Commercial Tuneaway as a Function of Message Frequency: What Can We Learn About Wearout From The Set-Top Box?

Research Brief

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Abstract

The analysis of advertising tuneaway can help us to understand many of the dynamics of advertising response, including advertising attention and wearout. In this paper we examine the relationship between advertising frequency and advertising tuneaway, and discuss the relationships in the context of attention and wearout.

Introduction

Since the origin of television advertising there have been questions about commercial attention and commercial wearout. There are several perspectives we can take on the topic of commercial attention and wearout. They include approaches that focus on consumer information processing and communication theory. These approaches are useful, and provide substantial context. But research of this nature offers directional advice that can be difficult to apply to a specific campaign. In contrast, we can take a behavioral approach and recognize that television advertising exposure begins with channel tuning and ends with commercial tuneaway. As a result, commercial tuning and tuneaway is a good place to start the study of commercial retention and wearout.

Set-top box (STB) data provide a perfect approach for examining the behavioral aspects of commercial exposure. The set-top box provides the volume of data necessary to support complex analysis of key factors including commercial messaging, commercial position, and commercial frequency.

While tuneaway is driven by a complex combination of factors, it's generally best to break down a complex problem one dimension at a time and study a single factor. We can pursue the complex analysis after we improve our understanding of the individual factors that drive tuneaway. In this study, we have focused on commercial tuneaway as a function of commercial frequency. Our research is intended to answer a basic question:

> Do commercials reach a point where a viewer is more likely to tuneaway based on
> the level of past exposure?

In this paper we utilize Return Path Data (RPD) to explore the relationship between message frequency and commercial tuneaway, present key findings on this relationship, and relate those findings to ideas on a more complex model for understanding commercial audience.

The study is based on an extract of the Charter Los Angeles data set that measures second-by-second tuning of over 420,000 sets in roughly 270,000 homes. We have supplemented the analysis with a business case study featuring DIRECTView, a representative sample of 203,000 STBs that project to the national DIRECTV universe of 16.7 million households.

Advertising Attention and Patterns of Tuneaway

Commercial tuneaway is part of the larger issue of selective exposure to communication. The principles of selective exposure tell us that people pay attention to messages due to the perceived consequence of the information. Most people view television in order to be entertained or informed about current social and

personal topics. In many ways the idea of selective attention to advertising is at odds with the reasons that people view TV. Viewers don't necessarily avoid the ads; it's just that the ads are not what they are looking for.

During the time that an advertising message is telecast a viewer's attention can go in many directions. A pilot study, published by the Ball State University Center for Media Design, indicates that viewers focus their attention in several possible directions during ads. This is shown is Figure #1:

Figure #1: Activity During TV Ads

Activity	Percent
Talking to others:	22%
Attention to other media	18%
Channel changing, other programs	7%
Channel changing, program guide	4%
Leave room	3%

Ball State University Center for Media Design, 2004 working paper

The channel changing numbers in Figure #1, which add up to 11%, are consistent with other studies. However, we have observed a high degree of variance in these numbers, with tuneaway ranging from a low of 2 to 3% to some isolated observations that exceed 15%. Tuneaway may be influenced by a number of factors, not the least of which is relevancy. In addressable advertising trials Starcom and Comcast estimated that commercials that were correctly targeted were 38% less likely to be tuned away than commercials that were delivered to a viewer that was "out-of-target." Tuneaway is also related to the message environment, including pod position, or program formats that encourage channel changing. Finally, we expect tuneaway to increase when the message has gotten old, the viewer has seen the message four, five times or more to the point where the commercial says nothing new or the execution has become tedious or annoying. In order to make sense of the complexity, it's useful to think of tuneaway as part of the response to the commercial. Principles of advertising response help us to anticipate the patterns we are likely to observe in the data.

The best-known advertising response model was proposed by Dr. Herbert Krugman. Dr. Krugman argued that a person's "psychological response" to advertising can, (will), change during exposure to a commercial and across multiple exposures to a campaign. Subsequently, he outlined three successive stages of advertising response. They are:

1) "What is it?"
2) "What of it?"
3) a "true reminder"

The logic and principles behind the sequence have held up over time. When we are exposed to something new we tend to pay attention, identifying new things helps us make sense of the world. During initial exposure a viewer should attend to an ad long enough to recognize its nature. The second response, the "what of it?" is an evaluation. Evaluation is not always thoughtful or effortful, and often it is not. It is common to have a "non-response," or "I think nothing of it." This is the implicit acknowledgement that something just does not matter, "it is just not relevant." In many cases an instant acknowledgement of irrelevance is coincidental with the "what is it?" response. In contrast, when an advertisement elicits relevant thoughts and feelings the viewer is more likely to pay attention to the message. All other things being equal, relevant thoughts should lead to more attention, less tuneaway. For example, a person who has springtime allergies should find a message for an OTC allergy remedy more relevant than a person who is allergy free. If the ad has the right cues to engage the attention of the viewer there should be less tuneaway.

Message cues can be direct, such as "Raid Kills Bugs Dead!" Message cues can also be peripheral, more important for grabbing attention than for driving home brand benefits. Sex really doesn't sell, but it can help to get the sales process started. There is one final factor that drives attention, and that is familiarity. When a message is old we have no motivation to pay attention. We cheerfully ignored our mother's plea to "button up our overcoat" even though it was a relevant message.

When taken together the three factors, the message, the environment, and the frequency give us a model for understanding advertising attention. Because our focus is on the relationship between tuneaway and frequency, we've simplified things by collapsing the message and environment into a single dimension of campaign quality. Campaign quality is built on the idea of "saying the right things to the right people in the right environment." If we use this rough definition of campaign quality we have a simple model of ad attention and tuneaway that is shown in Figure #2a:

Figure #2a: Model of Ad Attention
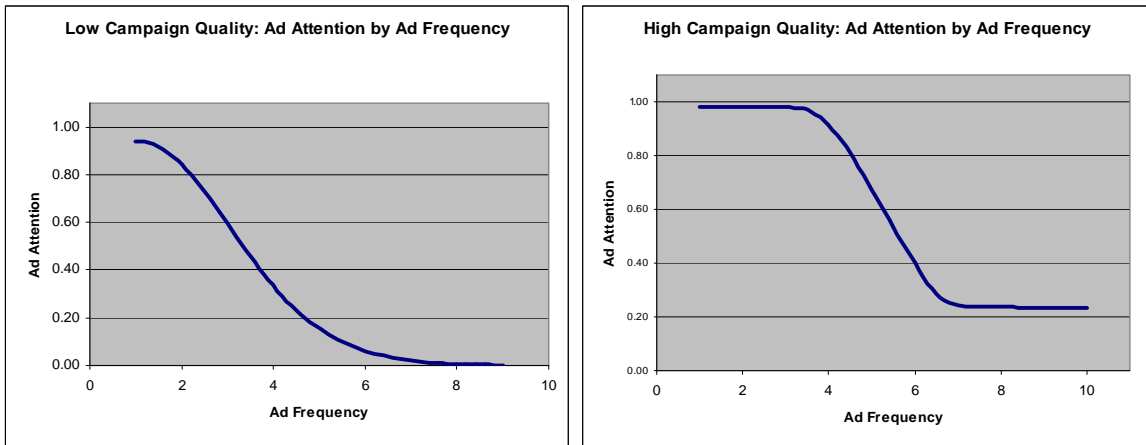
In this model we have set the maximum value for ad attention to a value of "1," or "full attention." As campaign quality drops ad attention should drop. Further, as the ad becomes more familiar across repeated exposure, ad attention should also drop. This is our working hypothesis: As ad attention drops ad tuneaway will increase, and we should find patterns of advertising tuneaway that mirror the patterns of ad attention shown in Figure #2b.


Figure 2b: Ad Attention and Ad Tuneaway
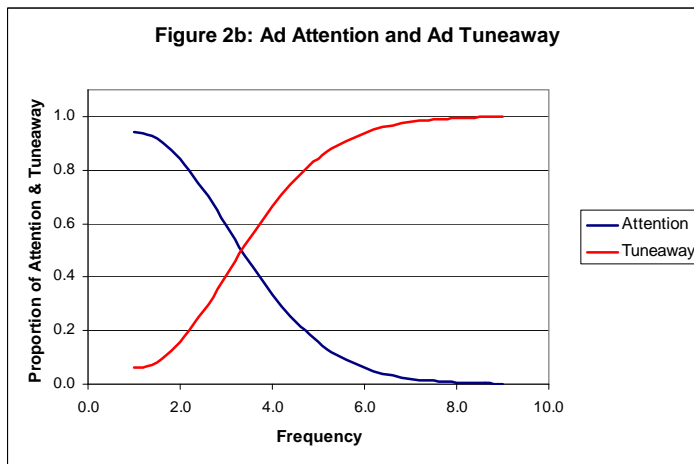
Observations from second-by-second data

Our first challenge was to create the research data to study the topic. In order to do this we analyzed commercial pods. We randomly selected a number of pods. For example, we'll assume that 500 set-top boxes were tuned to a commercial pod, on channel "X", at 6:35 PM on Thursday May 21. If the pod contained three commercials we could query the past viewing records for each box, and count the number of past instances of tuning to each of the three commercials. That query would create 1,500 paired observations that indicated prior exposure and current tuning or tuneaway. We repeated the process over several hundred commercial pods.

This allowed us to identify higher and lower levels of prior commercial tuning from each set-top box and relate them to higher or lower levels of tuneaway to the advertisements in a current commercial pod.

In our first analysis we took a broad view of total campaign weight and the percent of audience that tunes away during airing the campaign execution. If our hypothesis is correct then increased advertising weight should lead to an increase in tuneaway. This pattern, although subtle, is confirmed in Figure #3a.

**Figure 3a: % Commercial Tuneaway by Campaign GRPs**
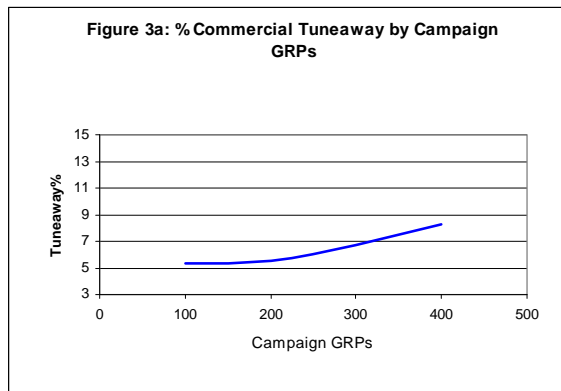
Another way to look at this pattern is to look at the relationship between a campaign's average frequency of exposure and tuneaway. We can see this in Figure #3b.

Figure 3b: %Tuneaway by Campaign Frequency
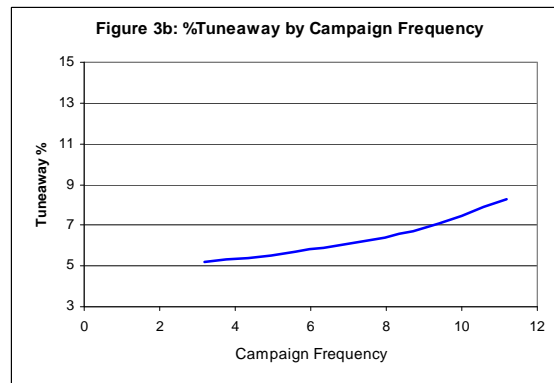
In both cases we see a moderate but consistent relationship between increased campaign weight and tuneaway, with a change from 5% to 9% that indicates an 80% increase in tuneaway as advertising weight approaches levels that are common for many well-funded brands.

During the initial analysis we noticed a number of interesting outliers, and they lead us to take account for the time frame of exposure. We assumed that heavier weight in shorter time frames would be related to an increase in tuneaway. To summarize the relationship we looked at advertising weight and advertising frequency within single weeks, and related them to advertising tuneaway. These relationships can be seen in Figures #4a and #4b.

Figure 4a: % Tuneaway by Weekly GRPs

Figure 4b: %Tuneaway by Weekly Frequency
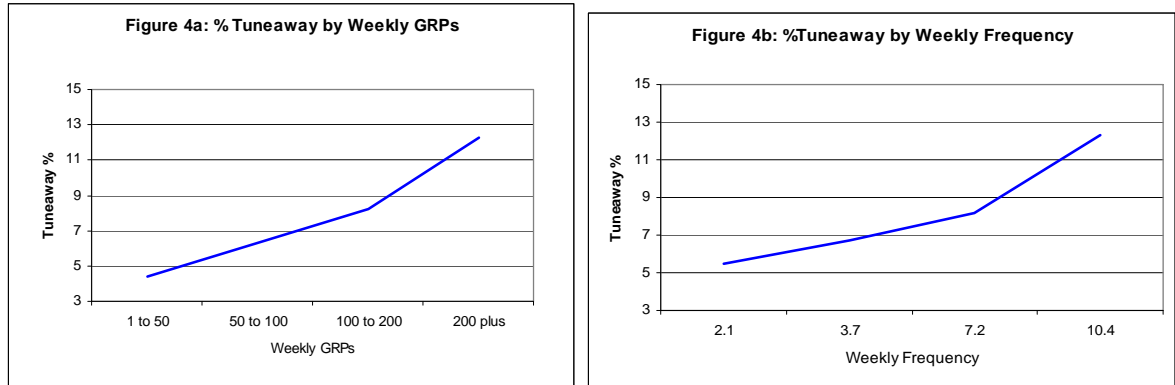
If we compare the patterns in Figures #3a and #3b with the patterns in Figures #4a and 4b, we see an interesting contrast. The changes shown in Figures #4a and #4b indicate that advertising weight that is concentrated in a short time frame can drive a change in tuneaway of roughly 300%. This contrast is important. Message weight, alone, is only part of the story. Message timing and scheduling are critical.

Introduction to a Comprehensive Analysis of Tuneaway

The aggregate tuneaway figures may be useful and interesting, but they are only part of the story. The relationship to message frequency, while being relatively strong, explains only about 1/3 of the variance in tuneaway. This can be seen in Figure #5, which shows a randomly selected subset of the data points from the analysis.

Figure #5: Tuneaway by Frequency: Data Scatter
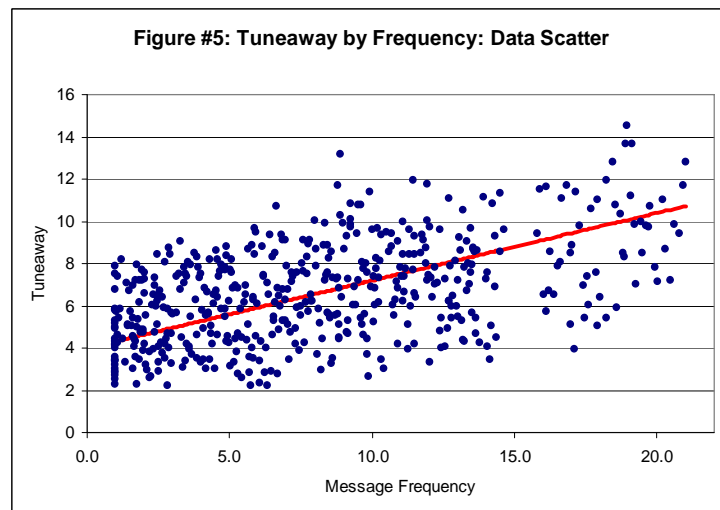
Because frequency is only part of the story it's important to construct a more comprehensive model, and we need to start with a simple question: What does the model look like? First, the model starts with a behavioral floor, the scatter plot in Figure #5 shows us that there is a 2-3 % floor, and this floor held up across the board. The presence of a tuneaway floor leads us to a second question: Do some viewers have "viewing styles" that result in more commercial tuneaway? At first glance, it appears that individual set-top boxes do exhibit unique tuning and landing patterns. However, if a viewer is engaged in a "search and select" process for choosing a program they may tuneaway from ads simply because ads are not important to the immediate task. Search and select, or channel surfing, can occur at different rates at different times of the day, at different times of the year (e.g., during summer vacation for teens), and can occur differently for different program formats including short format programs and sports. Subsequently, we need to look at an individual set-top box data across a large time-series of viewing events in order to evaluate this issue.

Once we get past the existence of a campaign's tuneaway "baseline" we need to return to our initial proposition about ad response, and start thinking about systemic variation. A comprehensive model of advertising attention and tuneaway has four fundamental dimensions. They are:

- Frequency of exposure – on an individual STB basis.

- Advertising relevance, where Comcast and Starcom have shown that an on-target ad achieves 38% lower levels of tuneaway.

- Executional style of the ad, which provides the verbal and visual cues that allow a viewer to interpret the relevance of the brand and its benefits.

- Programming environment, which provides context, engagement and hopefully, ad receptivity.
An important step towards integrating these four elements into a more holistic approach to advertising retention is to determine how frequency of exposure affects commercial tuneaway. Using 203,000 set top boxes from the DIRECTV universe, we analyzed commercials for one brand, AT&T Wireless, because it exhibited the heaviest commercial activity over the most recent 7 weeks, April 6-May 24, 2009.

For the purposes of our business case study, we chose to use creative execution, as reported by TNS Media Intelligence, as a cue for the messaging elements of relevance and executional style. We looked at two different creative executions: "Blake Gives Shoes to Children" speaks to AT&T Wireless's international coverage; "Andy Roddick and 3G" pitches the 3G AT&T laptop connect card. The Blake ad is inspirational as the commercial narrator depends on the product's reliability to aid third world children. The Andy Roddick ad is humorous, with Bill Kurtis, host of "American Justice," challenging the product's Internet access speed against the "world's fastest server."

We found that tuneaway increases as frequency of exposure increases for both the Blake and Roddick campaigns (Figure #6). The increase was slight but steady — STBs that were exposed 4+ times tuned away 25% more frequently than those who saw the ad one time. As regards to commercial weight, we expected that the Blake creative, which ran three times more weight (3,700 spots/336 GRPs) than the Roddick creative (1,330 spots/115 GRPs), to exhibit higher tuneaway levels. This did not bear out in the analysis, as the Blake spot garnered consistently lower levels of tuneaway than the Roddick spot across all levels of frequency. As mentioned previously, this demonstrates that additional factors such as messaging and environment are as responsible for impacting ad receptivity as is frequency of exposure.

Figure #6: AT&T Wireless
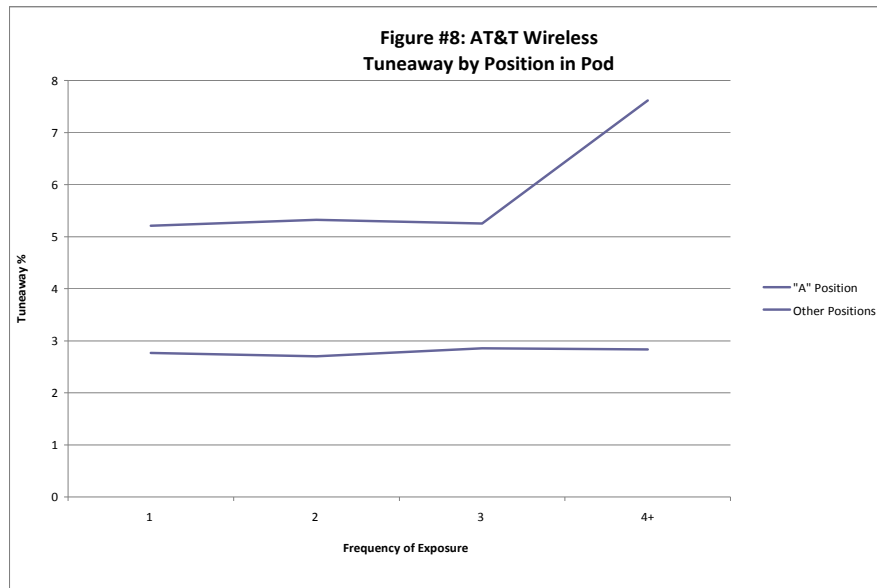**Tuneaway by Creative Execution**
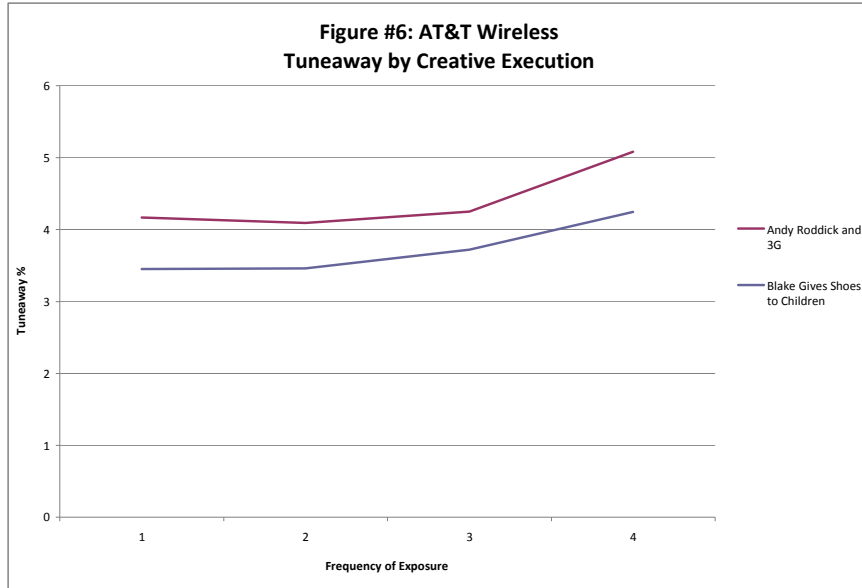
One of the environmental factors that seems to have the most predictable impact on tuneaway is position in pod (Figure #7). We combined the effect of creative and pod position by analyzing the differences in tuneaway by frequency of exposure in the "A" position as compared to all other positions. On average, STBs that had 4+ opportunities to view either creative execution in the "A" position tuned away 72% more often than those who tuned to the ad one time.
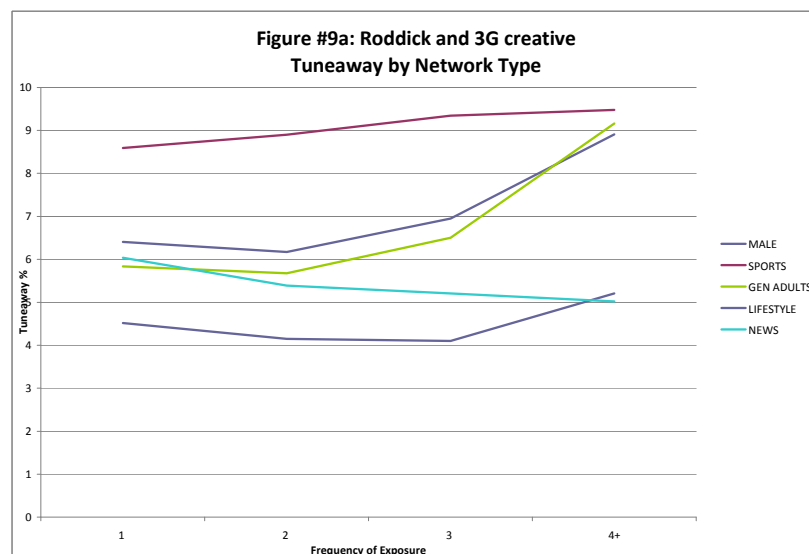
Figure #7: AT&T Wireless
Tuneaway by Creative in "A" Position
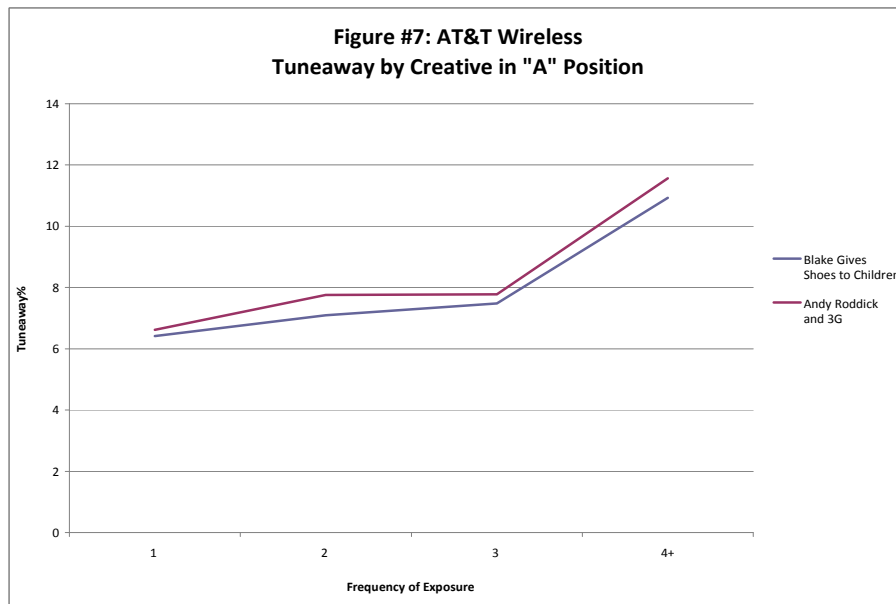
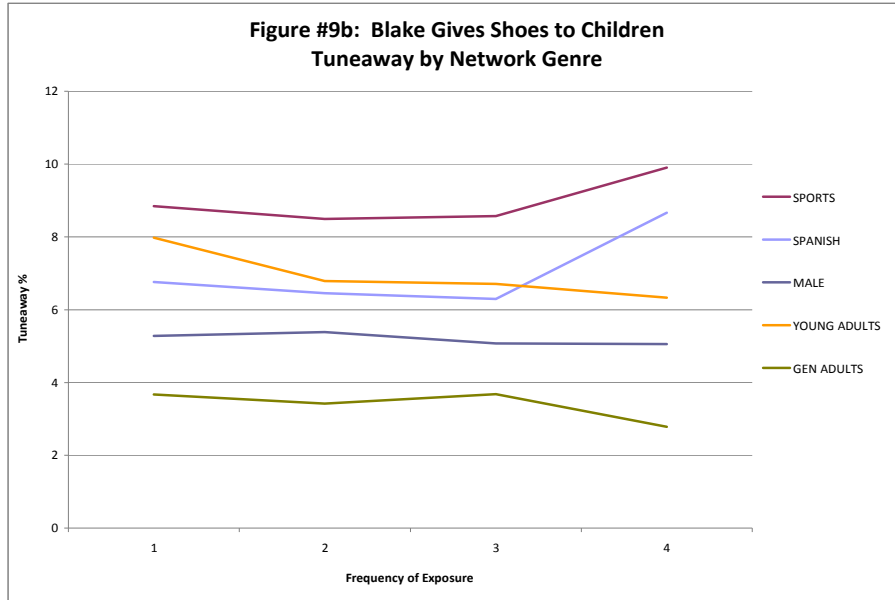The impact of the "A" position becomes even more apparent when looked at across the entire spectrum of AT&T's commercial occurrences which totaled 11,208 spots over a three week period (Figure #8). On average, STBs exposed to ads in the first position of the pod were 169% more likely to tune away than STBs that were exposed to the ads in any other position. And the slope of change increased dramatically after the

third exposure – an interesting finding in light of the concept that only reach at a 3+ frequency is effective! Clearly, position in pod needs to be taken into account as a key driver of commercial avoidance.

Figure #8: AT&T Wireless Tuneaway by Position in Pod

Finally, we reviewed the relationship of creative execution as it relates to its programming environment by grouping networks into programming genres (Figures #9a and #9b). Tuneaway by genre differed depending on the creative execution. Blake, the inspirational creative, had the highest tuneaway in the Sports and Spanish genres, increases of +12% and +28% respectively. Roddick, the more humorous creative, experienced higher tuneaway, with ads on Male-oriented networks reporting +39% tuneaway at the 4+ level and Gen Adult networks reporting +57% tuneaway at the 4+ level. While these findings indicate that tuneaway at higher frequency levels may differ by network type, much work needs to be done to determine to what degree programming environment impacts on commercial avoidance.

Figure #9a: Roddick and 3G creative Tuneaway by Network Type

Figure #9b: Blake Gives Shoes to Children
Tuneaway by Network Genre

Tuneaway %

Frequency of Exposure

- SPORTS
- SPANISH
- MALE
- YOUNG ADULTS
- GEN ADULTS

Further Considerations

In this analysis we assumed that the message was relevant for the viewers of the set-top box. We need to recognize that many products and services are not that important or relevant to all viewers. Given the low relevance that all viewers attach to at least some products, should we assume that some moderate level of tuneaway is a fact of life? Probably. But initial findings from the addressable trials that TNS Media Research has been involved with confirm that delivering the right message to the right audience does lead to lower tuneaway. As television becomes better equipped to move beyond mass demographic targeting to more relevant messaging, tuneaway patterns related to traditional approaches are expected to diminish.

As for programming environment, we tend to focus on networks and channels; however their audience compositions may be as important as program content and scheduling. It appears that younger viewers, who grew up on technology, are quicker to pull the remote control trigger than older audiences. If this assessment is accurate then, as these viewers mature, the tuneaway norms for younger viewers may become the tuneaway norms for the mainstream. It's an issue we need to understand. It's also possible that tuneaway metrics are not the sole responsibility of the network. Let's assume that a network has a higher proportion of off-target and over-exposed ads. A small number of ads with extreme tuneaway levels can skew a network's overall metrics, and we need to account for these factors in order to make clear-cut conclusions.

Finally, message environment also involves pod positions and rotations. There is a long-standing belief that commercial pods that are between programs receive lower levels of viewing and attention. What does tuneaway tell us about program breaks? Are all break positions created equal? There is clear evidence that a break is not a break, is not a break. The exact time of day and the program adjacencies create different patterns of audience flow across the break, and each of these impact tuneaway. We must account for the normal dynamics of audience flow before we can make definite statements about the impact of break position on ad attention and tuneaway.

Conclusions

We started with a working hypothesis that attention to an advertisement should decrease with frequency of exposure, and subsequently that advertising tuneaway should increase. These working hypotheses were confirmed. The existence of a dynamic relationship between advertising frequency, scheduling, and tuneaway supports the idea that averages or norms are rudimentary. When tuneaway numbers range from a low of 3% to a high of 15%, a more complete model is needed. TNS Media Research will continue to examine the issue of commercial frequency in light of the broader questions surrounding ad retention and relevancy. These insights will be incorporated into a more holistic model that will include key drivers such as:

Category type
Campaign length
Copy Duration
Programming Environment
Pod geography
Frequency of exposure

At this point we can only speculate at the answer, but if we can find a reasonable relationship between tuneaway and the other behaviors we can use tuneaway metrics as a powerful tool in the arsenal to develop and test a more comprehensive model that includes: 1) Message targeting, 2) Executional and copy elements, 3) Ad Environment and 4) Scheduling, weight and rotations, and link them to advertising attention, advertising effects, and advertising effectiveness.

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