Practitioners’ articles

Building stronger brands with sensory driven product design

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Abstract

The profession of industrial design has evolved and grown more sophisticated over the past few decades. From computer-aided design (CAD) enabling faster and better design processes, to the development and perfecting of visual brand language (VBL) as a strategic driver for design, this discipline has increased its strategic impact and ability to support a company’s brand values. Still, the design profession has yet to embrace multi-sensory design fully as an effective way to build better product-based brand experiences. The adoption of sensory driven design is becoming more crucial, given today’s rapidly evolving user expectations, and this paper will show how multi-sensory design can build better product and user experiences, thus supporting corporate brand values and messaging. Additionally, the paper will discuss the implications of sensory driven design on business practice.

Keywords

multi-sensory design, multi-sensory brand language, product design, industrial design, product brand building, customer brand loyalty
INTRODUCTION

When interacting with other people, one can be easily turned-off by people who keep interrupting. Most annoying is when someone is forcing his or her views on another, without listening to what their companion has to say. On the other hand, one can experience very enjoyable exchanges with individuals who understand that communication goes both ways and utilises multiple senses to create more meaningful engagement.

Now, think about product-to-user interaction. Some products push their branding message onto the user through marketing and advertising, but fail to connect on a deeper level. This connotes the phrase ‘beauty is only skin deep’, and leaves open the opportunity for marketers to move beyond simple visual presentation to subtle cues and qualitative elements that create subconscious and visceral brand connections. Multi-sensory design is the tool that enables these visceral connections — in a more sophisticated and meaningful way.

Most readers familiar with Martin Linstrom’s book ‘Brand Sense’ understand that 83 per cent of everyday communication is visual. But of particular interest here is his comment that the handshake creates a deeper, emotional connection; that greater emotional connection is crucial to a deeper brand experience. These are important concepts of sensory scale, and the potential of sensory awareness. Until recently, these concepts were mostly applicable to retail and service design, with some anecdotal product design references — mostly for products we eat — where smell and taste are expected sensory dimensions.

While there may be no need to convince any good branding professional of the value of multi-sensory design, the reality is that it has not been fully leveraged in product design practice. There is a big opportunity here to leverage new techniques and technologies and gain competitive advantage. The following examples can be considered, ranging from low to very high tech and cost:

- **Tiffany & Co.** elicits great expectations with visual brand language (VBL) via its iconic robin’s egg blue boxes. But beyond this visual asset, Tiffany ties every one of those blue boxes — no matter how modest the purchase — with a silken white ribbon. The tactile experience of loosening the silky bow deepens the brand attachment.

- **Abercrombie & Fitch** stores exude a very strong cologne scent, spilling out of their darkened, louvred panel storefronts. Along with throbbing music — lyrics guaranteed to alarm a mother — and darkened spaces, with piles of expensive T-shirts and jeans illuminated by spot lighting, the brand makes it clear, through multiple modalities, that it is a den for the teen tribe. That scent permeates the teen’s room and psyche, long after the initial purchase.

- **Samsung** is using auditory design cues to great branding advantage. The audible startup and shutdown signatures of its flat-screen televisions are design elements that cue the user to what is happening, but also linger in the user’s consciousness and can be reinforced through advertising.

- **Chase credit card** is using a subtle, tactile design element. Its Chase Sapphire Preferred card is much heavier than most other cards, adding weight, literally, to the reputation and perceived importance of the user, as well as those taking the card. In this case, heavier equals worth more.

The point here is that connecting at a deeper level with customers does not have
to be expensive or technically sophisticated to be effective. It has to be meaningful and neatly delivered. The Chase and Tiffany examples are especially interesting as they are subtle and relatively low-cost, and quite low-tech. Product developers and marketers with more sophisticated/higher-cost product platforms have that much more room to leverage immersive techniques.

A car maker at the forefront of multisensory design is Audi, with its ethos of
‘Progress through technology’ and supporting position of ‘Truth in engineering’. These brand promises are supported by design details such as the precision tactile and audible feedback of the actuation of the gear lever during gear changes; the ‘click’ and feel that motoring critics rave about (Figure 1). The injection of fuel into the exhaust as the driver changes gears creates the raucous deep sound of a high-performance engine. These details are the result of careful, multi-sensory design cues, creating subconscious brand addiction elements.

Conversely another automotive experience with relatively sophisticated ‘hardware’ at the developers’ disposal can be considered — pulling up to a petrol station to refuel. The interaction with self-service pumps is woefully inadequate (Figure 2). There is limited and/or confusing tactile or audible feedback to user input, and the LCD screen is often barely readable. In some cases, there is obnoxious promotion blasting out of speakers and emblazoned on displays pushing car washing or snacks. The experience can be a turn-off and make one brand experience indistinguishable from the next. But what an opportunity there is for the company that delivers a positive, multi-sensory experience in the near future. That brand can break through and gain customer recognition and brand loyalty.

**UNTAPPED HUMAN POTENTIAL**

Many will argue that developers need to be careful not to overload the consumer, but it is clear that humans will gladly adapt to gratifying change. They start out discovering life through very complex multi-sensory experiences, touching and tasting as they go, and developing the
ability to compute complex multi-sensory experiences, until social norms teach them to tame this sensitivity. People's interactions with products are largely a reflection of how they were raised to interact with people: they keep their distance, rely on visual analysis and verbal communication, and have been conditioned to refrain from using the senses of touch, smell or taste much of the time, with rare exceptions such as very personal relationships or anything relating to food. Following rules of social conduct, humans use products in ways that are socially acceptable, sublimating some of their most critical senses. But, as human beings, we do have this inherent ability to manage large and complex cognitive loads from multi-sensory inputs.

Product development professionals were quick to conclude that younger generations, weaned on new technologies, were capable of adapting and developing multi-sensory cognitive capabilities beyond expectations of previous generations. But is it a generational thing? It is true that practice helps in the development of complex multi-sensory sensitivity, and that age plays an important factor in willingness to adopt new ways of doing things. Research indicates that this is largely a resistance to change, rather than a missing ability. For example, Carnegie Mellon’s Human Computer Interaction

Figure 3 The grip details of portable drill handles give static tactile feedback
Institute (HCII) research shows a shift between generations while using a GPS device, from a preference for visual modalities for older generations, to an auditory modality preference for younger people. But the study also points out: 'In almost all cases, modalities worked best in combination, than they did alone, in terms of user preference, cognitive load, and actual task performance'. This means that even though the generations differed regarding their preferred lead modality, all agreed that additional stimuli aided in task performance. This kind of research should build confidence in all users’ adaptability when presented with well-considered multi-sensory experiences.

Additionally, research suggests that the effects of multiple sensory inputs may be greater than the sum of the parts. Researchers at Sweden’s Chalmers University report that ‘information received from one sense created expectations for experiences through other senses and the information perceived through the second sense was used to confirm or modify anticipated experiences.’ The study, as reported in International Journal of Design, also suggests that ‘the less prior knowledge participants had of the particular product, the more important the additional information delivered through the second sense appeared to be.’ Armed with this information, companies entering new market segments could utilise additional sensory stimuli to drive home their differentiation from category leaders.

**ESTABLISHING A PRACTICABLE BASELINE**

The design profession has not yet adopted a common understanding or vocabulary for incorporating and/or evaluating multi-sensory modalities. Defining a common vocabulary that can be shared across disciplines is an important first step in developing true multi-sensory design expertise. This is certainly ground that can be explored academically, through professional practice and professional design associations. To date, much of the definition work has been done by individual organisations, in support of their specific brands.

For example, DEWALT has long been a leader in VBL strategy and execution. The design leadership at DEWALT has driven multi-sensory design experiments and built multi-sensory prototypes to develop an understanding of how multi-sensory design can enhance the user’s product and brand experiences. They have worked strategically and tactically to design products in support of the core branding message of ‘Guaranteed Tough’. From the start, consistent VBL was a given. But the company also recognised the opportunity to move beyond visual aesthetics of the product to include ‘branded’ tactile and sound signatures.

Today, the brand has evolved to consider sophisticated classes of sensory feedback, such as static tactile feedback like the grip details of portable drill handles (Figure 3), all the way to dynamic tactile feedback of the ratcheting mechanism found in the 12-volt torch and many other products (Figure 4). They represent separate product tactile qualities critical to quality cues and user perception. This level of sophistication illustrates the maturing of the design management function as it addresses product and user experience through multi-sensory design.

Another good example of commonly shared vocabulary for discussing, measuring and designing the tactile modality was introduced by Marieke H. Sonneveld of Delft University of Technology, in ‘The
tactual experience of objects’ (Figure 5) Unfortunately, a lot of these critical teachings remain modality specific and are not yet taught to product designers on any significant scale, with Delft University being a rare exception.6

As technology enables more complex user experiences, such as gestural interface and interaction, more sophisticated and interconnected senses, such as the vestibular (sense of balance) and proprioceptive/kinaesthetic senses (sense of movement) will enrich the user experience further while making the design for perception even more complex from a product development perspective.4 Some of the best examples of leveraging these senses include gestural interface used for gaming (Kinect and PlayStation 3) or any smart device applications using digital gyroscopes for user interface.

Users of more sophisticated multi-sensory rich systems like gaming will become both more skilled at leveraging multi-sensory interfaces, and demand more and more relevant stimuli in other products. As such, it will come as little surprise to see technology flowing into traditionally lower-tech products such as power tools. The new gyro technology developed by Stanley Black & Decker (parent company of DEWALT) is an example of how pervasive technology has become. Gyro integrates fairly sophisticated (yet now very affordable) electronics to recognise the user’s gesture — right twist to start clockwise tightening of screws, left twist to loosen, etc (Figure 6). With on-board smarts come opportunities to create new ways of using existing tools, and richer brand experiences.

**FOCUSING ON THE RIGHT SENSES FOR EFFECTIVE PRODUCT DESIGN EXPERIENCES**

As designers initiate their journey into multi-sensory design, there is a natural temptation to want to optimise product experience for *all* applicable senses. An example would be the temptation to design carefully for maximum audible and tactile feedback for all products. This is a natural tendency, because analytical design methodology teaches designers to isolate variables better to control their outcomes. But this approach is limiting. While user sensory perceptions are multi-modal (multiple senses), they are also contextual (affected by the environment of use).

Designing effective product user experiences is an exercise in creating, and controlling holistic perception, rather than
Figure 5 The tactual experience of objects

Figure 6 Even traditionally lower-tech products have fairly sophisticated electronics

individual senses. The goal of multi-sensory design is to affect perceptual systems, with consideration for how the different senses have an impact on perception and interact and affect other modalities. Understanding the role of the senses and quantifying their relative influence are the two steps Martin Lindstrom suggests in his book, ‘Brand Sense’, in which he states:

‘Designing for perception (or multi-sensory design) requires understanding both the psychological dimension of product design, grounded in user research, ethnographic research, persona development and cultural understanding of your target audiences, and also mastering the technical
aspect of sensory measurement and quantification. Ideally, the two can be studied concurrently, and analyzed to create hypothesis, define research protocols and reach conclusions to inform the product development process. Multi-sensory design requires establishing a rigorous scientific process where user experiences and perceptions are studied qualitatively and validated quantitatively. Defining specific and shared vocabulary is key for product development teams to develop their understanding in multi-sensory design and evolve their expertise over time.1

While leveraging smell and taste has powerful implications for user experience, such as the unique perception associated with the ‘new car smell’, it represents a level of sophistication that would be a challenge to integrate in most product categories. Their integration in the design toolbox should definitely be considered a goal, but the design profession should develop its understanding and mastery of the tactile, audible and kinaesthetic senses as a first step in furthering multi-sensory design.

CHALLENGES TO ADOPTION
Multi-sensory branding is still the exception, rather than the rule. There are numerous challenges, including a lack of sharing within the design profession among traditionally trained industrial designers and user interface and ergonomics experts. The majority of academic institutions have been slow to embrace multi-sensory approach, and this leads to a lack of access to cohesive information, even for the seasoned designer who wishes to push his or her work forward. The lack of a defined multi-sensory design vocabulary exacerbates the problem of building it into an existing design process. But private companies with strong design cultures are most likely to champion the multi-sensory approach.

The best thinkers in upper management recognise that brands are built where their service or products touch their customers. Organisations that go beyond branding as a marketing tool, and understand branding to be a way of thinking — most effectively supported by design — are poised for success.

Structural change is required. Leadership needs to be more enrolled, and more technically aware, in making their product experiences multi-sensory brand builders. Corporate leadership needs to ask design professionals ‘what are you doing from a multi-sensory product design standpoint?’, and then give design professionals the means to leverage that expertise.

CONCLUSION
The best brands have a cohesive and consistent approach to product design; they leverage their brand strategy to inform decision-making at a corporate level, which in turn enables design organisations to deliver product experiences that are supportive of the brand personality, values and message.

Too many organisations are still pushing a branding message that is inconsistent with the products they actually design, and rely on marketing and advertising to enforce the message to the end consumer. With ever-rising consumer expectations, the field is wide open for those adept at multi-sensory design to carry the day. The best organisations have come to realise that product design is the unique opportunity to translate branding values into tangible and palpable user experiences.

Leaders in their respective categories are likely to lead the charge and drive adoption of more and better stimuli. And
where there is a leadership void, upstarts will emerge, setting new standards and earning share through improved brand experiences. As is always the case, the only true risk is in standing still.

References