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Why you need sensory brand engineering

While appearances can gain consumers' attention, many more senses create genuine engagement. By using rigorous processes such as sensory brand engineering brands will be able to understand and exploit opportunities, says DCA's Garen Kouyoumjian

Many have heard anecdotes about the care taken by Mercedes over the sound their car doors make when closing. Fewer know that Rolls-Royce design their cars to smell like a 1965 Silver Cloud. Because, to Rolls-Royce customers, that is precisely what the word 'quality' smells like.

Automotive manufacturers aren't the only ones aware of the world beyond what we can see. Brands from hotels to airlines and coffee shops to clothing manufacturers have long realised that while appearances may grab attention, many more senses create genuine engagement.

The sensory brand engineering (SBE) process used at DCA is about developing this engagement in a considered, evidence-based way.

> The search for meaning

At the core of SBE is the understanding that semiotics – the study of symbolism in communication – is not exclusively visual. We accept that how something feels, smells, sounds and moves are all integral to our perception of it.

Semiotic analysis is used to immerse the design team in how the target brand values are already communicated in culture. Design researchers and semioticians source and decode samples to identify the sensorial patterns that amplify or dampen brand cues, as well as their cultural roots.

Understanding semiotic origins is crucial where cues need to be delivered outside their source context, without deceiving consumers. How can you suggest polished metal on a plastic product, without resorting to disappointing metallic pigments or vulnerable coatings? Even if it looks right, how do you avoid disappointing your users when they pick your product up and notice the lack of weight or unexpected warmth, or when they put it down and hear a dull thud instead of a metallic chime?

> Technology landscapes

This is where the second strand of SBE comes in – an understanding of enabling technology. Engineers work in tandem with design researchers to identify relevant cross-category technologies that could deliver desired semiotic cues. Electronics manufacturer Asus demonstrated this on its Nexus 7 tablet, forgoing the industry-standard glossy rear casework to use a soft touch resin and dimpled surface finish that mimics a perforated leather steering wheel.

> Quantifying feelings

The second role of sensorial engineering is in quantification of subjective feedback. For example, the specification for a computer keyboard may state what surface roughness the keys should have, how far they should travel and how the keys should be spaced. Some of this will be guided by human factors and the biomechanics of typing, but other aspects will come down to personal, subjective user preference. How would you define 'clicky', 'squidgy' or even 'premium' for your technical team?

Product test laboratories provide tools to help convert this subjective language into tangible metrics – to some extent, distilling feelings into hard numbers. Force and torque sensors are the most commonly used, allowing for recording of the loads consumers exert – and hence experience themselves – when using products. Dual axis systems also exist that allow simultaneous measurement of torques and forces, such as undoing a medicine safety cap.

Interface friction, interferences, audible outputs, surface finish and material stiffness, all of which affect quality perception, can be analysed in detail. Combining these with computer-aided engineering (CAE) tools and technical expertise allows for more complex analysis.

> Unifying purpose

Quantification of subjective feedback has a valuable side-effect – it provides the project team with a shared, objective development



How a product feels is as important in communicating the brand as how it looks

language. The marketing team can chair discussions over force/time plots and engineers champion brand ideals throughout their functional concepts. This builds closer ties between disciplines and accelerates alignment on practical solutions to subjective challenges.

This partnership becomes a necessity where aspects of a product are difficult to measure directly. A classic example is kinaesthetics, or sensation of movement. There is no simple way to directly quantify the mesmerising elegance of a clockwork mechanism in motion, or to attach a strain gauge to a pleasing animated device interface. However, an understanding of the semiotics behind these helps to overcome limitations of metrology and build on insights.

> Engineering the experience

Once sensorial directions are set, SBE merges into the iterative development flow of product design. An intrinsic part of this process will be the production and testing of sensorial prototypes in the lab and with users. Depending on the cues and senses the designers wish to stimulate, these mock-ups could vary from surface finish 'swatch' models to functional kinaesthetic rigs to test mechanism behaviours.

> Avoiding isolation

The common feature of SBE prototypes is that they try to represent the entirety of a product and not just a single sense. Artificial isolation interferes with how our senses work together.

At a neurological level, studies have shown that our senses 'interplay' – parts of the brain responsible for different senses have been seen to stimulate each other. Many people also experience synaesthesia – the involuntary triggering of one sense by another, such as wine tasters being biased by the type of music played while tasting samples. At a higher level, sensory deprivation instantly puts a consumer into an unnatural state of mind. It also derails the consumer journey, like a fragrance shop with no tester bottles.

> Delivering the magic

All of this development is only as good as the final execution. The findings of the iterative design and testing of sensorial rigs are refined and fed back into the product specification. Manufacturers drive to meet these targets in the same way as signing off on critical part dimensions. The end result is a product that provides considered, brand-driven sensorial engagement. Furthermore, it does so in a technically robust and reliable manner – whether it is a one-off or one of billions.

> Closing the loop

The implicit assumption in SBE is that it is an integrated design process. Consumer insights feed into creative workshops, engineers contribute to aesthetic concepts and prototypes are designed with the research team's involvement. As soon as core disciplines become segregated or project knowledge is siloed, the entire process breaks down, inefficiencies creep in and the quality of the design suffers, becoming just another rush to get to shelf. The results of this may not be felt directly or until much later in the process. But as Dr Ralf Speth, CEO at Jaguar Land Rover group, observed, the cost of bad design dwarfs the cost of doing things right. Nowhere is this truer than in an inherently multidisciplinary undertaking such as sensorial design.

> The next frontier

Consumers are wise to the concepts of a brand experience and experiential design. More brands are entering the multi-sensory arena with varying levels of sophistication, from scratch-and-sniff labelling to augmented reality classical concertos provided by an ice cream tub. As more companies consider sensory design with the same focus as aesthetic and functional concerns, defining product-driven sensations – and the emotions they elicit – will come within the remit of brand leaders. Processes such as SBE aim to provide a rigorous system to understand and exploit these opportunities.