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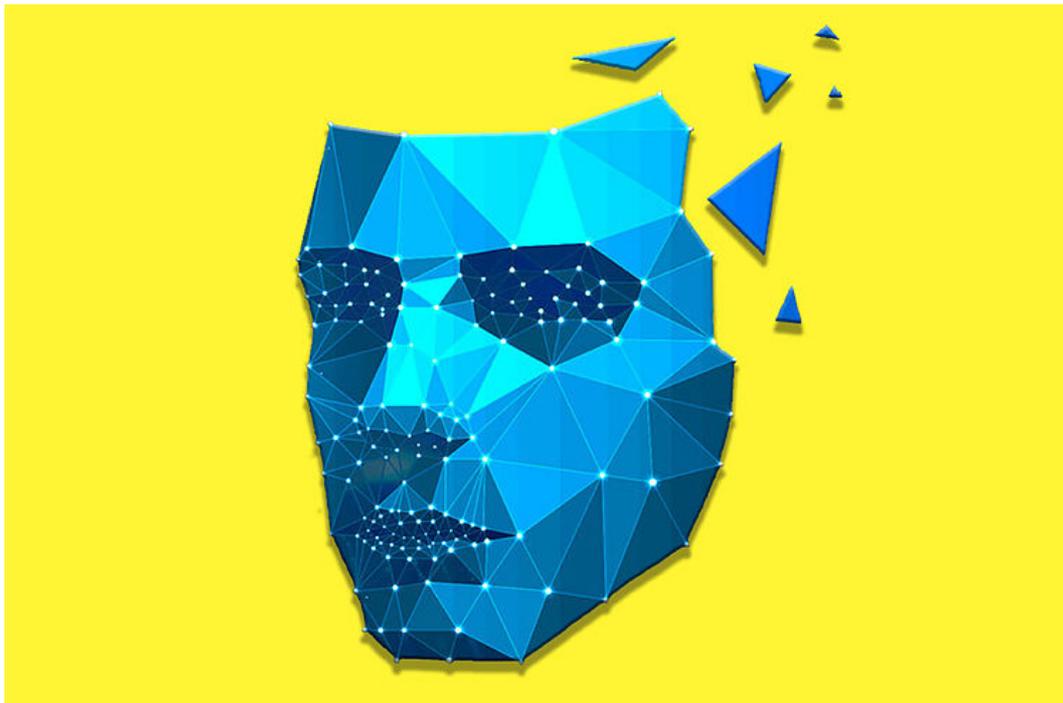
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## **This is how facial recognition works and why you should worry**

Although we have accepted facial recognition with some normality, the implications of this technology are, at least, disturbing.



You use it to unlock the mobile phone, it is the technology behind those filters that make you more Kardashian, that put you dog's nose and ears or that make it easier for you to imagine how you will be in 30 years.

Facial recognition is one of the technological revolutions of the last decade, present in our day to day is intended to be even more, for example, being the perfect addition to surveillance cameras. Are we on the way to a Big Brother? We are in 2020, not in 1984, but it seems that George Orwell got quite close to the concept of greater security in exchange for less privacy.

### **THE CAMERAS REMAIN WITH YOUR FACE**

China was among the first countries to use facial recognition as an ally and safeguard of street safety. There, more than 300 million security cameras, thanks to this technology, detect a face in a crowd in a matter of seconds.

Although the United States has this detection system in many of its airports, in cities like San Francisco it has banned facial recognition techniques to identify criminals, just like Oakland, Portland, Somerville, among others. In Spain, where there is no specific legislation on facial recognition, there is legislation on data protection.

Germany forbids it for its police and France in educational institutions, while other cities, such as London, lead the opposite way. Specifically, the London Metropolitan Police announced at the beginning of the year that facial recognition technology in the streets has passed the pre-test stage and is ready to be permanently integrated into the city's daily surveillance.

Meanwhile, the European Union plans to discuss the issue by announcing a strategy in terms of artificial intelligence and data for a digital transformation that places people in a preferential place. Within this framework, the European Commission presented last week a White Paper on Artificial Intelligence, with clear rules in areas such as health, transport or police activities, which states that AI systems must be transparent and traceable, in addition to be subject to human verification.

The document, which warns member countries about the risks that massive video surveillance brings, contemplates starting a debate on the circumstances that could justify the use of facial recognition for distance biometric identification, which today is only authorized in exceptional cases, justified and proportionate. Brussels, which also wants to discuss the conditions of these exceptions, provides for a voluntary labeling system in case they apply stricter rules for lower-risk artificial intelligence applications.

Not exempt from generating anxieties, facial recognition causes controversy due to its ethical and legal implications, it is one thing to fight crime and another to identify political protesters. Human rights and privacy are the main victims of this particular Big Brother. Again it is about sacrificing privacy and freedoms in exchange for increasing security.

To function, facial recognition only needs an accurate camera and software that, through algorithms, is able to recognize patterns on facial features. A two-dimensional or three-dimensional image creates an array of similarities, a pattern that matches a database of hundreds of thousands of photos. Although it is in full development, it already offers better results than the biometric fingerprint.

#### XIX CENTURY TECHNOLOGY

The first facial recognition technology was devised by French police officer Alphonse Bertillon over a century ago. At the end of the 19th century, Bertillon created a method to identify criminals based on their physical characteristics. The cards assigned to each person included 11 physical measurements, standardized photographic portraits and a written physical description.

At present, the human face is cataloged on a scale that Bertillon could not have imagined. A digital path that began in 1994, when biometric pioneer Joseph Atick, theorized that computers could one day process biological information, specifically faces.

The idea was based on the way in which the human brain processes visual information in cases such as pareidolia, a psychological phenomenon where a vague and random stimulus is mistakenly perceived as a recognizable form, basically it would be to recognize facial patterns in everyday objects such as some stains on the wall (like the famous faces of B elmez), in the mold of a toast or in the knots of a tree.