For years neuromarketing firms have been selling their services to help advertisers optimize TV commercials, product packaging, and other media. While these companies all claim success in helping their clients boost sales, there’s been little in the way of published academic research that demonstrates measuring consumer brain activity can reliably predict subsequent behavior. A new study published in *Psychological Science* brings us closer to that point: scientists using a UCLA fMRI facility analyzed anti-smoking ads by recording subject brain activity. They also asked subjects about the commercials and whether the ads were likely to change their behavior. The researchers found that activity in one specific area of the brain predicted the effectiveness of the ads in the larger population, while the self-reports didn’t.
fMRI Predicts Ad Campaign Performance

The methodology involved comparing brain activity in subjects who viewed ads from three campaigns to actual performance of the campaigns in increasing call volumes. The researchers focused on a subregion of the medial prefrontal cortex (MPFC) but also compared activity in other brain regions for control purposes. They found that the ad campaign which created the greatest activity in the MPFC region generated significantly more calls to a stop-smoking hotline. Here's a sample ad (sorry, not sure which campaign it’s from):

Experts Failed, Too
The subjects failed to identify which ads would change their behavior; in fact, the most effective campaign, “C,” was the one judged to be least likely to work. The researchers also asked a group of industry experts to predict which campaign would work best. Like the experimental subjects, the so-called experts also predicted that “C” would be the least effective.

**Before we get carried away…**

A few cautions are in order before we break out the champagne and claim that neuromarketing studies have been validated and the field has officially come of age:

- This was a single study that tested 31 total subjects. (That’s actually a good number for an fMRI study.) These subjects were smokers who wanted to quit, a group likely to be receptive to the messaging.
- FMRI is rarely used by commercial neuromarketing firms due to equipment cost, lack of portability, subject immobility, and small sample sizes. Most neuromarketing companies use EEG, biometrics, and/or other techniques not capable of the 3D brain region localization of fMRI.
- The ads weren’t commercial campaigns and the measured behavior wasn’t a product purchase or even a brand preference. The same technique might not work for the commercial campaigns of interest to most marketers.

**But still…**

Even if this single, small study of smoker behavior can’t be readily extrapolated to campaigns for BMW or Pepsi, it’s still of great significance in proving neuromarketing studies can actually work. As the authors note, “**The approach described here is novel because it directly links neural responses with behavioral responses to the ads at the population level.**” Simply put, the brain scan data correctly predicted how the ads would perform in the real world – not just how the subjects would behave, but the broader public audience. That’s a major milestone.

It’s interesting that the authors never use the term “neuromarketing” in the text of their paper, but rather refer to their study as a “**neural focus group.**” That’s actually a rather nice term, as it positions the idea of using brain scans in a context familiar to traditional marketers. Solid wordsmithing AND exciting data!


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emily falk, fmri, matthew lieberman, mpfc, neural focus group, smoking, tobacco, ucla

This post was written by:

Roger Dooley — who has written 831 posts on Neuromarketing.

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2 responses to “Neuromarketing Proof? UCLA Brain Scans Predict Ad Success” — Your Turn

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nalts 28. April 2012 at 5:06 am

I used to market to people living with schizophrenia and I met with a few players in this space. Unfortunately the researchers were not confident in their ability to read this audience. I was intrigued with the possibility of seeing a lymbic response to our creative, and learning which activated the memory (although it wouldn’t be clear whether storage or retrieval was being observed).

nalts recently posted. Gilly?! (sorry)
It’s going to be fascinating to watch as more studies like this unfold. Really goes to show how little we understand about our own brains and what makes us tick.

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