Originally published in French (14/09/2017), this post is a translation (mainly) made by: www.DeepL.com/Translator

BIG DATA: A NEW FORM OF COLLECTIVE INTELLIGENCE (1)

A trip in Terra Data

A recent article in The Economist magazine titled « Fuel of the future. Data is giving rise to a new economy »[i]. Alibaba General Manager Daniel Zhang called the data "blood of the new economy"[ii]. The World Economic Forum, for its part, in February 2011, considered the data not only as constituting the oil of the 21st century, but also « *as a new asset class touching all aspects of society* »[iii].

Digital data is everywhere, omnipresent, they speak of you, of me, of us. About us?! Yes, about us, too. Aggregate, cross-checked, these data show their value through the new knowledge they can reveal, now in all fields; it also represents a colossal economic value, quantifiable in billions of Swiss francs. Value for what? Value to whom?

These questions highlight a paradox[iv] : We, as citizens, have very little control over our data, let alone the value and benefits generated, while we are the source of this new raw material; it is we who generate it. Why sell out our data? But also, why leave them fallow? Are we powerless to exploit their value? What tools do we have at our disposal to make them talk?

One cannot talk about data without mentioning the omnipresent big data. But by the way, what's big data? The adventure that materializes in this series of posts began with this specific question, which I first asked myself. Being professionally at the intersection of law and statistics, I was thinking about how to make useful use of the abundance of data produced daily to answer questions about the legal ecosystem, to understand its transformation by digital means, when my ignorance seized me: but, by the way, what is big data? And what isn't that? What does this have to do with data mining? And with artificial intelligence? What are

its uses? In short, so many notions that in my mind were unclear. I couldn't leave these questions unanswered. And here I was on a trip to Terra Data, according to the eloquent title of the recent book by Serge Abiteboul and Valérie Peugeot[v].

Or pun: Tera Data? Eager for wide open spaces and bubbling nature, I was spoiled: floods, floods of data, data lake. If these bucolic terms describe a landscape that ultimately turns out to consist of only 0 and 1, an arid environment, I came out of this journey nourished by new knowledge, by a broadened understanding of a digital territory that is none other than the world in which you and I live. To know, to understand in order to move more easily and flexibly. Understand to accept and trust, or to refuse. Understand to choose freely what to do with our data.

This post launches a series of abotu fifteen posts divided into two main parts. In the first part entitled *From small to Big Data*, I will explore the notion of big data to outline its contours in a dozen notes on the following themes: history, Hadoop, maths & stats, correlation, big data, data mining, artificial intelligence, limits, the future. And in what fashion could big data transform conflict resolution processes ?

We will then discover how the project *MIDATA.Coop, My Data - Our Health*[vi] developed by the Swiss Federal Institute of Technology in Zurich, provides a solution to the paradox mentioned at the beginning of this post according to which we, as citizens, have very little control over our data, not to mention the value and benefits generated, while we are the source of this new raw material. Inspired by the bank account and agricultural cooperatives, this project places the citizen at the heart of precision medicine and a personalized health system. An innovative concept, it opens the door to a new form of collective intelligence by and for citizens made possible thanks to big data, while questioning us about the development of our democracy and the choice of our economic models.

All the posts of this series will be published on LinkedIn but also available in pdf format with detailed references on the blog of my website (www.medialien.ch).

Dear Readers, I wish you a pleasant and enriching trip in Terra Data.

See you soon!

Anne-Sylvie Weinmann
www.medialien.ch

Notes & References:

[i] *Fuel of the future. Data is giving rise to a new economy*, The Economist 06/05/2017 (https://www.economist.com/news/briefing/21721634-how-it-shaping-up-data-giving-rise-new-economy).

[ii] *Alibaba, maître du commerce en ligne et désormais du Big Data*, Le Temps 26/12/2016 (https://www.letemps.ch/economie/2016/12/26/alibaba-maitre-commerce-ligne-desormais-big-data).

[iii] *Personal data : the Emergence of a new asset class*, World Economic Forum, 17/02/2011, Introduction p. 5, (https://www.weforum.org/reports/personal-data-emergence-new-asset-class).

iv HAFEN Ernst, KOSSMANN Donald, BRAND Angela, *Health Data Cooperative – Citizen Empowerment*, Journal Methods of Information in Medicine, 2014 (Vol. 53), 2/2014, pp. 82-86 (https://doi.org/10.3414/ME1313-02-0051) also available on:
https://methods.schattauer.de/contents/archivestandard/issue/1849/manuscript/20811.html
v   ABITEBOUL Serge, PEUGEOT Valérie, *Terra Data*, Paris, Le Pommier, 2017 (https://www.editions-lepommier.fr/terra-data).
vi Adress of the English version of the site https://www.midata.coop/index.html