



Neuroscience: A New Perspective

The merits of neuroscience-based techniques continue to spark debate. New papers and articles persist in asserting that scientists' increased understanding of the brain will change marketing and the way we measure its results.



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Martin Lindstrom's 2008 book *Buyology* makes a similarly strong claim: that neuroscience will play a revolutionary role in research and marketing in the future. As a result, many marketers are challenging accepted modes of advertising development and research on the grounds that "neuroscience says" that what we've done before is wrong.

However, we don't believe that marketers need to turn their backs on tried-and-true research techniques in favor of the apparent objectivity of neuroscience. Rather, marketers should use neuroscience-based research in conjunction with established techniques when (and only when) it adds value. If used in isolation, such methods can be hard to interpret, but when combined with qualitative or survey-based research, they can add a powerful new dimension of insight.

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Which Methods to Use

In choosing among neuroscience-based techniques, we have found it useful to ask the following questions:

- Does the approach tell us something meaningful about brands or marketing?
- Does it tell us something we don't already know, and enough to justify its cost?
- Is it practical and scalable?

From among the many new techniques that have emerged from recent learning on the workings of the brain, we have identified three that meet all three of these tests. These are: implicit association measurement, eye-tracking, and brainwave measurement. When used in conjunction with established methods, these techniques can yield insights that lead to more effective marketing.

Implicit Association Measurement

While implicit association measurement is not strictly a "neuroscience" technique, what it shares with other truly biometric methods is the principle of inferring consumers' responses, rather than asking direct questions. The approach relies on the fact that the brain stores information in networks of ideas and responses. An experience of a brand

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or ad leaves residual levels of activation in these networks. Because the brain is likely to reuse recently activated ideas or responses, those levels of activation can be measured by the degree to which they influence subsequent performance on related tasks.

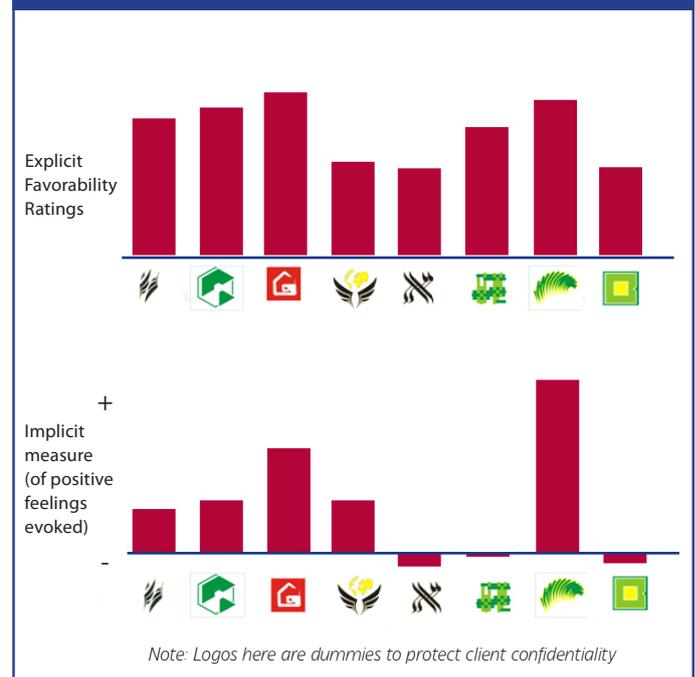
Implicit association methods have a long history of use in cognitive psychology to infer unstated processes and responses. To market researchers, they offer insight into a level of communication that can't be tapped through explicit questioning. They help reveal the “raw” ideas stirred up by brands and ads before any filtering for sense or social desirability has taken place. Our clients have used these methods to understand the associations activated by brands, by ads, and by stimuli that may be hard to discuss, such as brand names, logos, and other sensory elements of brand identity.

We recently used this approach as part of our research on a new TV ad for a major FMCG/CPG manufacturer. The ad, which was meant to convey the sense that the featured product was an indulgent pleasure, included both suggestive content and a dominant male character. While traditional testing left no doubt that the ad was not positively received, the implicit association technique helped us understand why. It revealed that while the intended themes of sensuality and indulgence were in fact evoked, themes of dominance and humiliation also emerged, driven by the main character. It also brought to light associations with “unholiness” among respondents who described themselves as religious. (This was not an idea that they verbalized in response to direct questioning.) The ad was not aired, but the implicit measures provided significant learning about the appropriate themes for future ads in this market.

Another example comes from Poland, where we recently conducted some logo research for a financial services client. Consumers often have trouble articulating their reactions to

logos, as they are not usually objects of considered thought. But their colors and shapes convey a great deal of nuance and symbolism that does influence people's responses. In this case, we found that the results from explicit ratings correlated with results from our implicit test, but the implicit method more clearly identified a winner. (See Figure 1.)

Figure 1 – Explicit and implicit ratings of brand logos



On the whole, we've found that this type of approach allows us to see in more depth whether a brand is achieving its desired positioning or if a campaign or logo has the potential to shape a brand's perceptions in the intended way. However, implicit associations clearly don't tell the whole story. Conscious responses must be captured to understand how messages are processed and how persuasive and compelling they are.

Eye-tracking

Eye-tracking is now widely used, in part because in recent years it has become simpler to implement and more affordable. We have used this approach in several markets and have found it to be a useful diagnostic tool that helps to explain the results of traditional survey instruments. Figures 2 and 3 show the results for a scene from the “Car Bakers” execution for Skoda Fabia. A Link study found this ad to be powerfully branded to Skoda but relatively weakly branded to Fabia. Eye-tracking helped explain why. When the Skoda brand is affixed to the

Figure 2 – Skoda Branding



Figure 3 – Fabia Branding



car, visual attention is clearly focused on it, but when the Fabia nameplate is mentioned, visual attention is dispersed.

The benefits of eye-tracking are clear: Eye movements indicate the focus of visual attention with more detail and accuracy than self-reported answers. Of course, the method doesn't reveal why a particular area catches the eye or how people respond to what their eyes fall on. That type of information requires additional survey-based or qualitative study. But eye-tracking provides realistic evidence of what people are likely to look at, which makes it a powerful aid in evaluating advertising creative.

Brainwave Measurement

Brainwave measurement is a difficult area for marketers to navigate, both because of the complexity of the process and the wide variety of systems available. We have examined a number of systems and are primarily working with the U.S.-

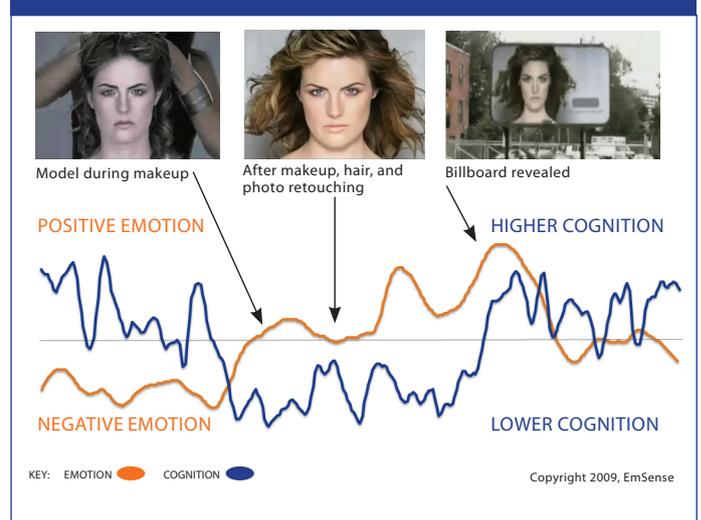
based EmSense to integrate electroencephalography (EEG) and other biometrics with results obtained using traditional survey tools.

We have chosen EmSense because the company's technology is more scalable and cost-effective — and therefore more useful — than conventional EEG methods. EmSense uses a simple headband with dry electrodes to collect EEG and secondary biometric data, such as heart rate, respiration, blink rate, and body temperature. This equipment is not only simple for researchers to use, but is much less intimidating for participants than conventional "wet" EEG equipment.

Brainwave data can provide a record of participants' reactions to an ad on a moment-by-moment basis. This can be very useful information because many of these responses are so quick and fleeting that viewers may not even remember them, let alone be able to objectively report them.

Figure 4 shows the results of this approach for the Dove "Evolution" film, which illustrates the process of preparing a model for a photo shoot and then digitally enhancing the results. Quantitative copytesting research found this film to be engaging, emotionally resonant, and a powerful communicator of the core idea. The EmSense data illustrated the cognitive and emotional paths that respondents travelled as they viewed the ad. At the point where it becomes clear that the film is about the creation of a billboard, we observe a peak in both positive emotion and cognition, followed by much more negative emotions as the implications sink in. This sequence of responses is a powerful illustration of how the ad

Figure 4 – EmSense results for Dove "Evolution"





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succeeds: It provides insight into the beauty industry's "tricks of the trade" that is not only fascinating and revealing, but also saddening.

Brainwave work we have done with other clients has helped reveal and address issues such as weak communication, branding, or disengagement with key protagonists.

When to Use Neuroscience

Clearly, these three neuroscience-based research techniques have value to offer. We believe that they tend to add the most value when dealing with needs and situations such as the following:

- **Sensitive material** Qualitative and survey methods are most vulnerable to distortion when sensitive material is involved. Methods that don't rely on explicit questions can reveal unstated attitudes more effectively.
- **Abstract or "higher order" ideas** Consumers may find it difficult to express some of the abstract ideas at the heart of some brands' positionings. Implicit association methods are useful to probe for ideas that participants might be too self-conscious to verbalize, or simply unable to articulate.
- **A need to probe for transient responses to ads or brand experiences** Consumers are great at talking about the gist of an ad or brand, but they may not be able to explain how they got there. Eye-tracking and EEG can help researchers fill in the blanks by identifying the focus of attention and illustrating the highs and lows of emotional and cognitive response to a piece of creative.
- **A need to understand consumers' feelings** When questions are framed correctly, consumers *can* talk about their feelings in response to surveys and qualitative research. But neuroscience-based methods can add an additional level of detail about the timing of these responses and their origins.

Getting the Best Out of Neuroscience

Our experience in researching and using these methods has suggested the following best practices:

- **Be critical.** The technology can be alluring, but ask the same questions that you would ask of any conventional research technique. Request proof. Go along to fieldwork or take the tests yourself to see how realistic the results are.
- **Look for experience.** This is a complex area, so you want to be sure that your supplier is really familiar with these techniques and the science underlying them. An empirical understanding of what works and what doesn't is important to understand claim versus reality and when neuroscience adds the most value.
- **Integrate.** Neuroscience-based methods do not reveal the "inner truth." Rather, they provide additional perspective on participants' responses to communication. It is only when this perspective is combined with others that greater insight is revealed.

Our experience suggests that in the future, neuroscience-based research will be a standard tool in the researcher's toolkit, but it won't be the only tool. Neuroscience techniques on their own can't fully explain consumers' responses. The most complete understanding will come from integrating information rather than looking at one perspective alone, and using the right tool at the right time.

To read more about neuroscience, visit www.mb-blog.com.

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