A BRIGHT BUT PERILOUS FUTURE FOR THE TECH-WEARING HUMAN

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The pulse of the tech community indicates that the initial hype and futuristic curiosity associated with wearable tech is slowly fading, making way for more pragmatic considerations.

What Are You Wearing?

The wearable technology melting pot is now starting to settle down into distinct types of technology that we can wear to improve our quality of life, monitor our health, assist with dangerous professional tasks or, let's face it, to be fashionable.

There is increasing interest in wearable tech from both the consumer and corporate markets. Originally focused on watches and eyeglasses, wearable tech has now expanded into other industry sectors, such as smart clothing, where Montreal-based companies like Hexoskin and OMsignal are world leaders.

Admittedly, it would be a stretch to say that within the next few months people will be using smartglasses to read their emails while driving to work (giving a whole new meaning to hands-free devices), or that the average person will be working out in their connected gym shirt and shoes. That said, we can already see the genesis of some trends likely to emerge over the next few months (dare we say years?).

Shifting to Software and Data Management

Many advances have been made in refining hardware over the past few years, and wearable tech developers are now expected to start turning their attention away from the hardware and aesthetics of single-function devices, focusing instead on software

and data management, save for the occasional collaboration with fashion designers or other well-known brands.

Good looks and quality sensors are important, but as the market and technology evolve, the crucial question will be about the benefits for the wearer. The real added value of wearable tech lies in its capacity to analyze and make sense of the huge volume of data that is being collected. The average user is unable to interpret the raw data captured by their device; software and big data analysis will be key in decoding that high heart rate in the middle of the night.

In the coming months, wearable tech companies will begin marketing themselves and their products based on data collection quality and data analytics capacity rather than hardware quality. It follows that more sophisticated data analysis will spur advances in the field of cognitive computing (including machine learning and adaptive algorithms).

It's impossible to say how much wearable tech will impact our quality of life in a short period of time. After all, cell phone brands are now distinguished by apps and other features, not their ability to make and receive phone calls.

Consumers will also help point developers in the direction that innovation should take. For example, smartwatches have been around for a relatively long period of time in the tech sector. Apple entered this space amid much media hype, but the market has failed to ignite consumer passion. Sales have not taken off as some had predicted, and others are predicting exits from the market. On the other hand, corporations have been quick to spot the advantages of wearable tech glasses, especially for training purposes, which has resurrected the Google Glass and other similar products from the cemetery for creepy tech.

The Perils for Security and Privacy

Even though the benefits associated with the coming of age of wearable tech are numerous and impressive, they also present a serious and real threat to something most of us value dearly: our privacy.

With the proliferation of IoT devices (of which wearable tech is but a subset) that act as new collection points for personal data, what is actually happening to the massive amount of collected data? Such enormous quantities of information are useless for the average user, who has no context for interpretation. However, some companies and even governments may want to use the information if they can find a way to interpret it in a meaningful way.

"Really we're entering this world where everything is catalogued and everything is documented and companies and governments will be making decisions about you as an individual based on your data trail. If you want to be considered an individual and

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not just a data point, then it's in your interest to protect your privacy," said Josh Lifton, MIT Media Lab Ph.D. and CEO of Crowd Supply, in this TechRepublic cover story.

Collectively, we must realize that personal data is extremely valuable for businesses, who want to use it to better understand their customers' habits and to know when, where, or what to sell them. Personal data is also extremely profitable to hackers, who will leverage their illicit access to this information. According to the same article, the personal information contained in a wearable device is worth ten times that of a credit card on the black market—a stolen credit card can be cancelled, usually fairly quickly by an alert consumer, while personal data will mostly remain the same throughout an individual's lifetime (date of birth, address, height, weight, medical conditions, etc.).

From a consumer point of view, the security of collected data is at the heart of wearable tech developments. The rapid increase in the number of wearable devices being sold worldwide means that the number of access points for data breaches has also increased exponentially.

While everybody agrees on the importance of data security, there is a real risk that the early versions of some wearable devices could be vulnerable to attacks as companies rush to get their products to market as quickly as possible in the race for market share. While some of these flaws will be corrected via software updates, not all wearable devices connect directly (or can even connect) to the Internet for installing updates and security patches. In addition, the hassle of performing a software update on a connected device may further exacerbate the vulnerability of wearable tech. Let's hope that 2016 will be the year that key industry players focus on data and device security.

The Uber-fication of Our Lives: When Convenience Trumps Privacy

Basil Hashem, Senior Director of End User Computing Mobile Strategy at VMware, perfectly summarized the great irony of the way we treat our privacy in everyday life:

"I think we're in a world I call the Uber-fication of our lives. You ask someone point blank for their location and credit card number and they say no. You say, 'Sign up here and I'll pick you up' and they give it to you. In our lives, conveniences seem to trump privacy every time." (quoted in the previously mentioned TechRepublic piece)

While software and data analytics will boost the sales of wearable devices in the coming years, the corollary is that there will be at least a proportional increase in the collection and analysis of extremely sensitive data that you would otherwise be hesitant to communicate to the government, insurance companies, or even your own physician. Let's hope that the developers of these wonders of the future will correlate

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the convenience and appearance of wearable tech with tremendous attention to data security and privacy

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