three times greater in 1994, and slightly more than twice the recall for newspapers in 1993.

DCR spent more of its budget on cable television ads, yet the CPM per market for each medium (except Northern Virginia where no newspaper ads ran in 1994) is fairly similar (Table 3). And, for spending almost three times the budget for cable television ads over newspaper, only one-third again as many households were reached.

Cable television is a better medium for this particular product because of its visual nature. According to Rossiter and Percy's tentative hierarchy, state parks television ads are dynamic concrete pictures and rank #1 (of 11) in their terms of awareness. State park print ads, which fit the static abstract picture category, rank #4 (of 11) in the hierarchy.

This judgement is based on the authors' descriptions: television advertisers especially "tend to use concrete pictures - usually of products, people or places" and that

"print advertisements most often employ abstract pictures."

The first characteristic of television ads is definitely true of state park broadcast ads. The newspaper advertisements fit the authors' descriptions of *abstract* pictures that included line art, or an animated or surrealistic style.

For more specific conclusions, further study is necessary to determine how consumers use this communication. For instance, determining the nature of the information consumers need, how they expect to satisfy the need (by which media) and whether they put it to use. Research about consumers and new versus existing products and/or brand share might help distinguish whether communication by advertising is the most effective method for DCR.

A basic goal the agency wanted to achieve was to communicate information to 40 percent of the state's residents who said it was necessary for them as consumers. Even with modest increases in park attendance figures, it is difficult to substantiate the communication campaign's effectiveness.

Providing 40 percent of the population with information might be satisfactory. However, few involved in advertising

research are interested solely in communication success and resulting implications. Most researchers and advertising professionals need to know how the advertising communicates to consumers to motivate them to make purchases. DCR should consider surveying people who call the toll-free telephone number to determine if, in fact, the information they are provided is enough to make them visit state parks.

With this information, attendance figures could be substantiated and used as a measure of effectiveness as far as increasing an advertising budget is concerned.

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