



Editorial

The e-Health internets

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In the dystopian scenarios of *Black Mirror* (Bebster, 2016), the successful series transmitted by Netflix, an atypical episode -because it is set in the last century (eighties), and also has a Hollywood ending: happy- develops the story of two women (Yorkie and Kelly) living in a technological future (2040) that allows the deceased, terminally ill patients, the elderly and the sick, to transfer their conscience and memory to hangars of servers so that “they never die “.

After an assisted death, all brain information is loaded from the servers into an artificial world for people to recreate the best years of their lives. This is the argument of *San Junípero* (2016), the fourth episode of season three of *Black Mirror*, winner of two EMMY awards (best telefilm and best script for a miniseries) and according to IMDb, Inc. (2016), the most and better qualified of the third season (8.7 with 31.385 votes). In summary, *San Junípero* is a collective longing; a place where hundreds of technologies emerged so that no one cares about health.

Beyond being an illusion, *San Junípero* allows us to perceive three connected layers that today construct the concept of e-Health for our reality: one in which citizens are connected, ubiquitously, to mobile devices and the internet; another, of new health professionals seeking new methods to approach communities and heal patients (Sepúlveda Cardona y Restrepo Escobar, 2018); and one more, a melting pot of technological innovations of engineers and developers building all kinds of technologies. And between layer and layer there is a whole web of experimentation in and for the Web. A contemporary mainstream to study. In the words of Martel (2014), “The Internet is not a tube, it is a puzzle” (p. 395).

The Internet is a great exploration laboratory, a LAB for all possible trials, because, as Friedman (2012) says, it is still in a beta phase. We are experimenting: connected citizens, new engineers and new health professionals.

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All kinds of initiatives are being developed in Internet laboratories. The effervescence of a hyper-connected civilization—if at all—allows us to catalogue the digital cocktails that are developed daily, either from a garage (as Silicon Valley was forged) or in a specialized clinic with the resources of a State or some supranational organization.

Under this dynamic, today it is not possible to review a single and exclusive application. The Internet is allowing converging infinite spaces between different health professionals and technologies. And while there is debate over the validity of the use of these in the health system and our health systems, for example, in Colombia, the State provides, through the Ministry of Information and Communications Technology (MINTIC), a program that includes more than 40 APPS (<https://apps.co/>) developed in co-creation with doctors, psychologists, pediatricians, nutritionists, therapists and engineers and developers, among others.

Also, other experimentations are found. In Europe, the Directorate General for Communication, Content and Technology Networks of the European Commission offers a portal with more than 200 APPS for health (<http://myhealthapps.net/>). Users can filter applications by more than 40 languages; for Android, Apple, Blackberry, Nokia, Windows and Desktop or Browser platforms; and for more than 20 categories of first order medical: cancer, mental health, HIV, medical research, bone and muscle system, breathing and lungs, diabetes, skin and others.

Added the Kurere project (<https://www.kurere.org>), founded from a social internet; collaborative example of how the concept of e-Health connects us and on the subject of Consumer to Consumer (C2C) technologies. A collaborative platform to find testimonies from the optimism, overcoming and resilience of the patients themselves; and although science does not yet confirm that being positive in the face of an illness improves those who suffer from it, language plays a key role in establishing connections between patients from all over the world. The “words that heal”, as defined by its founders.

And that the Internet, as a social mirror, is connected by words. As in San Junípero, the Internet is of languages. In a review of the impact of the e-Health concept it is necessary to highlight three semantic indicators.

The first one is Google Books Ngram Viewer, the Google's digital book scanning system that contains more than 5 million books. For example, the use of the e-Health concept, in books, has had an exponential increase since the 2000s (Figure 1), which warns of an intrinsic characteristic because, in some way, authors always write about our biggest concerns.

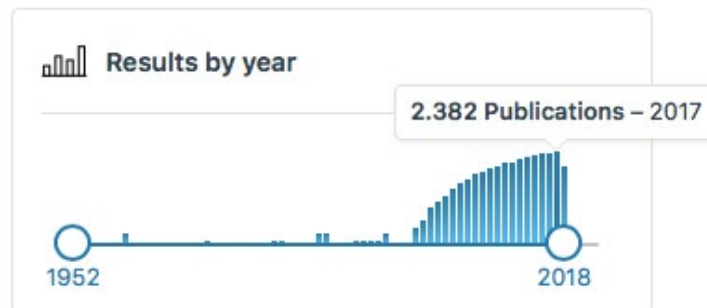
Figure 1. Statistics on the use of the eHealth and e-Health terms in Google Books Ngram Viewer



Source: <https://books.google.com/ngrams>

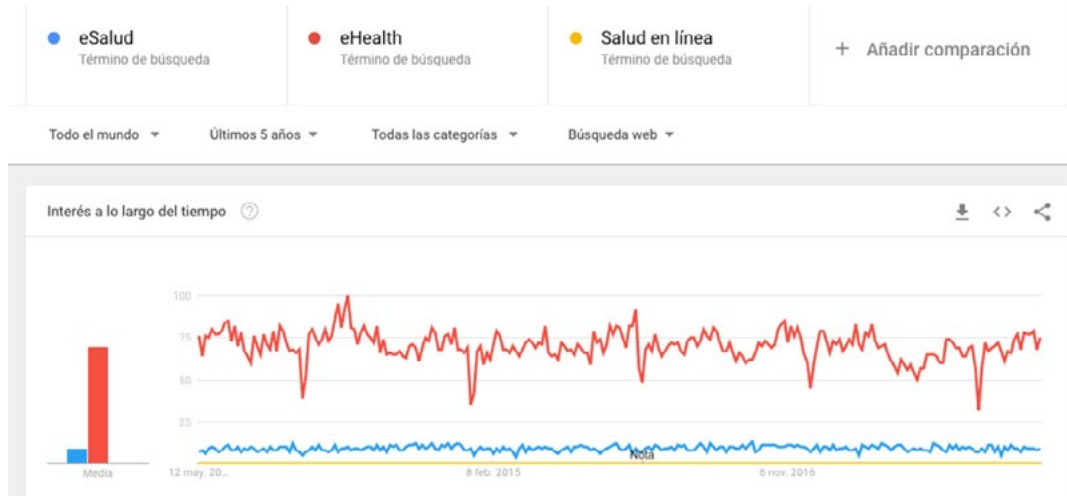
The second scenario is visualized with Google Trends, which confirms the search density by the eHealth, e-Health and online health terms. The popularity, according to Google, indicates a high interest of users by values between 75 and 100 points (Figure 2). Yes, we are very concerned about our health and we always resort to Google searches. The Internet is a best friend.

Figure 2. Statistics on the use of the term eHealth in Semantic Scholar



Source: <https://www.semanticscholar.org>

And finally Semantich Scholar, the artificial intelligence academic search engine of the Allen Institute for Artificial Intelligence (AI2), also confirms a notorious interest of researchers and scientists in publications related to the term eHealth. Since 2012, the number of scientific publications is sustained above one thousand; and during 2016 and 2017 they increased to more than two thousand per year (Figure 3). Opulent investigations on a subject that apparently is ostentatious.

Figure 3. Search statistics for the terms eHealth, eHealth and Health online in Google Trends

Source: <https://trends.google.es/trends>

In conclusion, it is worth referencing two disruptive theses about the concept of eHealth. The first, the considerations of Martel (2014) in his book *Smart: the internet (s)*, in which he describes how the Internet has multiple—and countless—laboratories and experiments on the development of numerous technologies for the entire health sector; you cannot continue talking about a single territory. What the health internets propose as an object of research because users, professionals and companies dedicate themselves every day to the creation of new applications. Digital ecosystems, networks of new knowledge impossible to reference in singular; as Martel maintains: “The Internet no longer exists, from now on we must speak in the plural and without a capital letter: the internets” (page 396).

The second thesis is the one proposed by Harari (2017) in *Animals to Gods*, a brief history of humanity about how humans are cyborgs. Harari argues that in a certain way almost all people are bionic because the most natural functions are complemented by devices that are commonly used: glasses or pacemakers, for example; but, in the same way, computers and devices that connect with our senses and duplicate the functionalities: memorize, save, communicate, download, send, transform, categorize, systematize (p.443). In eHealth internets, it seems, we are better humans.

As in San Junípero, all these technologies are catalysts of social changes.

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