

# Never Offline

## **The Apple Watch is just the start.**

### **How wearable tech will change your life—like it or not**

Apple isn't in the business of inventing things, or at least not primarily. It practices a grislier trade: resurrection. The company's modus operandi is to browse for dead product categories, looking for freshly dug graves that might contain carrion ripe for reanimation— digital music players, tablet computers. Sometimes it comes across the walking dead, like the smartphone business, which had died though nobody noticed.

When it finds a likely candidate, Apple dissects it and studies the various causes of death. Then it builds something so completely thought through, so seductively designed, so snugly embedded in webs of content and services and communications, that it not only lives again, it thrives to the point of annihilating memories of anything that came before. Apple creates demand for things that there previously was no demand for. It takes products we never wanted and convinces us we can't live without them. It does this better than any company in the world.

This time Apple has dug up a truly grim specimen, the smart watch. Lots of bodies buried here, whole cemeteries' worth. This operation is vintage Apple, the classic Lazarus maneuver. It's the first time the company has attempted it since the death of its legendary co-founder and presiding genius, Steve Jobs, but happily the product it has created is convincingly Jobsian: a startlingly beautiful and full-featured device called the Apple Watch. Note the absent i.

It has to be good, because Apple isn't just reviving an old category, it's moving a boundary. It's attempting to put technology somewhere where it's never been particularly welcome before: on our bodies. When CEO Tim Cook and his colleagues talk about the Apple Watch the words they use over and over again are "personal" and "intimate," and it's true in the most literal way possible: they're asking you to let them strap a computer to your arm. Like a pushy date, the Apple Watch wants to get intimate with us in a way we're not entirely used to and may not be prepared for. This isn't just a new product; this is technology attempting to colonize our bodies.

Technological progress tends to feel incremental, but this is a watershed, a frog-boiling moment. There was a time when the Internet was something you dialed up; then it was replaced in the late 1990s by broadband, the always-on Internet, a formula that already sounds quaint. Apple Watch signals the advent of an always-there

Internet, an Internet that can't be put away. We're used to dabbling just our fingertips in the Internet, but the Apple Watch doesn't stop there. It tracks your movements. It listens to your heartbeat. It puts your whole body online. Exactly how personal do we want to get?

If the Apple watch succeeds, it will do so on the back of many, many failures. Wristwatches first became popular in the 1920s, after soldiers came back from World War I wearing military-issue "trench watches," but since then we've mostly discouraged them from evolving. They tell the time and not much more—we like our watches dumb. The first calculator watch appeared in the mid-1970s, and it was a novelty, but that was all. In subsequent decades it was followed by pager-watches and phone-watches, which people wanted even less. In 2004 Microsoft produced the SPOT watch, a \$300 device that conveyed instant messages, stock updates, weather forecasts broadcast over spotty FM radio signals. It died unnoticed a few years later. The only survivor from this cheerless era is, in fact, the original calculator watch, which currently retails for about \$25 at Target.

But the dream didn't die. Technology companies have simply refused to give up on the idea that we want computers on our wrists—they insist on it. Over the past few years nearly every one of Apple's rivals has put out a smart watch, probably motivated at least in part by the iPhone maker's poorly concealed interest in them. Samsung, Sony, LG and Motorola all sell them. According to Strategy Analytics, Samsung has shipped more than a million watches in its Galaxy Gear line, though reviews have been mixed, and they show no signs of cracking into the mainstream. In June Google released Android Wear, a version of its mobile operating system tuned specifically for watches. A smart watch called the Pebble started in 2012 as a Kickstarter project and has sold about 400,000 units. "We're in extremely early days," says Pebble CEO Eric Migicovsky. "It's still kind of like the 2008 era for smartphones, when the iPhone had just come out."

Smart watches are themselves only one sector of a larger, equally unsuccessful, equally tenacious technology category called wearables. Google Glass is probably the most ambitious example, but wearables also include fitness trackers like Fitbit, Jawbone's Up and Nike's Fuelband. Doctors like them—hospital systems like the Mayo Clinic and Cleveland Clinic have been trying to incorporate Fitbits into their health care regimens, with some success. Analysts tend to treat the wearables category as a mighty, slumbering giant that could awaken at any moment—Credit Suisse, for example, predicts that in three to five years people will be spending \$30 billion to \$50 billion annually on wearables. But in 2013 the entire fitness wearables

market still amounted to only \$330 million, a rounding error for Apple, which takes in \$171 billion in revenue annually.

The nonadoption of wearables to date can largely be attributed to a single factor: people don't want to wear them. The problem is partly aesthetic—wearables tend to be ugly—but it's more personal than that. You can use a device and still distance yourself from it by tucking it out of sight. But wearing a device says something about who you are, and it's not always necessarily something you want to say. A special term of endearment has been coined just for people who wear Google Glass: glassholes.

The rapturous reception of the Apple Watch thus far suggests that it will be the first wearable to overcome the resistance that has so far dogged the category. Aesthetics aren't a problem: it's pretty. In person it's small and surprisingly light, especially compared with other smart watches out there. Its sapphire touchscreen is slightly curved, which makes it look like a piece of jewelry rather than a gadget, though it also attracts fingerprints and smudges. It sits on the wrist naturally. It doesn't feel overly showy or intrusive, constantly begging for your attention, the way other wearables do. You could easily forget you're wearing it.

The other significant design challenge Apple faced was the interface: a watch is too small for the kind of prodding and pinching we're used to doing on phones and tablets, and when you swipe across it, your fingertip obscures most of the screen. So the interface relies on Siri, Apple's voice-activated digital-assistant software, but it also includes some genuine innovations. The screen can understand the difference between a tap and a more forceful press, and the watch gives feedback with audio and haptic (meaning slight vibrations) cues as well as visual ones. A small sensor-filled nub on the side of the watch, which Apple has dubbed the "digital crown," enables you to zoom in and out, scroll through lists and navigate home.

The watch's elegance belies a surprisingly rich feature set. It makes calls like a phone. It handles text messages and emails, though because of the tiny screen reading is a lot easier than writing. Users can send one another small drawings that animate and then disintegrate after a few seconds. They can also, uselessly but nevertheless beguilingly, send their heartbeat to each other. Double tapping on the screen sends a gentle nudge to a nearby friend, like a light tap on the wrist. In practice it's silly, ephemeral and lovely.

The Apple Watch—the cheapest model will sell for \$349—already supports dozens of apps, often scaled-down but still impressive versions of familiar iPhone and iPad apps: weather, stocks, passbook, photos, maps, calendar. (Much of this functionality

relies on a link to a nearby iPhone for GPS and Internet connectivity.) It can control your iPhone's music and camera and, through Apple's HomeKit software, your thermostat, your door locks, your television and your lights. Crucially, it supports Apple's new wireless payment system, which is designed to replace credit-card swipes and which is a major play in its own right.

Apple has also doubled down on health and fitness features, which makes sense since that's the one area where wearables have gotten traction. The Apple Watch tracks how many steps you take and whether you're exercising enough or sitting down too long. A set of four optical sensors on the underside can take readings of your heart rate. Most smart watches available now provide some of these functions, though poorly. Apple promises the watch will not only work but learn about your habits over time to become a better coach. One could easily imagine the device providing a useful daily activity profile to your doctor.

It's intoxicating and also a bit disconcerting to have this much functionality perching on your wrist, like one of Cinderella's helpful bluebirds. Wearables get inside your personal bubble. We're used to technology being safely Other, but the Apple Watch wants to snuggle up and become part of your Self. This is technology, after being repeatedly repulsed, finally establishing a new beachhead. To wear a device as powerful as the Apple Watch makes you ever so slightly posthuman.

This is new and slightly unnerving. When technologies get adopted as fast as we tend to adopt Apple's products, there are always unintended consequences. When the iPhone came out it was praised as a design and engineering marvel, because it is one, but no one understood what it would be like to have it in our lives. Nobody anticipated the way iPhones exert a constant gravitational tug on our attention. Do I have email? What's happening on Twitter? Could I get away with playing Tiny Wings at this meeting? When you're carrying a smartphone, your attention is never entirely undivided.

The reality of living with an iPhone, or any smart, connected mobile device, is that it makes reality feel just that little bit less real. One gets overconnected, to the point where one is apt to pay attention to the thoughts and opinions of distant anonymous strangers over those of loved ones who are in the same room. One forgets how to be alone and undistracted. Ironically enough experiences don't feel fully real till you've used your phone to make them virtual—tweeted them or tumbled them or Instagrammed them or YouTubed them—and the world has congratulated you for doing so.

The paradox of a wearable device like the Apple Watch is that it both gives you control and takes it away at the same time. Consider the watch's fitness applications: your body is constantly throwing off data, and now the watch gathers them up and stores and returns them to you in a form you can use. This gives you control over your body that you never had before. The wristwatch made the idea of not knowing the time seem bizarre; in five years it might seem bizarre not to know how many calories you've eaten today or what your resting heart rate is.

But wearables also ask you to give up control. Once your device starts telling you what you should and shouldn't eat and how far you should run, it's getting in between you and your body and mediating that relationship. Wearables will make your physical self visible to the virtual world in the form of information, an indelible digital body print, and that information is going to behave the way any other information behaves these days. It will be copied and circulated. It will go places you don't expect. People will use that information to track you and market to you. It will be bought and sold and leaked—imagine a data spill comparable to the recent iCloud leak, only with Apple Watch data instead of topless selfies.

The Apple Watch is more intimate than other devices, but the Internet isn't getting any less public.

The more of our behavior that ends up online, the more the Internet affects that behavior, and wearables will reach deep into our lives. That's tremendously empowering, but it also makes us vulnerable to the rampant comparison and gamification that infect any aspect of our lives that becomes public. Just for example, the idea of already body-conscious young women comparing physical data, constantly, in real time, is worrying. Lives lived in public become performances, and even posthumans need to get offstage once in a while.

In the center of building 1 of Apple's Cupertino headquarters there is a large-scale replica of the new campus the company is building for itself on a 176-acre patch of land nearby. The Norman Foster-designed project has been nicknamed the spaceship for its circular shape.

Like all Apple products, including the watch, the building's simplicity obscures a lot of painstakingly labored details. It will reportedly use miles of curved glass, and don't even get the arborist started on the landscaping. When it opens in 2016, Apple Campus 2 will mean a lot of things to a lot of people, but more than anything it will be a temple to the stupendous success of the iPhone.

Even if the Apple Watch is a runaway hit, it won't reach the size of the iPhone business anytime soon. Phones account for more than half of Apple's total sales: over

the past year it has sold more than 163 million of them. During the last holiday season the iPhone alone generated \$32.5 billion in revenue, \$8 billion more than all of Microsoft. And customers have been growing more satisfied with each new version—90% of iPhone owners expressed “loyalty” to Apple in a March 2014 survey by Morgan Stanley research, up from 73% in December 2011. Though Samsung sells more devices and Google’s Android runs on more phones, Apple remains the pre-eminent brand, by which we mean the most loved.

The question about the iPhone isn’t so much the size of the business as its potential for growth. More than 70% of mobile-phone users in the U.S. now own a smartphone, according to comScore, which suggests that the market is close to saturated.

Apple’s year-over-year sales have been essentially flat throughout the Americas since the iPhone 5S launched last year. In the world’s most important market, China, the company hasn’t had it easy. Late last year, it reached a deal with China Mobile, the world’s largest wireless carrier, to sell the iPhone. Initial results are promising—Apple’s sales in the country leapt 18% in the first half of 2014 to more than \$15 billion. But the company is taking on giants like Lenovo and Huawei on their home turf. And then there’s Xiaomi, a company few Westerners have even heard of but which is routinely called the “Apple of China.” It shipped about 15 million smartphones in the second quarter, which makes it the country’s largest smartphone vendor, according to research firm Canalys. Apple wasn’t even in the top five.

Apple’s newest phones should help. The iPhone 6’s 4.7-in. and 5.5-in. models are an acknowledgement that the tastes of mobile users have changed. “Phablets,” devices that straddle the divide between smartphones and tablets, have become more popular. People mocked Samsung when it first unveiled the 5.3-in. Galaxy Note in 2011, but the Korean giant had the last laugh. The third version of the Galaxy Note sold 10 million units in about two months last fall. Just a few days before the Apple Watch event, Samsung pre-emptively announced two new phones with large screens.

There’s no question the watch will help the bottom line, and more. Never one to leave a bet unhedged, Apple has grounded its new device in five sectors that are reliably compelling to consumers: social, health, home, fitness and mobile payments. Like the iPod and the iPad before it, the Apple Watch is poised to perform the double feat of creating a market and dominating it in one fell swoop. Piper Jaffray estimates first-year sales at 10 million units.

Morgan Stanley puts it at 30 million to 60 million units. Whatever happens, the watch will act as a bulwark to prevent Apple’s share of the phone market from slipping,

because an Apple Watch won't work without an iPhone. Every watch Apple sells will bind consumers more firmly to its closed technological ecosystem.

The watch will also help Apple by proving it can still innovate, something that's been in doubt ever since Jobs passed away. The response from analysts has been ecstatic, and to its credit, Apple has earned it. To build its watch Apple must have evolved internally, from a company driven by a single overbearing executive's vision to one that reflects the ideas, taste and sensibility of a group rather than an individual. There is no i in Apple Watch.

But more than that, more than another decisively imperial annexation of another technological sector, the Apple Watch represents a redrawing of the map that locates technology in one place and our bodies in another. The line between the two will never be as easy to find again. Once you're O.K. with wearing technology, the only way forward is inward: the next product launch after the Apple Watch would logically be the iMplant. If Apple succeeds in legitimizing wearables as a category, it will have established the founding node in a network that could spread throughout our bodies, with Apple setting the standards. Then we'll really have to decide how much control we want—and what we're prepared to give up for it.

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