

# Truth Detection: Unbiased Brain Responses Reflecting Brand Attitude

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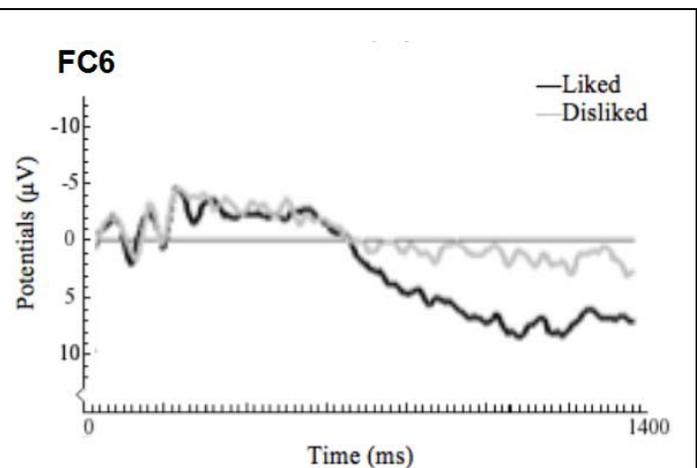
Human behaviour is driven by conscious (or explicit) as well as non-conscious (or implicit) neural information processing in the brain. To better understand and also predict human behaviour researchers take measures that are assumed to be directly correlated with it while exposing their study participants with various different stimuli or asking them any questions.

Crucially, explicit decisions and/or explicit responses to asked questions are not always directly reflective of actual behaviour. For example, just because people say (or tick a box) that they always buy eco-friendly (or organic) food doesn't mean they actually do it. However, traditional research approaches in product development, marketing and advertising usually follow the idea that explicit responses form a reliable basis to shape products, marketing strategies or the design of an ad. This is in clear contrast to what recent empirical evidence would suggest one to do. Grahl et al. (2012) found gender-specific discrepancies between explicit and implicit responses to different bottle shapes. Geiser and Walla (2011) found that walking through virtual urban environments elicits implicit emotional responses that differ from explicitly stated preferences. Also food intake (Walla et al., 2010), viewing facial expressions (Dunning et al., 2010) and even simply looking at emotional scenes are associated with such discrepancies (Mavratzakis et al. (2013).

Given all the above-mentioned evidence we were highly motivated to test whether or not an implicit measure, in this case brain activities in the form of neural potential changes (event-related potentials; ERPs), are directly reflective of brand attitude as in like and dislike towards known brands.

For this purpose we invited participants to first take part in the initial phase of our experiment, during which they were required to complete a survey and rate their attitude towards 300 brand names. After having recorded these ratings, an individual brand list was created for each participant. In the second phase of the

experiment, participants were required to enter the laboratory and view all brand names again while brain potentials were recorded via electroencephalography (EEG). After adequate statistical analysis we found that brands that were rated more positively (via self-report) were seen to elicit less negative brain potentials over the right frontal hemisphere than brands that were rated negatively. First of all, this result strongly confirms the usefulness and reliability of objective measures to investigate marketing-relevant attitudes as in likes and dislikes related to brand names. Second, it also provides an important basis for future investigations that will be designed to demonstrate the effect of evaluative conditioning on attitudes, a widely used tool in marketing and advertising. Finally, the present findings support the idea that basic affective processing as in brand attitudes is accessible via EEG (see Walla&Panksepp, 2013)



**Figure 1.** Event-related potentials elicited during exposure to written brand names that differed with respect to prior stated attitude.

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