How the Enlightenment Ends

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Thought-provoking questions selected by Michael Wollowski

Impact of Printing Press

- It most altered the course of modern history.
- It allowed the search for empirical knowledge to supplant liturgical doctrine.
- The Age of Reason gradually superseded the Age of Religion.
- Individual insight and scientific knowledge replaced faith as the principal criterion of human consciousness.
- Information was stored and systematized in expanding libraries.
- The Age of Reason originated the thoughts and actions that shaped the contemporary world order.

What would be the impact of self-learning machines?

- Is it possible that human history might go the way of the Incas, faced with a Spanish culture incomprehensible and even awe-inspiring to them?

Internet Age

- The Enlightenment sought to submit traditional verities to a liberated, analytic human reason.
- The internet's purpose is to ratify knowledge through the accumulation and manipulation of ever expanding data.
- Data becomes regnant.

Retrieving Information

- Users of the internet emphasize retrieving and manipulating information over contextualizing or conceptualizing its meaning.
- As a rule, they demand information relevant to their immediate practical needs.
- Search-engine algorithms acquire the capacity to predict the preferences of individual clients, enabling the algorithms to personalize results.
- Truth becomes relative.
- Information threatens to overwhelm wisdom.

Social Media Impact

- Inundated via social media with the opinions of multitudes, users are diverted from introspection;
- In truth, many technophiles use the internet to avoid the solitude they dread.
- All of these pressures weaken the fortitude required to develop and sustain convictions that can be implemented only by traveling a lonely road, which is the essence of creativity.

Speed vs Reflection

• The digital world's emphasis on speed inhibits reflection;

• Its incentive empowers the radical over the thoughtful;

• Its values are shaped by subgroup consensus, not by introspection.

AGI

• A growing percentage of human activity will, within a measurable time period, be driven by AI algorithms.

• These algorithms are mathematical interpretations of observed data.

• They do not explain the underlying reality that produces them.

• Paradoxically, as the world becomes more transparent, it will also become increasingly mysterious.

AGI

- How will we manage AI, improve it, or at the very least prevent it from doing harm, culminating in the most ominous concern.

- That AI, by mastering certain competencies more rapidly and definitively than humans, could over time diminish human competence and the human condition itself as it turns it into data.

Changing Human Thought Processes

- AlphaGo defeated the world Go champions by making strategically unprecedented moves—moves that humans had not conceived and have not yet successfully learned to overcome.

- Are these moves beyond the capacity of the human brain?

- Or could humans learn them now that they have been demonstrated by a new master?

Conceptual vs. Mathematical Learning

- Before AI began to play Go, the game had varied, layered purposes: A player sought not only to win, but also to learn new strategies potentially applicable to other of life's dimensions.
- For its part, by contrast, AI knows only one purpose: to win.
- It "learns" not conceptually but mathematically, by marginal adjustments to its algorithms.
- In learning to win Go by playing it differently than humans do, AI has changed both the game's nature and its impact.
- Does this single-minded insistence on prevailing characterize all AI?

Making Big Mistakes

- If AI learns exponentially faster than humans, we must expect it to accelerate, also exponentially, the trial-and-error process by which human decisions are generally made.
- To make mistakes faster and of greater magnitude than humans do.
- It may be impossible to temper those mistakes, as researchers in AI often suggest, by including in a program caveats requiring "ethical" or "reasonable" outcomes.

Explaining to Humans

- AI may reach intended goals, but be unable to explain the rationale for its conclusions.

- If its computational power continues to compound rapidly, AI may soon be able to optimize situations in ways that are at least marginally different, and probably significantly different, from how humans would optimize them.

- But at that point, will AI be able to explain, in a way that humans can understand, why its actions are optimal?

Explaining to Humans

- Will AI's decision making surpass the explanatory powers of human language and reason?

- Through all human history, civilizations have created ways to explain the world around them.

- The most difficult yet important question about the world into which we are headed is this.

- What will become of human consciousness if its own explanatory power is surpassed by AI, and societies are no longer able to interpret the world they inhabit in terms that are meaningful to them?

Consciousness

- How is consciousness to be defined in a world of machines that reduce human experience to mathematical data, interpreted by their own memories?

AI a Misnomer

- The term *artificial intelligence* may be a misnomer.
- To be sure, these machines can solve complex, seemingly abstract problems that had previously yielded only to human cognition.
- But what they do uniquely is not thinking as heretofore conceived and experienced.
- Rather, it is unprecedented memorization and computation.

AI a Misnomer

- Because of its inherent superiority in these fields, AI is likely to win any game assigned to it.

- But for our purposes as humans, the games are not only about winning; they are about thinking.

- By treating a mathematical process as if it were a thought process, and either trying to mimic that process ourselves or merely accepting the results, we are in danger of losing the capacity that has been the essence of human cognition.