



How Smart Are "Smart" Wearables?

Why Health and Wellness Trackers are Failing and How Engineered Empathy May Help them Succeed

It's not news that wearables are forming a booming market.¹ In fact, they're the most popular fitness trend for the second year in a row—and **they're projected to be worth \$34 billion by 2020.**² But despite the overwhelming

popularity wearables seem to be experiencing, stocks are falling and many companies are either cutting their losses or going bankrupt. Despite its recent acquisition of smartwatch maker, Pebble, Fitbit's stock has fallen

more than 55% since its IPO on June 18, 2015,³ Apple's Smartwatch sales have declined, and Jawbone is looking to sell itself amidst unprofitability and product performance issues.⁴ **Worse still, 50% of wearable users lose interest after a few months of interacting with their devices** due to myriad issues, including finding the device unattractive or cumbersome, experiencing short battery life, and having problems syncing their device with a smartphone.⁵

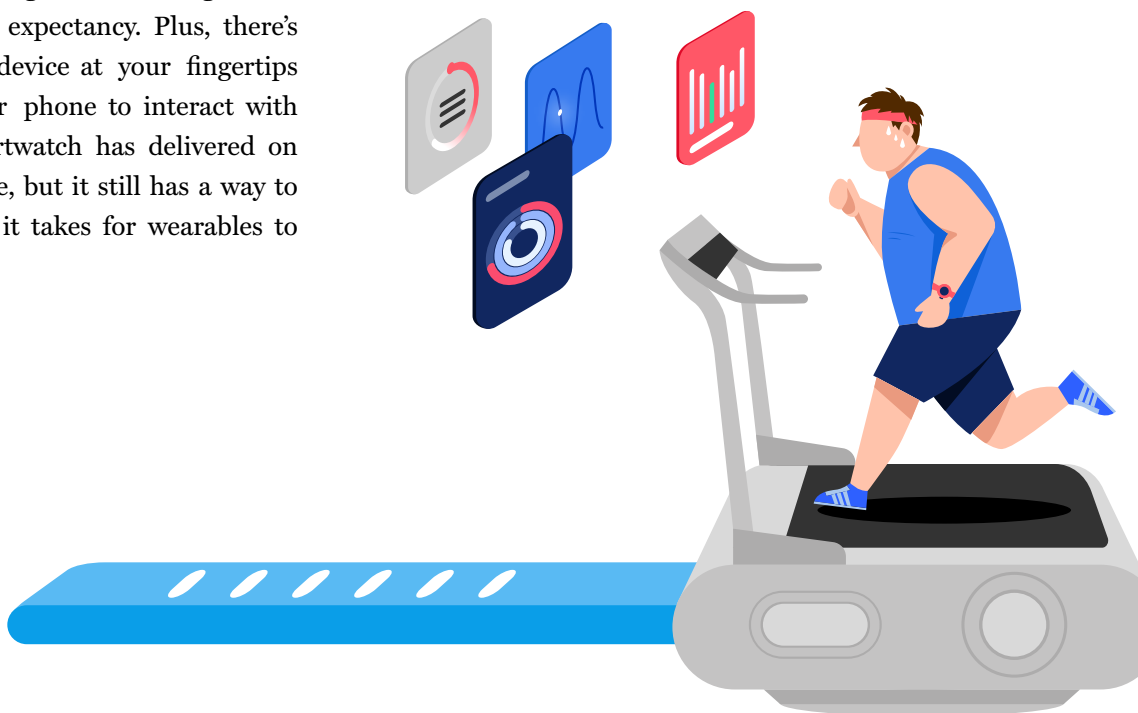
The truth is that in their current state, wearables aren't meeting user needs in sustained, cogent ways. In fact, wearables are failing the people who need them the most: the poor, chronically ill, and the elderly.⁶

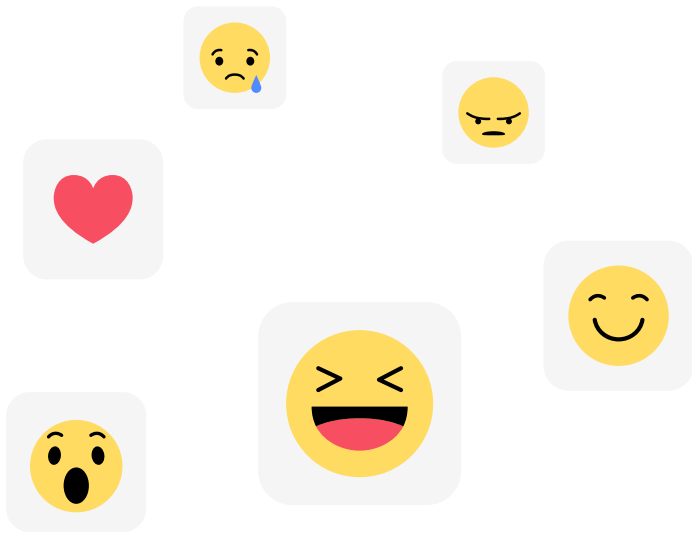
There's even evidence that they may be undermining weight loss efforts⁷; **a study in September found that when people were put on a weight loss program, the group using a wearable device lost less weight, not more.**⁸ And

while researchers have theorized reasons why, no one has managed to crack the code on creating the wearable device that generates meaningful user engagement.

In theory, wearables give us the hope that we can be the people we aspire to be. **It's hard to turn away from devices and services that promise to guide us toward our perfect selves;** at our goal weight, functioning at our peak, and enjoying a higher life expectancy. Plus, there's the convenience of a connected device at your fingertips without having to pull out your phone to interact with every few minutes. Apple's Smartwatch has delivered on some of this connected experience, but it still has a way to go on the "cultural engineering" it takes for wearables to become a mainstream product.

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So here's the \$34 billion dollar question: with efficacy being called into question, declining sales, and engagement at an all-time low, **what will it take for wearables to become the seamless extensions of self that we all want them to be?** Despite their shortcomings, there is something persistently compelling about the idea of wearables that appeals to millions of consumers, which, in turn, means there is still a great opportunity to explore sustainable solutions.

The key to any product or service's success is a thorough understanding of the user's needs and emotions. Here at Sequence, we prototype, incubate, and test our way towards as much user-driven insight as possible. If a holistic set of user data and synthesized insights are paramount to success, how can we expect to feel heard and understood by technology that has yet to develop its capacity for emotional

intelligence? These devices are intended to guide us along some of life's most intimately personal, physically and emotionally taxing journeys, and yet their ability to account for the complexities that come along with them -- the adequate emotional context, in other words -- remains limited. Knowing our heart rate, sleep patterns, and caloric intake is just the tip of the personal information iceberg; human behavior is far too complex to be captured in these simple stats. While recent developments give some promise to the future of a more sensitive, compassionate generation of wearables,⁹ **it's not until these devices start manipulating more holistic data sets that they'll be able to provide a truly impactful user experience.** To make a product that delivers, you need to provide highly personalized experiences that also account for the complexities that emotions and unpredictability introduce into the user's daily life.

So how might these future-state wearables make a difference in someone's day-to-day activity? Take a perfectly innocent reminder to "boost your steps": it may be helpful on an uneventful, drama-free day, but the same reminder could appear entirely tone deaf if delivered on a day when something emotionally taxing has occurred, such as a layoff or a sudden illness. **Imagine the difference in**

effectiveness if the wearable were able to react to relevant data points and reflect an empathetic suggestion accordingly. Rather than nudging the sleep-deprived, worn out parent of a newborn to “boost their steps,” the device might offer up a mindfulness exercise geared towards new parents to help reduce stress. **By tuning into easily accessible data sets such as weather, current events, calendar reminders, and to-do lists, the potential for personalization becomes endless.** (In the case of the new parent, a wearable could easily uncover relevant life-stage information by mining recent app purchases and Amazon orders). And while necessary developments in artificial emotional intelligence (AEI) and biometric data collection may hinder products and services that feel truly emotionally intelligent, a lot more can be done to harness existing user inputs and data sets into more strategic, thoughtful outputs.

By tuning into easily accessible data sets such as weather, current events, calendar reminders, and to-do lists, for example, the potential for personalization becomes endless.

At Jawbone, for example, they started getting to know new users by asking them why they joined. Then, they pushed content based on those answers. Tracks covered anything from “I need to track sleep because I just had a baby” to “I’m trying to lose weight, but work stress is getting in the way.” Users could be pushed through various content series that encouraged new ways to destress, lose weight, or sleep better. Unfortunately, the system didn’t encourage the inclusion of various scenarios, so if work was stressing you out *and* you just had a baby, you’d only get pushed down either of those tracks, not both. Imagine if Apple pulled all your information, knew when you were having doctor visits and why, knew how far your office was from your home, tracked how much sleep you’d been getting, and gave you exactly the kind of push you needed to meet those goals (or even knew when *not* to push—we’re humans, not goal-oriented robots). Of course, **there’s a fine line between feeling understood and feeling violated, so extensive user research and testing, as well as user participation and permission, are crucial pieces of the design process.** And the truth of the matter is that these companies have most of this information already, so it’s not entirely out of reach for them to start using it to empower and repattern our behavior in productive ways.

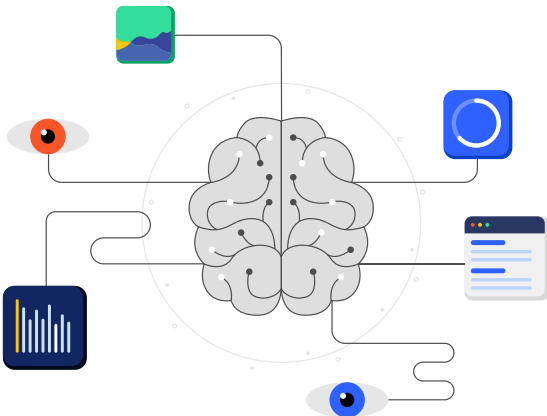


Key insights for a connected emotional experience:



Focus on Content.

Ask users what their goals are. There may be multiple goals, so building an interface that can handle the variance addressing them is essential. Then, get a good content team that can deliver on guiding users through those goals while testing reactions after each content push. Many companies place their focus on feature tweaks and development without looking too deeply into content, but at the end of the day, empathetic experiences aren't led by technology, they're driven by humans.



Smarter Algorithms, Smarter AI.

Smarter artificial intelligence and more sophisticated algorithms will do the most to unlock the truly personalized, human-like experiences we demand from our technology, and there are limitations to this that we haven't yet overcome. Even so, all technology still needs to be regulated and recalibrated by humans to enable the kinds of learning that will make a real difference.

Let the Experts Lead.

Wearable companies have more data than they know what to do with, so the aggregation of data isn't always successfully oriented towards repatterning habits. There are behavioral scientists and medical professionals in this space who are making interesting finds, but they are limited by interface issues and immobilized from the risk of hurting engagement metrics. The more these companies can collaborate on research and integrate their interdisciplinary findings into design, the better. Design should be driven by insights into mental and physical health optimization, not technical innovation for the sake of making something cool.



Sequence recently conducted a survey to explore engagement with fitness trackers, and found that **not only did the majority of respondents not own a wearable at all, but that those who did were not maximizing on its potential.**¹⁰

Their reported usage behavior and engagement levels were low, further corroborating the underwhelming user experiences that the greater wearables community has been reporting for some time. What we found noteworthy, however, was that **27% of people using fitness apps reported that the feature they use more than any other is that which allows them to set and track goals.**¹¹ If identifying and achieving goals are what matter most to health and wellness seekers, these apps have no choice but to focus themselves on consistent, highly-contextualized functionality that encourages long-term commitment.

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We live in a culture that places high value on bettering ourselves (and especially our bodies), yet many of us still struggle to realize the goals we set for ourselves; according



to our survey, **only 6% of respondents reported sticking to their fitness-related New Year's resolutions.**¹² People crave a new, more empathetic wave of wearable devices that cast a deeper – not just wider – net, capturing data that accounts for habit formation, social motivation and emotional context. They want support that goes one step further to more closely resemble that which comes from human-to-human interactions. This is a tall order, one that relies heavily on future advancements and breakthroughs in AI and AEI, among other things. Only time will tell where the evolution of wearables is headed, **but we're hopeful that whatever comes next will demonstrate a better understanding of the inextricable link between our physical and mental health.**

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Sequence surveyed 1000 individuals in October 2016. This survey was completed online and responses were random, voluntary and completely anonymous. Questions? Reach us at hello@sequence.com.

Sources

1. Leo Sun. (Nov 24, 2016). *11 Wearables Stats that Will Blow You*. Retrieved from <http://www.foxbusiness.com/markets/2016/11/24/11-wearables-stats-that-will-blow-away.html>
2. Paul Lamkin. (Feb 17, 2016). *Wearable Tech Market To Be Worth \$34 Billion By 2020*. Retrieved from <http://www.forbes.com/sites/paullamkin/2016/02/17/wearable-tech-market-to-be-worth-34-billion-by-2020/#4e4167fe3fe3>
3. Lauren Goode. (Dec 7, 2016). *Fitbit formally announces that it is buying smartwatch maker Pebble*. Retrieved from <http://www.theverge.com/2016/12/7/13867158/fitbit-buys-pebble-smartwatch-acquisition-deal>
4. Amir Efrati and Reed Albergotti. (Aug 8, 2016). *Jawbone Tested Market for Buyer, Delays August Payment*. Retrieved from <https://www.theinformation.com/jawbone-tested-market-for-buyer-delays-august-payment>
5. Teena Maddox. (Feb 13, 2016). *Wearables have a dirty little secret: 50% of users lose interest*. Retrieved from <http://www.techrepublic.com/article/wearables-have-a-dirty-little-secret-most-people-lose-interest/>
6. J.C. Herz. (Nov 06, 2014). *Wearables Are Totally Failing the People Who Need Them Most*. Retrieved from <https://www.wired.com/2014/11/where-fitness-trackers-fail/>
7. Gretchen Reynolds. (Sep 20, 2016). *Activity Trackers May Undermine Weight Loss Efforts*. Retrieved from <http://www.nytimes.com/2016/09/27/well/activity-trackers-may-undermine-weight-loss-efforts.html>
8. Mandy Oaklander. (Oct 4, 2016). *There's Even More Evidence That Fitness Trackers Don't Work*. Retrieved from <http://time.com/4517033/fitness-tracker-fitbit-zip-exercise/>
9. Lily Prasuethsut. (Jun 28, 2016). *Sensaura wants to track emotions through the wearable you already own*. Retrieved from <http://www.wearable.com/wearable-tech/sensaura-emotion-tracking-wearable-2899>
10. Proprietary Sequence Research (October 2016)
11. Proprietary Sequence Research (October 2016)
12. Proprietary Sequence Research (October 2016)