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## Is Continuity the Only Remedy?

Quantifying copy wear-out and its impact on TV scheduling

A critical aspect of a TV media plan strategy is to plan out the brand's scheduling strategy across the year. It is an accepted motherhood in media planning that continuity is the best for nearly all brands. On the other hand, one often knows that most brands do not have enough resources to last them through 52 weeks in a year.

This work shows that, flighting is a better scheduling strategy for one of the brands in Cadbury India Limited's portfolio, when one takes into account a dynamic view of advertising quality. This has very important ramifications on brand salience, budget deployment and copy management.

### *What do we mean by a dynamic view of advertising quality?*

It is often debated and discussed that copy wear-out effects the quality of advertising recall as well as its impact on long term brand equities. As more and more message weights are pumped behind that copy, one could argue that it loses its freshness. This phenomena, loosely, is what is referred to as wear-out. However, wear-out is rarely quantified. And if it so, it is done in static fashion in most models which have addressed this issue. That is, wear-out, is treated as a constant fraction that decays at the same rate. By this static definition, the efficacy of the TV copy's quality is at its maximum on day 1, and it declines at a constant rate basis advertising frequency.

However we asked ourselves could copy wearout, actually, be dynamic? That is, could its impact on the copy efficacy be different across time?

Our definition of advertising quality, in its dynamic nature, has three core aspects to it-

1. Repetition Wear-out: This can be understood as the wear-out of a copy due to media frequency. That is, as more and more GRPs are being pumped behind a TVC, it loses some of its freshness. The target audience starts seeing the ad as a blind spot, and stops processing the communication elements in the ad fully. The copy's memorability declines. This is the conventional definition of wear-out
2. Copy Wear-out: This type of wear-out of the copy happens independent of media frequency. This could be due to several reasons-
  - a. The proposition being communicated in the current copy has become irrelevant
  - b. Some other brand in the same category, or in a different category, has copied the advertising treatment. An example of this would be the similarity in the advertising treatment of both Bajaj Discover and Sun Direct

- c. An increase in the over-all ad clutter
3. Ad Recovery: This is the most critical part of this framework. Our theory is that, when an ad copy goes off air, there is *potential* for it to recover some of its freshness.

## An Analogy to Understand this Framework

All of us have favorite songs. Once we like a new song, we often try and listen to it as many times as possible. This slowly leads to us getting bored with the song (Analogous to Repetition Wearout). ..and then, we stop listening to that song. We take a break of say 3 months. Then, one day, we again chance upon this song and listen to it. And we are genuinely surprised. We re-discover the old magic that we felt 6 months ago. The song has recovered some of its freshness (Analogous to Ad Recovery).

Why is the wearout definition dynamic? Simply because the interplay between repetition wearout and ad-recovery would make it so. Additional GRPs would make repetition wearout increase. On the other hand, being off-air would make the ad recover.

*Therefore where does this lead us as far as brand salience is concerned?*

A brand's salience, represented by an intermediary variable such as spontaneous brand awareness, would be impacted by

1. Media Reach in a time period (or GRPs)
2. Memory Retention and Forgetting ( a certain fraction of the population aware of us would not spontaneously recall us every time period)
3. Advertising quality which will determine how much of the media reach will translate in actual recall of the brand or ad. We often see that there is a discrepancy between the media reach numbers and say, the spontaneous awareness or cut-through numbers. That is, if your media campaign reaches 40% @3+ in a week, the number of people who claim to have been exposed to the commercial, is much lesser than this. We attribute this to the advertising quality and memorability of the ad.

## Data Used

We had access to 3 years of tracking data. GRPs and reach figures were generated for that relevant week from TAM data.

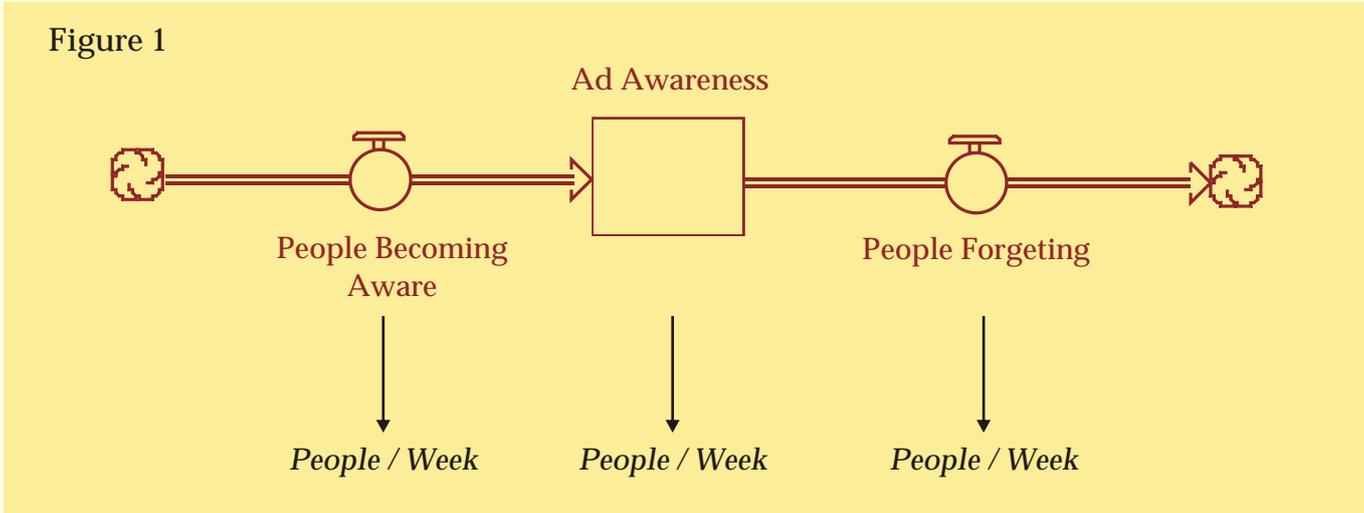
## Schema of Model Structure

A diagrammatic representation of this idea is shown below

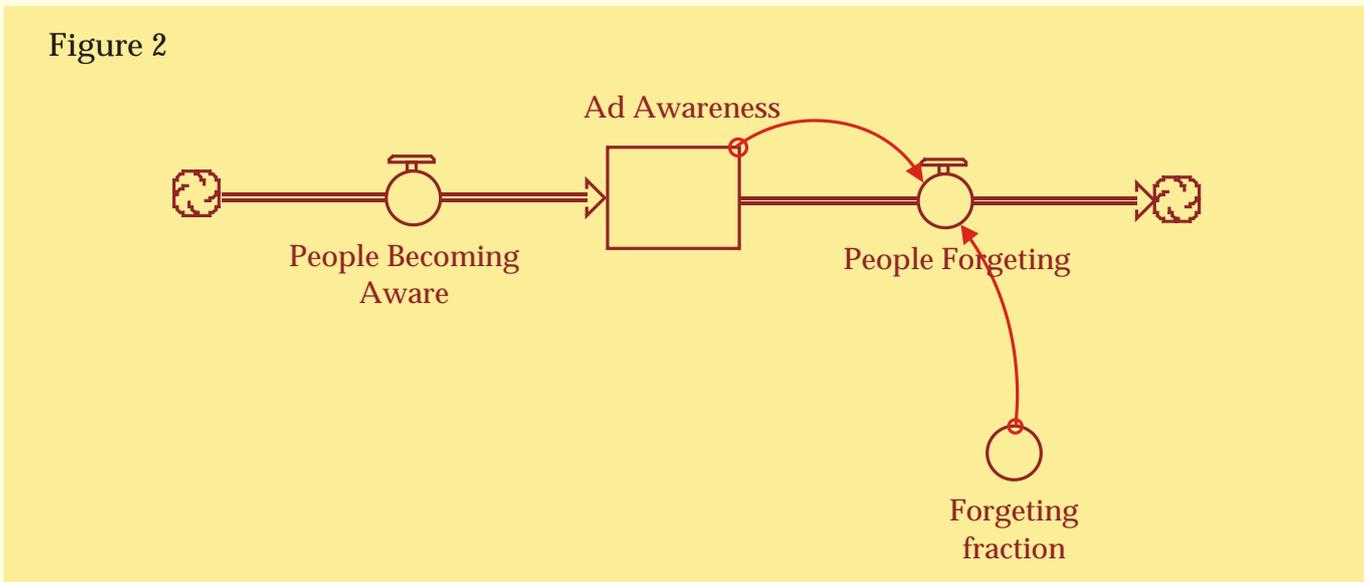
The number of people aware of the ad spontaneously, as an analogy, could be thought of as water stored in a bucket. This is represented by the rectangle titled 'Ad Awareness' in Figure 1 below-

There is a tap through which the bucket is replenished every week. The variable 'People Becoming Aware' represents this.

There is also a hole in the bucket through which the water leaks! The variable 'people forgetting' represents this



The number of people forgetting per week, would depend on a forgetting fraction. The forgetting fraction could be thought of as the fade or decay parameter (Refer Simon Broadbent). This additional structure is represented in Figure 2



The next logical question is what is that drives the inflow into the bucket? That is, what is the structure of the tap 'people becoming aware'?

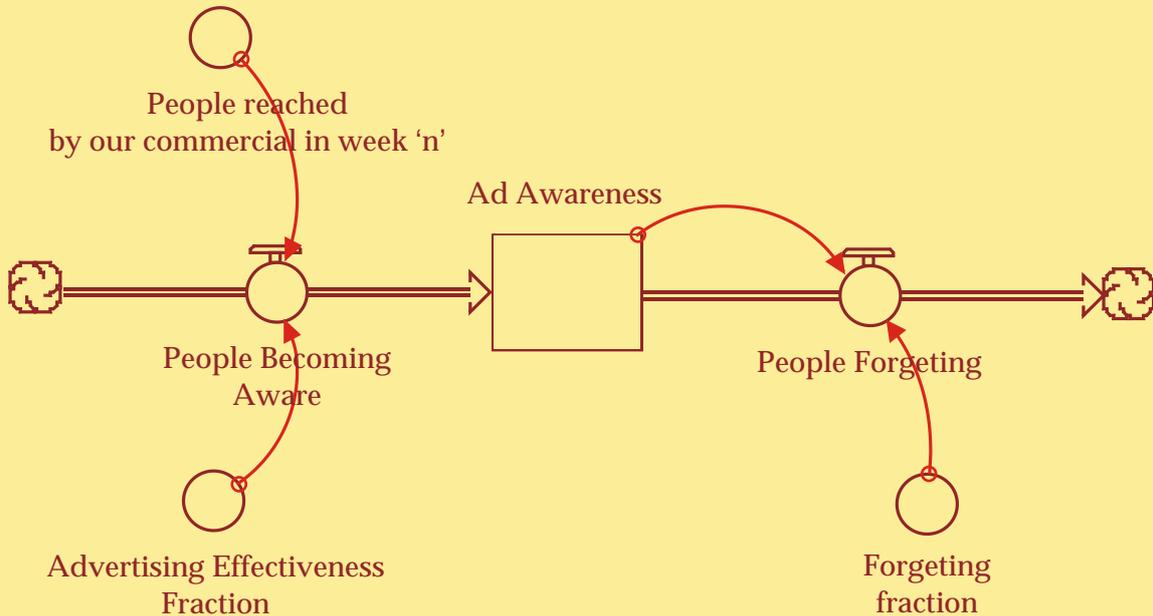
Figure 3 elucidates this.

The number of 'people becoming aware' in a week is a function of two variables

1. People Reached by our commercial in week 'n' that is , the effective reach of our media plan
2. The advertising Effectiveness Fraction That is, the 'advertising quality' would determine how many people reached by media in week 'n' actually recall having seen the commercial. As it

would be shown later on, wear-out plays an important role in determining the value of the variable, 'Advertising Effectiveness Fraction'

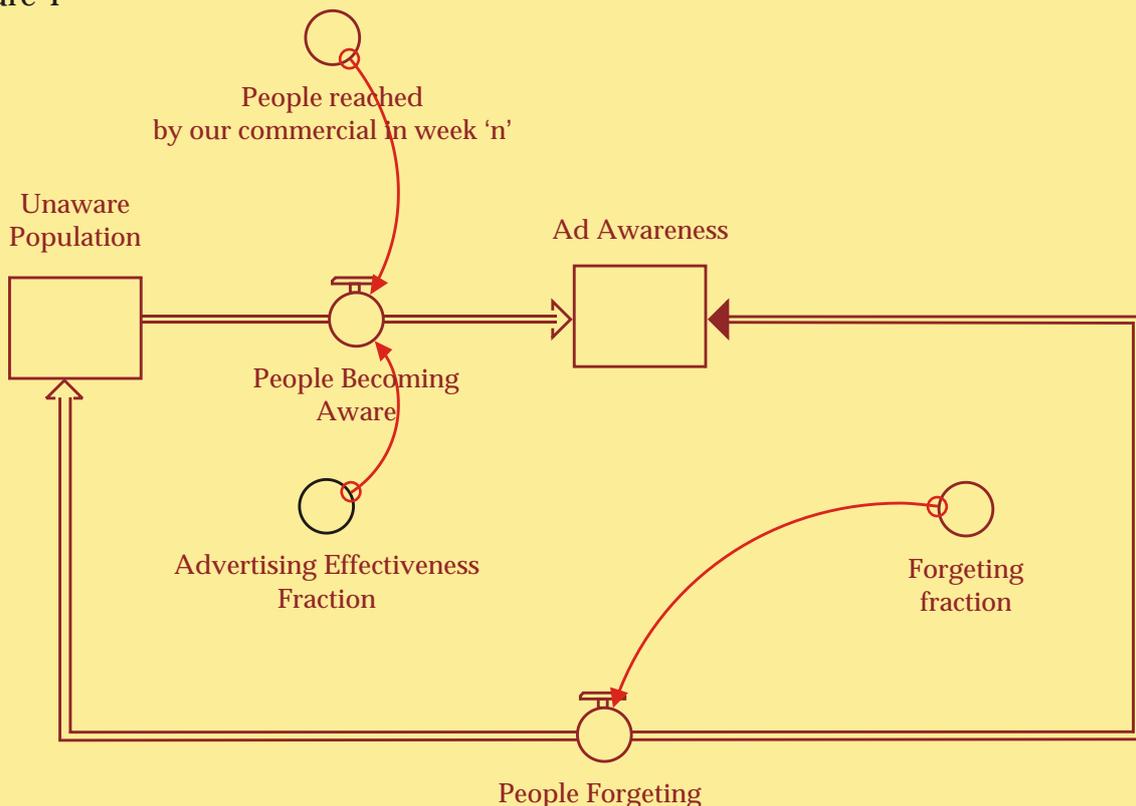
Figure 3



People become aware of commercials, and people also forget. However, this happens within a system that is looped and closed. A set of unaware people become aware of our commercial; some of these people forget and they go back into the stock of 'unaware' people

This closed loop in this awareness system is represented structurally in Figure 4.

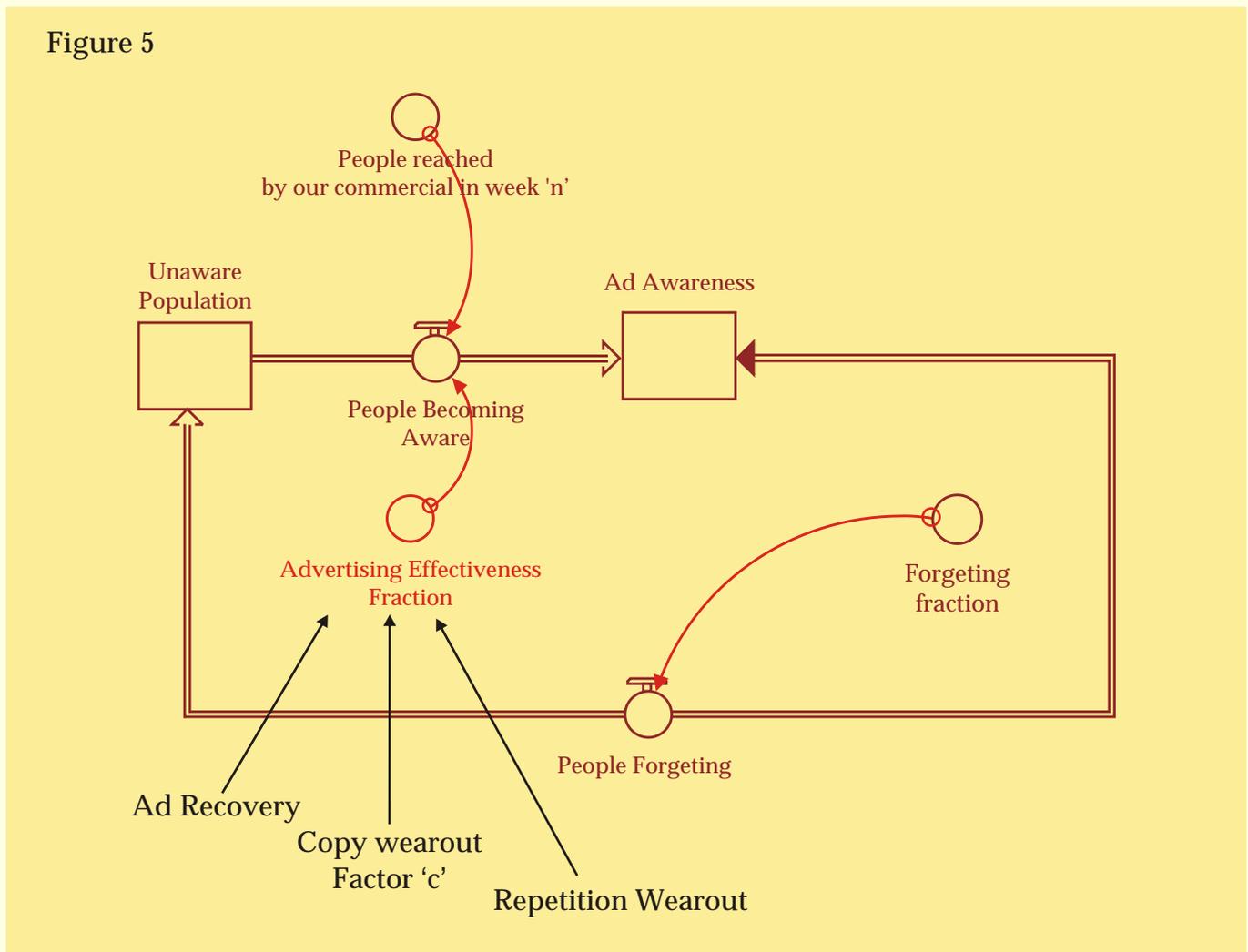
Figure 4



In this model, the variable, 'Advertising Effectiveness Fraction' has 3 components to it, as explained earlier

1. Repetition Wear-out: The wear-out of a copy that can be linked to media frequency.
2. Copy Wear-out: The wear-out aspect that is independent of frequency
3. Ad Recovery: The return in advertising quality that *might* happen when the copy goes *off air*

This aspect of the model structure is represented in FIGURE 5



There are therefore 4 different variables to determine here-

1. The forgetting fraction
2. The Repetition Wear-out
3. The copy wear-out
4. The ad-recovery delay

Structurally, if one were to refer to figure 5, the variable, 'people reached by media in week n' would come from the media plan for that week. The media reach chosen was weekly reach @ 3+. This was a qualitative call, as we felt that 1+ weekly is not enough to generate proven ad-awareness.

The stock variables, 'unaware population' and 'ad awareness' would be computed once we know the values of the 4 variables listed above.

## A few points to note on the Structure

1. It is looped as a system. People who are unaware become aware; if they forget, then they recursively go back into the stock of unaware people
2. There is unit consistency. That is, we are comparing apples to apples. For instance, the variables 'unaware population' and 'ad awareness' will be measured on the same dimensions either as % or as number of people. In our case, we stuck to the standard method of using %s. What this implies is that neither of these 2 stock variables can go above 100%!! While this might seem as a trivial assertion, try checking the same on a standard linear regression model using elasticities; often, one can come up with nonsensical values
3. Most importantly, it is dynamic. The awareness generated this week is a function of the residual awareness last week, and some incremental derived from advertising activity, if present
4. We also took pains to explain this structure to the client. In that sense, while the way the model worked would have been technical, it is important to align the client on the model structure. And, we kept the entire modeling process transparent

## Results and Ramifications

An incredibly interesting and counter-intuitive result emerged from the model. The results are shown below. Essentially, we computed an aggregate awareness score 'j' which represents the cumulative effect of a scheduling option on awareness. The higher the 'j score' the better is that scheduling option in impacting awareness.

Essentially, we did the model for two markets. In both markets, our findings were directionally the same. The question was, suppose we had enough financial resources to buy say 2400 GRPs in a year? How do we schedule it? We wrote a small program to try out several scheduling options. The payoffs across some of these options is shown below-

Sr No.	Option	J Score
1	Continuous (2400 GRPs distributed across 48 weeks)	1683
2	1 week on 2 weeks off	2923
3	1 week on 1 weeks off	2451
4	Classic Flighting 6 weeks on 6 weeks off	2500
5	Blitz spend all 2400 GRPs in 6 weeks	2050

As can be seen clearly, the 'continuous' option works out the worst!! That is, a continuous spread of GRPs leads to a constant deterioration in advertising quality in the model.

On the other hand, from the model, we can see that a pulsing option of 1 week on - 1 week off, mathematically generated the most optimal pay-off.

However, taking into account real world implementation constraints, we decided to go with an option 4 that is 6 - 8 weeks on; and then off.

### Conceptually, what seems to be happening here?

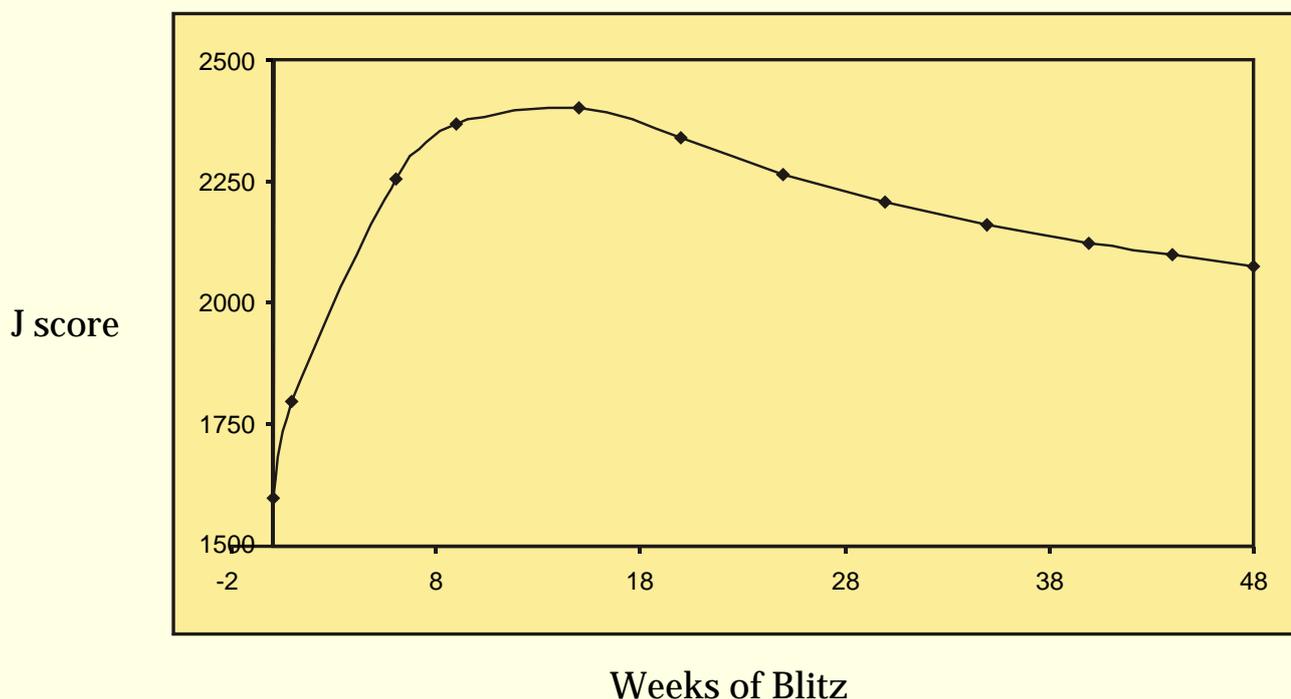
Well, given the kind of copies that the brand was using, it became apparent that they led to a quick build up of proven awareness - these copies due to their superior advertising quality, celebrity based themes, etc did the job of saliency fast. However, additional GRPs beyond the optimal also made these commercials a blind spot that is, a continuous scheduling option for these kinds of copies implies that consumers treat the commercial as a blind spot, and do not process all the relevant communication cues. This soon affects the quality of the recall.

Going off air, actually restores the quality of the commercial and in the second burst, the yield per GRP is better than a continuous schedule (Remember the favorite song analogy!)

### What about a Blitz?

Sometimes, business demands that a copy be used as a blitz. That is, the entire budget is exhausted within that campaign period. Now, what is the ideal periodicity of blitz? Should it be 6 continuous weeks? Should it be 8 continuous weeks? Or should it be 12 continuous weeks?

Our model helped determine this too. The figure below, shows the build up of the pay-off as per the 'weeks of blitz' on the x-axis. Very interestingly, the curve has a hump-shape. If one blows the money too fast, the payoff is poor. Stretching the monies too thin also does not help for instance, look at the payoff for the 28 week option. In this specific case, spending the budget in 8 - 12 weeks gave the best pay-off.



## Managerial Implications

Some critical managerial implications of this model were-

1. We actually quantified wear-out and defined the ideal scheduling option for the brand. The option came out as flighting, and we disproved the stereotypical recommendation of 'continuity is best'. This resonated well with the mental model of brand managers and made them confident of their model of how advertising impacted brand salience in their category.
2. The definition of the ideal blitz period also helped in terms of deciding the best periodicity for a blitz campaign besides mere reach curves, and qualitative buzzwords such as visibility.

## References

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- Prasad Naik, Murali Mantrala, Alan Sawyer 1998, Planning Media Schedules in the Presence of Dynamic Advertising Quality, *Marketing Science*, Volume 17, Issue 3(1998), pp 214 235
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