



## Marketing to the senses: Music gets under your skin

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## Marketing to the senses: Music gets under your skin

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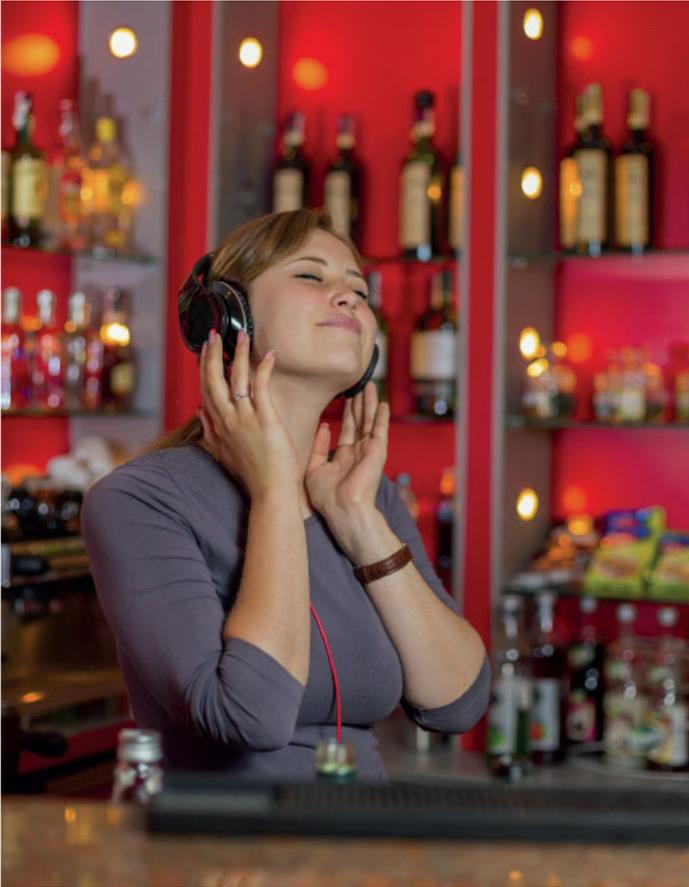
Biometric testing, such as skin conductance response, is proving to be a reliable and accurate research tool, revealing that music significantly enhances emotional arousal and can be a crucial ingredient for ad effectiveness.

### Marketing to the senses

This article is part of a collection of articles on multisensory marketing. [Read more.](#)

For over 50 years, most advertisers, researchers and agencies have implicitly assumed that advertising works by telling people things about brands. But in recent years, that assumption has begun to look rather shaky. In 2007, Paul Feldwick and Robert Heath won the MRS Prize for their excellent paper, '50 years using the wrong model of advertising', which showed that the information-processing model of advertising was theoretically and empirically flawed.

A few months later, Les Binet and Peter Field published *Marketing in the Era of Accountability*, an analysis of UK effectiveness data which showed that ads based on rational messaging tend to be less effective than those based on emotional priming. And around the same time, British advertisers seemed to have rediscovered the selling power of emotion for themselves, with adam&eve's iconic TV [campaigns for John Lewis](#) leading the new wave of emotional campaigns.



The idea that ads can work by emotional priming, rather than rational messaging, has important implications for market research and ad pre-testing. Most pre-tests and tracking studies focus on how well people notice, remember and understand what ads say. But if some of the most effective ads work without saying anything, then it implies we are probably measuring the wrong things. Over the years, a steady drip of empirical evidence, from the ARF's 1990 Copy Validation Project to Binet and Field's analyses of the IPA data, has led to a growing consensus that 'traditional' pre-testing needs to be supplemented with other techniques that probe less conscious, more emotional responses to advertising.



***John Lewis: the department store's iconic ads tap into the selling power of emotion with strong musical soundtracks***

The approach we take in this study is to monitor skin conductance responses, biosignals that are indicative of emotional arousal, and relate them to the business effects of TV ads that we present to participants. This is just one of many possible approaches to investigating the connection between emotions and effective advertising, but measuring skin conductance

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responses is very non-intrusive and doesn't require conscious judgments from participants. The measurement of skin conductance responses (SCRs) has been a standard technique for researching emotions in psychophysiology for more than 60 years (Cacioppo *et al.*, *Handbook of Psychophysiology*, 2007). Also known as galvanic skin response (GSR) or electrodermal activity (EDA), it earned some early fame as the core technique when used in lie detectors in forensic psychology, and since the 1960s, SCRs have been employed in marketing research as well.

The method works by measuring momentary differences in sweat levels on the inside of the hand, which are markers of the sympathetic (i.e. arousing) activity in the autonomous nervous system. This activity is very difficult to suppress or to fake and it is directly related to the processing of emotions in the brain (Boucsein, 2012, *Electrodermal Activity*). SCR has been used in clinical psychology as well as in the study of judgment and decision-making, where its primary purpose is to indicate the strength of the emotional arousal that a person is feeling in response to an emotional stimulus or a piece of marketing communication (Figner and Murphy, in *Handbook of Process Tracing Methods for Decision Research*, 2011).

SCRs are also a common measure to evaluate the emotional responses to music. For example, Craik (*Musicae Scientiae*, 2005) found a strong correlation between changes in the SCR signal and the experience of chills in response to music. Similarly, Salimpoor *et al.* (*PLOS ONE*, 2009) reported a strong positive correlation between the emotional arousal as measured by SCRs, high ratings of pleasure and the experience of chills during music listening. Thus, SCRs can tell us the strength of the emotions that someone experiences in response to a piece of music or a TV ad. But the key advantage is that the measurement is non-verbal and entirely passive, because people are usually not very good at talking about or even knowing their own emotions.

### **The role of music in advertising**

In order to test the potential of SCR measurements as a tool in the market researcher's armoury, we included a specific focus on the role of music in advertising, because music tends to work almost entirely on the emotional/associative level.

If you follow the 'messaging' model of advertising, then the role of music should be relatively minor. Music may help gain attention, and it might make an ad more memorable, but according to the rational model, the real 'work' is done by getting a proposition into people's heads. Accordingly, most clients and agencies pay far less attention to the music than to the message.

Similarly, researchers have tended to dismiss music as a side show. But if you believe that advertising can produce big sales effects merely by evoking feelings and associations, without the need for messages, then music can be much more than audio 'garnish': it can be a crucial ingredient for effectiveness. Some agencies have always known this (BMP, BBH and adam&eveDDB all come to mind), and what little research that has been done in this area suggests that they are on the right track. Our previous paper on the subject ('The power of music', *Admap*, October 2013) showed that getting the music right can increase sales effectiveness by as much as 30%. Building on that research, we decided to use SCR to deepen our understanding of the role of music, and of emotion in general, for effective advertising.

In *The Long and the Short of It* (2013), Binet and Field argued that, while rational messaging can play an important role in generating immediate sales, emotion is the key to long-term profit. And since the big payback from advertising tends to come over the longer term, generating an emotional response is an important ingredient for advertising effectiveness. So the first part of our experiment looked at the role of emotion in advertising. Our hypothesis was that effective ads tend to evoke stronger emotional responses than their less effective counterparts.

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Next, we looked at the role of music in generating those emotional responses. Our previous research suggested that getting the music right can dramatically increase the effectiveness of an ad, and one obvious explanation of that effect is that music intensifies the emotions evoked. The second part of our experiment looked at how music affects our emotions. Our hypothesis was that removing the music track from an ad should significantly mute the emotional response. Testing hypotheses like these with traditional questionnaire-based research is hard, but our research suggests that SCRs may be a promising alternative.

For the experiments, we used the hardware and software technology system that Sensus developed to gain insight into consumer decision-making processes. The main features that make the Sensus system ideal for ad pre-testing and consumer research are that it is wearable and non-intrusive. The set-up of the system is also completely wireless, so participants can move freely and don't have the feeling that they are being tied to a machine, which increases the real-world validity of the measurements. The system comprises a sensor device worn on the wrist and two electrodes that are attached to two fingers of the non-dominant hand, measuring the electrical signal that varies according to the participant's momentary micro-sweat levels.

The sensor is connected via bluetooth to a tablet device that sends the physiological data via a WiFi connection to a central server where emotional reactions can be displayed in real-time. The tablet also serves to display ads or any other stimuli and the whole system is time-locked so that emotional reactions can be linked back to the events on the screen that triggered them.

The system itself was subjected to a rigorous pilot test with a standard item bank of pre-calibrated images and sounds that were either highly arousing or not. As expected, we found clear differences in participants' reactions for high vs. low arousing images and sounds, validating the Sensus system as capable of measuring differences in emotional experiences.

For the main experiment we selected 20 TV ads from several different categories, including finance, drinks, retail, and food. Ten of the ads had been highly effective in business terms (i.e. won an IPA award and reported very large business effects). We matched these with another 10 ads from the same categories and comparable brands but where the ads were not judged to be effective on the same criteria.

The ads were embedded into a TV documentary within three ad breaks to create a realistic viewing situation. Each of the 33 participants saw the ads in a different, random presentation order. Effective ads were randomly interleaved with ineffective ones and the participants were not aware of their effectiveness classification.

Ten out of the 20 ads (from across the effective as well as the ineffective set) used a music track very prominently. Of these ten musical ads, each participant saw five in their original form, and five with the music track muted. Participants were divided into two groups, and tracks that were muted for Group A were shown in their original form to Group B, and vice versa.

We measured participants' emotional responses to the ads by counting the number of spontaneous micro-sweat bursts during each ad, which is an indicator of their general emotional arousal level (Bach *et al.*, *International Journal of Psychophysiology*, 2010).

In addition to taking their SCRs, we also asked participants to rate each ad using a 'traditional' research questionnaire which measured advertising recall, branding, communication, etc., and also to indicate their subjectively felt emotions on a non-verbal rating scale.

The data from the experiments was analysed using multiple regression, taking account of ad length and their presentation

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position. The analysis showed very simple and clear effects: effective ads triggered significantly more and stronger emotional reactions; and the same ads with music were experienced as significantly more emotional than with the music track removed. The subjective emotions ratings also differed significantly between effective and ineffective ads and therefore validate the SCR measurements as an objective and non-intrusive tool for measuring emotional arousal.

Interestingly though, the scores from the 'traditional' research questionnaire did not differ significantly between effective and ineffective ads. This demonstrates that emotional responses are much more strongly associated with ad effectiveness than rational awareness of the ad message. Thus, advertising 'that gets under your skin' and is targeting the senses and emotions can result in large commercial effects.

## Conclusions

Our experiments suggest that the Sensus SCR measurement system is indeed a reliable and accurate way to evaluate emotional responses to stimuli such as images, music and other sounds used in advertising. The SCR data collected with Sensus's system provides further evidence that emotional arousal is an important ingredient for effective advertising, and that music has a significant effect on the emotional response to an ad. This helps explain why getting the music right has such a big effect on advertising effectiveness. But as our experiments show, traditional questionnaire-based research methods are not good at measuring emotional effects like these and in this study were unable to distinguish between effective and ineffective ads.

So perhaps biometric techniques like SCR can help us to improve the way we evaluate advertising, particularly advertising that works via emotional priming rather than rational messaging. Biometrics will never replace questionnaires, of course, but this study suggests that they may have an important role to play.

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## About the Authors

Les Binet is head of effectiveness at adam&eveDDB. He is an econometrician and was awarded the IPA President's Medal for his publications on how advertising works and how to evaluate it.

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