

# Advertisers turn to science to get inside consumers' heads

Neuroscience is shedding new light on how people respond to marketing, but can it be used to change behaviour, asks **Alan Mitchell**

When researchers working under the auspices of the Radiological Society of North America scanned the brains of subjects exposed to images of brands, they discovered that strong brands excite parts of the brain most associated with pleasure and reward.

The announcement of the findings in November prompted much excitement in marketing circles and raised an intriguing question. Was brain science about to change the face of marketing?

For many years, scientists investigating the workings of the human brain had to content themselves with studying victims of brain damage and disease, or conducted laboratory experiments in areas such as attention, perception, memory and learning.

But recently, thanks to new technologies such as

functional magnetic resonance imaging (fMRI), which takes "pictures" of the brain at work on various tasks, neuroscience has been advancing apace.

Marketers are intrigued by many of its findings. One is that brain activity for an action seems to begin about half a second before a person decides to take the action - suggesting that we are not so much "making" the decision as simply becoming aware of the fact that a decision has been made.

If people are not aware of their own decision-making processes, how can marketers best influence them? Our brains routinely recognise signals from our environment, including advertisements, that we have no awareness of ever seeing. What does this tell us about how to improve advertising effectiveness?

In 2002, Adam Koval, a senior executive at Atlanta-

based Brighthouse Neurostrategies - a consultancy specialising in applications of brain research - attracted interest from marketers when he announced that, thanks to the techniques of neuroscience, corporations would soon be "getting customers to behave the way they want them to behave". In reality, such dreams remain far from fruition.

Neuromarketing insights are influencing marketing practice at the edges. Weapon 7, a UK marketing agency, is advising its clients on how to place visual images in advertisements so that the message survives the fast-forwarding process by registering in the brain subconsciously.

PHD, a media buying arm of the US marketing services conglomerate Omnicom, uses a process called "neuroplanning" to give different weights to different media in marketing campaigns depending on what the brand is trying to achieve and how each media affects the brain: sight only, sound only, moving images plus sound, and so on.

But practical applications are hampered by the huge theoretical obstacles that would-be neuromarketers still need to overcome.

So far, for example, the same research observations have spawned many competing theories as to if, how and when advertising works on the brain. Some suggest that advertising is most effective when it works on consumers' emotions subconsciously. Others argue that consumers only really learn

about brands when their attention is fully engaged and when areas of the brain relating to reason, emotion, and motor activities are activated.

Debate rages even as to the meaning of experimental results. Is an fMRI scan of a brain lighting up when presented with an image of a brand proof of successful marketing or simply confirmation that brains recognise what is familiar? Not to mention technicalities such

as the fact that the brain scanning equipment works 200 times slower than real brains, warns Jane Raymond, professor of experimental consumer psychology at the University of Wales, Bangor.

Piecing different research results together to create credible, coherent theories is also a challenge. One important discovery is that brains are modular, using distinct systems for different tasks such as filtering out distractions, controlling the body, learning, motivation and emotion. Urges coming from one module can be translated into many different kinds of behaviour, or suppressed altogether. It is precisely these complex links between marketing "stimulus" and purchase "response" that would-be neuromarketers have so far failed to identify.

In fact, most neuroscientific research has so far uncovered the mechanisms behind long-established marketing and advertising techniques. "There's nothing that comes through that says: 'Oh my God! We have

to change everything we do!'," says Gordon Pincott, global development director of WPP-owned market research agency Millward Brown.

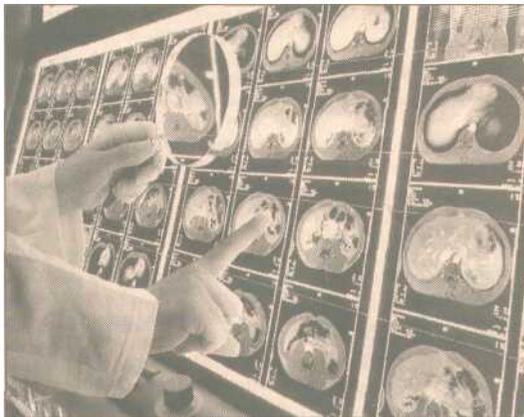
Indeed, in uncovering the mechanisms of attention, perception, memory and learning, neuroscience may also be revealing the limits of marketers' ability to influence consumers.

Research by Prof Raymond's team suggests that consumers' attention is "task-related" and that consumer reactions to things that interfere with these tasks - including advertising - can generate "very negative" reactions. Also, "if you throw too much information at people, they shut down. Marketers need to take that on board."

"Humans evolved to make trade-offs in complex situations," says Paul Zak, director of the Centre of Neuroeconomics Studies at Claremont Graduate University. "It's a fundamental misunderstanding that if you look at someone's brain you can manipulate them. People really aren't that easy to manipulate."

Antonio Rangel, a neuroeconomics expert at Caltech University, says: "If you define neuromarketing as the use of neurotechnologies to improve the effectiveness of advertisements or sales, I have not yet seen a single instance of success."

With or without neuroscientific breakthroughs, some things - such as *caveat emptor* - never change. Buyer beware.



One discovery is that brains use distinct systems for different tasks

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