Leadership

Inside the Wise Leader's Brain

The Neuroscience of Leadership

Part 5

The Problem with Homo Deus

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With the
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Leaders For What's Next

In a Nutshell - the Problem with Homo Deus

Smart machines copy certain behaviors. Autonomous cars can drive. But they don't really understand what they are doing (or why). Deeper understanding requires an abstract, causal model as a representation of this world. And we seem to be born with that incredible ability as part of our human evolution. Understanding contexts is possible for us because we see relationships and subtleties that machines can't.

Let's summarize what we have seen so far in our series.

Machines may make us more efficient and effective, or 'see' hidden patterns that improve our predictive power. But they don't change the context, or create a new and better landscape. Today's AI neural networks need billions of data points to develop an 'intuition' of a particular domain. Here, too, the human brain is still unmatched. A human baby can identify a cat after being shown only one or two examples. Machines are data-hungry, humans, data-efficient: human learning makes the most of the least amount of data. And the efficiency with which humans share their knowledge, using a minimum number of words, remains unequaled.

As long as *machina sapiens* doesn't master how to learn by itself, its intelligence will remain behind that of *homo sapiens*. This means that even the most advanced computer architectures can't yet match the ability of a human infant to build abstract models of the world. Let alone the aspirational power of corporate (and political) leaders, guiding organizations and countries towards a better future.

To learn also means inserting new knowledge into an existing network. Human brains can extract very abstract principles, systematic rules to re-apply in different contexts. We can draw extraordinarily general inferences. *Machina sapiens* is almost entirely incapable of profound insight: it is largely unable to represent the range of abstract phrases, formulas, rules and theories with which *homo sapiens* models the world. It solves only extremely narrow problems.

In the human brain, however, learning almost always means rendering knowledge explicit, so that it can be reused, recombined, explained to others or transferred into useful, reusable tacit knowledge.

It is this capacity to imagine and share, to communicate unlimited combinations of possibilities and create an infinite potential of futures, that makes us so powerful and special.

The major strength of homo sapiens over machina sapiens lies in two abilities:

1 - to make a [causal] representation of our world, and even of a future that does not yet exist
2 - to share our ideas with others through communication.

Humans can even imagine the unimaginable: "faire de l'infini avec du fini." Our unique capabilities reside in our ability to represent the world, to model a complex reality with causal relationships, sharing ideas through language.

It is this capacity to imagine and share, to communicate unlimited combinations of possibilities and create an infinite potential of futures, that makes us so powerful and special.

In the next chapter, we'll look at the ethical brain.

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