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The brain whispers

Neuroscience was heralded as the next big thing in marketing research back in 2005 when some thought it would tip the balance between creativity and science in research firmly towards science. But until now, so-called 'neuromarketing' has failed to gain traction in Australia.

In 2005, Colmar Brunton began providing its clients with Steady State Topography (SST) technology, developed and marketed by Melbourne-based company Neuro Insight.

Peter Kenny, managing director of research science, development and operations, says 'Colmar Brunton has pulled back its investment into Neuro Insight in the past few years,' says. 'Despite there being quite a lot of interest in this technique, we found it did not have much commercial viability when marketed through a commercial market research company.'

However, another research company will attempt to commercialise neuromarketing in Australia when Nielsen launches the availability of the NeuroFocus service in Australia this month. NeuroFocus is a US based company that specialises in neuromarketing research and holds numerous patents for its technologies. The Australian launch follows similar successful launches in Egypt, Korea and Japan in recent months. (Its work is featured prominently in Martin Lindstrom's book, Buyology, which was reviewed in the February 2009 edition of Research News).

Nielsen's Tim Rose, who will oversee marketing and client service for the NeuroFocus service here, says Australia is one of the earlier markets in which the service is being launched because it is considered a more sophisticated market.

Rose believes the use of neuroscience in shopper and customer experience research has been the biggest development in this field in the past few years.

'The equipment is much more manageable and easy to use today. The sensor headsets are just like baseball caps. They're much less obvious and intrusive than they used to be. These advances have opened up possibilities for research that haven't existed before, such as finding out how a customer really feels while they're waiting in a queue.'

Dr AK Pradeep, founder and CEO of NeuroFocus, will visit Australia to participate in the launch of the joint venture. Pradeep was the winner of the 2009 Advertising Research Foundation's 'Great Mind' Innovation Award and is working on a new book called The Buying Brain, which is due for release in the middle of this year.

Dr Pradeep says the book is written for practitioners, namely vice presidents (VPs) of research and chief marketing officers (CMOs) - it is very deliberately a 'how to' rather than a text that debates whether or not neuroscience is a good thing to do.

'VPs and CMOs are not looking for cute stories about how the brain works, they want to know how neuroscience can be used to generate actionable insights.'

'I am not wide eyed in my admiration of neuroscience; this book is a very pragmatic, tactical text. It is not based on a theoretical view. It's a visceral first person account.'

'For example, you might ask yourself, we have designed this new package or we have designed this new in-store display, what can neuroscience tell us, what kind of experiments should we conduct, what kind of metrics should we gather, what kind of insights should we be able to generate? You should be able to do all of this if you read the book carefully. It basically gives the market researcher all the tools they need to design an experiment.'

Pradeep says that it's only been recently that researchers have been able to bring together the fields of biology, signal processing and marketing.

'Consider that the brain whispers, sending signals 2000 times per second,' he explains.

'These micro-volts are really, really small. It's only been more recently that complex computing has enabled us to produce algorithms to understand these micro-volts. This signal processing has yielded break-throughs in neuroscience and has enabled us to apply it to marketing research. In a traditional focus group, it's difficult to do research if everyone is mumbling at the same time, but signal processing enables us to make sense of everything the brain is telling us.'

'Clients want repeatability. This is one of the two hallmarks of science - that it can be done with precision and that it can be repeated. It is important to know why, not just to know what.'

The retail battlefield

Pradeep's approach is to examine what he calls the 'total consumer experience' (from first viewing a package to using the product) in order to determine its 'neurological iconic signature'. To do this, research participants are asked to wear a headset with 64 sensors. The signatures are tested by activating them in some stores and not in others, which are used as a control group. Pradeep and his team then examine the micro-volts to determine which are particularly evocative - when the whisper becomes a mumble, if you like.

'It's important to point out that nobody can read anyone's thoughts. NeuroFocus measures levels of attention,

emotional engagement, and memory retention. Those are the company's primary metrics. We combine those three to arrive at an overall effectiveness score. We also derive three more measurements, called marketplace performance indicators. They are purchase intent, novelty, and awareness.'

On the retail front, Pradeep says there are four battles to be won and that neuroscience can deliver extraordinary insights about each. He argues that it would be extraordinarily difficult to understand any of these four battlefronts using rational means (i.e. asking the customer to tell you). He gives the following example for supermarket shopping.

1. Store. Does the category pop? When you walk into a store, what makes you interested in visiting my category? This comes down to store design, aisle layout, displays and so on. Neuroscience experiments are conducted in-store.
2. Shelf. Does my particular brand pop off the shelf? In-store testing can be done using portable electroencephalography (EEG) and eye-tracking equipment. Video realistic and virtual reality testing can also be done to replicate the actual retail environment - although, between those two, video realistic is the superior technology.
3. Cart. What attracts a customer to pick up my product from the shelf and actively consider buying it? What removes it from the clutter of its peers and gets into the shopping cart? Does the packaging design speak directly to the customer's brain?
4. Kitchen. Once the customer has bought the product, what factors determine whether it will be used/consumed or will it just collect dust on the pantry shelf? Does the packaging invite the customer to use the product in the way it was designed to be used?

Pradeep adds: 'The neurological iconic signature is one of the highest drivers of intent to purchase. When we work out how to activate this at the point of purchase, sales increase.'

'Remember, we are looking at 2000 signals per second. When you consider this, you can understand it's impossible for a customer to summarise an experience of five minutes. These insights are impossible to attain in traditional research.'

The brain is like a dance floor

More attention has been given recently in the popular press's coverage of neuroscience to the concept of neuroplasticity - the changing of neurons, the organisation of their networks, and their function via new experiences.

Pradeep says it's important not to get caught worrying about areas of brain specialisation. Instead he says we can think of the brain as a dance floor.

'The brain is highly connected - it has the same thirst or yearning for brilliant pieces as it does for connectivity. So we need to align neuromarketing research in the same way, because this is how the brain processes things. When a company intelligently connects pieces, they will have a successful brand.'

'This highly connected network is like a dance floor, which can be full of many people with many different dance partners. They are all coordinated and synchronised.'
Neuroscience can be used to research brand, product, packaging, store environments (the context or ecosystem) and advertising. Pradeep stresses they need to be thought of as 'interlocking pieces of the same puzzle' and that the challenge is to understand how they fit together.

Standards for neuromarketing

Pradeep has strong views on the ethics of neuromarketing research. He says an independent review board, protocols and informed consent are all essential to maintain the privacy and dignity of participants.

'With greater levels of understanding, we have greater levels of responsibility. I am entirely against the use of subliminal messages. Consumers need to be aware they are being presented with a message. For example, if they see an in-store promo that shows a beautiful, pristine waterfall and then they see a brand of bottled water, it infers the water is pure. The components that persuade are presented overtly. There is no subterfuge and it is up to the customer to decide. We will never support the use of covert messages. Being open, transparent and honest will ultimately win the day with consumers.'

Rose believes the time is now right for much wider application of neuroscience in Australia. In the past, neuroscience has been predominantly used in advertising research and has been considered relatively expensive.

'I think people will be surprised by its cost; it's not as expensive as many might think,' says Rose. 'The reason is that the variation in response for neuro testing is small compared to traditional research and 20-30 subjects is enough to get reliable results.'

He says a basic print ad test will be around \$25,000, while the average cost might be around \$50,000.

Rose believes the time may now be right for neuromarketing in Australia, as it is now more cost effective and has much wider applications given the recent technological advances. Nielsen plans to market the Neurofocus service to fast moving consumer goods (FMCG), automotive and telecommunications clients. He says there has also been considerable interest from clients in sectors like banking and travel.

Kerry Sunderland, managing editor, Research News

Another perspective on neuromarketing research

Peter Pynta from Neuro-Insight comments:

Is Neuro Insight involved in retail environments?

We're not using our technology in retail environments. We've stuck to the field of marketing & media

communications / effectiveness. The idea of using EEG to measure the actual shopping experience (while in a retail experience) is a low priority for us for the following reasons:

- The demand for our other marketing effectiveness based services
- The need to use large samples to produce statistically reliable & representative data

How does one ensure that all 100 respondents are exposed to an identical retail experience in real-time?

- The significant trade-off required on data integrity (including sample) in a retail environment and
- Our company's desire to produce neuro metrics that can be actioned, predict consumer behaviour & then correlate with the requisite proof of ROI.

General observations about neuromarketing research

- The growing demand for media metrics that are consumer-centric & effectiveness-centric...has been a continual evolution. Neuro-Insight has played an active role in this arena. The role and importance of context has really matured...despite the fact that some marketers still think that cheap, cost-efficient media is the most effective - It's often not! We've developed a scalable metric (product) that 'maps' media to message. A message is never consumed stand-alone & in isolation of the surrounding media channel & context. By identifying the natural 'NeuroState' of both the medium (ie. TV or Radio program) & the message, the two can be matched to achieve much greater effect/impact.
- Sponsorship Effectiveness Measurement: Our work on broadcast sponsorship measurement has broadened into working with clients & other specialised consultancies like Repucom International. Marketers in this area have long looked for insights into precisely how the elements within the sponsorship mix actually contribute to overall impact.
- We've continued to blend our Neuro metrics with the existing approaches that marketers & researchers have used. When the situation calls for it, we find that Neuro + Qual or Quant can be highly complimentary. The client learns something that is incrementally deeper, richer & more actionable. This trend will continue.
- The congregation of a variety of internal & broader market pressures (heightened by the GFC) has awakened the need to innovate. The innovative companies have found ways to minimise wastage (beyond straight cost-cutting) & we've found that it's this mindset that has predominantly used (our) Neuro. The tolerance for wastage is unsustainable & will continue to dwindle!
- Neuro-Insight launched in Germany earlier last year. This has allowed us to work with a range of European marketers & media organizations. The same "NeuroState" rules have been identified - they're very much a universal communications rule - media & message work better together when the NeuroStates match! The general awareness of the 'psychology of advertising' & how the brain works is very healthy throughout Europe & the UK.
- Who's using Neuroscience: Our work is roughly evenly divided amongst media & marketers ie. media effectiveness & advertising optimization. Media: TV & Radio Networks. We've moved into the measurement of Outdoor, Online & Mobile within the media space. We're having ongoing success with marketers in the area of ad optimisation.

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