

## Marketers literally want to take consumers' pulse

By Scott Kirsner December 12, 2010

In the interest of understanding exactly how marketers are trying to burrow even more deeply into our brains, I donated my body to science. Wristbands and fingertip sensors were affixed, my eye movements tracked, my facial expressions analyzed, and a tight-fitting belt was Velcroed around my chest to measure my breathing and heartbeat.



The objective was to divine my true emotional reaction to things from websites to TV ads to logos to retail environments that I might not be able to accurately describe in an interview or a survey. It's called neuromarketing, or biometric monitoring, and it's an evolving set of techniques aimed at helping marketers understand what we really like, as opposed to what we say we like.

"Ninety-five percent of all decisions happen in the subconscious," says Barry Martin, executive director for consumer research at Time Inc., the publishing company. "When you do traditional research with consumers, you're just scratching the surface."

Tom Bick, a vice president of strategy at Boston ad agency Hill Holliday, says: "When you ask consumers, 'What did you think about that ad?' they tend to go into a different mode. They want to impress the interviewer with how smart and

rational they are. But most of our thinking and our responses are subconscious."

On a recent visit to the North End offices of Innerscope Research Corp., I donned a biometric belt made by a British company. There is a gray triangular pod that sits right above my sternum, and wires running down to sensors that are attached to my pointer and middle fingers. "You'll generate close to 500,000 data points while you're here," company cofounder Carl Marci says.

"But basically, we're looking at two different axes: Do you like something or not, and how engaged are you? We're looking for unconscious measures of personal relevance."

I'm seated in front of a computer monitor made by Tobii Technology AB, a Swedish company. Built-in cameras will track my gaze to see what I'm focusing on. The first video I'm shown is one of a talk that I gave at a recent conference in Boston. Then there are ads for Lowe's, American Express, and Degree antiperspirant, a series of gymnastics bloopers, and some relaxing video of fish swimming. Afterward, I review my responses with Marci, looking at a graph of purple, pink, and green lines representing my heart rate, breathing, and skin conductance (the tiny amounts of perspiration generated by my sweat glands).

"It's very hard to interpret the data from just one individual," says Marci, adding that Innerscope typically works with groups of at least 30 consumers. But I was obviously surprised and delighted to see myself in the first video clip (then quickly bored by hearing myself deliver a familiar talk).

"The fish swimming is supposed to be boring and relaxing," Marci says. "You did show some

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response to the AmEx ad with Jerry Seinfeld, especially when they talked about innovation, but not much engagement with the Lowe's ad." (When aggregated across an audience, elevated heart rate or increased sweat can suggest an emotional connection with content, Marci says.)

Marci says that many of Innerscope's clients are testing consumers responses to television ads or new shows in development. (Innerscope's projects start at about \$20,000.) There's growing interest in understanding what grabs consumers on a website, and what they find useful or frustrating when they are using a mobile phone app. And sometimes, Innerscope asks consumers to navigate through a virtual store environment, to see "where people are spending their virtual attention. The retailer can move around displays or products on shelves and see whether it increases people's interest."

Another local company, Waltham-based Affectiva Inc., uses a much simpler monitoring setup: a wristband that measures skin conductance (the same input used by lie detectors), and software that analyzes facial expressions based on images collected by a basic Webcam.

The technology was originally developed at MIT, to gain insight into the emotional state of autistic children.

While the wristband today costs more than \$1,000, Affectiva chief executive David Berman says that the price will decline with higher production volumes, and that researchers eventually might be able to mail them to consumers for a short-term study.

"We'd have them go to a website, consent to be studied, and turn on their Webcam so we can track their facial expressions," he says. Watching a user's face as she navigates a website, Berman says, can let the site owner know whether the user is frustrated or confused. The software can also count smiles if the consumer is watching a movie trailer, for example, or the number of head nods during a political ad. Neither Innerscope nor Affectiva will divulge how many clients they have.

At Hill Holiday, Bick says that the agency has used biometric measurement "for campaigns where we're trying intentionally to stir people's emotions, like in selling personal insurance. There's that subsurface layer of our response to marketing messages, and you may not get it when you interview people after they watch an ad."

Bick says that the biometric data doesn't point to ways to improve ads that aren't working, "but it can give you some diagnostics of where the high and low points are within the flow of the ad, and you can try to make some correlations."

Martin at Time Inc. says that trying to conduct in-depth focus groups or interviews about consumers' responses to a magazine cover can be fruitless.

"People give a magazine cover about eight seconds," he says, "and they're either attracted to it or they move on to the next one." Working with Innerscope, Martin says that at least one of Time's publications has learned that rather than splashing a diverse set of topics across a cover, "one thing we started to learn is that the more connected the things on our cover are, the longer the consumer will stay with it."

At Shopper Sciences, an Atlanta firm that studies retail shopping behavior, chief executive John Ross has been using Affectiva's technology.

A recent study looked at how shoppers might use a mobile phone application to get additional information about products as they shopped. "What we found was that the app radically decreased stress levels, and there's a direct relationship between that and a higher average purchase," Ross says.

Ross says that his firm doesn't conduct research on consumers unless the consumer has consented to be studied. "Plus, I'm paying you," he adds. (Consumers are typically paid \$25 or \$50 for participating in an hour's worth of research.)

Still, some activist groups like Commercial Alert, which tries to curb the influence of adver-

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tising in society, are horrified by neuromarketing. In a 2004 letter to the Senate Commerce Committee, Commercial Alert executive director Gary Ruskin wrote, “Orwellian is not too strong a term for this prospect.” But the committee didn’t respond to Commercial Alert’s request for an investigation.

In September, the Advertising Research Foundation, an industry group, said it would begin to explore how biometric measurements are being used, in the hopes of developing some industry standard practices.

The field may be too new, and still too low-profile, to have generated any real consumer backlash. But in an age when consumers have gotten exceptionally good at filtering, skipping, and blocking, advertisers, consumer goods makers, and media companies seem to be gravitating

toward biometrics and neuromarketing as a potentially powerful way to connect with what we really want.

“How many silly little ads do you want to see, or would you rather get meaningful communication?” asks A.K. Pradeep, founder of a California company called NeuroFocus. He pooh-poohs the monitoring of heart rate and skin conductance, and instead advocates having consumers wear caps that can gauge their brain activity through electroencephalography.

“Consumers have gotten so smart and so savvy,” Pradeep says, “that marketers are starting to realize that they are working in the digital age with Stone Age tools. Surveys and focus groups, and even biometrics, are totally inappropriate for the digital age.”

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