Frankestein is back, *and his name is AI*

Navigating the uncharted territory of artificial intelligence: a deep dive into ethics, governance, and the unpredictable consequences.

By **SASJA BESLIK**
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Uncontrolled. Unregulated. All mighty. Fast. Cruel. Cold. Soulless. Yet useful and profitable. No, it is not a virus or a war. It is not a device or a management consulting solution grown out of a neoliberal Chicago school. It is something else. Something far more beautiful and vicious at the same time.

It can be used as a cure and to kill; it can develop and destroy at the same time. Start wars. Read your mind and translate your thoughts. The ultimate nowhere-to-hide thing.

Some people call it divine art, where humans get outgrown by machines. Some call it the final stage of human decline. The Frankenstein singularity age is here, and it has been around for some time. The difference? Well, the difference is that we are getting to know how little we know about consequences.

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WE HAVE BUILT A MORE FEROCIOUS PREDATOR THAN OURSELVES

The reason humans are on top of the food chain is not down to sharp teeth or strong muscles. Human dominance is almost entirely due to our ingenuity and intelligence as well as the fact that we are the biggest predators on this planet.

We can get the better of bigger, faster, stronger animals because we can create and use tools to control them: both physical tools such as cages and weapons, and cognitive tools like training and conditioning.

This poses a serious question about artificial intelligence: will it, one day, have the same advantage over us? We can't rely on just "pulling the plug" either, because a sufficiently advanced machine may anticipate this move and defend itself. This is what some call the "singularity": the point in time when human beings are no longer the most intelligent beings on earth.

With new artificial intelligence applications such as ChatGPT taking the world by storm, digital and technology politicians are caught between a rock and a hard place. The rest of us? Well, we are passengers on a moving train.

How to apply rules to the use of generative AI tools is becoming a pressing issue for governments around the world in the wake of the public debut of OpenAI's ChatGPT last November. Since then, the chatbot app has demonstrated its high capacity to handle a variety of tasks, including finding and summarising information, drafting documents and checking programming code.

As more tech firms develop generative AI products, governance over the tech became one of the main topics of all political discussions around the world.

EU policymakers, meanwhile, have reportedly been rushing to update the draft for the AI Act to regulate the use of copyrighted materials. The scary part is the regulatory bodies are not equipped with the expertise in artificial intelligence to engage in oversight without some real focus and investment.

The rapid rate of technological change means even the most informed legislators can't keep pace. Requiring every new product using AI to be pre-screened for potential social harms is not only impractical but would create a huge drag on innovation.

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LET'S LOOK AT THE ETHICS OF IT, OR SHALL WE SAY, WHAT ARE THE CONSEQUENCES FROM THE LAND OF 'WE DON'T KNOW'

How do machines affect our behaviour and interaction? Artificially intelligent bots are becoming better and better at modelling human conversation and relationships.

In 2015, a bot named Eugene Goostman won the Turing Challenge for the first time. In this challenge, human raters used text input to chat with an unknown entity, then guessed whether they had been chatting with a human or a machine. Eugene Goostman fooled more than half of the human raters into thinking they had been talking to a human being.

This milestone is only the start of an age where we will frequently interact with machines as if they are humans; whether in customer service or sales. While humans are limited in the attention and kindness that they can expend on another

person, artificial bots can channel virtually unlimited resources into building relationships. Even though not many of us are aware of this, we are already witnesses to how machines can trigger the reward centres in the human brain.

Just look at click-bait headlines and video games. These headlines are often optimised with A/B testing, a rudimentary form of algorithmic optimisation for content to capture our attention. This and other methods are used to make numerous video and mobile games become addictive. Tech addiction is the new frontier of human dependency.

On the other hand, maybe we can think of a different use for software, which has already become effective at directing human attention and triggering certain actions.

When used right, this could evolve into an opportunity to nudge society towards more beneficial behaviour. However, in the wrong hands it could prove detrimental.
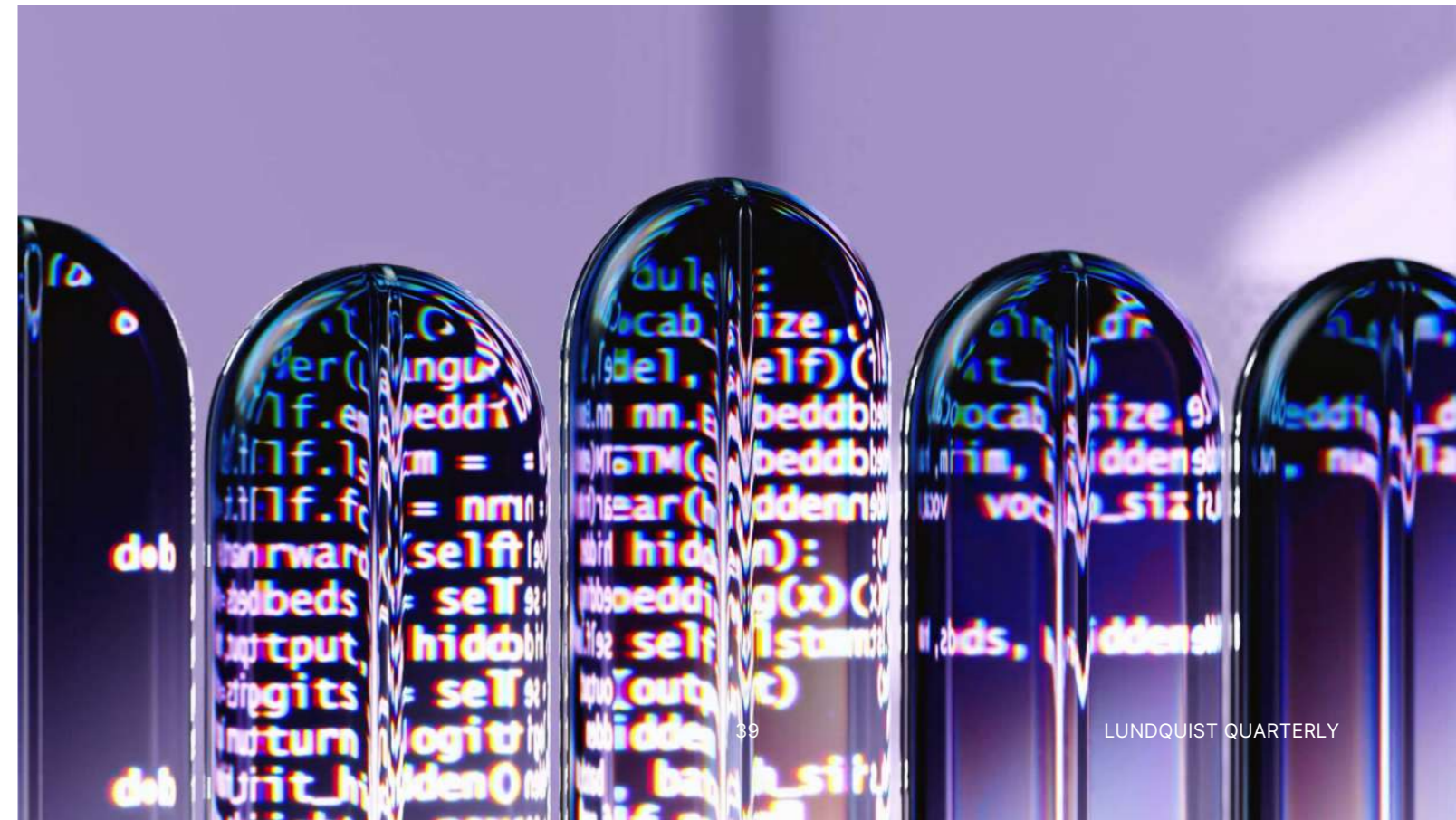
SIMPLY EXPLAINED: MANAGEMENT DOES NOT UNDERSTAND THE TECHNOLOGY

Intelligence comes from learning, whether you're human or machine. Systems usually have a training phase in which they "learn" to detect the right patterns and act according to their input.

Once a system is fully trained, it can then go into test phase, where it is hit with more examples, and we see how it performs. Obviously, the training phase cannot cover all possible examples that a system may deal with in the real world. These systems can be fooled in ways that humans wouldn't be.

For example, random dot patterns can lead a machine to "see" things that aren't there. If we rely on AI to bring us into a new world of labour, security, and efficiency, we need to ensure that the machine performs as planned, and that people can't overpower it to use it for their own ends.

Though artificial intelligence is capable of a speed and capacity of processing that's far beyond that of humans, it cannot always be trusted to be fair and neutral. Google and its parent company Alphabet are one of the leaders when it comes to artificial intelligence, as seen in Google's Photos service, where AI is used to identify people, objects, and scenes.

But it can go wrong, such as when a camera missed the mark on racial sensitivity, or when a software used to predict future criminals showed bias against black people.

We shouldn't forget that AI systems are created by humans, who can be biased and judgemental. Once again, if used right, or if used by those who strive for social progress, artificial intelligence can become a catalyst for positive change.

"After all, we're dealing with a system that is faster and more capable than us by orders of magnitude. Predator deluxe."

The more powerful a technology becomes, the more can it be used for nefarious reasons as well as good. This applies not only to robots produced to replace human soldiers, or autonomous weapons, but to AI systems that can cause damage if used maliciously. Because these fights won't be fought on the battleground only, cybersecurity will become even more important.

After all, we're dealing with a system that is faster and more capable than us by orders of magnitude. Predator de-luxe.

CAN AI BE A GAME-CHANGER FOR ESG?

Although most businesses have the best intentions, that will not matter in the end unless substantial and demonstrable improvements are made. This starts with setting aggressive, impactful ESG goals. But developing ESG goals and then monitoring and making progress towards them is among the greatest challenges faced by global businesses today.

The incoming data sources are complex and divided, leading to insufficient analyses, inconsistent reporting, and unfulfilled promises. This is where artificial intelligence (AI) can be a game changer for managing ESG efforts and, ultimately, addressing climate change.

AI can help move the needle in the right direction by providing comprehensive ESG management solutions, reporting capabilities, and actionable emissions insights for even the biggest enterprise.

Over the past two years, an increasing number of governmental bodies around the globe have enacted laws requiring corporations to report ESG metrics. In 2021, the European Commission adopted a proposal that will require companies to report on social and environmental impacts starting in 2024.

The United Kingdom, Hong Kong, Singapore, and China have all updated their environmental and social disclosure guidance.

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And in August 2022, the US Securities and Exchange Commission proposed regulations to enhance and standardise climate-related disclosures.

But right now, most corporations are not yet prepared to meet these new requirements. They need automated solutions that integrate data and provide the full scope of emissions-tracking features and broader ESG performance management. AI is a big part of such a solution.

AI-powered solutions provide near real-time data fusion, validation and mapping to current standards and frameworks. For systems infused with AI, reporting is no longer a burden, and we can ensure the correct metrics are tracked. This includes Scope 1, 2, and 3 emissions, the last of which is notoriously difficult to track.

Those with automated solutions for emissions measurements are 2.2 times more likely to measure emissions comprehensively and 1.9 times more likely to reduce emissions in line with their ambitions.

It's increasingly clear that consumers and investors are becoming wise to greenwashing and false promises, while organisations are still struggling to implement sustainability solutions that provide meaningful climate action. The need to do so is urgent, for both the planet and to satisfy stakeholders.

AI has the potential to contribute notably to improving the monitoring of ESG reporting and goals. However, there are still challenges in analysing the extensive data available while the choice of one measure over another could have a large impact on the outcome.

In the end, a comprehensive investment process should avoid placing too much confidence in a single measure.

Furthermore, one also needs to consider the costs of maintaining alternative datasets: not only the costs of acquiring data, but also the investment required to store and integrate these large datasets, activities that might necessitate a dedicated team.

Overall, the common consensus is that ESG integration into investment approaches will become more profound and the ability to use robust data will play a major role in that process.

Not only can AI help to extract relevant information from existing data sources, it also offers exciting opportunities to create new ones.

YES, YES, BUT… THERE IS ALWAYS A BUT

According to the International Energy Agency, electricity consumption from cooling data centers could be as much as 15% to 30% of a country's entire usage by 2030. Running algorithms to process data also requires energy consumption. Training AI for firms' use has a big environmental impact, according to Tanya

Goodin, a tech ethicist expert and fellow of the Royal Society of Arts in London. "Training artificial intelligence is a highly energy-intensive process," Goodin says. "AI are trained via deep learning, which involves processing vast amounts of data."

Recent estimates from academics suggest that the carbon footprint from training a single AI is 284 tons, equivalent to five times the lifetime emissions of the average car. Separate calculations put the energy usage of one super-computer as the same as that of 10,000 households. Yet, accounting for this huge electricity use is often hidden.

Where an organisation owns its data centers, the carbon emissions will be captured and reported in its TCFD scope 1 and 2 emissions.

If, however — as happens at an increasing number of financial firms — data centers are outsourced to a cloud provider, emissions drop down to scope 3 in terms of TCFD reporting, which tends to take place on a voluntary basis.

"I think it's a classic misdirection — almost like a magician misdirection trick," Goodin explains. "AI is being sold as a solution to climate change, and if you talk to any of the tech companies, they will say there's huge potential for AI to be used to solve climate problems, but it's a big part of the problem."

"There is a fundamental lack of expertise and experience in the investment industry about data," says Dr. Rory Sullivan, co-founder and director of Chronos Sustainability and a visiting professor at the Grantham Research Institute on Climate Change at the London School of Economics.

Investment firms are blindly taking data and using it to create products without understanding any of the uncertainties or limitations that might be in the data, Sullivan says. "So, we have a problem of capacity and expertise, and it's a very technical capacity

issue around data and data interpretation," he adds. Goodin agrees, noting that all boards at financial firms should be employing ethicists to advise on the use of AI.

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LESSONS FROM VICTOR

The main message that Frankenstein conveys is the danger in the pursuit of knowledge and advancement in Science and Technology. In the novel we see Victor try to push forward the limits of science by creating a creature from old body parts.

The creation backfired on Victor once the monster escaped. Victor's life became obsessed with the monster because he could not control his creation. In the end, Victor lost everything from his pursuit to push science and the limit of human knowledge.

Frankenstein shows the issue that can come from technological and scientific advancement. It can be too much for humans to control causing a spiral downward. He brought the monster to life, but in the end, Victor could not control his creation.

I think this underlying message of not being prepared for a creation is extremely relevant to today's society. As artificial intelligence is continually expanding every day, it is important to understand the ramifications of discovery. In social culture, we see shows like Black Mirror that capture the negative effects that technological advancements can have on humans.

Technology has the power to bring out human traits that are not positive. If we let technology take over our lives, then we will lose our human elements. We must constantly stay aware of the implications technological advancement has on society. As the world continues to evolve in advancement there must be knowledge of how to adapt. That said, we must welcome advancements in science and technology. If we do not, then there will be a negative effect on society as we saw with Victor.

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Sasja Beslik was born in Bosnia and Herzegovina. At the age of 20, with 20 Deutsche Mark (about 10$) in his pocket and three t-shirts in a plastic bag, he fled to Sweden. Sasja is currently the Chief Investment Strategy Officer at SDG Impact Japan and has recently joined Lundquist as Senior Advisor. He holds a bachelor's degree in journalism and economics at Stockholm University, and worked for several years as a war correspondent for the Red Cross and UNICEF — among other organizations.

Sasja was previously Head of Sustainable Finance at Bank J. Safra Sarasin Sustainable Asset Management before which he was Group Head of Sustainable Finance for Nordea for 10 years. He was awarded an Order of the Seraphim medal by King Carl XVI Gustaf of Sweden for his achievements in the field of finance and sustainability in Sweden. Sasja co-authored "Where the Money Tree Grows: Invest Climate-Smart and Get Rich"