

# The next revolution: Emotions

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## **Abstract:**

The dialog between technology and creativity is at the dawn of a new revolution. Predicted to be intellectual, imaginative, romantic and emotional, this revolution will give a surprising texture and subtlety to sex, to borrow from Anaïs Nin's *Delta of Venus*. How long will we have to wait for an algorithm in seductive attire to be uplifting for our five senses? Spike Jonze's movie *Her* partly responds to this; and *Blade Runner 2049* has given form to desirable forms of artificial intelligence. Many another is trying...

Artificial intelligence (AI), robots, cobots, drones, algorithms, virtual or augmented reality, holograms, connected devices... we are tipping into a world where humanity and technology combine, enhancing, confronting or opposing each other.... We don't really know.<sup>1</sup> Even as these new words and phrases occupy screens and minds, the issues are far from deciphered. According to an opinion poll conducted in France, 34% of respondents said they did not know what AI is; 41% thought they knew; and 25% thought they knew exactly.<sup>2</sup>

## The tipping point

Churchill said, "*The power of man has increased in all areas except himself.*" These technological mutations seem to contradict this statement since they are now relentlessly exploring the areas of our five senses, our emotions — evoking imagination and interactions in the realm of 0 and 1: sight enhanced tenfold, hearing hash-marked and spatialized, touch hypersensitive (now with the capacity for a projection of the body), smell reproducible. Only taste is wanting, but for how long?

Whereas previous generations confined emotions to the sphere of intimacy, considering them to be a sign of sentimentality or even of weakness, contemporaries are mustering the social media and emoticons (or smileys) to announce the reign of emotions. This technological revolution, as it tries to conquer the *terra incognita* of our emotions, coincides with two other decisive changes.

Nowadays, the cognitive sciences, in particular neuroscience, are revolutionizing our understanding of emotions. According to Cynthia Fleury, a philosopher and psychoanalyst, "*Emotions are, above all, a scientific revolution: we now have tools for showing that consciousness is holistic and sensorially unlimited.*" The most recent major change has been political, namely the battle between the rational and emotional in democracy. In her words: "*We are witnessing a democratic revolution about the place of emotions in institutions, which have the precise role of instilling rationality even as emotions submerge individuals.*"

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<sup>1</sup> This article, including quotations from French sources, has been translated from French by Noal Mellott (Omaha Beach, France). The translation into English has, with the editor's approval, completed a few bibliographical references.

<sup>2</sup> *Sciences et Avenir*, September 2017.

These three accelerations — technological, scientific and political — raise questions about how we understand ethical and regulatory issues, not to mention the legislation now being debated for a corpus of law on robots. They also directly challenge firms. How do firms understand their customers and employees? How do they design products and services? The revolution of emotions is on the march.

## We have entered the era of the economy of emotions

According to Joël de Rosnay, “*artificial intelligence, well controlled, could lead us to become even more human, a hyperhumanism.*” Even more human? More sensitive to the equilibrium in nature around us? In the words of the historian Yuval Noah Harari, we are faced with a “*new human agenda*”.<sup>3</sup> All problem areas are touched: ethics, regulations, R&D, governance.

What to think about ethics when considering data et “conscious machines”? Efforts in the past few years have been made to define the place of ethics. In 2014, a preliminary “declaration of digital human rights” was drafted to allow “soft law” to preempt this random future.<sup>4</sup> For Laurence Devillers, professor at Paris-Sorbonne University and specialist in “affective computing”, several approaches coexist for broaching the topic of an ethics for AI:

- the ETHICS OF ABDICATION: AI is programmed to destroy itself in case of problems and to risk the lives of passengers in driverless vehicles.
- a DEONTIC ETHICS: AI applies regulations in the strict sense of the word.
- a CONSEQUENTIALIST ETHICS: AI arbitrates using statistics (*e.g.*, the number of casualties in an accident involving a driverless vehicle).

How to combine these ethical approaches to cope with various forms of AI? On a lighter note, what to think about the “suicide” on 27 July 2017 of a security robot (designed to feel no emotions) in a fountain in Washington, DC?

Another question concerns the body of law for robots. The question of “robot law” might seem ludicrous. In 2014, Alain Bensoussan, an attorney, founded the Association du Droit des Robots. It calls for a legal framework specific to robotics, like the body of law on information and communications technology. For the supporters of this approach, “robot law” is inevitable as machines are equipped with AI, which makes them ever more autonomous.

At the core of this topic is the support for research. Given its more than 5000 researchers in AI, France is a driving force in these developments. Research is well endowed, but very few studies have been made on how it should be put to use. Like previous technological revolutions, the uses are economically crucial. To detect and invent new uses, Jean-Gabriel Ganascia, a professor of information science at Pierre-et-Marie-Curie University and a researcher in AI, has argued for a multidisciplinary reinforcement from, in particular, sociologists.

The sudden accelerations described by Y. Harari in his “*brief history of tomorrow*” are dazzling. According to him, the major products will no longer be material goods but, instead, the body, mind and consciousness (in other words, artificial life); and *homo deus* (humankind becoming godlike) has three ways to pass to a higher level: bioengineering, cyborgs and inorganic life. How to conceive of a theoretical framework for thinking about these issues?

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<sup>3</sup> “The new human agenda”, chapter 1 in Y.N. HARARI (2016) *Homo Deus: A Brief History of Tomorrow* (London: Vintage).

<sup>4</sup> <http://www.ddhn.org/>.

In recent months, several initiatives have been undertaken across the Atlantic: financial funds (Salesforce AI Fund, Google, etc.); the creation at Harvard Business School of the Future Society,<sup>5</sup> a think tank that wants to open debate on AI; and attention-grabbing announcements by major players in digital technology: Elon Musk, Mark Zuckerberg, Bill Gates, Larry Page, Jeff Bezos.... In France, there have been: Cédric Villani's report, at the parliament's request, on AI;<sup>6</sup> President Macron's proposal in a speech on 26 September 2017 at the Sorbonne for creating a European agency of innovation (for funding AI, in particular).

Is it not urgent to mark public opinion by organizing a "conference of parties" on AI? This would be a bold initiative to bring together all stakeholders in this new economy of emotions: researchers, entrepreneurs, artists, engineers, philosophers, sociologists — a conference open to all disciplines. The solutions for tomorrow cannot be left up to technicians and specialists alone. As Laurence Devillers has warned: *"It is necessary to work on the discrimination that could occur in artificial intelligence. Are we going to reproduce in AI the cleavages in society? We notice that female conversational assistants are mainly used for acts of care, that there might be a proliferation of sexual robots of a feminine gender [...] or that face recognition software, such as Google's, knows how to identify white people better than black people owing to the lack of sufficient data in the training set. It is necessary to give serious thought to such topics in order to not end up with artificial stupidity."*

## The authors of emotion

For firms, a new battle is under way: how to introduce emotions in processes for making innovations? Since emotions increasingly dictate our behaviors and actions, firms must speak their language. Emotional management, emotional intelligence, emotional marketing... no field seems neglected; and the creativity of artists is already being tapped for designing advertisements and objects, for re-enchanting spaces or places.

At a closer look however, we notice a whole section of corporate activity — the design and development of products and services — that still pays little heed to the dimension of emotion and the distinction of creativity. A fact compels recognition: products increasingly resemble each other in terms of reliability, features and prices. It is, therefore, hard for a product or service to stand out. It must be made distinct owing to the wrapping, to advertising campaigns or, more deeply, to the firm's values, brand name, etc. Above all, distinction will increasingly be achieved by taking account of emotions during the process for developing new products and services, by factoring this dimension into the methodology of the work done by engineers, researchers and technicians. The sales battle that pitches firms against each other starts far upstream in the production process (including the management of employees). Emotion is what makes a product or service special, what gives it an irreducible sensuousness. Jean-Gabriel Ganascia's call for multidisciplinary means bringing various talents into the processes of innovation. This approach is yet to be invented.

Firms do not spontaneously foster creativity: it challenges habits, the taken-for-granted, traditions; and disrupts organizations. Always producing something new is a source of disorder. In a society of emotions however, creativity becomes a top-ranking quality. Artists (whether screen- or script-writers, video game graphic artists, musicians, dancers, movie directors...) create by evoking the questions asked about our society. The special ties between artists and society, approach of artists to the sensory world, their aesthetics, their vision... these are an opportunity that extends beyond the multidisciplinary of the teams working on new ideas.

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<sup>5</sup> <http://ai-initiative.org/>.

<sup>6</sup> VILLANI C. (2018) *Donner un sens à l'intelligence artificielle. Pour une stratégie nationale et européenne*, mission parlementaire, March, 242p. Available via: [https://fichiers.acteurspublics.com/redac/pdf/2018/2018-03-28\\_Rapport-Villani.pdf](https://fichiers.acteurspublics.com/redac/pdf/2018/2018-03-28_Rapport-Villani.pdf).

The findings by Antonio Damasio (director of the Brain and Creativity Institute at the University of Southern California) provide examples. This professor of neurology, neuroscience and psychology is a specialist in the relations between consciousness, emotions, feelings and the body; he is also keen on art. He sees neuroscience and art as two different ways to understanding the world and the human condition. The difference is that art is more related to emotions than science. What is important for the artist is to connect the imagination with emotions. Damasio's comments and neuroscience provide us with a new glimpse of the place for emotions in the creative process. But we must appropriate these findings. Quite simply, the artist's ability to make his/her works special, unique but, too, universal resounds with the firm's determination to find products and services that are special, unique but, too, universal.

Firms have already come out of their bubble by becoming involved in "open innovation" and thus mobilizing the capacity for innovation "outside their walls". But they have come but halfway. They must now go a little farther by becoming involved in "open creativity". This is the condition for them to be capable of receiving what artists can give: the diversion of an idea, an innovation, a technology in order to endow it with a "supplement of soul", a meaning. This is exactly what is going to enable a firm to become a "creative tech" — connected to the new world, a world that combines technology and emotions.

The word "robot" — forced labor — comes from the Slavic languages. It appeared for the first time during the 1920s in the play *R.U.R (Rossum's Universal Robots)* by the Czech playwright Karel Capek, who borrowed the word from his brother Josef, a painter and writer. So, let us make room for artistic talents, in all forms, so that, along with researchers, engineers, sociologists, philosophers, entrepreneurs and public officials, they help us return to the path of the Humanities of the 21st century.