



# The Impact of Celebrities in Advertising

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## Executive Summary

American companies commonly hire celebrities to promote their brands both on television and online. In January of 2011, we published a definitive study on the performance of celebrities in advertising, which determined that, on average, the use of celebrities served to diminish the effectiveness of television advertising. We decided to revisit and extend our analysis. We reviewed ad data from January 1, 2012 through October 24, 2013, an exercise that yielded more than 1,200 unique, national television ads that included a celebrity endorsement. The ads are but a fraction of the 30,000 ads in the Ace Metrix database, making the study the broadest analysis, to date, on the subject of celebrity creative effectiveness. Our intent was to extend the research to look not only at celebrity ad performance through the addition of some 18,000 ads, but also to isolate the overall performance of a celebrity across all ads, controlling for several confounding variables. Highlights from the paper include the following findings, below.

- Consistent with our prior study, celebrity ads, in aggregate, underperform ads without celebrities as measured by average Ace Scores (514 with celebrities vs. 527 without celebrities). However, the analysis provided in this iteration of the paper extends the findings to control for both demographic targeting and industry bias—greatly enhancing the understanding of the performance of advertising with celebrities. Even controlling for demographic targeting and industry bias, there is no statistical benefit attributable to the use of celebrities.
- There is a wide range of ad performance, both of individual ads involving a celebrity as well as the aggregate celebrity score. Celebrity advertising continues to be a mixed bag for the brands that employ them. Using a celebrity who delivers a substantive message and has a strong connection to the brand or product can yield a highly effective ad; however, finding the right balance proves to be elusive for most celebrity creative executions.
- Some ads featuring celebrities did score well. These success stories were found among commercials that featured a celebrity or celebrities who have a meaningful connection to the product or brand that they're endorsing and employ a clever and integrated script. In short, success stems from a plausible connection between the celebrity and the brand.
- We also extended our definition of "celebrity" to include some fictitious brand characters, such as Mr. Clean, Tony the Tiger or Flo. It is interesting and instructive to brands to look at the effectiveness of these characters relative to traditional, real celebrity endorsers.
- In particular, Ellen Degeneres (JC Penney), Dean Winters (Allstate), and Ray Lewis with Paul Rudd (EA Video Games) are three examples of celebrities whose portfolio of ads significantly outperformed within their respective target demographics.

Finally, the analytical methods in the paper applied a bayesian approach, the result of which creates a unique model that can predict the likelihood that a particularly pairing of brand and celebrity would be above or below the mean. Ace Metrix will make this model available to brands and agencies at a later date.

## Introduction

Nearly three years ago, Ace Metrix published a study examining the effectiveness of advertisements that featured celebrity spokespersons. At the time, the prevailing wisdom among advertisers was that casting celebrities in commercials was an effective way to engage the audience. Celebrities featured in advertisements were supposed to help develop a positive view of the brand and the product featured in the commercial that lasted beyond the commercial's airing. In brief, using celebrities in advertisements was seen as a winning proposition that led to creative effectiveness, better advertising, and, therefore, more products sold.

In January 2011, Ace Metrix examined this issue in an analysis of more than 2,600 television commercials. We found that, on average, advertisements featuring celebrities scored no better than advertisements without them. In fact, after statistically controlling for a number of potentially confounding variables like competitive industry, as well as accounting for campaign targeting, we still found that advertisements with celebrities failed to outperform other ads.

To be clear, our analysis was *not an entire indictment of celebrity advertisements*. Some ads featuring celebrities did score well; however, those commercials also put great emphasis on their message and persuasive style. Moreover, the role of the celebrity in the commercial was relevant—that is, there was a clear reason why the celebrity was featured in the commercial. Examples include Oprah Winfrey in several public service announcements warning about the dangers of sending text messages while driving, Carl Weathers serving as a spokesman for Bud Light, and Jason Alexander pitching the Jenny Craig weight loss program. In these successful advertisements, the celebrity supplemented advertising copy that was already designed to appeal to viewers.

Alternatively, unsuccessful commercials that featured celebrities frequently paired a celebrity with a product or brand where there was no clear connection between the two. In many cases where this occurred, it seemed as though the advertiser was keen on featuring a celebrity, not necessarily one that fit the purpose of their communication. Commercials featuring Lance Armstrong for Radio Shack and celebrity chef Thomas Keller for Avis serve as classic examples of celebrity misfits.

Since our initial analysis, Ace Metrix has collected considerably more data. In the last two years alone, we have collected data on more than 12,000 advertisements, of which, more than 1,200 featured a celebrity. Armed with this considerable increase in sample size, we revisited the topic to see if things had changed since we last examined this issue.

After analyzing this new dataset, we can confirm that ads featuring celebrities do not have higher creative scores than other ads. Rather, across all measurements gathered in the Ace Metrix survey, advertisements that featured celebrities scored slightly lower than advertisements that did not feature celebrities.

As before, we observed that certain celebrities tended to outperform others. In particular, ads featuring Ellen DeGeneres for JC Penney, Dean Cain for Allstate Auto Insurance, and the duo of Ray Lewis and Paul Rudd for EA Video Games were high scoring. Conversely, ads featuring Jay-Z for

Samsung Mobile Phones, Blake Griffin for Kia, and Drew Brees for Nyquil/Dayquil failed to resonate with the audience—even among those targeted by the campaign.

Clearly, there is some role for the celebrity spokesperson in television advertising. However, this latest round of data analysis reaffirms our view that in order for an advertisement to be truly effective, the message, tone, and relevance of any actors featured in the commercial must be clear, well-communicated, and justifiable. Frequently, advertisers underestimate the level of scrutiny and critical eye that audiences use to evaluate television commercials. It is a mistake to believe that simply casting a celebrity in a television commercial is all that is required to resonate with an audience. Greater care about how audiences interpret an advertisement is needed.

## Findings

At the most basic level of analysis, we found that advertisements featuring celebrities scored below advertisements without celebrities. Table 1 illustrates the differences between celebrity and non-celebrity ads in terms of average scores. Across each measurement in the Ace Metrix system, ads without celebrities slightly outperformed ads with celebrities.

Type of Ad	Ace Score	Desire	Relevance	Change	Attention	Information	Likeability	Emotion
<b>Non-Celebrity Ads</b>	527	567	571	600	627	572	612	47
<b>Celebrity Ads</b>	514	538	549	592	621	561	605	44

Table 1: Differences in Scores between Ads Not Featuring Celebrities and Ads Featuring Celebrities

This finding echoes results from our initial analysis in 2011. For historic reference, consider Figure 1 that depicts both our initial findings in 2011 as well as the most recent analysis. These charts clearly demonstrate that the average Ace Score has remained equal during the last three years. Simply put, there has been no change in the ineffectiveness of celebrity advertisements.

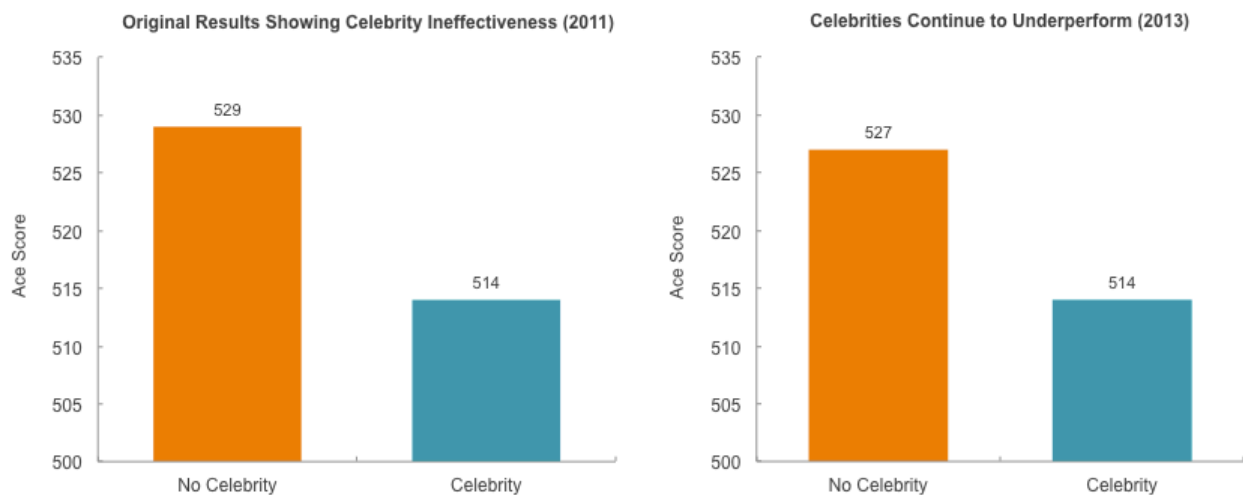


Figure 1: No Difference in Scores Between Ads Not Featuring Celebrities and Ads Featuring Celebrities Over Time

Since simple cross-tabulations can lead to spurious analytical findings, we utilized more sophisticated techniques to better understand the relationship between celebrity presence in an ad and creative scores. As we did in our original analysis, we considered the possibility of two potentially confounding factors affecting our results.

First, it is well known that advertisements from some industries tend to systematically score higher than others. For example, advertisements from the Candies & Snacks industry generally score higher than advertisements from the Financial industry.<sup>1</sup> Consequently, it was necessary to statistically control for the advertisement's industry in order to avoid incorrectly attributing celebrity effects—or a lack thereof—to advertisements where scores are produced at fundamentally different levels.

Second, targeting to specific demographic subpopulations is a common practice among advertisers. For instance, it tends to be the case that advertisements from the Personal Care industry have lower scoring ads among general population viewers. This is not because Personal Care advertisements are of poorer quality than the average ad; rather, this is because Personal Care advertisements are frequently targeted and relevant to a single demographic (e.g., shaving cream for men, cosmetics for women, etc.). As a result, if one examines the creative scores by demographic instead of general population, a different story emerges in terms of whether the ad was effective.

Clearly, these potential systematic biases could not be ignored. To account for these potential confounding explanations, we adopted an analytic plan that (a) models that targeted creative score as a function of both the advertisement's industry as well as an indicator of whether the ad featured a celebrity or not and (b) models the highest creative score by demographic—a proxy for the demographic campaign target.

Using a random effects model, we found that the coefficient for whether a celebrity was in the advertisement was 3.7. Simply put, this means that among the demographic who scored the ad the highest, the average benefit of having a celebrity in an advertisement was a modest 3.7-point increase in Ace Score. To put that in perspective, Ace Scores range from 1 to 950, so a 3.7-point average increase in scores corresponds to about four-tenths of one percent benefit from having featured a celebrity in the commercial.

When considering this lack of an effect, two questions subsequently emerged: Do some celebrities tend to outperform others? That is, is the issue simply a matter of differential abilities amongst celebrities to represent a brand? And, if so, how much better or worse is each celebrity than the average paltry celebrity performance?

Recall that in our initial analysis of celebrities in advertising, we found there were some celebrities who tend to do well. We observed that Oprah Winfrey, Carl Weathers, and Jason Alexander were all successful spokespersons in the past.<sup>2</sup> Since then, which celebrities had outperformed the celebrity norm?

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<sup>1</sup> Among this dataset that spanned all advertisements tested by Ace Metrix from November 2, 2011 to November 24, 2013, the mean Ace Score for ads in the Financial industry vs. the Candies & Snacks industry was 480 vs. 542—a considerable difference.

<sup>2</sup> Unfortunately, none of these top three performing spokespersons were featured in recent advertisements, so we could not determine if they had the “magic touch.”

To answer this question, we identified a list of celebrities who had appeared in at least five commercials (an admitted arbitrary number). From this group we evaluated their average performance while also considering the variability associated with that performance. We fit a new random effects model, now considering each celebrity as his or her own as a random intercept. This approach results in a performance metric for each celebrity ad, which we aggregated to yield an average performance metric for all celebrities who appeared in five or more ads.

The approach we took with the analysis was to isolate the “pure celebrity” impact on the overall performance of the ad. We could have provided simple Ace Score ranking of the average scores of ads by a given celebrity, however, we wanted to go a level deeper, since the effectiveness of a celebrity ad is a function of several elements.

- 1) The appeal of the celebrity
- 2) The category and product advertised
- 3) The demographic target of the ad

Methodologically, the goal was to remove the effect of the product category and the demographic polarity, which we know has a significant impact on overall ad performance. Ace Metrix data shows a significant variation in ad effectiveness across product categories. For example, we know that industry plays a role in advertising effectiveness. The mean score for ads in Financial Services is considerably lower than Casual Dining. Further, we also know that a product that has a narrower target may not score as well across all demographic groups as a product with broad appeal. Cosmetics have a narrower demographic target and appeal than mobile phones. By controlling for the differences in category and for demographic targeting variation, we can evaluate the impact of the celebrity ad effectiveness more precisely—what remains is the pure celebrity effect. This methodology also allowed us to evaluate celebrities who might appear in ads for multiple products and categories.

Figure 2 illustrates the average performance by celebrity compared to the average performance of celebrities in general (denoted by the blue vertical line).<sup>3</sup> Recall that the average performance in general is a mere 3.7 points, thus each point depicted is a deviation above or below 3.7. In addition, the size of the points in Figure 2 indicates the number of ads (i.e., the basis) for each celebrity’s average performance. Thus, this chart identifies both the average performance by celebrity as well as the volume of commercials that comprise that mean.

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<sup>3</sup>This model also controls for Industry as a fixed effect.



Performance of Celebrity Compared to Average Celebrity Performance

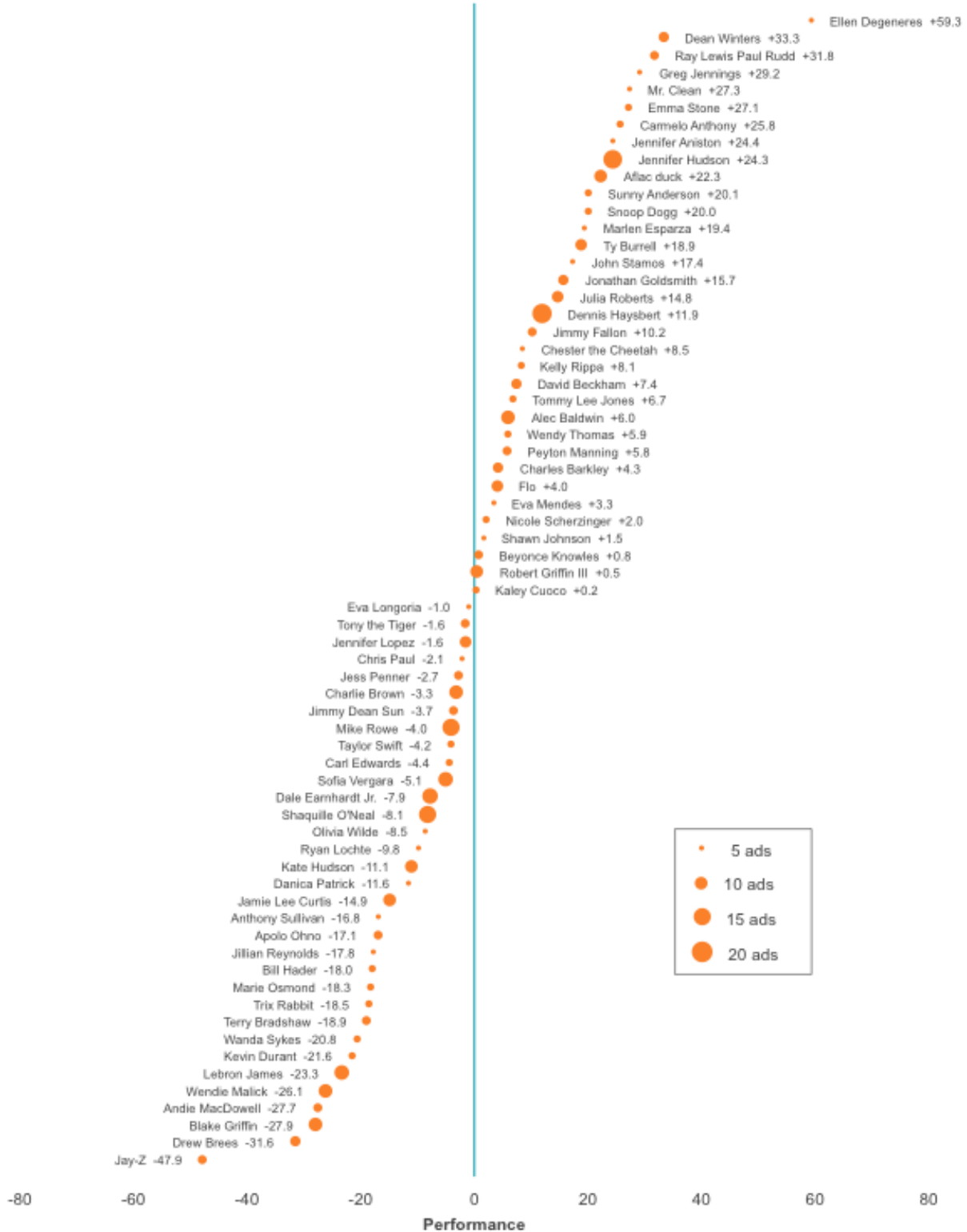


Figure 2: Performance By Celebrity Compared To Average and Volume Of Ads

When viewing Figure 2, two points are noteworthy: First, some celebrities are clearly more popular than others. There are about a dozen celebrities who have appeared in quite a few television commercials for more than one brand in the last two years, indicating that certain famous personalities are in high demand. Examples include Dennis Haysbert, Jennifer Hudson, Mike Rowe, and Shaquille O’Neal.

Second, it is worth observing the magnitude of increase (or decrease) compared to the average celebrity effect. Almost all ads by a celebrity fall within about +/- 20 points of the average celebrity effect. This means that even among the “top performers” the actual benefit brought about by that particular celebrity is not very large. A 20-point increase in Ace Score is akin to approximately a 2% increase in advertising effectiveness. Moreover, it is critical to observe that this increase applies to only a few top-performing celebrities (e.g., Ellen DeGeneres & Dean Winters).

It is noteworthy that these results do not factor the role of copy-quality and the possibility that smart, inventive ideas and storylines carried the celebrity to success (as opposed to the opposite or perhaps some combination of the two).

We note that a subset of the celebrities represented in Table 2 are mascots, namely made-for-TV characters who are either animated (e.g., Chester the Cheetah) or characters portrayed by actors (e.g., Flo). Mascots are a popular option for advertisers, and not just because the costs to retain their services is lower. Companies are also sheltered from the risk that these mascots will misbehave in the real world. Tiger Woods is the most visible example of such a risk in recent years. Table 2 shows the “pure lift” performance and the average Ace Scores of the nine mascots that appeared in five or more ads.

Mascot	Performance Relative to Average Celebrity Performance	Average Ace Score
Mr. Clean	+27.3	589
Aflac duck	+22.3	570
Chester the Cheetah	+8.5	567
Flo	+4.0	518
Tony the Tiger	-1.6	550
Charlie Brown	-3.3	518
Jimmy Dean Sun	-3.7	562
Trix Rabbit	-18.5	503

Table 2: Performance of Mascot Celebrity Compared to Average Celebrity

Finally, to underscore how important an ad’s message is in relation to an ad’s Ace Score, we provide the following lists of the top ten and bottom ten celebrity ads since the beginning of 2012. Ads that score high have a substantive message with wide demographic appeal, whereas those that score low have weaker messages or pair celebrities that do not have a strong connection to the brand or product.

### Top Ten Ads

Celebrity	Brand	Ad Title	Duration	Air Date	Ace Score
Jordyn Wieber	AT&T Corporate Promotions	Jordyn Wieber: Take The Pledge Today	0:30	9/19/2012	666
Zac Brown Band	Applebee's	Salute	0:30	10/29/2012	660
Victoria Justice	AT&T Corporate Promotions	Victoria Justice: No Text and Drive	0:30	9/4/2012	660
Jordyn Wieber	Procter & Gamble	Try Again Wieber	0:30	8/11/2012	660
Chandra Wilson	Downy	Chandra Wilson: Touch of Comfort	0:30	5/10/2012	659
Will.i.am	Coca-Cola	EKOCYCLE (:60)	0:60	8/1/2012	658
Dwayne Wade	Lowe's	Heat Break	0:60	5/19/2013	654
Zoey Deschanel	Apple iPhones	Zoey Deschanel: It's Raining	0:30	4/16/2012	653
Aaron Rodgers	Pizza Hut	Shush	0:30	9/10/2012	648
Jordyn Wieber	Procter & Gamble	Jordyn Wieber: Biggest Fan	0:30	8/7/2012	647

### Bottom Ten Ads

Celebrity	Brand	Ad Title	Duration	Air Date	Ace Score
CM Punk	THQ Video Games - Mature	CM Punk: The Big Welcome	0:30	10/12/2012	303
Justin Verlander	Chevrolet	Justin Verlander Sings	0:15	4/5/2012	360
Multiple	MySpace	New Myspace	0:30	6/12/2013	362
Keegan Bradley	Dick's Sporting Goods	The Best Swing	0:45	10/5/2013	365
Rachel Roy	Macy's	Rachel Roy: We All Need A Maxi Dress	0:15	3/19/2012	367
Jay-Z	Samsung Mobile Phones	Magna Carta	3:00	6/16/2013	368
Charles Woodson	Nissan	Two	0:45	11/17/2012	368
Woodkid	Absolut	Woodkid	0:30	9/9/2013	371
Manoj Bhargava	Chaser 5-hour	They Take It Themselves: Manoj Bhargava	0:60	12/3/2012	372
Lebron James	Samsung Mobile Phones	Next Big Thing	0:30	6/20/2013	374

## Conclusion

For more than three years, Ace Metrix has studied celebrity spokesperson performance in television commercials. We have consistently found that the presence of a celebrity in an advertisement in and of itself does nothing to improve creative effectiveness of an advertisement. At their best, celebrities serve as incremental supplements to already solid creative copy.

In a competitive marketplace where return on investment is a key criterion for evaluating success, marketers need to seriously consider what benefit comes from casting high-priced celebrity spokespersons in television campaigns. If the average benefit from including a celebrity in a commercial is less than half of one-percent, even among a product's target audience, then the argument on behalf of investing those funds in improving advertisement copy with better writers or ideas as well as doing more pre-testing to identify strengths and weaknesses in commercials begins to make sense.

Nonetheless, using celebrity spokespersons in advertisements occurs quite frequently. Since the early years of advertising, advertisers have attempted to utilize endorsements from famous individuals as a mechanism to appeal to viewers. We see no evidence that this practice has fallen out-of-favor as the proportion of ads featuring a celebrity has not meaningfully changed in the last few years. Despite illustrating that celebrities are largely ineffective substitutes for producing persuasive advertising copy, the trend of relying upon celebrity endorsements persists.

As noted in the paper, there is a role for the celebrity spokesperson in television advertising. Nonetheless, the data reaffirms our view that in order for an advertisement to be truly effective, the message, tone, and relevance of a celebrity must be clear, well-communicated, and justifiable. It is a mistake to believe that simply casting a celebrity in a television commercial is all that is required to resonate with an audience. Advertisers must realize that message substance is as important—if not more important—than message style.

To download a copy of the previous whitepaper, "Celebrity Advertising, Exposing a Myth of Advertising Effectiveness," visit [acemetrix.com/spotlights/insights](http://acemetrix.com/spotlights/insights).

For more information on the contents of this paper or to inquire about other insights, contact Ace Metrix via [acemetrix.com](http://acemetrix.com) or call 800.279.7984.