



Think You're Immune to Advertising? Think Again

With literally thousands of ads hitting us every day, it's impossible to avoid being influenced.

Society has long been of two minds about advertising. On the one hand, it promotes marketplace efficiency by educating consumers about new products. On the other hand, people justifiably worry that its power to impart information may outmanoeuvre our rational controls.

For example, market researcher James Vicary's 1957 experiment with subliminal messages—in which he claimed to have sent cinema snack-bar sales soaring after flashing plugs for popcorn and soda at unsuspecting patrons for one three-thousandth of a second—prompted a panic that swiftly reached Capitol Hill. Vicary was ordered to repeat his experiment before an audience of lawmakers. Subliminal advertising bans were summarily introduced in several U.S. states, with one congressman calling the technique “made to order for the establishment and maintenance of a totalitarian government”.

However, Vicary later admitted his findings were fraudulent, and more recent studies failed to find evidence for subliminal advertising's effectiveness in changing attitudes.

So can advertising, in fact, “teach” us things without the assent of our conscious mind? Perhaps the answer is hiding in plain sight, rather than in the subliminal under-layers of consciousness. In a 2012 paper in the *Journal of Experimental Psychology*:

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General, a research team led by Mandy Hütter (of Eberhard Karls University Tübingen) and Steven Sweldens (of RSM, Erasmus University and INSEAD) recounts experiments where visual stimuli presented in full view appeared to precipitate unconscious learning. Following on this research, their recently published article in the *Journal of Consumer Research* delves deeper into automatic mental impressions triggered by supra-liminal stimuli. Their evidence seems to suggest that at least part of our response to advertising is beyond our control.

How advertising works

Hütter and Sweldens' research focuses on a technique that has long been employed by advertisers: *evaluative conditioning* (EC), which pairs things in hopes that the positive or negative associations of one will rub off onto the other. EC is the reason so many brands rely on celebrity endorsements, and cute animals often feature in television commercials, e.g. Coca-Cola's **polar bear spots**. Advertisers have found that a quick way to win love for their product is to position it alongside something or someone people already love.

The researchers investigated whether the enduring success of marketing techniques such as EC could be partly due to automatic response. Drawing upon past research, they identified several conditions that

would have to be satisfied for a response to be deemed uncontrollable or automatic. For example, it should appear regardless of a strongly motivated attempt to repress it, and it should be present even when the conscious mind is occupied with something totally different.

Six EC-based experiments were run in the lab, in which a neutral image—human faces in the first set of trials, product logos in the later ones—was paired with something either pleasant (e.g. beautiful natural scenery, people having a fun day out) or unpleasant (e.g. cockroaches, graveyards). Participants were then asked to register their opinion of the face or logo. Some participants received no prior instruction; others were told to directly disobey the EC cues, by liking images paired with ugly things and disliking those paired with appealing things.

With each experiment, the researchers varied the above paradigm to test for different aspects of automaticity. In one study, half the participants were asked to perform the EC task while memorising four-digit numbers. In another, the stakes were raised with a €20 payout promised to the participants who followed instructions best.

To trace the invisible processes underlying participant responses, results from all six experiments were put through a model designed to disaggregate the data and generate granular estimates of controllable and uncontrollable effects. The model allowed Hütter and Sweldens to analyse effects for each face or logo used in the experiments.

Overall, they found consistent statistical evidence of automaticity. Even when participants made a conscious effort to flout EC, their ability to do so never quite matched the impact of EC itself when working at full strength. The difference may correspond to a subtle but indelible influence exerted by associative techniques such as EC, despite our attempts at rational resistance.

Faces vs. logos

Moreover, the uncontrollable effect was far greater for the experiments mimicking marketing scenarios. In one experiment using logos of bottled water brands, the portion of participant response owing to automatic effects was approximately twice the average for the face-based studies.

Sweldens speculates that abstract marketing messages such as logos are better at bypassing our rational defences because we come to them with less real-world baggage. Their neutrality is a kind of blank canvas that can more easily be filled with associations and connotations via EC and other

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techniques. Once applied, the “paint” dries quickly and forms a complete picture in our minds. At least sometimes, this picture will likely help determine our impression of the brand in question.

As Sweldens says, “If you see 20 commercials, and are trying not to be influenced, for four or five of them, you are going to fail and your attitudes are going to be changed despite your best efforts.”

The two systems

Consider Sweldens’s comment in light of reports that the average adult is exposed to **as many as 5,000 ads** in a given day. Consumers may need more than a *caveat emptor* approach to withstand the daily advertising barrage, especially in sensitive domains such as food advertising, pharmaceutical advertising and advertising targeting children. For example, a 2016 article in the *Journal of Bioethical Inquiry* found that pleasing imagery of the sort commonly used in American prescription drug advertisements strongly affected consumer opinions of pharmaceutical brands. The authors saw reason for federal regulators to mull more serious involvement.

Beyond the marketing sphere, the findings provide supporting evidence for the two-track learning process detailed in psychologist Daniel Kahneman’s bestseller *Thinking, Fast and Slow*. Our cognitive faculties, Kahneman wrote, are split into an instantaneous and intuitive “System 1” and a reflective and deliberate “System 2”. Hütter and Sweldens’ experiment combining EC with number memorisation demonstrated that while “System 2” has its hands full, “System 1” is as receptive as ever to outside impressions. Advertisers, then, seemingly have nothing to fear from our world of ever-increasing distraction.

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