

Neuromarketing: beyond branding

"I know half the money I spend on advertising is wasted, I just don't know which half", John Wanamaker, who created the first department store in 1876, once joked. Ever since, marketing executives and politicians alike have sought tools to help them sell their products or ideas to the public. The focus group is currently in vogue among advertisers and marketeers. But this could all change with the invention of neuromarketing—the use of cognitive neuroscience techniques, such as fMRI or EEG, to assess whether a person will respond favourably to a brand name or product. Although many independent experts doubt that fMRI can be meaningfully used in this way, this is unlikely to concern marketeers wanting to dazzle potential clients with snazzy imaging technology

Neuromarketing has certainly created a high profile for itself recently, with feature-length articles published in *Forbes*, *The New York Times*, and *The Financial Times*. The main draw for journalists seems to be an answer to the intriguing conundrum of why Coca-Cola continues to outsell Pepsi, even though consumers prefer the taste of Pepsi in blind tastings (the "Pepsi Challenge" of the 1970s). In an unpublished experiment done last summer, Read Montague—a neuroscientist at the Baylor College of Medicine in Houston, TX, USA—claims to have used fMRI to show that consumers who prefer Pepsi during blind tastings have a five times stronger response in the ventral putamen than those people who preferred Coca-Cola. However, when the test was repeated unblind, nearly all the participants said they preferred Coca-Cola. Interestingly, when the participants tasted Coca-Cola, both the ventral putamen and the medial prefrontal cortex—an area linked to our sense of self—lit up. It seems that the Coca-Cola brand is so attractive that it over-rides what our taste buds are telling us.

On the basis of this new research, some marketing companies have decided to specialise in selling brain-imaging technology to large corporate clients. This is hardly surprising considering that focus groups are big business. MRI equipment may be expensive, but in the USA alone an estimated US\$6.8 billion was spent in 2002 on focus groups, opinion polls, and other marketing tools. Should we blame enterprising

neuroscientists for trying to tap into these big budgets and sell their know-how to the highest bidder? Commercial Alert, a non-profit organisation that aims "to keep the commercial culture within its proper sphere", certainly thinks so. On Dec 1, 2003, it sent a strongly worded letter to the president of Emory University to request that the university's researchers stop their neuromarketing experiments. When no response was forthcoming, Commercial Alert followed up with a letter to the US Federal Office for Human Research Protections asking it to investigate whether the experiments violated federal guidelines for research on human beings.

At the centre of the row is Clinton Kilts, Professor and Vice Chair for Research in the Psychiatry and Behavioral Sciences Department at Emory University, and scientific director of Brighthouse Neurostrategies Institute, a neuromarketing firm. Many of Commercial Alert's concerns are unreasonable, even plain ridiculous: "Does the BrightHouse institute have any political clients? Any sale of neuromarketing research by the BrightHouse Institute to violent dictators or other political propagandists could potentially have devastating effects on entire countries." However, Commercial Alert does raise the important question of whether academics should be using university equipment to do research for corporate clients, especially in a clinical environment like Emory University Hospital.

There is no doubt that brain-imaging technology will increasingly be used in a commercial setting. But the consequences will not all be beneficial. Donald Kennedy, the editor in chief of *Science*, told delegates of the Society for Neuroscience meeting last year that he is very concerned that brain imaging will be used in ways that infringe personal privacy to a totally unacceptable degree. And with the scanning industry growing rapidly—there are 88 for-profit imaging centres in the USA, a third of which are in California—legislation may be needed in the future to regulate the commercial use of this technology. But the time for such draconian measures is not yet here.

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