From Homo erectus to Homo numericus

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Our evolution: from the African savannah to the Darwinian digital space

Part 1
From apes to robots

Part 2
How our world is changing

Part 3
How survive in a digital world
Part I

FROM APES TO ROBOTS
Why there is always evolution?

Natural events:
Volcanos, oceanic streams, meteorites, glaciations, solar activity, earth cycles ...

The red Queen ...
You have to run as fast as you can in order to keep your position. Lewis Carroll

... and Man
The most influent and living agent on Earth to date...
The rising of Humankind and another co-evolution

Language
Cosmogonies/Storytelling
Brain size
Bipedalism/running
Acheulean/Handaxe
Fire/Cooking/Shelters
Clans/sexual activities
Exogamy
Bargaining/exchanges
Old World

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Changes in Human societies:

In the course of Human evolution and History, the most important (r)evolutions are linked to the emergence of new technologies which involve drastic changes in all parts of the society:

knowledges, networks, press, publishing technologies, customs, materials, energy, means of production, transportation, banking, social structures and organisations, fashion, arts ... and our biology as gene expression and gene selection.
The first Industrial Revolution

Press/Daily news/mail
Democraties / Technologies
Collective intelligence
Train / Steam boats
Manufactures / Firms
Steal / blast furnace
Exportation/Capitalism
Big Industries/Workmen
States and nations
Colonialism
1.5 billions of human beings

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The second Industrial Revolution

Telecommunications
Universal Democracies
Human rights
Worldwide connections
Airplanes / cars
Composite materials
Power/oil/nuclear energies
Services/Finance/credits
International organisations

The American dream and/et les Trente Glorieuses
My very personal evolution
A very recent and amazing evolution
Cycles - Crises and creative destructions

Figure 1  Schumpeter's waves accelerate

Source: adapted from The Economist (1999)
The third Industrial Revolution

5th Kondratieff Cycle

NTIC /NBIC
Web/MOOC
Social networks
New « families »
Urban mobility
Postindustrial innovations
3D printing
Green/renewable energies
Crowdfunding; bitcoins
Mondial governance
Entrepreneurship
Part II

HOW OUR WORLD IS CHANGING
Welcome in the world made by GAFAT, NATUBAT and Co ....
Darwin’s finches or how a dromedary becomes a camel

Figure 2. Global income distributions: number of people with certain level of income (in dollars of 1990), 1820-2000
The « great decoupling »

Decoupling Productivity and Employment

Digital technologies have boosted productivity in the United States without also spurring the expected job growth, argue Erik Brynjolfsson and Andrew McAfee. A result of this decoupling is that while gross domestic product (GDP) has risen, median income has not, and inequality has grown.

- **U.S. productivity and employment**
  - Beginning in 2000, a widening gap between productivity and private employment showed up in federal labor statistics (indexed: 1947 = 100).
  - All growth suddenly ceased in 2005, while productivity remained robust.

- **Output per employed person in manufacturing**
  - In leading advanced manufacturing countries, output per worker has grown impressively as factories have become more automated (indexed: 2002 = 100).
  - USA, Germany, Japan

- **U.S. GDP per capita and household income**
  - While the nation’s total output has generally grown over the last 25 years, the mean household income has been nearly stagnant (indexed: 1975 = 100).
The majority of our jobs is going to be taken and/or augmented by robots and AI.
Uberization: towards a smarter world?

Appization

"Tout le monde a peur de se faire Uberiser"

Maurice Lévy
PDG de Publicis

Big data - IoT
Blockchain
Digitalization
Robotisation - IA
Startupization

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Big data and the V3 galaxy
The Blockchain Revolution
Collaborative robots are coming
3D printing
Part III

HOW TO SURVIVE IN A DIGITAL WORLD
We are in a Darwinian world

DIGITAL DARWINISM IS THE EVOLUTION OF CONSUMER BEHAVIOR WHEN SOCIETY & TECHNOLOGY EVOLVE FASTER THAN YOUR ABILITY TO ADAPT
Lamarck vs. Darwin
active vs passive innovations

Variation
Selection
Development

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New economies:

*Economy of solidarity*

*Share Economy (Mauss; Rifkin)*

*Circular Economie*
Species and Firms
The need for darwinian labs
Big companies and the startup effect

*Bricks and Mortar to Clicks and Mortar*

Reinventing the company

financial sector startups funding $B
The universal patterns of innovation

Pasquaretta and coll. : Social networks in Primates. smart and tolerant species have more efficient networks. *PLOS décembre 2014*
Autoadaptative companies
From dinosaurs to Apes:

The more species are offering free services to others species, the more the ecosystem is resilient and diversified and able to resist to invading species.

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Lunar Society: genus are, first of all, collaborating and working together
Neandertal vs. Cro-Magnon

The real reason why Neandertalers disappeared? A question of culture!

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