Buy-ology
Truth and Lies About Why We Buy
by Martin Lindstrom

At a cost of $7 million and three years of intensive research, marketing guru Martin Lindstrom has conducted what he describes as the biggest-ever study of neuromarketing — understanding and exploiting how the brain operates when we buy stuff — that forms the kernel of this, his latest book.

The money came from eight big commercial enterprises, who, naturally, had an abiding interest in the results of an investigation of how subconscious mental processes drive most of our decision-making. And the three years of effort were contributed not only by Lindstrom but also by 200 researchers, 10 professors and doctors, an ethics committee, and a global team of thousands of volunteers whose brains were "read" by two hi-tech pieces of equipment.

Many of the results are surprising, challenging the validity of popular and established methods of consumer research and signposting a revolution in the way marketers of the future will switch us on to their products.

Traditional research methods like market research and focus groups — a $12 billion industry in the US alone — are not up to the task of finding out what consumers really think because we don't always say or even recognize how we really feel. In fact, sometimes we even say just the opposite to what is going on in our subconscious. For instance, a brain-study of how people reacted to a TV pilot show correctly predicted its chances of success, in complete contradiction to what the viewers actually told researchers.

Our irrational minds are flooded with cultural biases rooted in our traditions, upbringing and many other subconscious factors that assert a powerful but hidden influence over our choices. He goes on to explain that 85% of the time our brains are on autopilot, so that our deep-seated emotions trump our rational thinking. As a result, companies using traditional marketing and research methods don't know how to engage us authentically and eight out of every 10 new product launches fail within the first three months.

To get at these subconscious mechanisms and emotions, Lindstrom takes us through such regions of the brain as the amygdala (handling fear and fight-or-flight), the nucleus accumbens (craving and reward), the caudate nucleus (joy, serenity, self-awareness) and the ventral putamen (taste appeal), courtesy of a neuro-imaging device called an fMRI and a brain-wave reader called an SST.

The former is a “functional Magnetic Resonance Imager”, one of the most sophisticated brain scanners in the world. By monitoring oxygen levels (via its magnetic carrier; hemoglobin), this machine can identify which parts of the brain are stimulated and active under various circumstances.
SST stands for "steady state typography"; this instrument is an advanced electroencephalogram (EEG), which tracks rapid brainwaves in real time.

With these devices, his experts and volunteers, Lindstrom (described by Mattel CEO Robert Eckert as "one of branding's most original thinkers"), sets out to answer six specific questions:

1. How powerful are brand logos? (less than you would imagine and in need of support from other sensory stimulation)
2. Does product placement work? (only in certain circumstances)
3. Does subliminal advertising still take place? (yes)
4. What effect do disclaimers and health warnings have on us? (big, big surprise)
5. Are there similarities between religious attitudes and buying behavior? (you bet)
6. Does sex in advertising work and where is it heading? (a qualified "yes")

"If marketers want the naked truth — the truth unclogged and uncensored about what causes us to buy — they have to interview our brains," Lindstrom declares.

However, the author is at pains to stress that, despite the source of his financial backing and the importance to marketers of the study's results, he did not set out to help companies manipulate consumers. Rather, he thought, shining a spotlight on buying behavior might help uncover our minds' truest motivations and help push brain science forward.

**Mirrors, Markers and Senses**

In various parts of the book, the author explores elements of the brain's activities that underpin buying behavior.

For example, we have what he calls **mirror neurons** that urge us to imitate others. We experience them when our sporting hero scores a touchdown and we punch the air — in effect transferring or mirroring their euphoria to ourselves, as if we were them.

For the same reason, mirror neurons play a part in impulse purchases. We see people wearing clothes we admire (one retail clothing chain actually uses live models walking around its stores), driving cars we envy, using products we want — and our credit cards are maxed out before we know it. Only later does the rational part of our thinking process question the wisdom of our buying decisions.

Another important brain feature is the **somatic marker**, a sort of shortcut process that enables us to make ultra-fast decisions based on past experiences we have recorded and stored. The rationale behind the choices you make is built on a lifetime of associations — both positive and negative — that you're simply not aware of when you draw on them in choosing a particular product.
Half of all purchasing decisions are made spontaneously, but if we were able to slow down the subconscious thought process that led to them, we would witness a sequence of operations in which we make comparisons based on a whole host of factors that shepherd us to the decision we know will yield the best, least painful outcome.

Advertisers create somatic markers with imagery. For instance, using a food blender to chew up a piece of electronic equipment or showing the Energizer Bunny outlasting its rivals, leave strong and long-lasting impressions on our minds that influence our future behavior without us realizing it.

The whole issue of how our senses, especially in combination with each other, drive our buying decisions challenges a key element of traditional marketing: the use of logos to represent a brand. Today, the author points out, we are more visually stimulated than ever, so visual images alone are often insufficient to represent a brand and prompt us to buy.

Instead, sensory branding may involve use of smell, sound and even touch, as well as color and other imagery, to persuade us to make a purchase. In fact, when we see and smell something we like, the same area of our brains lights up. Interestingly though, if the two sensory stimulants don’t harmonize effectively, the dual reaction still occurs but in a different part of the brain — one that is associated with aversion and repulsion.

"So, while companies are spending billions of dollars a year saturating sidewalks, our airwaves and every place else with logos," the author argues, "they would do just as well in capturing our interest — if not better — by appealing to our sense of smell instead."

And of course, they do — with phony bakery smells in supermarkets or fragrance of charbroiled burger vented out from fast food joints. The association need not always be so direct, either. Sportswear maker Nike found that people examining its shoes in a scented room bought more and were prepared to pay a higher price than others who examined the same product in an unscented room! Now you know why some switched-on retailers make their stores smell so nice!

**Fear as a Driver**

In addition to the use of sensory stimulants, marketers who understand the way we think have also confirmed that fear is frequently a factor underlying our behavior.

This is especially evident in politics, the author says. After 9/11, for example, images of the atrocity shown to voters among a selection of commercials from the 2003 election triggered a noticeable fMRI reaction, with the amygdalas of Democrats lighting up more noticeably than those of Republicans.

"Despite widespread cries that political advertising emphasize 'optimism,' 'hope,'
'building up, not tearing down,' and so on, fear works. It's what our brains remember," he adds.

In similar fashion, advertisers try to scare us into believing that not buying their product will make us feel less safe, less happy, less free, and less in control of our lives. Some somatic markers are based on fear — a baby shampoo called No More Tears responds to our own childhood memories of getting soap in our eyes.

There are instances, however, when fear can drive us away from a product. Brain scans of subjects viewing a commercial for annuities in which a well-known actor is transformed by circumstances from a rich Ferrari driver to a fast food counterhand showed they became so scared that the ads simply didn't work.

And, for quite different reasons, as explained below, attempting to induce fear by publishing health warnings and gruesome images on cigarette packs does not work because of other factors at work in the brain.

Notwithstanding that there's no denying that fear exerts an extremely powerful effect on the brain.

"In fact, when fear-based advertising plays less on our generalized anxieties and more on our insecurities about ourselves, it can be one of the most persuasive — and memorable — types of advertising out there," Lindstrom claims.

**Brands and Product Placement**

Most of us may tend to think of product placement as simply the appearance of a branded item in, say, a movie or TV show. In fact, this marketing tactic is a whole lot broader and more sophisticated than that. And the way in which it is used drives its success or failure.

As an example, the author highlights awareness results from the hugely successful American Idol TV series for which three companies — Ford, Coca Cola and Cingular Wireless (now part of AT&T) each paid $26 million for branding opportunities. Ford went down the traditional route of 30-second commercials but Cingular branded its name not merely through this method but also by using its name and exclusive phone line numbers in the public voting process.

Coca Cola, however, pulled off a placement coup that, according to the author, made the brand visible or suggested it, for 60% of the time the show was on air. In addition to the judges using Coke-branded drinks cups, the brand was visible or evoked in things like the design, shape or color of furniture, carpets and wall decorations.

In his neuroscience experiment, Lindstrom and his team hooked volunteers up to SSTs and showed them a sequence of 20 product logos for one second each, including the three from the show. Then they were shown a special 20-minute edition of the show followed by a different, unconnected TV program as a control.
Before the showing, the subjects had no greater recall of any particular brand logo, but afterwards they had far greater recall of the three promoted brand logos. What is more, this effect was so strong that it reduced recall of the logos that weren't in the show. Most significant of all was that recollection of the Coca Cola brand was so powerful it not only eclipsed the other two participating brands but actually suppressed recall of them too.

In short, the author concludes, the results demonstrated that we have no memory of brands that don't play an integral part in the storyline of a program. With simple advertising or placement, they become white noise, easily, instantaneously forgotten. For product placement to work, it has to be a lot slyer and more sophisticated than placing a collection of random products on screen.

"In other words, advertisers and marketers who blizzard us with brand after brand ... might as well light a match to the millions of dollars they've spent on their ads," he suggests. "Unless the brand in question plays a fundamental part of the storyline, we won't remember it, period. And therein lays Ford's multimillion dollar mistake."

**Subliminal Messages that Stimulate our Brains**

Just as we might have a simplistic notion of product placement, so we tend to think of subliminal advertising as the flashing of images before our eyes for such a short period that we don't really know we have seen them. Although never formally outlawed, this technique is generally frowned upon by regulatory authorities; its effectiveness is disputed anyway.

But, in fact, subliminal advertising can embrace any form of behavior influencing that we are not consciously aware of, as in the Coca Cola exercise mentioned above. As another example, an experiment exposing two separate groups of people to positive and negative words resulted in those seeing the positive words making greater purchases of beverages at a drinks stand.

The use of covert promotion is perhaps most evident among cigarette manufacturers who use elements of their logos and brand — colors, shapes, images — to subconsciously influence potential users, without explicitly naming them. In the author's experiment, smokers exposed to such non-explicit images exhibited craving activity in the brain within just five seconds.

"In other words," the author concludes, "the tobacco companies' efforts to link innocent images with smoking in our subconscious minds have paid off big time. They have succeeded in bypassing government regulations by stimuli powerful enough to replace traditional advertising."

Indeed, possibly the most stunning and controversial element of Lindstrom's study was his investigation into the effect of health warnings on cigarette packs.

This focused on the nucleus accumbens area of the brain — a chain-link of
specialized neurons that lights up when the body desires something, whether it's alcohol, tobacco, drugs, sex or gambling.

In the tests, even though most smokers had declared that they were deterred by the printed warnings, the fMRI scans showed that the nucleus accumbens actually fired up their cravings when they saw them, apparently encouraging them to light up.

"We couldn't help but conclude," he says, "that those same cigarette warning labels intended to curb smoking, reduce cancer, and save lives had instead become a killer marketing tool for the tobacco industry."

Ritual, Superstition and Religion

We live in uncertain times, and, as the earlier discussion on fear as a driver shows, the more unpredictable our world, the more we seek a sense of control over our lives. This manifests itself in superstitions like knocking on wood and ritual ways of behaving during our day — the way we prepare for work, gather at a table for meals, and prepare for our leisure time or going to bed.

Smart companies can exploit this behavior by inventing or reinforcing rituals that actually have no real meaning but strengthen brand values. Examples would be the squeezing of a lime piece into the neck of a Corona beer bottle, which is attributed to nothing more than a bartender's novel idea, or the conversion of the lengthy process of drawing a glass of Guinness into a positive using the slogan "Worth the Wait."

Our sense of loyalty to brands is an extension of this idea of ritual behavior. There is something so appealing about the sense of stability and familiarity of a particular brand that a lot of consumers have almost a religious sense of loyalty to it. They buy and use it no matter what.

This prompted the author to wonder if brain activity and behaviors associated with religion, which is itself steeped in ritual, have parallels in our buying motivations and brand loyalties.

In what he describes as one of the most provocative pieces of his research, Lindstrom interviewed leaders of various religions to identify common characteristics. Then he produced a list of shared characteristics of religious groups that he says are also present in successful product and commercial enterprises. These include:

- A sense of belonging. We feel this when we gather to worship. Exactly the same sort of emotion is invoked when we come together for, say, a musical concert or join a diet club.

- A clear vision. Just as most religions are unambiguous in their mission, so too are successful companies. Think of visionary statements that underpin
brands like Apple ("Man is the creator of change"), Bang & Olufsen ("Courage to constantly challenge the ordinary"), and IBM ("Solutions for a small planet).

- Power over enemies. A central tenet of most religious faiths, overcoming enemies in the commercial world is reflected in competitive rivalries, for example in Coke versus Pepsi.

- Sensory appeal, which manifests itself in the religious arena through the ambience of its churches, mosques and temples. In the same way, products and brands evoke certain feelings and associations based on how they look, feel or smell.

- Storytelling. It's an integral part of all religions and the root of many of the rituals they use. So too, every successful brand has stories built around it, often reflected in advertising taglines that conjure them up — for example "Nicked from Virgin Atlantic" on condiment canisters or "I'm not a plastic bag" on a bag that enables consumers to make a statement about themselves and their principles.

- Grandeur, which is evident and celebrated in most faiths. Think of the Vatican or the Temple of the Golden Buddha as extreme examples. Then think of the extraordinary architecture of Dubai or the fabulous, themed hotels of Las Vegas as their commercial equivalents.

- Evangelism. This, the author explains, is the power to reach out and secure new acolytes, equally present in business as it is in religions. Each treats converts in a similar way — making them feel honored to be members of their fold.

- Symbols. They are ubiquitous in religion but symbols are equally important in a brand. A symbol may be an image, an item (the Lance Armstrong wristband) or even a sound (like the Nike "whoosh").

- Mystery. In religion, the unknown can be as powerful as the known. Consider the Turin Shroud or the quest for the Holy Chalice. Then recall how many products claim to use a secret formula or ingredient, or contain unintelligible, supposedly scientific formulae. Weird product names, using letters and numbers, are another example.

Lindstrom's brain scan studies showed that the most successful products are the ones that have the most in common with religion. In his experiment, images relating to spirituality or brands were flashed in front of subjects. Strong brands — those with powerful emotional attachments like Apple, Ferrari and Guinness — elicited stimulation in the same area of the brain as did the images associated with religion.

"Clearly, our emotional engagement with powerful brands shares strong parallels with our feelings about religion," he says, "which is why marketers and advertisers
have begun to borrow more heavily from the world of religion."

**Does Sex Still Sell?**

Tracing the use of sexually potent images in advertising, the author notes how what has been controversial in the past is later regarded as tame, as marketers continue to push the frontiers of acceptability. However, its usage is a pretty exacting skill — too overt and titillating a sexual element can actually swamp the brand message.

A clever technique seemingly used by some advertisers is to generate such controversy about the sexual content of an ad that it eventually has to be withdrawn, by which time it has achieved its aim of gaining publicity and strengthening brand awareness.

One reason why sex continues to be a powerful marketing device is the activity of those mirror neurons discussed earlier. Both men and women want to confer on themselves the images of sexuality conveyed, for example, in underwear ads for their own gender. They are visions of one’s ideal self, says Lindstrom.

Of course, the effectiveness of these images also reaches across to the opposite sex, as we also use them to idealize the images of our partners. The images of those virile and well-endowed men on packaging for boxer shorts are not just for the male mirror neurons. Three quarters of all male underpants are bought by women, as those same mirror neurons seek to transfer the purchaser’s aspirations to the recipient!

Sex in advertising is all about wish fulfillment, about planting dreams inside consumers’ brains, says Lindstrom. And because, thanks to the Internet, sex is more accessible than it’s ever been, its importance as an influencer is likely to increase.

Nevertheless, for precisely the same reason, its ability to shock may fade over the longer term and we can expect the sexual dimension of advertising to become more suggestive than overt. These ads will likely become sneakier and more subtle.

**Conclusion**

By using the latest technology to observe the brain in action, Martin Lindstrom makes two key assertions about buying behavior:

1. Most of our decisions are made at the subconscious level.
2. Our actions often do not reflect the opinions we voice.

With a greater insight into the way our subconscious influences decision-making, he predicts, among other things, that:
• More and more marketing tactics will be based on our fears because these are key factors in many buying decisions.
• Branding will become ever more important; expect anything and everything to be branded.
• The more successful and expert marketers become at applying neuroscience, the more our national obsession with buying and consuming will be stimulated and will therefore escalate.
• More ways will be found to exploit our tendency to mimic others, to be followers of fashion and others’ behavior.
• By the time of the next presidential election, neuroscience will be used as the principal method of getting at voters’ true intentions.

"Neuromarketing is still in its infancy," he notes. "And in the years ahead, I believe it is only going to expand its reach. Though it may never be able to tell us exactly where the ‘buy button’ resides in our brain — and thank God for that, a lot of people may say — it will certainly help predict certain directions and trends that will alter the face, and the fate, of commerce across the world."