How neuroscience can spark creativity

Educating creatives on how to integrate neuroscience insights at early-stage creative development will help close the knowledge gap between conscious and unconscious feedback, and create consumer behaviour change by engaging attention, eliciting emotion persuasively, and strengthening associations in long-term memory

By Neil Adler, *Mosaic Group*

After an exceptional display of athleticism in college or professional sports, the Entertainment and Sports Programming Network (ESPN) periodically produces a television segment called Sports Science to explain scientifically what happened. In these segments a physicist analyses an athlete's skills on the field to understand the underlying mechanics of their play. In other words, identifying the physical laws that explain how a home run is hit in baseball or a goal converted in soccer. While athletes are most likely unconscious of the physics related to their actions (although with the introduction of biofeedback into training, perhaps physics is already relevant), if they did understand how their play works, this knowledge could lead to greater confidence in their actions and increase the chances of repeating it in the future. In a similar way, creatives in advertising can learn and optimise the impact of their creativity by leveraging knowledge of neuroscience.

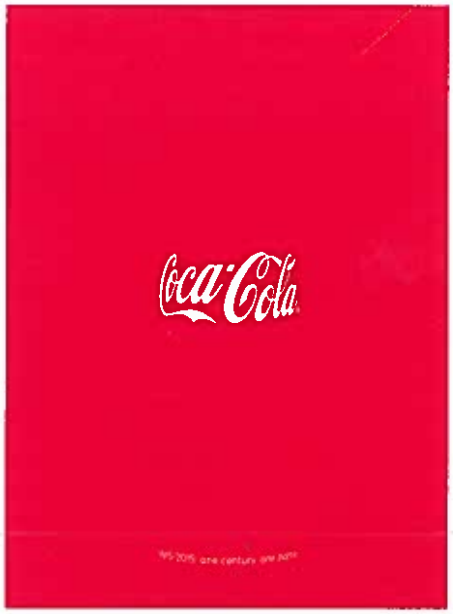
Every advertising creative knows that inspiration can come from anywhere. Everything you know, sense, feel and do can be the source of a brilliant idea. Integrating neuroscience insights into the early stages of developing concepts (e.g. brainstorming) offers the opportunity to bring a new language, a different way of thinking to the work of a creative. The key to this integration is using strategies that produce creative work that is more natural and simpler for the brain to process. This approach holds the potential to increase the likelihood of engaging attention, eliciting emotion persuasively, and strengthening associations in long-term memory. In short – ads that are more effective.

Currently, creative standards are overwhelmingly derived from research techniques that investigate conscious responses to advertisements – in other words, testing designed to elicit spoken responses from consumers (e.g. focus groups). We look at the conscious response as opposed to the unconscious, or unspoken, responses of participants using techniques such as brain-imaging or biometrics. Given the frequency of conscious response testing approaches, a feedback loop is created that not only influences how creatives understand if they are on track for their current project but also impacts future projects.

This one-way feedback loop is a problem because consumer neuroscience and behavioural science-based market researchers have demonstrated the importance of the unconscious in understanding consumer responses to advertisements. As a result, these insights should be taken into account to provide a comprehensive picture of behaviour. After all, often what consumers say they do is very different from what they actually do. I believe there is a need to educate creatives on how to integrate neuroscience insights at early-stage creative development to help close the knowledge gap between conscious feedback and unconscious feedback, and expand our creative potential to help create consumer behaviour change.

Here I will analyse ads (some of which are award winning) that demonstrate examples of neuroscience insights that were applied during ad development – whether the creatives who were involved were conscious of the science underlying these techniques or not.

A subdiscipline in cognitive neuroscience that is beginning to play an influential role in advertising is neuroaesthetics. This discipline looks at the neural networks that underlie the 'aha!' moment – when an individual appreciates or understands some form of beauty (e.g. measuring self-relevant areas of the brain). This beauty can be recognised in any one of a range of settings, including paintings, abstract patterns, landscapes, faces, fashion, and sound. While art and advertising are very much personal



experiences and open to interpretation, neuroscientists have identified shared artistic principles that are widely considered to effectively excite the visual areas of the brain and are reinforced by direct neural connections to structures related to emotion. The first two examples of insights given below are from neuroaesthetics.

One of the fundamental activities of the brain is to predict what is going to happen next in time. In the ad opposite, positioning the words Coca-Cola in a curved format on a 2-D page provides your brain with a challenge to engage and ultimately resolve. Your brain needs to fill in the gaps from what it expects to see and then adjust to see the picture as it is. Researchers believe that the effort required to solve for this type of perceptual problem is most likely pleasurable, triggering a state of arousal.

Research has shown that people prefer objects with curved edges to those with sharp edges, perhaps because sharp objects appear as potential threats. On this page, the ad for Miyabi, a Japanese knife company, uses a sheet of traditional Japanese paper that appears to resemble salmon (think sushi) wrapped around a stick to offer a clever view of a 'knife' that presents sharpness in the context of a rounded edge, thus tempering the sharpness that is still visible.

When a word change occurs at the end of a common phrase, the headline is more likely to grab our attention. One example is 'Practice Makes Patron'. Patron is a type of tequila. This prompting of attention occurs because, when our brain recognises a pattern (similar to the perceptual problem-solving example above), it predicts what is coming next and compares that prediction to reality. When there's a mismatch between the expectation and reality, our attention becomes engaged. For Patron, this phrase is especially relevant as the tagline is 'Simply Perfect'. I drew from the blog written by Roger Dooley, author of the widely acclaimed book *Brainfluence*, for this idea.

About five years ago, pharmaceutical manufacturers promoted the term 'Low-T', as opposed to 'low testosterone', to such an extent that it has become a part of common parlance for patients. As a result of the campaign, there are many healthcare clinics that use the term Low-T in their name. The owners (or marketers of) these clinics are leveraging a technique used to enhance memory known as the levels-of-processing effect. The levels-of-processing effect is the idea that the transfer of information from short-term to long-term memory is improved by giving meaning to information, or associating it with other previously acquired knowledge. One approach to implementing this technique is to use data analytics to undertake natural language searches across the web – that is, identify words that are commonly used to relate to a category of ads, commercials, and social media and apply this language to the development of copy for your concept.

There are insights from neuroscience that make clear what emotional words do to our brains and how we can think about using them. There are basically four directions that are considered when emotional words are studied by neuroscientists. Researchers evaluate whether words are characterised according to approach/avoidance – which is known as valence – and/or positive/negative – which is known as arousal. With the tagline 'More Science. Less Fear.', Memorial Sloan-Kettering Cancer Center in New York combined all four elements of emotional words to paint a poignant picture of its cancer research hospital. 'More' is generally associated with moving towards or approaching a goal, and 'science' is a positive element, especially in this context. Conversely, 'less' can mean avoidance, and 'fear' reflects a negative experience. Together, this combination of words runs the emotional spectrum and at the same time encapsulates the sentiment that Sloan-Kettering wants to get across. When you are facing cancer, you want more science than fear.

A long-held cognitive principle is that memory is enhanced when you have words that create images or are more concrete vs. those that are more abstract. For example, if I tell you to meet me on the street, it provides a clearer picture of what I mean than if I say pathway.

For an air freshener targeted specifically at men, the copy for the ad uses a brilliant composition for an uncommon product:

"You downshift. Because that's what you do when you're driving a '72 roadster down the Spanish Steps in Rome. There's significant amount of slaloming involved as it's high tourist season..."

In the ad, you can see how descriptive words were used to paint a scene about the

'European sports car'-scented air freshener and help the viewer visualise and remember what they have read.

One way to introduce neuroscience into your thinking is to read books on applying neuroscience and behavioural science to marketing problems, and meditating on the insights revealed in the book. Meditation is basically an exploration of the unconscious where connecting seemingly divergent ideas can happen more naturally. For example, think about a particular neuroscience insight you learned (e.g. perceptual problem solving) and connect it to projects you have worked on or ads you have seen. The more you realise that you are already using neuroscience insights, the more comfortable you will become with integrating new techniques into your concepts.

Most importantly, neuroscience is a way of thinking, and the more you learn, the more likely you are to think along these lines. And perhaps understanding the neuroscience mechanics that underlie the work creatives do can help build confidence in the effectiveness of concepts and increase the chances of repeating successful techniques in the future.

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