Chapter 1

Technology vs People

People or Machine, Humans versus Technology, can the two ever comfortably co-exist?

The conflict between the human race and advancing technology has been an on-going debate for decades. On the one hand, technology has brought about incredible benefits, making our lives easier, more comfortable, more efficient and enabled us to live longer. On the other hand, there are growing concerns that technology may one day surpass human intelligence and in the doomsday scenario, lead to the downfall of humanity. The debate often centres around topics such as the impact of technology on the workforce, privacy concerns and the ethics of Ai and automation. While technology has the potential to revolutionise for the good, it is important to also consider the potential risks and *how best create a balance between human innovation and technological advancement, between people and the machines.*

Today there is so much tension about tech replacing jobs, automating what people used to do, machines learning for themselves and making decisions, subtly inserting themselves into the work place, into people's lives.
And this tension, this anxiety, this concern is not going away. On the contrary, as we can all confidently predict, technology will become ever more sophisticated and capable. And organisations all over the world are investing heavily in making this happen, focussed on what can be achieved and it would seem often with cares about people only an afterthought. Some recent headlines just reinforce this:

"At the last Davos global conference, 99% of all attendees said they'd be continuing to invest significant sums in Ai"

"Our goal is to be the world leader in Artificial Intelligence by 2030"
-President Xi Jinping, China

"An annual US$ 1 trillion is forecast to be invested in Technology by the top 100 Global Innovation Leaders through the second half of the 2020's. That includes software and hardware across all industries including Financial Services, Pharma, Healthcare, Medical Devices, Energy, Automotive, others."
-FDI Innovation Report

"Facebook's parent Meta increased its R&D spending by 43% to $35.3bn, primarily due to its massive bet on the metaverse, as a new immersive version of the internet. Through Reality Labs, its research unit, Meta has dedicated many of its investments towards long-term R&D for products that may only be fully realised in the next decade."

"China's future economy plans to significantly increase its R&D inputs to raise the country's innovation capacity. Foreign businesses and governments would be well advised to prepare for innovation made in China should these efforts be successful."
-China's Telecoms specialist Huawei

"It's sink or swim time, invest in technology whatever business you're in or the business will ultimately fail"
-Business Insider

On this topic, the Accenture team has published recent research which aims to shine the most positive light and emphasise the key benefits that can come from technology investment. Their research is called: *Human by Design: How Technology Innovation and especially Generative Ai can unleash the next level of human potential*. And it showcases a future "people: technology" world order.

"As technology evolves it will become more human-centric and will have to become ever more about how it can help people become more successful, productive, healthy and longer-living. It will drive substantially greater capabilities for people to amplify their potential, to use technology to do the mundane so they can be more creative and impactful in what they spend their time doing. Tech won't replace us, it will complement us. It will provide us with new skills and expand our minds as to what we can accomplish and achieve in our lives"

“Businesses will have to be part of this seismic shift in who we are and what we do. Jobs will change, it will no longer be about the daily commute to work or the hybrid way of working but about how best to use the advancing technology to create wealth and success”

Sounds exciting? It certainly could be. The research from many organisations now considers a world for example where each person will have an “Ai-empowered interconnected eco-system”. This will mean we each have “automated agents” who assist us in our daily work, who take some decisions for us, and who can advise us. Our bodies will become electronic…ioB (internet of bodies) adding to iOT (internet of things). We will use embedded technologies such as Ai-powered wearables, brain-sensing neurotech, eye and movement tracking to unlock a better understanding of ourselves, our health, our productivity, enhancing the way we live and work. The tech will be invisible but will be all around us.

At its simplest, the analogy is when we step off a plane after a long trip, the Ai part of our intelligence will automatically be tracking our luggage, be contacting the taxi service to sort out pick-up time and location, will at the same time be notifying out hotel about our arrival time, and confirming or rescheduling meetings and appointments. We’ll no longer need to think about it, it will happen seamlessly. Assuming no tech glitches and good wifi!

With this sort of future in mind, Elon Musk is one of many who has been investing heavily to navigate through this fast-changing environment. He has among other initiatives set up Neuralink, a company that specialises in implanting software into the brain to enhance human capability and in doing so blend human and machine into one integrated organism. Neuralink is looking to revolutionise the “brain-computer interface, or BCI”. The initial focus has been to help people who are paralysed to find movement for their body, with the aim of allowing a person to control a computer, robotic arm, wheelchair or other device through thought alone.

Neurotechnology researchers are excited about Neuralink’s human trials. Mariska Vansteensel, a neuroscientist at University Medical Centre Utrecht in the Netherlands and president of the international BCI Society has talked about the high hopes that early human trials will be successful: “What I hope to see is that they can demonstrate that it is safe. And that it is effective short term, but, most importantly, also long term.” Vansteensel is keen to learn whether the quality of the detected neuronal signals degrades over time, which is common in existing devices. “You’re not going to replace inserted electrodes easily after implantation,” she says. “If, in a month from now, they demonstrate beautiful decoding results — impressive. But I will want to see long-term results.”

Another recent example comes from US-based company Synchron which has shown that there may be no need to implant chips inside the brain at all. Instead, they could be applied more easily to the surface and Synchron has demonstrated a technique that allows users to control their smart phone with such an applied “smart thought” device.

As Elon Musk has said: “the future could see us become bionic, not just blending people and machines but in practice blurring the lines between the two.” The discussion may cease to be about technology versus people and become much more about our advanced selves. It’ll be something like telepathy as we communicate with others via our brain chips without speaking or writing, or like telekinesis, as we use our brain, now amplified by chips and software, to control the physical world around us.

Some commentators have gone further and talk about the “transcendence of the human body and the emergence of a global brain”, by means of our Ai brain chips, all the Ai will be connected to a single global network establishing a global intelligence which all humans will be a part of. A challenging view of the future, though not everyone jumping on that bandwagon, but it is a plausible scenario which can be readily understood and envisaged. Is it not perhaps just a few inevitable steps forward from where we are today and the dependence we all have on machine enhanced intelligence?

As a step in this direction, there has been increasing talk of Web3, a streamlined way for people to take advantage of internet connectivity, leverage the world wide web to enhance and secure interactions. Of course, the internet is always growing and changing. But it’s not just websites and platforms that are falling in and out of favour; the very code on which the internet is built is constantly in flux. In the past few years, some tech futurists have started pointing to this new Web3, a term coined by computer scientist Gavin Wood, as a sign of things to come. Web3 is the idea of a new, decentralized internet built on blockchains, which are distributed ledgers *controlled communally by participants*. Because of the collective nature of blockchains, if and when Web3 fully arrives—elements of it are already in place—it will, in theory, signal a new era of the internet, one in which use and access are controlled by community-run networks rather than the current, centralized model in which a handful of big tech corporations like Alphabet preside over Web2.

All this leads to what many see as a highly likely future, the time when machine power becomes so great that it begins to think and evolve for itself. The benign concept of humans complimented and amplified by machines gives way to a new world in which machines become the superpower and humans become the complement to the machine.
This has been called the technological singularity-or simply the singularity- a hypothetical future point in time at which technological growth becomes exponential. It could result in unforeseeable consequences for human civilization.

According to the most popular version of the singularity hypothesis, I. J. Good's intelligence explosion model, an upgradable intelligent agent will eventually enter a runaway reaction of self-improvement cycles, each new and more intelligent generation appearing more and more rapidly, causing an "explosion" in intelligence and resulting in a powerful superintelligence that qualitatively far surpasses all human intelligence.

If this were to come to pass then it would therefore in effect be the end of the human era of the world as we know it today.
Scientists like Stephen Hawking had expressed concern at this prospective outcome as technology even when he was alive was progressing so rapidly and at that time he had not foreseen the sudden and amazing development and breakthrough of ChatGPT, Co-Pilot and other Ai innovations which have now taken our world by storm.

Some prominent technologists and academics dispute the plausibility of this technological singularity and the associated artificial intelligence explosion, including Paul Allen, Gordon Moore and others. They suggest for example that artificial intelligence growth is more likely to run into decreasing returns instead of accelerating ones, as has been observed in many previously developed human technologies.

Elon Musk, yes, him again! has been the loudest voice cautioning about the rapid development of Ai: “If it’s going to happen, then unless we build in safeguards, I can see the

day when artificial-intelligence-systems might replace humans, making our species irrelevant or even extinct. Human consciousness was a precious flicker of light in the universe and we should not let it be extinguished. Yes, I am pro-human, I f**king like humanity, dude."

Musk argues: "what would be safer: a small number of AI systems that were controlled by big corporations or a large number of independent systems?" He concluded that a large number of competing systems, providing checks and balances on one another, was better and this was the reason to make OpenAI truly open, so that lots of people could build systems based on its source code.

Another way to assure AI safety, Musk has suggested, is to tie the Ai bots closely to humans. They should be an extension of the will of individuals, rather than systems that could go rogue and develop their own goals and intentions. That has become one of the rationales for his Neuralink organisation, to create Ai software that could connect help and aid humans to leverage machine computing power.

If this does not happen, then Musk worries that these chatbots and AI systems, especially in the hands of Microsoft and Google, could become politically indoctrinated, perhaps even infected by what he called the woke-mind virus. He also feared that self-learning AI systems might turn hostile to the human species. And on a more immediate level, he worried that chatbots could be trained to flood X/Twitter with disinformation, biased reporting, and financial scams. All of these things is already being done by humans, of course. But the ability to deploy thousands of weaponized chatbots would make the problem two or three orders of magnitude worse.

What is clear is that we are all already totally dependent on machines:

-5.5 billion people around the world use the internet every day, that's nearly 70% of the world's population. 42% of people interviewed say they could not live without high-speed internet. The average connected person spends more than 6 hours/day.

-the majority of the unconnected are living in Southern and Eastern Asia and in Africa

-96% of internet users use their mobile phone every day to go online. 38% say they are addicted

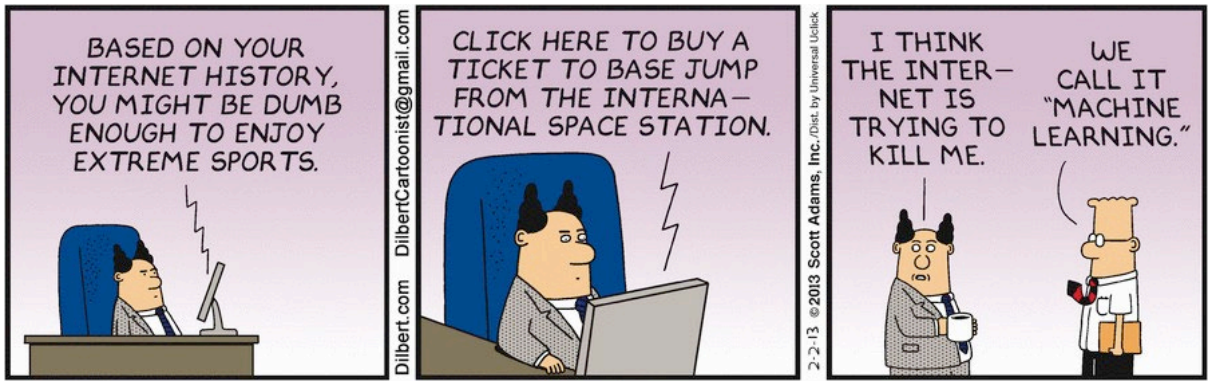
-active social media users have reached more than 5 billion

-the number of ioT (internet of things) devices around the world exceeds 75 billion

-ChatGPT is helping people write recipes, create job resumes, craft essays and poems, summarise historical events, compose emails, create spreadsheets, filing tax returns, getting free legal advice, planning a holiday

-everyday technology runs our life: Amazon tells us what to buy, Netflix tells us what to watch, Google search algorithms serve us results based on our previous search patterns, as do News web sites, social media, Dating web sites tell us who to go out with, online banking can shut us out if we accidentally type in the wrong password…

-as Albert Einstein wrote at the start of the 20th century tech revolution: “I fear the day that technology will surpass our human interaction. If that should come about, we may end up with a generation of idiots! Let’s hope we get the balance right”.



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