Slowly, Then Suddenly: How Products Fail

What happens when you breach the trust thermocline

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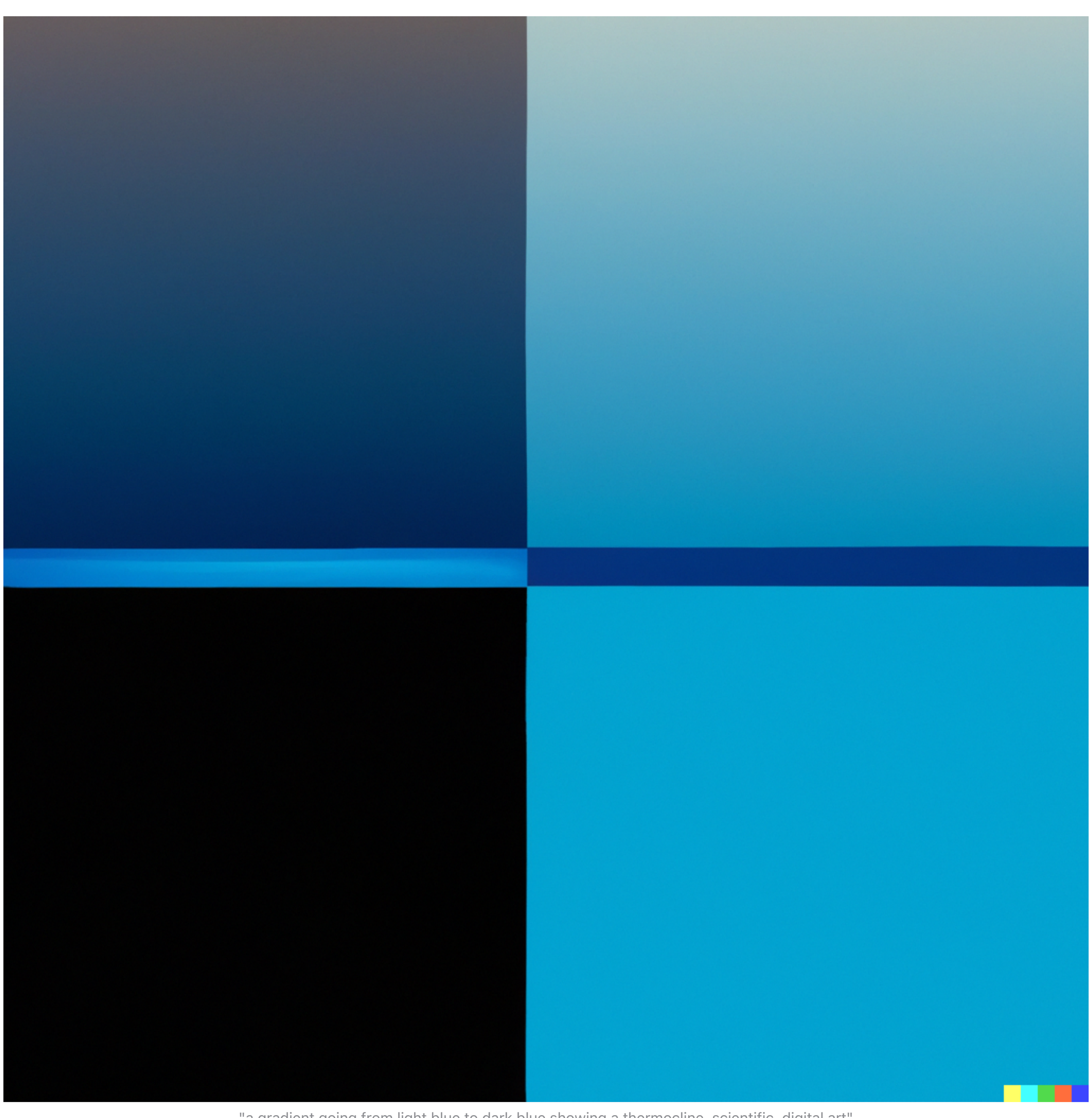
MARCH 8, 2023



"a gradient going from light blue to dark blue showing a thermocline, scientific, digital art"

Yesterday Twitter broke for several hours: Links weren't working, images disappeared, and TweetDeck went down. Twitter has been a pervasive part of our world for many years, almost in spite of itself. But the product is now fraying—will a drop in users follow?

So far, the answer seems to be no. We're all still tweeting despite the service interruptions. But there's reason to believe that might not go on forever. This seemed like a good time to resurface one of our favorite posts from last year: Breaching the Trust Thermocline Is the Biggest Hidden Risk in Business.

In it, Gareth Edwards argues that you can degrade the experience of successful consumer products for some period of time without seeing any corresponding drop in growth or retention rate. However, if you push things too far you'll pass a critical threshold—a trust thermocline—where usage collapses.

Is Twitter close to breaching a trust thermocline? Decide for yourself.

In large bodies of water, the temperature drops slowly the deeper one dives. That change can, if the descent is slow enough, feel almost imperceptible. Yet at a certain point, the water temperature drops sharply and alarmingly. This point is the thermocline—a near-physical barrier where warm water meets cold. The shift between the two is sudden and dramatic.

In business, particularly digital services or businesses relying on a subscription revenue model, trust works in the same way. Wired into those products and services is a "trust thermocline." It is a point which, once crossed, otherwise healthy businesses and products suddenly collapse.

The easiest way to understand how trust thermoclines work is to look at how they fail. Content services, both print and digital, are particularly prone to these failures. So are social media networks or businesses that focus on delivering quality-of-life monthly services—from TV streaming to beers of the month. Broadly, any business in which the consumer forming an *emotional* relationship with the product contributes to adoption is at risk of such failures.

In most cases, that failure follows a pattern: the company or service will be growing, whether in users or revenue, and perhaps rolling out new products that are bundled within an expanded subscription, or showing good adoption on their own. In many cases, there will not even seem to be a new rival in the market, with existing ones failing to threaten them through market share. Then suddenly, over a short period of time, sales and user numbers collapse. Consumers move to seemingly inferior products or simply disengage completely from the business.

The thermocline has been crossed.

At its simplest, the trust thermocline represents the point at which a consumer decides that the mental cost of staying with a product is outweighed by their desire to abandon it. This may seem like an obvious problem, yet if that were the case, this behavior wouldn't happen so frequently in technology businesses and in more traditional firms that prided themselves on consumer loyalty, such as car manufacturers and retail chains.

These collapses happen because most businesses fail to properly understand how a reliance on emotional engagement changes the way consumer trust in their product works. That reliance is particularly common with digital products or social media, where personal image, follower count, and "influencer" behavior are a critical part of the user experience.

The greater the emotional engagement, the more trust is a communal asset, not an individual one. In a 2019 paper for the *Stanford Technology Law Review*, Professor Christopher W. Savage described this collective trust as an "ambient trust commons." Consumer trust is a pooled resource as well as an individual one. A multitude of micro-infractions for consumers don't just harm an individual's experience; they damage that trust commons until the trust thermocline is breached for large groups of users *at the same time*.

The concurrent loss of trust by many users is what makes such a breach so dangerous. Many businesses fail to spot the risk of these collapses because they treat customer experience as a linear system. Companies, particularly tech companies, like to see customer experience as a linear system. Linear systems are those in which cause quickly leads to effect. They're easier to measure and execute strategy around because they imply that there is a "straw that will break the camel's back" that, correctly identified in time, can be avoided: prices can be gradually raised, a product offering diluted, terms and conditions changed. All of these things can be done as long as enough metrics are being gathered, the growth curve still heads upward, and customer retention services can persuade annoyed users not to cancel.

But the trust thermocline is non-linear. Nonlinear systems are those in which causes can happen far in advance of their effects, even when a direct relationship between them can be identified. This is why so many businesses miss the looming presence of a trust thermocline. In scientific terms, it's a system of "hysteresis," in which the current state of a system depends on the consumer's cumulative history with that system as well as how they perceive their current relationship with it.

As a result, many of the issues that cause a consumer to approach —and ultimately cross—the trust thermocline can have happened in the past. "Stickiness" is for real: a consumer will persist in a bad economic or product relationship beyond the point where it makes logical sense to do so because an element of the trust, and emotional commitment, remains.

But once *that* thermocline is crossed, there are few routes back. There is no "final straw"—a price cut, a promise to "do better"—that can be reversed to draw them back in, nor was there one that could be avoided. The triggers for each individual are different, but their effect on the group is cumulative.

Trust thermoclines are so dangerous for businesses to cross because there are few ways back once a breach has been made, even if the issue is recognized. Consumers will not return to a product that has breached the thermocline unless significant time has passed, even if it means adopting an alternative product that until recently they felt was significantly inferior.

For businesses that have breached their trust thermocline, the ways back are thus limited. Most of them rely on having sufficient financial reserves or product lock-in to be able to skip a generation of consumers and start again. Microsoft's lock-in on its business software enabled them to weather a significant pre-millennium storm, and a hard pivot toward gaming with its Xbox gave the company time to rebuild relationships with business tech consumers. That salvaging its reputation took almost 20 years shows how serious a breach of the trust thermocline can be.

In most cases, though, the only real solution is to avoid crossing the trust thermocline at all. It requires placing emotional engagement and trust at the heart of product strategy, and accepting that the causes of trust failures are non-linear. Businesses need to address their customers' complaints early and not dilute the value of their product. Informing users that prices are being increased because new features are available can damage trust if those features weren't asked for to begin with. Just because a consumer swallows a new charge or price increase doesn't mean they accept it as necessary.

Twitter was already experiencing a number of issues that large percentages of its user base considered to be breaches of trust even before Elon Musk's takeover—issues like fake accounts and spam, failures to act promptly on disinformation, and uneven or confusing applications of its moderation policies. It was nicknamed "this hellsite" among sections of its user base, a term used only partially in jest. These were clear warnings that it was approaching its own trust thermocline, and Elon Musk's takeover of the site has only hastened that progress. His plans to overhaul verification and turn it into a pay-to-play service have not only aggravated the existing trust concerns, but raised them for an entirely new group as well: the big brands who maintain a presence and, crucially, pay to advertise on Twitter. Within hours of the initial roll-out of Musk's paid-for verification option, a fake Eli Lilly account was tweeting that the pharmaceutical firm would make insulin available for free. For the *real* Eli Lilly, that represented a catastrophic and instant crossing of the trust thermocline on the part of Twitter itself.

Former digital service poster-child Evernote has learned this same lesson. One of the first cloud-based note services, Evernote once boasted over 220 million users. Starting with the removal of its free tier in 2016, a series of poor decisions on pricing, device restrictions, and privacy eventually led to a rapid decline in users at a time when the firm still seemed unchallengeable in the marketplace. Despite reversing a number of those changes, Evernote never recovered, and the company recently announced that it was being sold to Italian app maker Bending Spoons. At the time of this writing, Evernote does not even feature in the top 100 productivity apps chart for iOS.

Nor is Twitter the only big company with potential thermocline problems. Firms like Netflix and Disney's Parks Division have been sinking slowly towards their own thermoclines as well. In the case of Netflix, users are witnessing a reduction of catalog depth alongside price increases, the introduction of an advertising tier, and shifting subscription models. Disney faces the growing perception among fan communities that its parks do not provide a sufficiently differentiated experience from regular theme parks; they just cost significantly more.

In both cases, the collapse in customer engagement and purchases, should it come, is likely to seem sudden. For Disney, that may not be for decades, as a key element of the emotional attachment park visitors have to their product is created when they are children. Happy memories of park visits as a child translate to returning to the parks decades later as parents themselves, looking to create memories for their own children. Increasingly, those happy memories are not being created.

Should both firms experience customer drop-off, then they will no doubt hunt for immediate causes and problems they can fix to "win" those customers back. In doing so they will have fallen into that well-worn trap of seeing their engagement model as a primarily linear system, when it isn't. They'll fail to understand that the opportunity to change course—to rebuild that lost trust—has long since passed.

"How did you go bankrupt?" the character of Bill asks another character in Ernest Hemingway's *The Sun Also Rises.* "Gradually, then suddenly," comes the reply. Businesses need to be aware that if their product relies on emotional engagement with the consumer, a breach of the trust thermocline may see them experience the same.

Gareth Edwards is a digital strategist who has worked for startups and corporations in both the UK and U.S., helping them develop digital brands and products. Follow him on Twitter.