



Fixing Retail's Weakest Link: Payment

White Paper Series

Sentient Decision Science

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“Over 75% of consumers have a negative emotional reaction to the experience of paying for their purchases.”

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Introduction



How is this for a sobering statistic? Over 75% of consumers have a negative emotional reaction to the experience of paying for their purchases. Think about that – of the billions of purchases made every day, three out of every four buyers walk away from the register feeling distressed. What’s more, this is true whether the register is a real one in a physical store or a virtual one in an online or mobile environment.

We stumbled across this discovery as part of a larger research study into the emotions of shopping in partnership with [Made Music Studio](#). To be sure, the emotions that we experience while shopping vary to a large extent on our own personal attitudes about shopping, as well as on the type of shopping being done. Our experiences range from tedious and utilitarian to exciting and joyful, with a broad spectrum in between. However, regardless of the emotions we feel while shopping, there is one inescapable truth – the experience of actually paying for things is a downer. Perhaps, to quote Galileo, “all truths are easy to understand once they are discovered; the point is to discover them.”

The negative emotions we experience during payment can include anxiety, guilt, shame, fear, and even anger. Subconsciously, we’re asking ourselves questions like, “Am I paying too much for this?” or “Are my payment details safe?” or “Can I really afford this?”. Most of us aren’t even

aware that these emotions are at play, eating away at any positive feelings created during the rest of our shopping experience and leaving us with a vague, nagging sense of disquiet.

Because these irrepressible emotional responses typically occur on a sub-conscious level, we need to employ neuroscience-based techniques to isolate and quantify them. For over a decade, Sentient has pioneered the application of these techniques – in particular, implicit association testing – to marketing research, and in that time we’ve collected more than half a billion neural measurements. When it comes to sound specifically (using our proprietary sonic research tool, SonicPulse®, developed in collaboration with Made Music Studio), the most intensely negative reaction that we have ever measured is the experience of someone screaming in pain; by contrast, the most intensely positive emotion we’ve ever detected is the experience of a baby laughing. To anchor the retail payment experience in the context of these more familiar experiences, the retail payment experience is quantitatively closer to screaming in pain than listening to baby laughter.

Why Does This Matter?

To understand why this matters we need to take a brief detour, quite literally, down memory lane. The human memory – our ability to preserve and recover information we’ve experienced – is a complex and surprisingly flawed set of processes. Even when we think we are remembering specific facts, our recollection of events is typically incomplete and heavily dependent on what we were feeling at key points during an experience.

Our memory of any experience is dependent on two things: what we were feeling at the most *extreme* (peak) point, and what we were feeling when the experience *ended*. Our memories are typically not an average of the experience or the amount of time we were engaged in the situation. This psychological heuristic, popularized by Daniel Kahnemann¹ and Barbara Frederickson, is known as the Peak-End Rule, and explains why we can actually be irrational in our recollection of events. It also suggests that our memories consist of a series of highlights rather than an unimpeachable record of facts and events.

The “end” point of the shopping process is payment, where consumers have to part with their money in exchange for the goods and services they want to buy. Bearing in mind that this part of the particular part of the experience is emotionally distressing for the vast majority of consumers, it becomes clear that we haven’t really applied the lessons of the Peak-End rule to the shopping process.

1. WHY THE “PEAK” IS MEMORABLE

Put simply, we remember more intensely emotional experiences than less intense ones², so we tend to believe that these extreme moments represent the entirety of the experience being recalled³.

2. WHY THE “END” IS MEMORABLE

A phenomenon called recency bias means that the process of forming new memories makes it harder for us to recall older ones⁴. These “serial position” effects mean that we recall last element of an experience more vividly than the beginning or the parts in the middle⁵.

We invest heavily in the architecture and design of brick-and-mortar stores, using planograms, traffic flow & queue analyses, shelf findability tests, pack design, and endcap optimization to enhance the shopping process. While these may help orchestrate an ideal “peak” consumer experience, they all stop short of tackling the “end” part of the experience – payment.

Likewise, in the world of mobile commerce, we tend to dwell obsessively on the user experience and user interfaces of our applications using wireframes and human-centered design principles to optimize the shopping experience, but then we typically rely on a payment plug-in applet or API to actually process a customer’s payment.

Unfortunately, we’re doing exactly the same thing in the emerging world of voice commerce, dwelling on the type of voice our Voice-User-Interface (“VUI”) assistants should have, and how consumers can engage in product discovery through the design of the voice interface, but we continue to largely ignore the actual payment experience.

In this context, the payment experience is retail’s weakest link, eroding the emotional resonance of both the retailer we visited AND the brands that we’ve bought.



¹Frederickson, Barbara L.; Kahneman, Daniel (1993). “Duration neglect in retrospective evaluations of affective episodes”. *Journal of Personality and Social Psychology*. **65** (1): 45–55

²Dutta, Satrajit; Kanungo, Rabindra N.; Freibergs, Vaira (1972). “Retention of affective material: Effects of intensity of affect on retrieval”. *Journal of Personality and Social Psychology*. **23** (1): 64–80

³Morewedge, Carey K.; Gilbert, Daniel T.; Wilson, Timothy D. (2005). “The Least Likely of Times: How Remembering the Past Biases Forecasts of the Future”. *Psychological Science*. **16** (8): 626–630.

⁴Baddeley, A.D., Hitch, G. The recency effect: Implicit learning with explicit retrieval?. *Mem Cogn* **21**, 146–155 (1993).

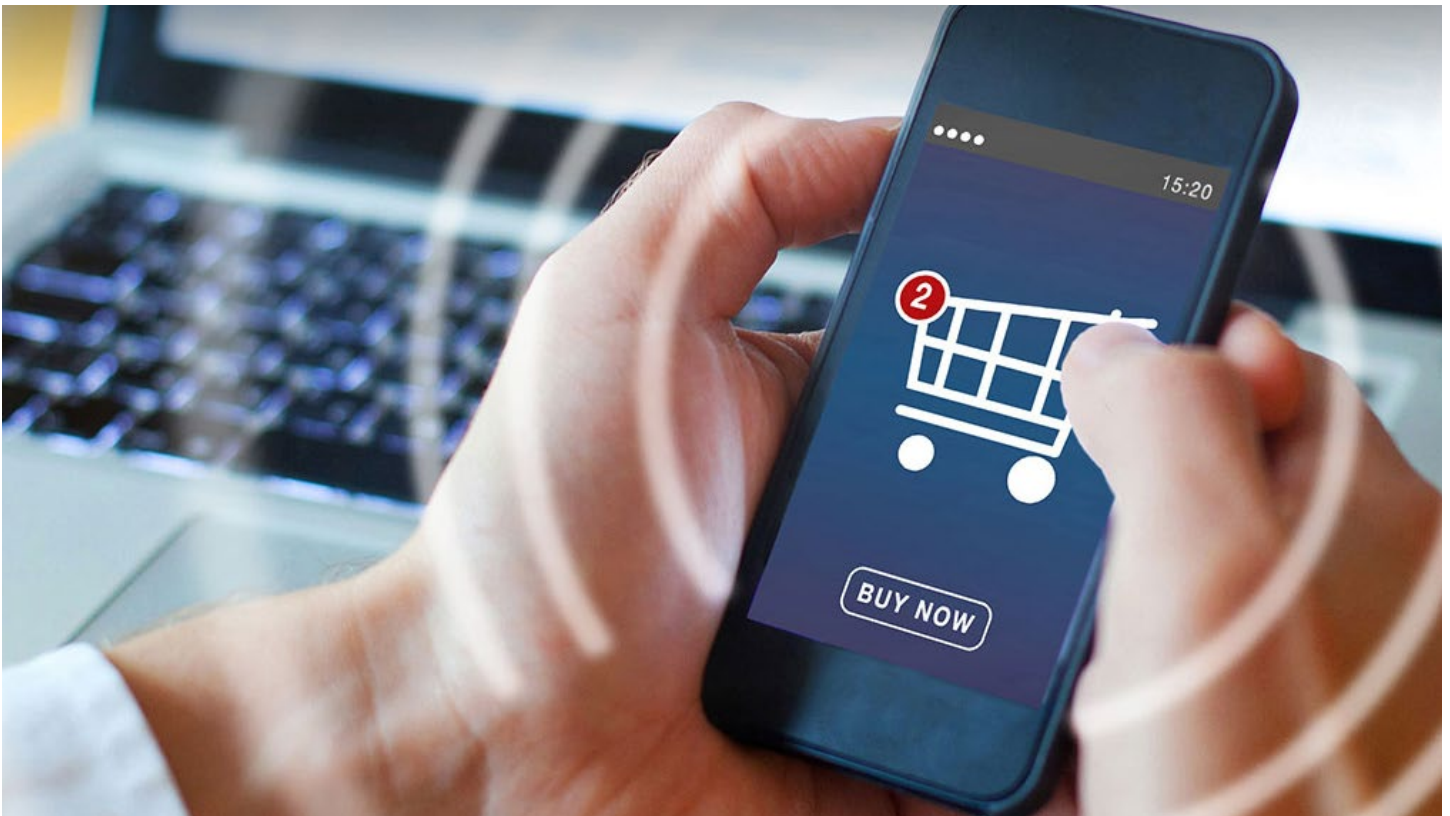
⁵Garbinsky, Emily N.; Morewedge, Carey K.; Shiv, Baba (2014). “Interference of the End: Why Recency Bias in Memory Determines When a Food is Consumed Again”. *Psychological Science*. **25** (7): 1466–1474.

What Can We Do About This Problem?

Although it is changing slowly, the vast majority of today's payment experiences are generic and unbranded, devoid of sensory cues that might mitigate against the negative emotions consumers are feeling in the moment. We wanted to explore whether it was possible to re-design the payment experience to transform it from a profoundly negative one into a positive one. This led us to develop and test two hypotheses:

- Knowing that one of the main causes of the negativity of payment stem from concerns over transaction security (e.g., Will I be charged the correct amount? Will my card details be skimmed?), our first hypothesis was that integrating trusted and contextually-relevant brand logos into the payment experience would help allay those concerns.
- Knowing that sound and music can infuse experiences with meaning and emotion, our second hypothesis was that layering well-designed, purpose-built sounds into the payment experience would introduce enough positivity into the experience to at least offset its inherent negativity.

Is it possible to re-design the payment experience to make it a positive one rather than negative?



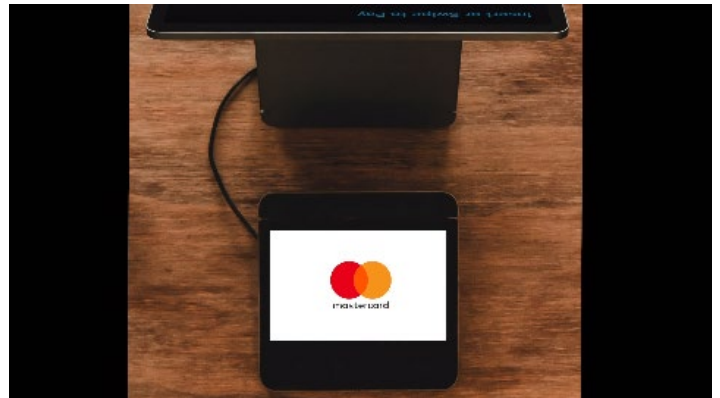
Results of Testing Our First Hypothesis

Integrating Visual Branding

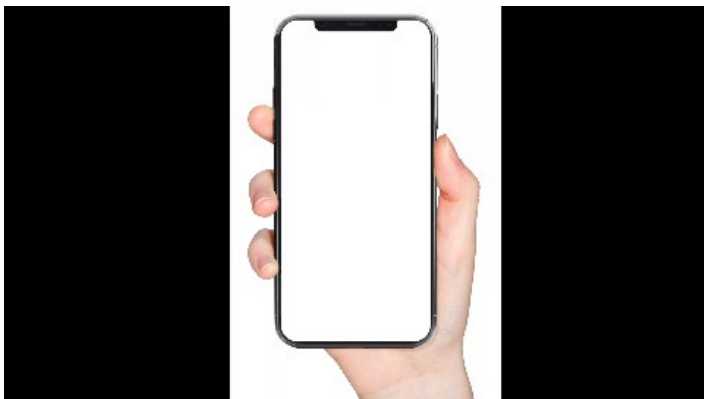
Generic In-Store Payment Experience



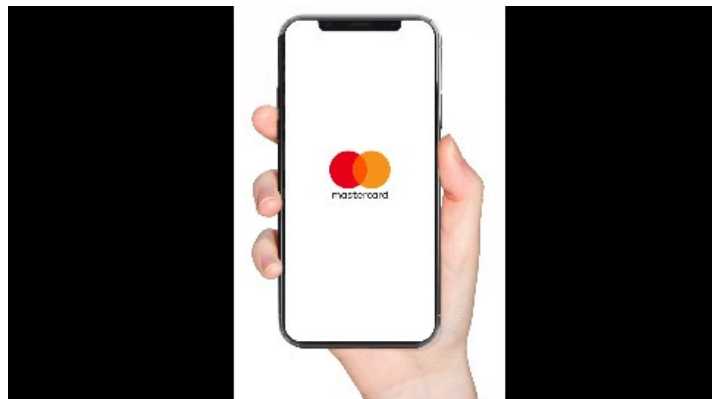
Visually-Branded In-Store Payment Experience



Generic Mobile Payment Experience



Visually-Branded Mobile Payment Experience



To test our first hypothesis, we measured consumers' emotional responses to the same payment experiences but with integrated visual logos for three different types of players in the retail payment process:

- Card Networks (like Mastercard, Visa, & American Express)
- e-Cash / Digital Wallets (like ApplePay, GooglePay, & Venmo)
- Large Retail Brands (like Target, Costco, & McDonald's)

From a visual perspective using the Mastercard logo to illustrate, the payment experiences now looked quite different (as shown in the videos above - double click each image to play).

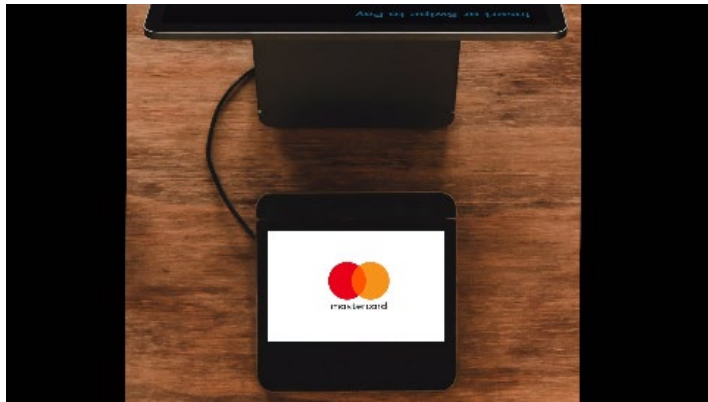
Since the vast majority of VUI / smart speaker devices do not have visual displays, VUI-based payment experiences were excluded from this "visual branding" test.

The results were promising for both card networks and large retailers. Integrating the visual logos for both types of brands into in-store and mobile payment experiences was able to offset much of the negative emotion of payment, pushing the overall response to the emotionally neutral range. Results for the digital wallet brands were decidedly less positive – their visual logos had no positive effects on consumers' emotional responses to payment, either in-store or mobile. However, despite the relatively positive results for card network and large retailers, the Peak-End rule suggests that we need to push beyond simply mitigating negative emotions and actually deliver an emotionally positive experience; so while the hypothesis was proven, we did not accomplish the strategic objective of transforming a negative experience into a positive one.

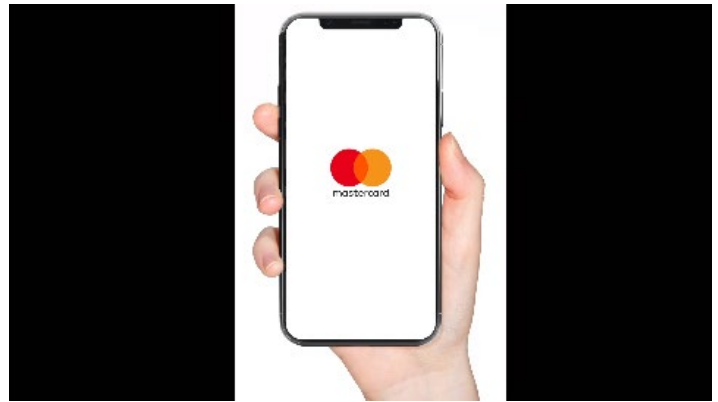
Results of Testing Our Second Hypothesis

Adding Sound To The Experience

Multi-Sensory In-Store Payment Experience



Multi-Sensory Mobile Payment Experience



Generic VUI Payment Experience



Sonic-Enhanced VUI Payment Experience



To test our second hypothesis, we measured consumers' emotional responses to visually-branded payment experiences but with an added sonic element. All of the card network and digital wallet brands included in the test have already developed and published either a sonic logo or custom-designed payment sound, so each brand was paired with its own sonic signature. However, since very few of the retailer brands have a similar set of sonic assets in place, we partnered with sonic branding experts [Made Music Studios](#) to develop a bespoke "payment experience" sound that could be coupled with any retailer brand's visual logo.

Again using the Mastercard logo to illustrate, the in-store and mobile payment experiences now had a multi-sensory dimension (as shown in the videos below - double click each image to play).

As outlined earlier, since most VUI/smart speaker devices do not have visual displays, the payment experience we tested at this stage had only a sonic element added in, as shown in the videos above (double click to play). With such a wide range of sounds tested, the results vary significantly

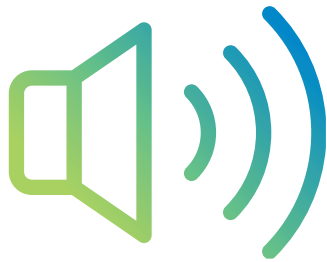
by brand / sound pairing. For example, Mastercard's visual logo paired with their custom payment sound results in in-store and mobile payment experiences that are *less emotionally positive* than the payment experience that only used their visual logo; in other words, adding in Mastercard's payment sound actually made the payment experience worse! For ApplePay, the results were quite different – adding in the Apple payment sound pushes the payment experience from negative into neutral territory. (For a full list of brands and sounds tested, please contact the author.)

The most impressive results, however, came from Made Music Studio's purpose-built payment sound that that was paired with large retail brands. These combinations generated the strongest emotional responses, pushing the in-store and mobile payment experiences well into positive territory, in the 65-80th percentile range in our normative database. It is worth noting that the VUI response were less positive, suggesting that what works in mobile and in-store can't necessarily be simply ported across all channels, and more sonic work is needed to optimize voice commerce transactions.

Key Takeaways

A Custom Sonic Signature Transforms the Payment Experience

The combination of trusted brand logo and custom-designed sonic signature was able to completely transform the consumer payment experience from an emotionally negative one fraught with anxiety, guilt, and even fear into an emotionally positive one. The benefits for both the consumer and all of the brands involved in the shopping process are considerable. The lessons learned for marketers are equally considerable:



SOUND HAS EMOTIONAL CLOUT

Sound is a largely untapped or under-leveraged element of a brand's identity. In an era where most brands struggle to establish (much less sustain) meaningful and relevant connections to consumers, companies cannot afford to ignore the impact that well-designed and thoughtfully integrated sound can have on how they are perceived.



NOT ALL SOUND IS GOOD SOUND

Mastercard's payment sound is a sonic variation of its corporate sonic logo, which was released to much fanfare in 2020. While consumer response to the corporate sonic logo has been emotionally positive, Mastercard has clearly missed the mark with its payment sound. They are not alone: the sonic branding landscape is littered with brands that have slapped a poorly-designed or badly-matched sonic logo on top of their visual identity and actually damaged their brand equity in the process. A well-designed sonic logo emerges from a carefully planned sonic identity system produced, tested, and refined by industry-leading sound specialists like Made Music Studio.



SOUND'S IMPACT DEPENDS ON ITS CONTEXT

Isolating and quantifying our emotional response to sound requires sophisticated measurement techniques. Most measurement approaches are simply inadequate or produce inaccurate results because they test sounds in isolation rather than in the full context of a sensory experience *and/or* they use conscious measures (e.g., asking people directly how the sounds make them feel) to quantify subconscious effects. Making a significant investment in your brand's sonic identity system also means committing to an ongoing and disciplined approach to measuring its impact on your brand's equity.

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Joe is an award-winning researcher and marketing strategist focused on understanding the implicit and explicit drivers of human behavior. He has built high-impact research organizations and developed ground-breaking methodologies from both the client and agency sides of the research table.

With Sentient Decision Science, he works with senior client executives across product development, brand management, and marketing communications to drive strategic choice and action. Joe is an in-demand speaker with a reputation for innovation and thought leadership, presenting regularly at industry conferences and client events on topics ranging from behavioral science & neuro-marketing, business model innovation, and the effective exploitation of emerging technologies.

Visit sentientdecisionscience.com for more information on the fundamental drivers of consumer behavior.

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