

Increasing our brainpower

Using neuroscience effectively

Erik's book illustrates both the complexity of neuroscience as a field and the crucial implications it has for brand owners as they seek to make their brands more desirable to consumers and win in the marketplace. It is, therefore, unsurprising that marketing and advertising conferences now incorporate a strong neuroscience emphasis, and many recent papers and articles maintain that scientists' increased understanding of the brain will change marketing and the way we measure it. *Buy-ology*, by Martin Lindstrom, makes similarly strong claims: that neuroscience will play a revolutionary role in research and marketing in future. As a result, many marketers challenge accepted modes of brand and advertising development and research on the grounds that "neuroscience says" that what we've done before is wrong.

Similarly, we now see neuroscience being cited in many brand and advertising decisions. The phrase "neuroscience proves..." is increasingly being used to justify a new model of advertising response, brand strategy or advertising research tool (though it's often useful to examine just how much actual proof follows such statements). Most crucially, over the last few years there has been a blossoming of neuromarketing agencies who claim to deploy the methods used by neuroscientists to answer marketing questions in a way that conventional research cannot.

So we'd be forgiven for believing that traditional qualitative (focus group-based) and quantitative (survey-based) techniques are not sufficient anymore and that we need to turn to the methods used by cognitive neuroscientists, such as brainwave measurement (EEG), brain scanning (fMRI) and other biometrics, to really understand how consumers will respond to marketing.

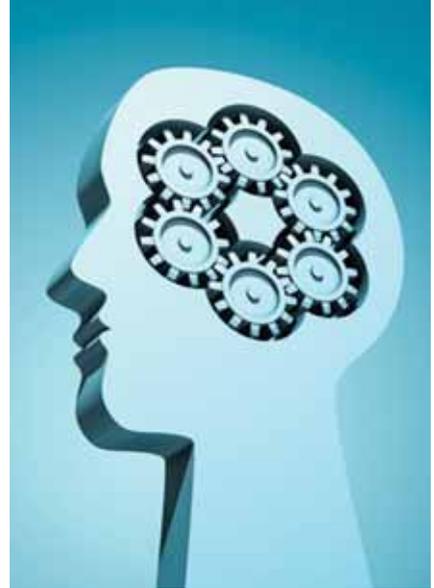
However, despite all the discussion about neuroscience, the vast majority of brands and ads are still researched using traditional methods. Likewise, over the last few years, papers have periodically emerged that question the value of the whole area. So who's right? Are we poised at the start of a revolution or is neuromarketing overhyped wishful thinking?

The current state of play

Our firm, Millward Brown, conducted its first neuroscience project in 2004, and since then we have reviewed all the key

snapshot

In an excerpt from *The Branded Mind*, a new book on neuroscience research by Erik du Plessis, Millward Brown's Graham Page offer his firm's assessments of neuroscience techniques and how to get the most out of them.



By Graham Page

Editor's note: This article is a chapter excerpt from The Branded Mind, a new book by Erik du Plessis. This chapter was written by Graham Page, executive vice president, consumer neuroscience, Millward Brown. The book is published by Kogan Page (www.koganpage.com). To view this article online, enter article ID 20110506 at quirks.com/articles.

methodologies available in this area, working with our clients, neuromarketing practitioners and academics. Our experience is that marketers are increasingly turning to neuromarketing and they will continue to do so more and more. But this has been a gradual process for several reasons:

- Marketers are rightly being cautious. Neuromarketing is new and to some people controversial. So they are working with partners who they trust to do their homework before adopting more widely.
- There are still significant practical hurdles. The technologies are not available everywhere, and the logistics of brainwave measurement or brain scanning are not trivial. Testing robust numbers of participants is often expensive - or worse, not done.
- The extreme claims of some of the early practitioners in the field have inspired some skepticism.
- Many of our clients believe their work in this area has the potential to generate significant competitive advantage and so are understandably coy about sharing too much publicly.
- Most marketers quickly realize that neuroscience methods in isolation can be hard to interpret and don't stand alone.

This last point is crucial. Over the last six years we have examined all the main techniques in the area and compared them to the existing qualitative and quantitative work we do to ensure a realistic perspective on what the science can and can't say. We've seen that there is clear and significant value in certain neuroscience methods, but only when used alongside existing methods rather than as a replacement and only if interpreted with care by people with experience in the field. To this end, in 2010 we created a dedicated neuroscience practice to ensure that, as a business, we would implement neuroscience-based approaches in a realistic manner that added to our insights about consumers.

Applied tests

When deciding which methods to use, we have applied the following tests:

- Does the method tell us something meaningful about brands or marketing?
- Does the method tell us something we don't already know (and enough to justify the costs)?
- Is the method practical and scalable?

There are neuroscience-based methods that meet all three of these tests. These are: implicit association measurement, eye-tracking and brainwave measurement.

Implicit association measurement

While not strictly speaking a neuroscience technique, what it shares with more biometric methods is the principle of inferring consumers' responses rather than asking direct questions. The approach measures consumers' reaction times or accuracy on tasks that are systematically biased by their reactions to brands or ads. At first this sounds strange, but the approaches capitalize on the way the brain stores information - as a network of connections rather than isolated units. It is for this reason, that, for instance, thinking about the idea of a "doctor" means you will tend to respond faster to a related idea like "nurse" than an unrelated one like "plumber." Similarly, if you feel positive you will tend to respond faster to positive words and slower to negative ones, but this is reversed if you feel negative.

Implicit association methods have a long history of use in cognitive psychology to infer unstated processes and responses, especially in researching socially sensitive areas, such as people's biases towards different races or genders. They offer market researchers a window to the raw ideas and feelings stirred up by brands and ads, prior to any filtering for sense or social desirability, which still may play a role in shaping consumers'

responses.

We have used these methods in a variety of markets and with a range of clients to understand the implicit associations activated by brands, by ads and by hard-to-discuss stimuli such as brand logos.

For instance, we recently used this approach to research an award-winning Australian TV ad for Allen's (a confectionery brand). The spot featured a giant doll walking the streets, blowing bubbles which turn into the product and rain down onto a crowd of children and parents. The ad was designed to reinvigorate the brand, which, although a long-time favorite, had lost some relevance and presence in the market, by reminding consumers of the magic of childhood. The ad proved to be hugely engaging but the implicit association test identified that the ad worked in a way somewhat different from that expected. While explicitly consumers played back messages of fun and happiness, implicitly, the spot also communicated irresistibility and playfulness.

Also, while explicitly the ad was not directly persuasive, the implicit measures revealed that it strongly reawakened the emotional connection to the brand. Therefore rather than being a simple nostalgic look at a trusted favorite, the ad functioned very strongly as a modernizing ad while highlighting the playfulness of childhood and reinvigorating the emotional resonance of the brand.

Similarly, in Poland we recently conducted some logo research for a financial services client. Logos are a topic that consumers find difficult to talk about as they are not usually subjects of much thought but they are full of nuance and symbolism. Although the results from explicit ratings correlated with results from this implicit test, the implicit method pulled out a much clearer winner, suggesting that this is a useful approach for this type of research.

On the whole, we've found 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.

Eye-tracking research

Eye-tracking technology is now widely used, partly because it has become simpler to implement and cheaper than in the past. The benefits are clear: eye movements indicate the focus of visual attention with more detail and accuracy than self-reported answers. However, the method doesn't reveal why a particular area of an ad catches the eye or how people respond to it, which is why it can be difficult to interpret in isolation.

We have used this approach in a number of markets and have found it a useful additional diagnostic technique that helps explain advertising or packaging performance as measured via conventional survey methods. In one example, we tested a particular scene from a well-known Skoda Car ad in which the car is built entirely from cake. This ad was shown to be powerfully branded to Skoda in our Link survey work and eye-tracking helped illustrate why. Visual attention was clearly focused on the Skoda badge when it is affixed to the front of the cake-car. However, this contrasted with dispersed visual attention at the end of the ad when the Fabia nameplate is mentioned, which was a useful diagnosis of the weaker nameplate-branding we saw in the survey results. In a similar project for RoC skincare, we found a powerful illustration of a communication barrier due to misdirected attention during a key scene. Using this information the client was able to re-edit the ad and generate a much stronger final film.

Brainwave measurement

Brainwave measurement is perhaps the most complex area in neuro-marketing, due to the variety of systems and companies offering them. Millward Brown conducted one of the first large-scale commercial EEG projects in the U.K. for the Newspaper Marketing Agency in 2005. Since then we have partnered with U.S.-based EmSense to integrate EEG and other biometrics

with survey tools.

Using a headband with dry electrodes, EmSense collects EEG and secondary biometric data, such as heart rate, respiration, blink rate and body temperature. This method not only makes the equipment less intimidating for participants and simpler to apply, we have found it is also more cost-effective than conventional EEG equipment, which tends to use full-head skull-caps and gel to make connections with the scalp. Consequently, it enables full quantitative testing (e.g., samples of over 100 versus the 20 or so typically used in conventional EEG) and so allows cross-analysis with explicit questions and metrics.

We have therefore deployed this technology in several countries and it has become an important component of the ad development work that we do. This is because brain-wave data can provide a powerful diagnostic of people's reactions to an ad or brand experience on a moment-by-moment basis, revealing responses that are so quick or fleeting that respondents may not even remember them, let alone be able to objectively report them.

This can also be particularly useful in markets such as India, China and Latin America, where the tendency for research respondents to be positive on surveys is stronger and where we may miss some negative responses as a consequence.

We conducted Link survey-based research on the Dove "Evolution" film - an engaging, emotionally resonant and powerful communicator of the core idea of encouraging real beauty. The EmSense data illustrates the journey consumers take to get to that set of responses and which creative elements drive this response. While the model is being made-up, positive emotion actually rises (which is not something viewers report verbally). There is also a crescendo of both positive emotion and cognition at the moment it is revealed that the film is about the making of an ad; as understanding blossoms and the cleverness of the

idea is apparent. This is crucial to the overall positive reception the film generates. However, it is also clear that as the implications of this moment sink in, positive emotions decline as the point of the ad is considered, which is what gives the communication such power.

Work using this form of EEG with other clients has helped reveal and address issues such as weak communication, branding or disengagement with key protagonists. It has also evidenced which elements of an ad should be retained in cut-downs of long-form ads and which elements to pull out for use in other parts of campaigns.

While we have focused on these three approaches, it is important to remember that there is no one-size-fits-all neuroscience-based technique; depending on the individual client issue one approach will be better suited than another. For instance, we have used fMRI with the Royal Mail for a project about the effect of physical versus virtual media in marketing effectiveness. However, it is limited in its scalability so we have used it less extensively than the other methods outlined above. It is important, however, that marketers use the right tools for the issue they face, rather than treating neuroscience as a single entity and trying to use one tool to do everything.

No substitute for talking to people

It is a misconception, and a scary one, that marketers will be able to (or want to) just measure people's responses to brands via electrodes and work out what they really want. There is still no substitute for talking to people, as this is the only way we can understand the whole meaning of their relationships with brands and products. The point of market research is to generate insights that lead to more desirable brands, rather than to use the latest methods for the sake of it. For this reason we don't believe neuroscience methods can ever replace the need for conversation with consumers, though we do believe they can be a powerful complement to

it. In addition, on a practical level, survey-based techniques have been shown over many years to have a demonstrable link to consumer behavior - and such linkages are still being forged for neuroscience methods.

Turn their backs

We don't believe that marketers need to turn their backs on tried-and-true research techniques in favor of neuroscience, but we do believe that neuroscience can offer an additional perspective on consumer responses and motivation. Therefore, the approach we've taken has been to roll out neuroscience-based methods alongside - and integrated with - existing tools, rather than as a replacement. Each method is used when it will add value and when it is relevant to the client issue.

When should neuroscience-based techniques be used? Neuroscience-based techniques will tend to add the most value under certain circumstances:

Dealing with sensitive material. This is when qualitative/survey methods are most vulnerable to distortion, so methods that don't rely on explicit questions can reveal unstated attitudes more effectively.

Dealing with abstract or higher-order ideas. Consumers face challenges when trying to talk about the often complex ideas at the heart of many brands' positioning. Implicit association methods, in particular, can be useful at probing for ideas that participants think sound strange or overblown on a survey or which they might discount as irrelevant when answering explicit questions.

Probing for transient responses to ads or brand experiences. Consumers are great at talking about the gist of an ad or brand or experience but they may not be able to articulate all the steps in the process that got them there. Biometric methods, such as EEG, can add value in pinpointing the emotional or cognitive highlights and low points in a piece of creative, or the focus of attention, which can provide useful insights for developing more effective campaigns for brand experiences.

Giving more detail on consumers' feelings. Feelings can be difficult for people to talk about, though qualitative and survey-based methods can help people do this. However, neuroscience methods can add an additional level of detail here, about the depth of emotional response, the timing of these responses and the elements of an ad or brand that are driving the way consumers feel. Given the importance of emotion in motivating behavior, these methods have a role to play here.

In terms of specific research applications, the differing advantages of each method mean they lend themselves to different areas of research. Implicit association measurement is well-suited to brand strategy work, product testing, concept testing and assessment of communication from marketing campaigns. Eye-tracking is strong on in-store and online marketing optimization and advertising development. Brainwave measurement adds greater detail in these areas, especially regarding emotional and cognitive responses, and thus

lends itself to advertising optimization.

Best practices

Based on our experience researching and implementing these methods, we suggest the following best practices to get the most out of neuroscience:

Be critical. The technology can be alluring, but the same questions (detailed above) that would be asked of any conventional research technique should be asked of these methods. Ask for proof.

Look for experience. This is a complex area, so familiarity with the approaches and a scientific perspective is important to understand what is claim versus reality and when neuroscience adds most value. Likewise, experience in drawing together neuroscience and conventional research is key to maximizing the value.

Integrate. Neuroscience-based methods do not reveal the inner truth; rather they provide additional perspective on consumers' responses to brands and marketing, which needs interpretation in the light of other information. A holistic approach reveals greater insight than conventional or neuroscience methods alone.

A standard tool

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. | Q