

Technology for the Benefit of Humanity
NOT
Humanity for the Benefit of Technology!!

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"When my kitchen sink was clogged last year, I grabbed the strainer out of the drain and placed it with my left hand above the trash can. I then banged it with the strainer upside down and this got rid of the dirt clogging the strainer. But suddenly, my Internet-connected watch tapped me on my wrist, and I got a message on my watch screen: "It looks like you have taken a hard fall". I immediately canceled the alert and did not let my watch call emergency.

This has made me think... The watch has a sensor basically occupying a point in space. The body, on the other hand, is a system that occupies more than one point in space. In spite of that, some body parameters like heart rate could be determined by measuring it at one point on the body. However, when one would like to detect a fall, one must make sure that the whole body changed height suddenly. This is not possible with certainty when only one sensor is attached to a point on the body (e.g., the left arm). More than one sensor - a few at least - distributed over the body are needed. In other words, more than one thing needs to be considered... Here, a thing is not just a sensor (like in the "Internet of Things") but also things like the situation, geometry, and other facts of life" [1].

This watch could also monitor activity, measure heart rate, perform an ECG, sense the environment (weather, noise) and it is expected that in the future it will have additional health-related capabilities. In addition to a capable watch, one could expect that we will have more wearables, sensors on our skin and implanted ones monitoring our bodies, health, and other factors. Even without commercial alerts (a looming nightmare...), this could produce a "flood" of status messages and alerts that come in addition to many interruptions we tend to get from our cell phones and computers during the day and unfortunately at night too (emails, text messages, alerts etc.). This situation could be a problem as life and research has shown that frequent interruptions could decrease concentration and thus reduce the effectiveness of our work. They even might cause some unwelcome changes in the brain (see [2]).

Reducing the Number of Alerts. To reduce the forthcoming huge number of disruptive alerts, we should take on ourselves to design and build a system that will remove unnecessary alerts from our environment. Such a system will go over the plethora of alerts, evaluate which ones are repetitive and/or unnecessary and then "weed out" (or "sanitize") the unnecessary and the disruptive ones. It is not expected to be an easy task and even when the current expectations of AI will be fulfilled, it might not be enough...

In addition, addiction to our mobile devices and potentially to our future wearables might further disconnect us from the physical environment around us, e.g., spouse, children who need positive and constructive human parental attention that is necessary for their development, from friends and just from mere human beings in our physical vicinity. And, just imagine how

hypochondriacs might become obsessed with their health-related wearables... In short, something needs to be done here.

Humans First!! These cases illustrate some examples where technology developers sometimes do not consider enough the needs of humans while developing technology products. This lack of knowledge and/or concern about how people tend to conduct their lives and how communities work (and the lack of common sense) is not just limited to wearables. This could remind us of a situation happened in the 1950s and the 1960s when urban planners were trying to design city environments composed of large areas with tall buildings sparingly distributed in a park-like environment. They thus preached to destroy older neighborhoods that were composed of buildings of a few stories high with a mix of residential and commercial entities. The famous Jane Jacobs who lived in the West Village in New York City at that time understood what makes a city livable and functional and wrote the now famous book, “The Death and Life of Great American Cities” [3]. She asserted that urban renewal practitioners did not respect the needs of city dwellers. Now, it is widely accepted that she was right.

Before designing a human environment that relies on technology, it is important to first understand how people use it or would like to use it before developing & installing the technology. It is necessary to understand and consider all things - sensors, habits, health, and humans and community expectations, and use common sense. Technology should be built for the benefit of humanity, and we should not use humanity for the benefit of technology!!

References

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- [2] Adam Gazzaley and Larry D. Rosen, "The Distracted Mind: Ancient Brains in a High-Tech World", MIT Press, 2016.
- [3] Jane Jacobs, "The Death and Life of Great American Cities", New York: Random House, 1961. ISBN 0-679-60047-7