



# **The Rising Cost of Consumer Attention: Why You Should Care, and What You Can Do about It**

**Thales S. Teixeira**

**Working Paper**

**14-055**

**January 17, 2014**

Copyright © 2014 by Thales S. Teixeira

Working papers are in draft form. This working paper is distributed for purposes of comment and discussion only. It may not be reproduced without permission of the copyright holder. Copies of working papers are available from the author.

The Rising Cost of Consumer Attention: Why You Should Care, and What You Can Do about It  
by Thales S. Teixeira, Harvard Business School

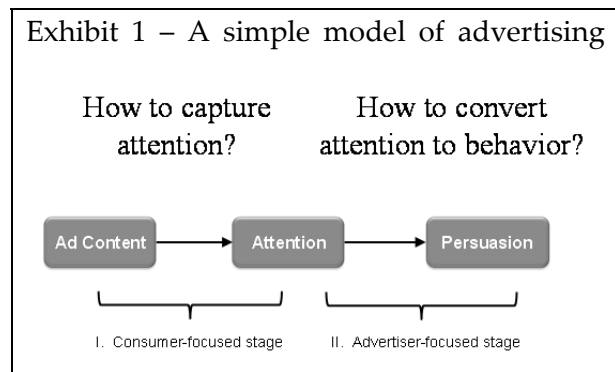
**Abstract:** Attention is a necessary ingredient for effective advertising. The market for consumer attention (or “eyeballs”) has become so competitive that attention can be regarded as a currency. The rising cost of this ingredient in the marketplace is causing marketers to waste money on costly attention sources or reduce their investment in promoting their brands. Instead, they should be thinking about how to “buy” cheaper attention and how to use it more effectively. Research in the emerging field of the *Economics of Attention* shows how this can be achieved. Here, I argue that, irrespective of the means to attain it, attention always comes at a price. I also show that the cost of attention has increased dramatically (seven- to nine-fold) in the last two decades. To counteract this trend I propose novel approaches to lower its cost or use attention more efficiently by adopting multitasker-tailored ads, Lean Advertising, and Viral Ad Symbiosis. To guide the choice of which approach to take, I propose the Attention-contingent Advertising Strategy, a framework to match the most effective approach to the quality of attention contingently available. As the value of attention rises, marketers need to become better managers of attention. This paper is intended to help them in this regard.

### **Attention as a main ingredient in advertising**

Attention is the allocation of mental resources, visual or cognitive, to visible or conceptual objects. Before consumers can be affected by advertising messages, they need to first be paying attention. Stories persist to this day that people can be influenced by ads without directly paying attention, but these are myths. For instance, the classic case suggested by James Vicary in 1957—that people who were exposed to subliminal (i.e., without noticing) advertising of Coca-Cola and popcorn in a movie theater were more likely to buy these products after they left the theater—actually involved fabricated results [1]. Today, the academic community studying advertising agrees that some amount of attention is necessary for ads to even begin to have an impact on consumers. Further, greater attention generally leads to higher impact.

Understanding why and how advertising works is complicated by the fact that it is situation-specific. As with other forms of communication, it depends on the message, sender, receiver, medium, and context. Further, ads have multiple purposes, among them to build awareness, sell products, and fight off competition. Yet whether advertising beverages to teenagers over the Internet or steel pipes to contractors in trade magazines, three components are always present: ad content, attention, and persuasion. A simple model of how advertising

works can be built by joining these components into two stages of conversion (see Exhibit 1). Advertisers first produce ad content, which needs to capture the consumer’s attention. Once attention is captured, then the ads need to persuade,<sup>1</sup> i.e., change the consumer’s attitudes or behaviors regarding a product or brand. The two questions that advertisers always need to consider are how to cost-effectively capture attention and how to convert attention into purchase behavior. Traditionally, marketers have been overly concerned with the latter question and not concerned enough with the former. Admittedly, most prior research in advertising has not helped much in this regard, as ad exposure has been forced upon consumers, assuming attention as a given. The reality is quite different. In this paper I elaborate on the questions in Exhibit 1, with emphasis on the importance of cost-effectively capturing attention to persuade.



Because consumers control, for the most part, where they allocate attention, marketers should address the first question by understanding what consumers are interested in learning about or experiencing. This should be a consumer-focused stage. Otherwise, consumers may disregard the message even before it has a chance of being evaluated. As my research has shown, only after focusing on the consumer’s interests, thereby securing attention, should advertisers focus on their own persuasion-related goals. As a brand manager, putting your own interests before those of consumers is a sure way to get neglected in the marketplace. Consider an ad by Scapino, a clothing retailer in the Netherlands. In an effort to convey its various products at cheap prices, it showed a model switching between outfits with prices onscreen. The ad was skipped by 72% of Dutch viewers in a standard copy testing study. So, how can ads capture and retain attention?

### **Capturing attention in order to persuade**

There are two broad approaches to capturing attention in advertising: you can pay for it or you can earn it. The first option is what occurs when advertisers purchase media time, such as a 30-second TV spot, or space, such as a full page in a newspaper. Media companies have a good understanding of the size and composition of their audiences and can provide prices relative to these factors. Prices divided by audience size are commonly referred as CPMs (cost-per-mil, or thousand, impressions). When the audience is restricted to a subset of viewers, e.g., women

<sup>1</sup> Economists refer to three roles of advertising ([2], [3]), persuasion (changes value of products), information (informs the value of products), and complementarity (adds value above and beyond that of products). I use the term “persuasion” broadly to refer to any of them, as I assume advertisers’ intention is always to change perceived values.

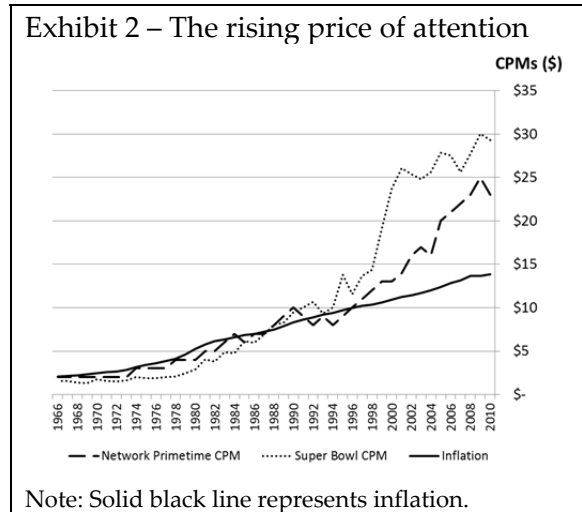
younger than 25, they are referred to as TPMs (targeted CPM). Obviously, media firms don't actually sell attention; they sell access to an audience that provides the opportunity for advertisers to communicate. If TV viewers change the channel during commercials or flip through the ads in the newspaper, it is the advertiser's problem—media companies still charge for these potentially impressionable viewers. Going back to the Scapino example, it paid for 30 seconds but got only an average 13 seconds of attention from its viewers.

The second option is to earn attention without directly buying access to an audience. Instead of the advertiser going to the consumers, the opposite occurs. This is the case of organic search results on search engines such as Google and video ads uploaded on video repository websites such as YouTube. In this option, the content has to be compelling enough for consumers to actively seek out brand messages. Advertisers typically spend large sums of money to create such sought-after websites and video content. Thus, regardless of the approach taken to capture it, attention always comes at a price.

How can brands create ads so compelling that consumers actively seek them out? This question will be addressed later on. Before that, let's go back to the first option, the traditional approach to advertising: buying attention from media publishers.

**The cost of “buying” attention in the marketplace is rising**

The traditional measure of the cost of attention is the CPM or TPM. Television is one of the most desired media spaces for traditional advertising, particularly during primetime (weekdays 8 pm to 11 pm). The other is during the most viewed sports event on American television, the Super Bowl. The Super Bowl attracted more than 100 million viewers in 2013. Primetime television attracts, on average, five to 15 million viewers each night depending on the network and time. CPMs control for the difference in the number of viewers. In both of these media spaces advertising prices are, to a great extent, efficiently set by supply and demand via auctions. Thus, the value of the attention captured by each media space is incorporated into its respective CPM. Exhibit 2 provides the CPMs for these options from 1966 to 2010. Two things are apparent. First, the values were quite similar until 1998, the year before the digital video recorder TiVo entered the market. After that the values diverged, with the cost to reach 1,000 viewers during the Super Bowl rising faster than that for primetime TV. Many factors might explain this discrepancy. One is that Super



Bowl viewers are more desirable than primetime TV viewers. However, even if comparing the TPMs for the same target demographics, we see a similar price differential.

What explains this difference? Shouldn't the cost for an opportunity to show a 30-second ad to a TV viewer during the Super Bowl be the same as when an identical viewer is watching primetime TV? A possible explanation is that there are some brands with deeper pockets that can afford to bid higher to advertise on the Super Bowl and benefit from the PR and other intangible benefits associated with the event. However, considerable CPM differences exist across sports events, sitcoms, and dramas within or across networks. Recalling the advertising model in Figure 1, the more attention the ad gets, the more persuasion is likely to occur. Thus, better-quality attention has higher market value. And the market has spoken, as brands are willing to pay a premium in the Super Bowl for each viewer's heightened attention. Possibly due to the hype surrounding the ads, quality of attention is "baked into" Super Bowl ad prices.

The other noteworthy pattern in Exhibit 2 is that both CPMs have been rising for decades and, since the mid-1990s, faster than inflation. While this graph only shows two cases, notably among the most expensive media available, this pattern is not an exception. The rise in CPMs for premium content (broadcast TV, major magazines, online portals) has followed a similar path. Interestingly, higher prices did not reduce TV's share of media spending among U.S. brands until the mid-1990s (see [4]). Why such sharp price increases? Basic economic thinking dictates that the price of a good rises when demand grows faster than supply. Competition is definitely rising. More companies are now advertising on TV than ever before, and each company has more products and brands to show to consumers. In 2013, the average American was exposed to about 52,000 TV commercials. In summary, the price of attention is rising because demand for attention is outpacing its supply. But what about the quality of this "product," i.e., attention per viewer? Has it changed?

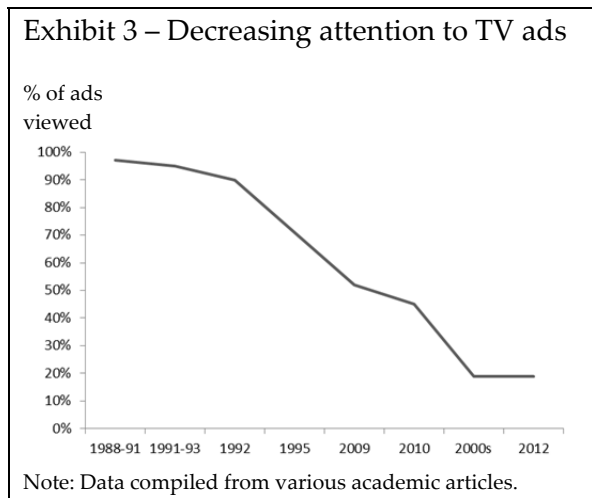
### **Consumers are allocating less attention to ads**

Attention has two dimensions: intensity and duration. Intensity is a measure of the quality of attention during an interval, while duration refers to its quantity. The latter is considerably easier to measure than the former. How does one measure quality (versus quantity) of attention? In a lab setting, eye-tracking technology now allows researchers to indirectly measure quality of attention to specific objects such as product packaging (see [5]) by combining gaze location and duration. Outside a lab setting, attention duration is the proxy used for measuring its quality. Duration, however, is not a good proxy for attention. (I drive my car to work and it takes me about the same time every day. But sometimes I pay high attention to driving and, at others, my mind wanders and I admittedly pay considerably less attention.) Measuring the intensity with which viewers pay attention to advertising is challenging, as it

depends on each person, ad, brand, and context. An alternative is to use the viewer's decision of whether to watch the ad as a proxy for her willingness to dedicate heightened attention to it.

Using research by others published up to 2000 and my own research since 2009, I was able to compare the trend in ad-skipping rates (i.e., the percentage of ads viewed completely divided by the total number of ads shown) across a variety of populations, ads, and brands (a caveat is that different researchers used slightly different metrics of ad avoidance). Until 1992, all ads not skipped due to channel changing were considered viewed, or fully attended to. But since viewers might not be looking directly at the TV screen, my research incorporated eye-tracking technology to account for this (see [6]).

Figure 3 shows that the percentage of ads considered fully viewed and getting high attention has decreased dramatically, from 97% in the early 1990s to less than 20% today (note: time is not strictly ordered as studies overlap in time of data collection or publication). This finding coincides with other market research showing that people are paying less attention to TV ads, either by changing channels with a remote, skipping with a DVR, or just mentally tuning out by the act of multitasking.



### **Why are consumers losing interest in viewing ads?**

Academics and industry specialists have proposed many explanations as to why consumers are devoting less attention to ads. Among them is that of ad clutter (consumers are exposed to too many ads nowadays), distrust (consumers have lost faith in the truthfulness of ad messages), short attention span (consumers don't have the ability or motivation to attend to long ads), and media proliferation (consumers have more channels from which to choose). Although these factors might be playing a role, they cannot fully explain the sharp decrease in attention over the past two decades, as seen in Exhibit 3. There has always been high ad clutter. Complaints about excessive amounts of competing ads date back to as early as 1759 (no, this is not a typo!) when a newspaper copywriter named Dr. Johnson said, "Advertisements are now so numerous that they are very negligently perused." As for trust, research by Nielsen [7] shows that the level of trust in TV ads has stayed relatively constant, even slightly increasing from 2007 to 2013. And while the Internet may have helped to shorten our attention spans, the duration of TV ads has changed in response. In the 1950s and 1960s the standard length of a broadcast network TV ad was 60 seconds. By the 1970s and 1980s, 30 seconds became the norm. And by

2005, one-third of all TV ads were only 15 seconds long [8]. Finally, even in years when the number of TV channels remained constant, there were reductions in attention to TV ads.

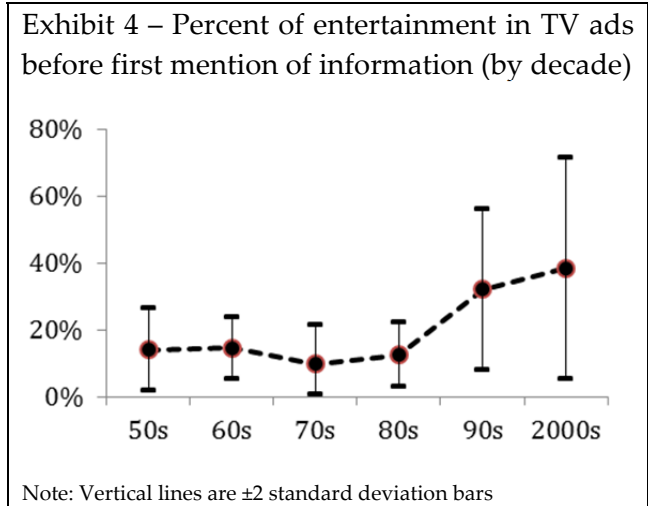
These proposed explanations revolve around the assumption that consumers don't *want* to pay attention to ads as much as they did in the past. In that sense, recent technologies such as DVRs simply enable consumers' desire to avoid ads, and are not the root cause. But marketing is about needs and wants. Could it be that consumers just don't *need* to pay attention to ads anymore? I explore this possibility next.

There are two distinct classes of ad content that can provide value to viewers: information and entertainment. Information consists of facts about the brand, product, price, availability, etc. Entertainment provides content that is playful, lively, amusing, imaginative, or clever, so as to make the ad pleasant to view. Early TV commercials were predominantly informative in nature with little to no entertainment content. For example, the first-ever TV commercial in the U.S. presented a Bulova wristwatch, simply showing the time. The wave of TV ads that followed in the 1950s informed viewers of a series of new products such as powdered detergent, cereal in a flake format, instant coffee, and countless new electrical kitchen appliances. Even manufacturers of seemingly non-novel products utilized informative ads to differentiate themselves: Dove soap was made out of "1/4 cream" whereas Ivory's was made to "99 and 44/100% purity."

By the late 1990s and early 2000s, when the commercial Internet exploded with websites, there was a notable decrease in attention to TV and other mass media advertisements (note: there was still an increase in TV viewing time during this period). This is not a coincidence. In the past, one of the reasons consumers spent time viewing ads was to gather information to make better purchase decisions. With the increase in the use of the Internet and its information-rich brand websites, the need to rely on TV ads to provide this information decreased. Incidentally, in the span of 20 years, between 1992 and 2012, the correlation between the number of active commercial websites (.com domains) and TV commercial avoidance is -0.92, possibly due in part to spurious correlation, but interesting nonetheless. Today, virtually all companies, big or small, have a website. It costs only a few dollars per month to maintain a web domain and only a few thousand more to build a corporate website. Customers can find any information they want on a company's products, prices, availability, and more. Even if consumers do not want the information provided by the brand's own site, they can use a search engine to get information from other sources—and that is what they have been doing. For example, in an average month, 30 times more people Google "Ford" than visit [www.ford.com](http://www.ford.com) [9]. Webpages have, in effect, replaced the informative value of advertising. This is a more customized, quick, and easy way to get brand or product information. It is also on-demand, meaning consumers don't have to use their limited and untrustworthy memory to store

information encoded during ad viewing. With the Internet, consumers no longer require ads to satisfy their need for product information.

If there is little value of information in ads, what is left that viewers might need or want from ads? The only other class of content that advertisers can use is entertainment. In the last two decades, TV commercials have become more entertaining and less informative. I conducted a quick content analysis of a random sample of 60 TV ads from the 1950s to the 2000s and found that the percentage of the ad's time dedicated purely to entertainment in the beginning of ads (prior to any mention of the brand, product, or other related information) was about 13% from the 1950s until the 1980s. By the 2000s, the ad's time used for "pre-information entertainment" had jumped to 38% (see Exhibit 4), with a corresponding increase in variance.



As consumers stopped attending to advertisements for their product information needs and started accessing the web in their own terms, advertisers responded by making ads less informative and more entertaining. But why would consumers pay more attention to entertaining ads? Do they have a need for the entertainment that advertisers can provide and that the Internet cannot? Why not go online for one's entertainment needs as well? Will entertainment in ads solve the lack-of-attention problem? More importantly, can advertisers successfully persuade using mainly entertainment? These are still unanswered questions. The reality is that creating entertaining ads has been one of the main strategies used by a variety of brands, from consumer goods to industrial products, to counteract the loss of attention in advertising. This trend also helps to explain why the market has pushed Super Bowl ad prices to such heights. How to use entertainment in advertisements will be discussed later. For now, we stick to the main fact: the quality of attention is decreasing as its price is rising. But is this a significant problem?

### **The magnitude of the problem**

The cost of buying attention has been rising quickly and consistently in the past decades while the quality of attention purchased has been decreasing at an even greater pace. By not taking quality into account, CPMs only reflect the quantity of attention (i.e., views). A better measure of the true cost of attention incorporates both aspects, in the form of completed views (in the



case of video ads) as well as number of viewers and total minutes viewed. The formula in Exhibit 5 does that. Using it to account for the fact that a larger number of people exposed to the

ad simply do not pay attention to it (assuming those who skipped the ad have no value to advertisers), we find that the effective CPM (eCPM) in 1990 would be around \$18 (= \$17/95%)

Exhibit 5 – Formula to calculate the effective cost per thousand impressions for video ads

$$\text{Effective CPM} = \frac{\text{Media Cost (in \$)}}{\frac{\text{Views}}{1000} \times \text{Completion Rate} \times \frac{\text{Length (in sec.)}}{30}}$$

in 2013 dollars, whereas it would range from \$132 (= \$25/19%) for primetime to \$163 (= \$31/19%) for the Super Bowl in 2013, a seven- to nine-fold increase in only two decades, even after accounting for inflation. In comparison, the average inflation-adjusted CMO and other C-suite compensation packages in large U.S. firms during that period increased between four- and six-fold, which is considered by some to be a remarkable rise (see [10]). How have companies been coping with this dramatic increase in the cost to advertise?

### **What companies have been doing about it**

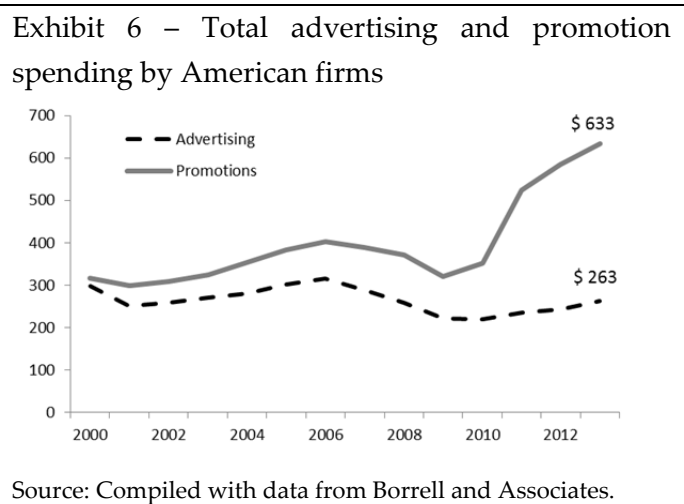
Marketing managers are generally aware that the cost to advertise has been rising due to higher media costs. My experience with talking with them, however, is that many are not fully aware of the extent of this seven- to nine-fold rise because they don't fully observe the reduction in the *quality* of the attention purchased. This is partly due to the fact that some media measurement companies tend to underreport ad avoidance rates and inflate the number of ads viewed. This can be done by not discounting when people have their TV sets on but are not actively watching it, for example. In 2008, Nielsen reported that of the people who watched programs across a variety of TV channels, between 83% and 96% of the ads were also fully watched (see [11]). Do you recall spending the time to watch these 45,000 ads that you supposedly saw last per year? Similarly, despite being paid for, an estimated 46% of online display ads are never seen by anyone because they never appear in the visible portion of the web browser [12].

In response to higher advertising costs and lower attention, marketing executives have had to rethink how they secure their marketing budget and allocate it across several demand-generation activities, not just advertising. Many have delegated the attention problem to their advertising agencies, which have often approached the challenge by reducing the amount of information in ads and increasing entertainment, as discussed earlier. Yet the major challenge is that CMOs are being required to prove the return of their investments in marketing activities. According to a 2009 survey, this was the top priority for CMOs of U.S. firms. To increase their budget, they have to persuade the CEO, the CFO, and the board that their efforts pay off. How does this work?

In most large firms the CMO proposes and defends the marketing budget, the CFO scrutinizes and allocates the budget, and the CEO oversees the negotiation process and ultimately approves the budget (for details, see [13]). CFOs are notoriously skeptical of the demand-generation activities coordinated by CMOs, argues a recent McKinsey study ([14]), particularly those concerning advertising. According to the authors, the lack of data and lack of rigorous analytical approach, which are present in only a third of proposed marketing campaigns, contributes to constant tension during the budgeting process. In many companies, the solution is that budgeting is often done by incrementally changing the resource allocation based on prior years ([15]). In that line, many companies follow a historic marketing-to-sales ratio, which is increased or decreased depending on various circumstances, such as the company’s growth needs and the return on investment (ROI) of past or intended marketing campaigns. Sometimes CMOs are granted a higher budget, and sometimes they aren’t.

CMOs that are given a higher marketing budget typically either use the money to advertise more to compensate for the decreasing effectiveness of advertising or allocate money toward other forms of acquiring customers. The problem with the first option is that it becomes increasingly hard for CMOs to show that the return justifies the investment. An increasing effective cost as shown by the eCPM implies that the ROI of advertising is decreasing, all other things equal. In general, higher budgets invested in marketing activities with steadily decreasing effectiveness are bound to eventually halt the budget increase. Further, the collective effect of companies spending more to capture a fixed supply of attention can only increase prices even more in the marketplace. At the same time, attention quality suffers as more money spent by more advertisers means more “shouting” in the marketplace. Consumers in turn respond by covering their eyes and ears more often. In essence, prices drive budgets, which drive prices, which create more inefficiencies in the usage of attention, until budgets can’t keep up the pace and stop growing in absolute terms or relative to sales.

One alternative to the downward spiraling of advertising effectiveness is to shift spending into consumer promotions. Instead of providing information on the value of products, these promotions generate demand by providing a better deal than the competition. The most popular forms of this are coupons, daily deals (e.g., Groupon), rebates, and short-term price discounts. While consumers have grown tired of ads, they still love a



deal—and marketers have responded. Data shows that in the U.S. promotion spending relative to advertising spending has been rising, particularly in the past three years (see Exhibit 6). Whereas American companies spent approximately equal amounts on advertising and on promotions in 2000, around \$300 billion each, by 2013 spending on promotions was almost 2.5 times larger than on advertising. Much of this growth occurred from 2010 to 2011, coinciding with the fast growth of online daily deal websites such as Groupon and Living Social. These and 2,000 other similar websites allow local and national businesses to offer discounts as high as 50% off the original price directly to consumers and with low operational costs (e.g., no need to create marketing material, provide logistics, or negotiate with retailers).

Is spending on consumer promotions a bad thing? No, as promotions can have a positive and measurable impact on short-term sales ([16], [17]). Marketers who implement new data and analytics initiatives tend to initially focus on the low-hanging fruit of pursuing a spike in sales. One approach has been to allocate resources toward promotional activities to meet their sales goal. This also helps the CMO secure a higher marketing budget in the next year. Yet, in talks with major consumer packaged goods companies, I learned that the majority are not happy with the long-term prospects of increased promotion spending. Among the reasons given were that most promotion spending does not carry over into future sales, nor does it build brand equity. Academic researchers of sales promotions have warned us about these downsides for years (e.g., [16], [18]). As soon as promotion spending stops, sales tend to quickly dip in response, something that doesn't tend to happen with advertising spending (see [19]).

What happens if CMOs are not given a higher budget? If this is the case, for that year they are oftentimes tempted to reallocate some of the marketing budget away from advertising and into consumer promotions. And since, in many cases, a consumer promotion is not an out-of-pocket expense, but a discount over regular prices, marketing budgets don't need to increase for CMOs to invest more in promotions than in advertising. CMOs may still choose to keep the portion allocated to advertising constant. In this scenario, there is often a pursuit of more engaging media (e.g., social network sites) and/or engaging content (e.g., entertainment) to advertise. However, the sustainability of these practices is questionable, as they are not impervious to increases in the price and decreases in the quality of attention either.

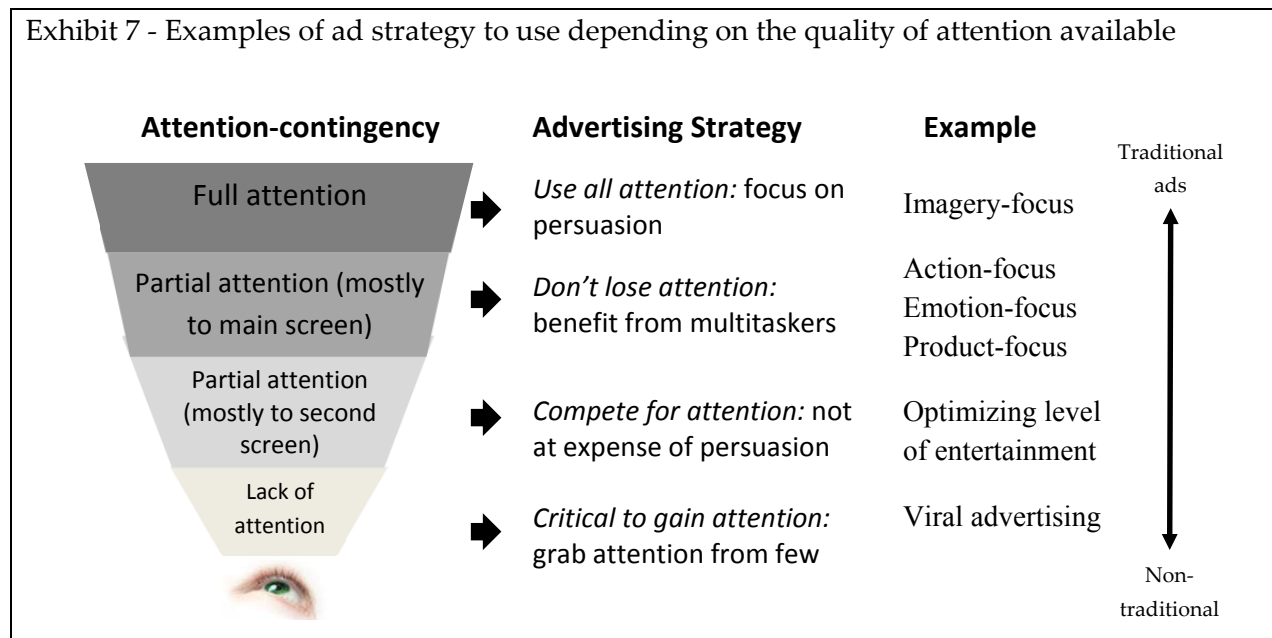
If spending more on advertising to compensate for lower effectiveness only propagates the problem, and switching from advertising to promotions has adverse effects on profits in the short term and on sales in the long term, then how should marketers respond to the increasing cost of attention in the market?

### **The solution: An Attention-contingent Advertising Strategy**

Attention is a scarce and increasingly expensive resource and, as such, should be well managed.

Use too much and you risk paying a hefty price. Use too little or waste it and you risk not obtaining the desired persuasion effects. The best way to achieve this balance is by tailoring the right advertising strategy to the appropriate level of attention available so as to increase an ad campaign's success rate without dramatically increasing the cost.

The Attention-contingent Advertising Strategy (ACAS) is intended to do just that. ACAS involves four steps. First, marketing executives should define the purpose of their marketing communication. This will inform the quality of attention that is necessary. Second, with the help of partners such as media agencies, marketing managers should determine the available quality of attention based on the target market and media characteristics. If there is a discrepancy between the necessary and the available quality of attention, marketers should secure higher budgets to buy additional attention. Otherwise ad content will have to bear the burden of accomplishing this. Third, marketers need to choose the appropriate advertising strategy to match the quality of attention (i.e., the contingency) available. Exhibit 7 shows how the matching process between attention-contingency and advertising strategy is done. These three steps can be regarded as the attention management portion of advertising and are exemplified in a Harvard Business School case study that I wrote on Pepsi [20]). The final step is to create the ad content, which should be delegated to the firm's advertising agency or creative department. Others have done extensive prior work on how to manage the process of creativity (see [21]). But before creating ads, the attention contingency has to be determined.



In simple terms, there are four attention contingencies. In the case of full and undivided attention, the focus should be on persuasion. Here, traditional ads such as those that focus on visual imagery still work quite well. In the case of partial and divided attention, where viewers

are exposed to excessive advertising in their primary media of choice, it is important not to lose consumer attention. The focus should primarily be on triggering immediate actions and emotions, with less focus on the product, particularly among consumers who are multitasking. In cases where attention to the advertised medium is also divided but secondary, mostly going toward another (e.g., primary) screen, winning the competition for attention becomes the main focus of the ad. Entertainment can achieve this. Just make sure not to overdo it, as too much entertainment may reduce persuasion. Lastly, in the case of near or complete lack of attention by the majority of consumers, the best approach is to grab attention from a small subset of those individuals who are still paying attention. Once this is achieved, use them to collect attention from others via viral sharing. The ACAS framework assures that the most important resource, consumer attention, is not wasted in the process of communicating with consumers.

But exactly how is this accomplished? Next I explain how these four attention contingencies can be dealt with more cost effectively, using one of three options. The first option, which applies to all attention contingencies, is to buy cheaper attention. The second option, which applies to partial attention contingencies, is to use low-quality attention more efficiently. The third option is to use content to increase the quality of attention available, which is particularly critical in the contingencies of very low or complete lack of attention.

### **Option 1: Use Lean Advertising principles to buy cheaper attention**

Paid media, particularly television but also online video, can be a very expensive means to buy attention when measured using the eCPM formula. An ad campaign involves two tasks: content creation and distribution. Over the years, I've found multiple examples of brands that have produced and distributed successful campaigns for 10% or even 1% of what they would have spent using traditional ad agencies and paid mass media. Instead of just providing examples from brands that have succeeded once, which could be hard to replicate, I've studied the underlying processes of these non-traditional approaches to advertising.

The result of this work is a framework to help marketers conceptualize the options available to them for creating and distributing ad content at a fraction of the cost of using traditional TV commercials made by advertising agencies. This framework, which I call "lean advertising," categorizes two approaches to creating and two to distributing online video ads. For both pairs of options, firms looking to cut costs can take a do-it-yourself (DIY) approach or outsource to lower-cost firms. The term "lean" is used to describe quick and low-cost, not low-value, approaches to advertising<sup>2</sup>.

---

<sup>2</sup> The term "lean" has been used before as in lean manufacturing (Toyota), lean start-up (Eric Reis), and lean marketing (Das Narayandas), and is used here in a slightly different manner.

The four options for practicing lean advertising are: create content yourself, outsource content creation, distribute content yourself, and outsource content distribution (see [22]). DIY content can be an extremely cheap way to create content. However, many firms quickly learn that creating quality content in-house is challenging and time-consuming. For these reasons, some have opted to outsource content creation. Dozens of crowdsourcing companies such as eYeka and Tongal have appeared with the proposition to quickly and cheaply creating high-quality ads using a network of professionals or skilled amateurs. But high-quality content is not enough—lean distribution matters as well. Companies can again choose to do it themselves or to outsource. DIY distribution is generally done using so-called inbound marketing tools such as Hubspot, a web analytics tool that helps track the level of incoming attention from various ad placements, such as a firm’s webpage, Facebook, and Twitter. Outsourcing distribution, on the other hand, involves hiring digital agencies such as Mekanism that tap into huge online audiences through relationships with appropriate influencer networks. Other similar agencies help firms with limited resources, such as start-ups or small businesses, build or buy cheaper attention in the marketplace. Those with tiny budgets can take the DIY route, others with higher budgets can opt to outsource to cheaper service providers.

Practicing lean advertising is not without its own challenges, which include higher variability in the success rate and possibly higher overhead maintenance costs. Despite that, the potential savings can range from 50% to 90%, a significantly reduction in the cost to advertise without incurring a commensurate reduction in quality. Surprisingly, even large firms such as Coca-Cola and P&G have been using these principles. They have learned that digital media and new digital agencies can be valuable resources for rapidly building brands on a limited budget—the core of lean advertising.

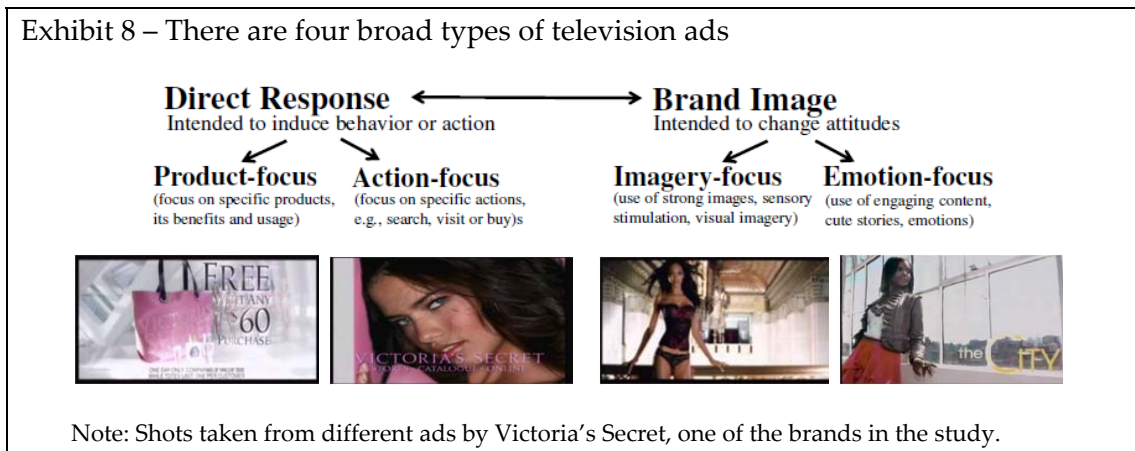
### **Option 2: Create ads to work under low levels of attention**

A second option is to use attention more effectively, particularly when the quality of attention purchased is low—for instance, when 72% of viewers are avoiding your TV ad, as in the Scapino example. In the last few years, consumers have increased, not decreased, the time they spend watching television content. This would sound like good news for advertisers, except for two caveats. First, while attention time dedicated to TV content has been rising, this is not the case for attention to TV ads. Second, when consumers are watching TV they are increasingly dividing their attention between the TV set and other devices, particularly portable computers and mobile devices. A recent study showed that as much as 40% of time watching TV is spent on such media multitasking activities, and this behavior is quickly becoming more common.

While some argue that multitasking is not a bad thing, as people can pay attention to multiple stimuli simultaneously, much of the physiological study on attention has shown this

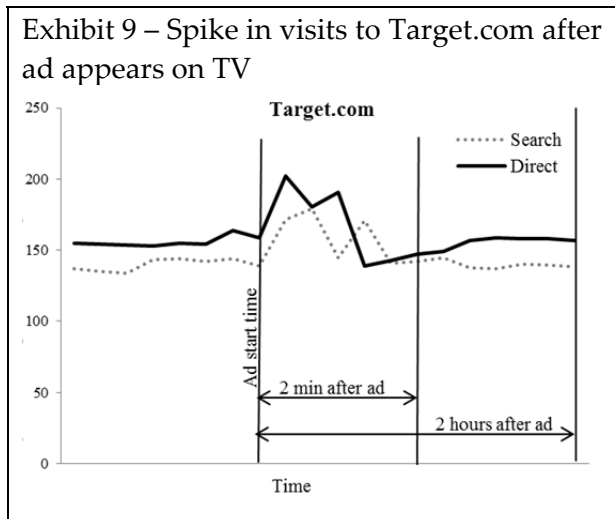
not to be the case. In reality, people switch back and forth between two or more stimuli and their working memory needs to keep track of all events and integrate them (see [23]). This suggests that advertisers should worry about media multitasking. Despite that, there might be a new opportunity for advertisers to benefit from this trend. Collaborating with other researchers (see [24]), I posed the question: if a sizable portion of TV viewers are indeed multitasking by going online, should advertisers create entirely different ads from the ones currently used (which were created to work under undivided attention)? If so, what are the features of the ads that are most effective in these low and non-captive levels of attention? Further, if ads can get TV viewers to seek out a company’s message on these other platforms, i.e., quickly go to the brand’s website and drive them to make a purchase, then this clearly represents a new and fantastic opportunity to use attention captured on TV to trigger incremental sales online ([25]).

To answer these questions, we built a massive dataset and coded the content of nearly 1,400 unique ads of 22 brands aired more than 374,000 times on various programs and TV channels during the course of 2010, the year tablet sales skyrocketed. We focused on five industries, which represent \$4.2 billion in TV ad expenditures in the U.S. and accounted for most of the e-commerce that year. The industries were apparel (Target, Macy’s, etc.), telecom (AT&T, Verizon, Sprint), travel (Southwest, Expedia, etc.), pizza (Pizza Hut, Domino’s, etc.), and online services and content (Netflix, eHarmony, etc.). To measure the effect of TV ads on online behavior immediately after an ad was aired, we matched TV advertising data with the website visits and online purchases of 100,000 participants on a second-by-second basis.



We classified ads into four types. An ad could be a direct-response ad with a product-focus, intended to showcase particular products and features. It could have an action-focus, intended to induce an action such as search, visit, or buy. These two ads are intended to induce immediate behavior. The other two ad types, known as brand image ads, are intended to change attitudes. Ads with an imagery-focus make use of stunning images and sensory stimulation, whereas emotion-focus ads engage by evoking specific emotions. See Exhibit 8.

What we found was quite surprising. First, among multitaskers, the imagery-focus ads are the least effective of all four ad types in terms of driving online purchases. They don't increase the number of people that visit the brand's website and actually *reduce* the likelihood that TV viewers momentarily purchase any product. Imagery-focus ads are known to be among the most traditionally effective types of TV ads because they are good at engaging viewers with strong visuals. But it is precisely this effect on engagement that makes viewers pay greater attention to the TV rather than switching attention to a lower and self-paced media such as the Internet. Among the best ads to drive multitaskers to the brand's website are action-focus ads. It turns out those ads that urge people to go online (versus those that do not)



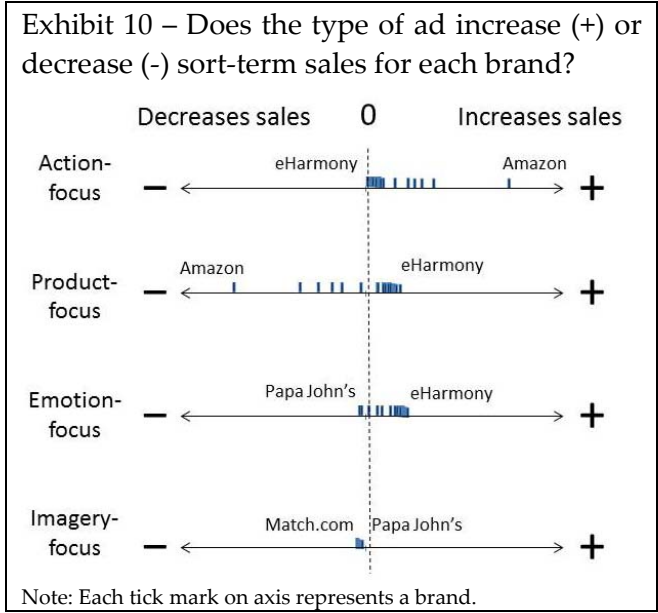
actually accomplish this to a great extent. The downside is these ads are not more persuasive than other ad types at getting people to make a purchase. For some brands, action-focus ads can indirectly increase sales in the short term, particularly if the website is designed to complement the TV ad. This is the case of a Target ad urging people to go online. Within two minutes of the ad appearing on TV, there was a 30% spike in direct website visits by those who typed target.com and indirect visits by those who used a search engine (see Exhibit 9).

One of our most surprising findings was that no single ad type can accomplish both tasks of increasing the number of visitations to the website *and* the number of purchases. By using only one type of TV ad, managers can achieve one or the other, but not both benefits. Product- and emotion-focus ads carry similar impact, though emotion-focus ads are a bit more effective. Both ad types increase the number of purchases online, but also result in fewer total visits to the website. In other words, people who decide to visit the brand's website are more inclined to purchase but the ad itself does not increase a TV viewer's desire to visit the website immediately. It turns out that a focus on product or brand can be persuasive when consumers eventually decide to shop, but it does not motivate multitaskers to act impulsively.

So what does all this mean for advertisers? Well, it depends on what product you are selling, on your brand, and on your audience. If you sell online and have a reason to believe that you are advertising to a multitasking audience, then TV ads that were created to operate under high levels of attention (such as imagery-focus ads) will not work. This is the case for young viewers, as they multitask most of the time, and for older viewers, who multitask early in the morning and in the evening. In these cases, one should opt for action-focus ads regardless



of the brand or industry. One thing media multitaskers are adept at is acting quickly to do something new. We found that brands in all the categories analyzed can increase online sales using this type of ad. The other type of ad that increases online sales for the majority of brands is emotion-focus. Emotions are great triggers for action if executed well. If using product-focus ads, caution should be exercised, as we find that many brands can increase online sales but many other brands, such as Amazon.com, get lower sales when using this type of ads. Exhibit 10 shows the impact of each type of ad on online sales for various brands studied.



As the figure shows, brands such as Amazon and eHarmony, a dating website, have a stronger incentive to use particular types of ad content. For them, choosing the appropriate creative execution can mean the difference between higher or lower online sales. For brands in other industries, such as Papa John's, a pizza delivery chain, the type of ad used doesn't matter as much.

Importantly, advertisers can benefit from the increasing trend of consumers engaging in media multitasking by crafting more appropriate ads. Lower attention is not necessarily bad news for advertisers as long as they target the most effective ad content to the appropriate audience, and use the TV ad as a springboard for consumers to engage with the brand online and ultimately make a purchase.

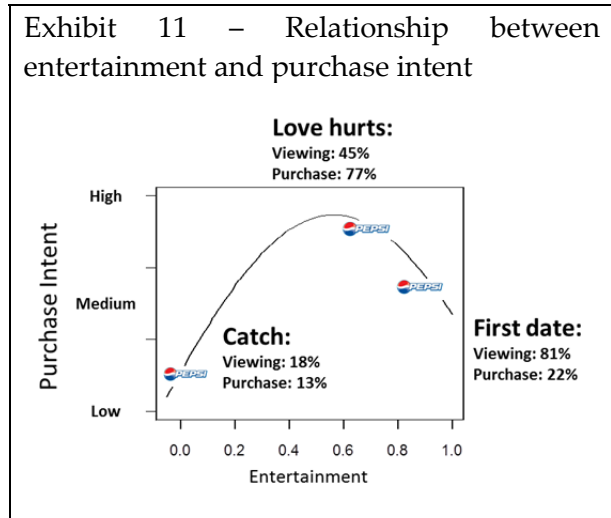
### Option 3: Develop ads that increase the level of attention

Not all brands have short and simple 30-second messages that can be effectively communicated to people with divided attention. Some messages require heightened and sustained attention to be understood. The third option for marketers is to use ad content with a dual purpose: first increase attention and then convert it into persuasion. Entertainment and social messages are generally used with these goals. Next, I explain two research projects that look at how content could be used to increase attention, either from the viewer herself or from her acquaintances.

In a collaborative project, I tested 82 ads for beverage, confectionary, and alcohol brands containing various levels of humor and non-humor entertainment. With consent, I recorded viewers' reactions to the entertainment content in these ads by filming their faces while they watched ads at home or at work. I then used face-tracking technology to detect grins, smiles,

and laughter (for details, see [26]). Using data from almost 5,000 ad exposures, I measured the total amount of entertainment experienced throughout the ad and related that to each person’s decision of whether or not to fully watch the ad and their intent to purchase the product.

Unsurprisingly, I found that the more the viewer was entertained the more she was likely to view the ad until the end. More surprising was that for those who watched the ad until the end, the more they were entertained, the higher their intent to purchase the product—but only up to a certain point, after which *more* entertainment led to *fewer* purchases. Exhibit 11 shows three ads by Pepsi in the 2011 Super Bowl. “Catch” evoked low entertainment among the viewers and had low viewing rates (18%) and low purchase intent (13th percentile). “Love Hurts” was much more entertaining and garnered more views (45%) and very high purchase (77th percentile). “First Date” was by far the most entertaining and more viewers watched it to the end (81%) but the average intent to purchase Pepsi dropped (22nd percentile).

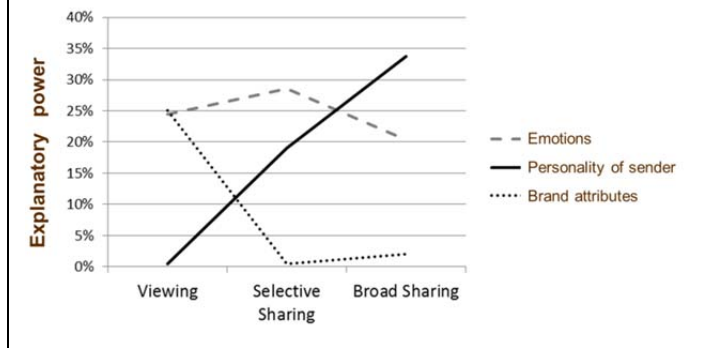


Using entertainment to create more engaging TV ads always helps to attract attention but deters persuasion after some point, as excessive attention paid to entertainment competes with attention to the brand’s message. Thus, when using entertainment in TV ads, advertisers should balance the two goals of increasing attention and persuading consumers. Going too far in the former might come at the expense of the latter. Earning attention *always* comes at a price.

In the other project, I looked at ads from a wide range of industries, including packaged goods, financial services, retail, apparel, electronics, etc. The goal was to understand why some ads get so much attention online that they even end up being shared, thereby earning attention from others in addition to the original viewer. Similarly to the prior study, I showed a sample of ads to consumers and used face-tracking to assess reactions to humor by tracking expressions of joy and surprise. This time I also gave consumers a personality questionnaire before the ads. For each ad shown they were allowed to view or skip it and, if they viewed, they could share the ad with few (termed selective sharing) or multiple (termed broad sharing) acquaintances. I expected that the ads for brands people liked or with which they were already familiar would be more likely to be viewed until the end. Indeed that is what I found. Twenty-five percent of the explanatory power in the decision to view an ad could be attributed to brand-related attributes. Yet for sharing, selectively or broadly, the brand did not matter as much. This means that an ad of an unfamiliar brand is just as likely as a familiar one to be shared if it gets viewed.

In terms of emotional content, feelings of joy and surprise are important to explain viewing as well as sharing. In fact, emotions explain between 20% and 30% of variations in viewing and sharing rates (see how in [27]). Completely unexpected was that viewers' personality would have such a strong influence on sharing, particularly broad sharing. Personality of the sender accounts for the majority of explanatory

Exhibit 12 – What factors explain viewing and sharing of online (viral) ads?



power, 34%, in the broad sharing stage with no influence in the viewing stage. Other individual and content factors account for the rest. As Exhibit 12 shows, for ads to go viral, which requires them to both be viewed and shared, emotions are critical. But to trigger broad sharing, the sender's personality is particularly important.

Which personality traits are related to high sharing? As expected, extroverted (versus introverted) people are more likely to share an ad, and they are more likely to share it broadly with many people. Counter to expectations, self-directed people (versus others-directed) are more likely to share ads and to do so broadly. We found that the ads that were highly shared got in the hands of self-interested people, those focused on themselves as opposed to others. I did find that some viewers shared funny ads altruistically, some of the time. But by and large, the majority of views originated from a sharer with a high degree of self-interest. When it comes to propagating viral ads, anyone with the "right" personality can be an influencer. The ads most shared also had a special characteristic; they used content that enabled the self-interested person to benefit personally and gain some element of social capital from the act of sharing. For example, these ads boosted the sharer's social status by allowing them to communicate their values to others, to foster a tribal relationship based on an inside joke, to be seen as someone with privileged access to good content, or even to show that they were the center of attention (see examples in Exhibit 13). The marketer's challenge is to know which social motivator to use for their target audience and brand.

When marketers stop asking "what do I want to achieve from the advertisement?" and start asking "what can my consumers achieve if they share the advertisement?" they then start the process of creating truly consumer-centered advertising, that which benefits the consumer's social needs. Only after that is secured can marketers start thinking about themselves (remember the conceptual model: consumer's needs come first; then, after attention is secured, the firm's needs come second). I have termed the process of creating content that allows for

mutual benefit, of both the consumer and the advertiser, “advertising symbiosis.” I presented its core tenets at the Cannes Lions 2013 Advertising Festival, considered the Oscars of advertising (see [28]). In ecology, symbiosis refers to the co-existence of two species that benefit from each other’s presence by self-interestedly taking care of their own needs. In Advertising Symbiosis, the marketer has to understand the consumer’s needs and create content that allows the consumer to benefit personally, not from wanting to help the brand but by acting in her own self-interest. After all, the consumer owns her attention and the payoff of satisfying her social needs is that she pays back with her own attention (by viewing) and the attention of her acquaintances (by sharing). Lastly, it is important that brands remain self-interested by making sure they achieve their own persuasion goals, or else they risk providing free entertainment for audiences that will never consider their products.

Exhibit 13 - Examples of highly shared ads and the social needs they satisfy							
<b>Dove</b>	<b>Sketches:</b>	<b>Fiat</b>	<b>motherhood:</b>	<b>Virgin Air</b>	<b>Bond:</b>	<b>Old Spice</b>	<b>Twitter:</b>
Enable viewers to communicate their values to others.		Help viewer relate to and foster their own tribes.		Grant to viewers privileged access to valued content.		Place viewer in the center stage.	
							

**Buying cheaper attention or increasing its impact?**

If the cost of attention is rising, one obvious solution is to find cheaper attention. This might be challenging if the quality of attention is efficiently factored into its market price. However, Lean Advertising shows how non-standard approaches can be used to find attention that is almost as good as that of premium media at a fraction of the cost. The trade-off is that they might be less reliable than traditional media, where audience sizes are more predictable. Another option is to increase the yield of attention, i.e., the rate of conversion from attention to persuasion. This requires either improving ad content to work efficiently at the low levels of attention “bought” in the market, such as when viewers are multitasking, or using the principles of Viral Ad Symbiosis to increase these low attention levels in the market.

Using a simple model of advertising, in which exposure to ad content leads to attention and attention leads to persuasion, I show in Exhibit 14 how the three options above can increase advertising effectiveness. For simplicity, assume that traditional advertising works by buying attention at a market price, say 100 units of attention (@) per \$1 spent. Option 1, buying cheaper attention, involves reducing this cost, say by half. The result, assuming a conversion of attention

to sales in the persuasion stage at a rate of \$0.10 per each @, would generate a greater return on investment as compared to traditional advertising. Option 2 does not require cheaper attention at the first stage but instead a more efficient conversion of attention at the persuasion stage, using ads tailored to work well with low attention. This would also result in a higher return. Option 3 entails increasing the capturing of attention at the first stage by using ads that gain more attention than what was paid for, also securing a better return. Here, using ad symbiosis principles to “pay” sharers with content that satisfies their social needs can significantly increase the rate of success in what would otherwise be a very risky approach. These options can increase the sales impact of advertng, either by shifting focus to acquiring cheaper attention or by creating tailored ads to work more effectively in contexts of low attention.

Exhibit 14 – Calculation of how units of attention, @, are purchased (A) and converted into sales (B) for traditional versus the three proposed options to counter the rising cost of attention.

	A	×	B	=	C
Options:	Exposure → Attention		Attention → Persuasion		Revenue per \$1 spent
Traditional advertising	100 @ / \$1		\$ 0.10 / @		\$ 10
1. Buy cheaper attention	<b>100 @ / \$0.5</b>		\$ 0.10 / @		\$ 20
2. Create ads that are effective in low attention	100 @ / \$1		<b>\$ 0.10 / ½ @</b>		\$ 20
3. Create ads that increase attention bought	<b>50 @ + 100 @ / \$1</b>		\$ 0.10 / @		\$ 15

Note: **Bold** stands for different impact versus traditional advertising.

### Summary

The quality of consumer attention has been falling for decades. Consumers have lost interest in the information content of ads as they can access more and better information on-demand on the web. In addition, the price of high quality attention has skyrocketed, increasing as much as nine-fold in the last two decades. Marketers have responded by advertising more to compensate for this, or by pursuing other means, such as price promotions, to acquire customers. This has adverse effects on both current profits and future revenues. A better solution is to find cheaper attention or increase its conversion into sales. Novel approaches such as Lean Advertising and Viral Ad Symbiosis can help to mitigate the rising cost of attention. Ultimately, in order to effectively manage this valuable resource, marketers will need to tailor their advertising strategies to the attention contingently available to them. This paper shows how to achieve this through the Attention-contingent Advertising Strategy and lays out the fundamental principles of the *Economics of Attention*, an emerging field.

## References

- [1] [http://en.wikipedia.org/wiki/James\\_Vicary](http://en.wikipedia.org/wiki/James_Vicary)
- [2] Anand, Bharat and Ron Shachar. "Advertising, the matchmaker." *The RAND Journal of Economics* 42.2 (2011): 205-245.
- [3] Bagwell, Kyle. "The Economic Analysis of Advertising." *Handbook of Industrial Organization* 3 (2007): 1701-1844.
- [4] Silk, Alvin J., Lisa R. Klein, and Ernst R. Berndt. "Intermedia substitutability and market demand by national advertisers." *Review of Industrial Organization* 20.4 (2002): 323-348.
- [5] Chandon, Pierre, J. Wesley Hutchinson, Eric T. Bradlow, and Scott H. Young. "Does In-Store Marketing Work? Effects of the Number and Position of Shelf Facings on Brand Attention and Evaluation at the Point of Purchase." *Journal of Marketing* 73 (2009): 1-17.
- [6] Teixeira, Thales, Michel Wedel, and Rik Pieters. "Moment-to-Moment Optimal Branding in TV Commercials: Preventing Avoidance by Pulsing," *Marketing Science*, 29 (5) (2010): 783–804.
- [7] Nielsen, "Global Trust in Advertising and Brand Messages," (2013) available at <http://www.nielsen.com/us/en/reports/2013/global-trust-in-advertising-and-brand-messages.html>.
- [8] [http://www.nytimes.com/2005/04/08/business/media/08adco.html?\\_r=0](http://www.nytimes.com/2005/04/08/business/media/08adco.html?_r=0).
- [9] Hurman, James. *The Case for Creativity*. (2011) Aut Media, Auckland, NZ.
- [10] Gabaix, Xavier, and Augustin Landier. "Why Has CEO Pay Increased So Much?" *Quarterly Journal of Economics*, February (2008): 49-100.
- [11] <http://gaia.adage.com/images/random/0908/Commercial-Ratings%20White%20Paper.pdf>
- [12] <http://adage.com/article/digital/viewability-half-online-ads/242026/>
- [13] Farris, Paul W., and Douglas C. West. "A Fresh View of the Advertising Budget Process." in *The SAGE Handbook of Advertising*, ed. Gerard J. Tellis and Tim Ambler. London: SAGE (2007): 316-333.
- [14] Tellis, Gerard J., Rajesh Chandy, and Pattana Thaivanich. "Decomposing the Effects of Direct Advertising: Which Brand Works, When, Where, and How Long?" *Journal of Marketing Research* 37.1 (2000): 32-46.

- [15] Gordon, Jonathan, Jean-Hugues Monier and Phil Ogren. "Why Can't We be Friends? Five Steps to Better Relations between CFOs and CMOs." *McKinsey Quarterly*, December (2013).
- [16] Quelch, John A. *Sales promotion management*. Prentice Hall, 1989.
- [17] Ataman, M. Berk, Carl F. Mela, and Harald J. Van Heerde. "Building brands." *Marketing Science* 27.6 (2008): 1036-1054.
- [18] Gupta, Sunil. "Impact of sales promotions on when, what, and how much to buy." *Journal of Marketing Research* 25.4 (1988): 342-355.
- [19] Tellis, Gerry. *Advertising and Sales Promotion Strategy* (1998) Addison-Wesley, Reading, MA.
- [20] Teixeira, Thales S., and Alison Caverly. "Pepsi-Lipton Brisk". Harvard Business School Case 512-011, December 2012.
- [21] Amabile, Teresa. M. *Creativity in Context*. (1996) Westview Press, Boulder, CO.
- [22] Teixeira, Thales. "How to Profit from 'Lean Advertising'." *Harvard Business Review* 91, no. 6 (2013): 23–25.
- [23] Posner, Michael I., ed. *Cognitive neuroscience of attention*. (2011) Guilford Press.
- [24] Liaukonyte, Jura, Thales Teixeira and Kenneth Wilbur. "How TV ads Trigger Online Shopping." Mimeo, Harvard Business School (2013).
- [25] Zigmond, Dan, Horst Stipp. "Multitaskers may be advertisers' best audience." *Harvard Business Review* 12.1 (2011): 32-33.
- [26] Teixeira, Thales, Rosalind Picard and Rana el Kaliouby. "Why, When and How Much to Entertain Consumers in Advertisements?" Mimeo, Harvard Business School (2013).
- [27] Teixeira, Thales. "The New Science of Viral Ads." *Harvard Business Review* 90, no. 3 (2012).
- [28] Teixeira, Thales. "Viral Advertising via Ad Symbiosis." Presentation delivered at the Cannes Lions International Festival of Creativity, (2013). See brief summary at <http://www.youtube.com/watch?v=TVpX8Arcw7o>,