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## Calibrating Cheers

Technology to measure football fans' every sudden gasp and wild shout

By Brett Zarda Posted 01.29.2009 at 11:10 am 1 Comment



Viewer reaction to television can be emotional and emphatic. Case in point: when David Tyree caught Eli Manning's pass against his helmet in the fourth quarter of the 2008 Super Bowl, all of New England regurgitated while New York rejoiced. The YouTube clip above plots a complex compilation of diverging biometric data from 15 devastated Patriot fans and 15 elated Giants fans. Not only did the fans react to the play, but they reacted to each replay.

But such extremes are not always apparent, and at \$3 million for 30 seconds, Super Bowl commercials are big money. Those companies willing to pay the piper will willingly pay thousands more to predict the reaction of the viewers. The industry standard for rating commercials is the USA Today AdMeter. Viewers spin a dial one way if they like the ad, and the other way if they don't. AdBowl.com has a website where you can rate each commercial on a scale of one to five after the game. Both techniques are straightforward and simple, but hardly scientific enough to grace these digital pages. For our media research, we prefer the biometric techniques of Innerscope Research shown in the clip above. Why? Because it takes a PhD to understand their methods. (Oh, and because it works.)

While Innerscope is normally hired by specific clients, we'll use its Super Bowl demonstration from last year as an example of its methodology. The aforementioned group of fans was piled into the Innerscope lab. Innerscope didn't ask their opinion of commercials, measure their applause, or look at their facial reactions. Subjects wore a battery-powered Lycra vest that monitored motion, ECG, skin conductance, and respiration. The lab was more of a living room, with plush couches, free food, and free beer (just one per quarter). Participants could even invite a friend. Innerscope wants the environment as natural as possible, except for the skin conductance patches attached to your non-drinking hand. A 2008 article in the *International Journal of Advertising* establishes that while you Tivo through commercials at 6X speed, commercials are still influencing what you buy.

But we digress. All this data is collected and analyzed using validated methods we don't have time to explain. But there are two key factors. The first is intensity, which makes sense. The higher the physiological response, the more impact of the commercial. The second, synchrony, is more subtle. If one guy reaches for a beer (motion) or holds his breath to get rid of the hiccups (respiratory) Innerscope doesn't care and dismisses the data as noise. But if an entire audience leans forward in their seat and holds their breath at the same moment, something is happening.

"If everyone is having the same response, then they can't be responding to remembering that they left the oven on," said Innerscope president Brian Levine.

Two key data points are provided for Innerscope's clients: the max rating achieved in a commercial (scale of 1-100) based on a compilation of their four data points; and, perhaps more importantly, the area under the rating curve over time (the integral), referred to as build. According to Levine, their research shows that a commercial's build is more important to its lasting effect than the max value it achieves.

While the Tyree catch isn't an advertisement, it provides a proof of their methods - a sort of bimodal synchrony, in a repeating loop.

"Even though they know he's not going to make the catch they're still reliving it, and they have this cognitive response," said Levine. "They're reliving that moment even know they know the outcome."

But if those fans had the USA Today dial in their hand, the two subsets would've likely broken the device turning in opposite directions. So why all the fancy electronics? Levine notes that participants with the dial must remember to turn the dial. If viewers are continually adjusting the dial they're inherently not engaged in viewing. And if viewers simply turn at the end of the commercial, then valuable data across the advertisement (the aforementioned build) is lost.

A second advantage is again best exemplified by the Super Bowl from last year, this time a commercial. Most websites and media research groups suggested that the Budweiser Clydesdale commercial "won" last year's crown. But the Innerscope data suggested that a less tasteful advertisement for Amp Energy drink was the most effective (car battery, jumper cables, nipples ... now you remember). Why the discrepancy? Even the crudest fan might not feel comfortable turning a dial at such sophomoric humor, but that doesn't mean he's not laughing on the inside. In the post-Super Bowl buzz, Levine notes that their data was validated, as the Amp commercial received more views and comments on MySpace than any other.

Levine stresses that biometrics is not a singular solution. Traditional methods still have their places, and a compilation is necessary for the more comprehensive analysis. This year Innerscope plans to invite close to 50 people to their Super Bowl party. And while the beer will still flow like mud, we'd prefer one of those in our hand to any dial.