

Brain scam?

To the Editor:

As the chairman of one of the companies mentioned in the September *Nature Neuroscience* editorial, I would like to take the opportunity to reply to some of the points raised. The editorial is a timely one and reflects the increased commercial interest in fMRI as an aid in marketing and product development. It comes after a number of years characterized by the appearance of many high-profile publications in *Nature*, *Science*, *Nature Neuroscience* and other highly regarded journals describing interesting and often controversial findings in cognitive neuroscience obtained using fMRI. The subsequent exposure of these findings in magazines and TV documentaries has played no small part in awakening commercial interest. The main scientific reasons why the editorial urges caution in the commercial use of fMRI in marketing seem to be the transitions from the “laboratory environment” to real-world situations and the “sparseness of the current literature.”

It is obviously true to say that there are few, if any, papers with titles such as “Differential soft drink preferences as shown using fMRI.” However, the basic questions that marketing and product development managers seem to want to address using fMRI are those of differential responses, emotional and otherwise, to different products, presented in the scanner in situations very similar, if not identical,

to those used in noncommercial scientific research. Such questions have been widely investigated and reported using fMRI in more ‘basic science’ contexts. As the *Nature* journals and other high-profile publications have been prominent in publishing many of the papers (dealing, for example, with emotional responses) that have attracted public interest in fMRI, it is difficult to see why there is surprise that these studies should provoke some commercial interest. Presumably, if these papers were published in *Nature Neuroscience* and other journals with high standards of refereeing, the editors must have believed (and still do) that the use of fMRI is reasonably rigorous and scientifically credible.

The company set up by myself and my colleagues offers advice to clients concerning the potential use of fMRI in their commercial activities. We offer fMRI as only one option and do not suggest its use where we believe it might not be useful as an adjunct to other methods available in cognitive neuroscience or in mainstream marketing. These decisions are based on our accumulated experience in the field and on detailed discussions with companies. Clearly, we are a commercial organization, but that does not preclude the possibility that our activities might also be of scientific interest and does not mean that our experiments should be badly designed. Commercial companies set out to understand human behavior, an area not without

its scientific merit as a subject for study. It is also doing such companies a disservice to believe that they cannot be as exacting in their study design requirements as many scientists. Payment out of one’s own funds for a service often promotes a requirement for high standards. It is also worth reinforcing the point that, to our knowledge, there are no private scanners in the United Kingdom free from ethical control. Thus, all experiments, commercial or otherwise, must gain ethical approval, a situation that seems to us highly desirable. I would agree with the author of the editorial in urging caution in the exploitation of any new technology. Scientific rigor and ethical considerations are of paramount importance, but these questions are not confined to commercial activities but rather must apply to all our activities as scientists. Only time will tell whether neuromarketing using fMRI will become an established tool. If our crime is to investigate its value in understanding behavior, and to be paid in the process, we plead guilty. Finally, I am not aware that fMRI played any part in the launching of ‘New Coke.’ Maybe if it had been used, the product’s failure might have been less likely!

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