Cyborgisation – Good, Bad or a bit of both?

Introduction

The plot of the 2023 movie The Creator envisions a future world in which humanity and artificial intelligence are at war. In my viewing, this conflict appears to have been brought about by AI-infused beings (cyborgs) demonstrating their analytical superiority, aware of being considered inferior by their original creators, and rebelling in an attempt to change a less-than-utopian world into one, and where they wish to gain control of their mutual futures, they have developed a way to create peace. But it looks like humans aren't happy with it and are imagining cyborgs as wishing to replace humans altogether. They were not.

Currently, and back to reality, cyborgisation is about more than just replacing humans with robots; it is replacing human body parts that are presently underperforming or absent. This suggests a positive side to this technology, so could the fuss of its danger as represented in the movies be of genuine concern? (Marr 2018; Davidson 2023)

The problem

There is little doubt that the world is changing dramatically. Externally, we have an ultimately life-threatening scenario of uncontrollable climate change, with increasingly frequent extreme weather events such as record-breaking inundations and heatwaves. These are already presenting us with increasing loss of lives, conflicts causing mass population migrations, and the destruction of land for habitation and agriculture, resulting in decreased spaces for living and food production. It should be recognised that this threat is of our own doing by producing excessive atmospheric pollution and, when brought to our attention, ignored and, in many cases, denied, like children blaming someone or something else for their misconduct. For instance, the more common messages in this regard are the uncertainty of climate change implications derived from using logical fallacies, cherry-picking from reputable sources and reports from fake experts (Yadin et al. 2023).

Internally, if the human population can be referred to as that (an internal concern) and as a possibly more penetrating issue than climate change, there also appears to be a possible threat of takeover by a force that humanity has also created: artificial intelligence (AI) and

some of its derivatives. This is considered to present many threats, ranging from those of cyber security (Chowdury et al. 2023) to humanity's extinction (Lavazza & Vilaça 2024); it is well before this point is reached that we may wish to pause, as has currently been requested by many leaders in AI development (Clarke 2023). At this juncture, we may well want to consider whether the benefits of future use of artificial intelligence in cyborgisation outweigh the potential for outcomes that we see as less than optimal and if we can capitalise on the benefits whilst controlling or eliminating the drawbacks.

The expression "there is nothing more constant than change" has become a cliché for many situations. Still, concerning cyborganisation, the present definition of a cyborg is a human-machine association recently expressed as transhuman (Ramoğlu 2019). Kurzweil (2005) suggests that going further, technology may achieve a point of singularity shortly (within decades, not centuries). This is where the exponential change in the slope of our cyborgisation future graph will rise vertically and permit limitless improvement to humanity's evolution through a more embedded cyborgisation to the point that what we know as humans is entirely replaced. So, is the complete cyborgisation of humans a good thing or not? In considering this, we should look at the benefits and not-so-beneficial outcomes that both now exist and what we can foresee occurring if pause or halting progress in this arena is not taken.

Beneficial outcomes

Today, many people already have artificial body parts, some bionic (Bumbaširević 2020), for those unfortunate to have lost limbs either by disease, in conflict or accident. However, even at a less visible level, The Ear Foundation (2017) in the United Kingdom estimated the number of cochlear implants globally to be 600,000. Further to this, other body parts have been replaced by manufactured substitutes such as artificial hearts (Pfleger & Vagnozzi 2024), kidneys, liver, pancreas (Stamatialis et al. 2008), and bionic eyes(Beyeler & Sanchez 2022). Together with those who wear glasses and contact lenses or have false nails or dentures, this amounts to a large cohort of many who can already be recognised as cyborgs (Grinin & Grinin 2020).

This present cyborgisation of humanity indicates that it is already contributing to humanity's quality of life and longevity but appears to hold considerable promise for further medical interventions, such as the creation of cyborg cells (Clawson & Levin 2023; Contreras-Llano et al. 2023) to replace dead or dying tissues or even possibly, entire

organs. Could this predicate the cellular makeup transition from human to cyborg and lead to the transition of all humanity as we know it? If this were the case, then the definition of humanity may have to be reappraised, as this would add another level to our evolutionary progress. I cannot now see why this should be too alarming a concern, but it is not alone in its apparent threat (if it is one at all).

Other benefits could be using AI to solve problems related to climate change, both through robotics and cyborgisation. Examples of this could be the use of underwater robotics to find and destroy the “Crown Of Thorns “ starfish that eats the Great Barrier Reef (Dauvergne 2021) and with cyborgisation (Picken & Ferguson 2014) regarding the underwater environment alone, it could be considered that there are possibly millions of cyborgs diving our seas and waterways already, capable of retrieving information for scientific assessment; of course, these are certified SCUBA divers (DEMA 2024); or even cyborg jellyfish for greater depths (Xu et al. 2020). The list of possibilities for benefits to humankind appears endless and challenges the chaos of my imagination.

Concerns

Human replacement

One of the most significant concerns of what Grinin & Grinin (2015) has termed the Cybernetic Revolution is reflected in their citation of Richard Dawkins (2006) concerning evolutionary progress, in that “Whenever conditions arise in which a new kind of replicator can make copies of itself, the new replicators will tend to take over and start a new kind of evolution of their own”(p.189). This implies that cyborgs could eventually develop the potential to create replicas of, or even improve on themselves, certainly at a faster rate than humans can replicate themselves, through the combined use of synthetic biology, nanotechnology and materials science (Berry & Saraf 2005; Contreras-Llano et al. 2023; Islam et al.2023).

This focuses on a new stage of development: the creation of cyborg cells capable of transplanting their human equivalents and producing another type of entity. Perhaps we humans, and in the future, possibly more closely defined as cyborgs, will be transformed entirely into another population of entities that we don’t recognise yet or even, perhaps, not want to occur.

Materially, physically, and mechanically, there appears to be no limit to what may be transhumanised. Grinin & Grinin (2020) assert that the popular idea is that “cyborgization will develop by placing the brain and consciousness in an abiotic immortal body”, but that the concept of immortality is one of our primary concerns in this transition.

Even if we go this far, how will a cyborg’s relationships with others be formed, as this ability has developed with humanity? Apart from strict rules that can be engineered into cyborg’s thought processes, how can their minds become similar to or improve on what humans have developed over the centuries through their eclectic tastes in art, sociology, education, and those other essential features of humanity, such as love and disgust?

This concern has recently been recognised as a threat to the arts industry with the strike declared by the Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) to protect their future employment from “the potential of replacing human creativity and intuition in the filmmaking process with the fear that the use of AI algorithms may result in formulaic films that lack originality and artistic expression” (Channa et al.2024).

One of the most explicit arguments in agreement with this concern is that human beings are the “only actors who can be considered morally and legally responsible regarding these capacities” (Meyer et al. 2022). Still, on the basis of an improved conceptual clarification, “further steps can now be taken to develop a concept of responsibility in Hybrid Societies” (ibid. 25). Hybrids may also be considered cyborgs, a mixture of humans and machines “described as bred and chemically transformed artificial humans” (Xanke et al. 2012). Even though technically, anyone with just a cochlear implant could be called a cyborg (Ochsner et al. 2023), more significant consideration must be given to the question of “on what basis is a cyborg responsible for their actions?” particularly if brain functions are enhanced with the expectation of using the same criteria for decision-making as would a non- or partially-cyborgised human being. How would they be programmed, and what would their legal status be?

Ethical and Moral Problems

Prenga (2021), as cited in Michalowska (2021), states that “Humanity is morally accountable ...rational beings must exercise what Kant calls the autonomy of the will, which is the only principle of all moral laws and duties in keeping with them” (p.95). But where does this fit with a sliding scale of how much humans and technology exist together,

or as Jupiter (2016) refers to, as a “cyborgisation continuum”? Fuller (2021) argues that the focus on cyborgs is not solely on the technology itself but on the socially structured relationships between people that have been created historically… it is time to draw attention to who the “we” are (p.99). Meyer et al. (2022) expand on this concern by contrasting hybrids as human beings with implanted machinery to cyborgs as machinery with human characteristics. Legally, the action of the former is accountable, whilst the latter may be in dispute.

As algorithms control technological implants within the human body, legal considerations regarding the “hybrid nature” of the “cyborg mind” could become as complicated as the technological challenges in themselves (Barfield 2021).

Conclusion

There is no current real war in progress between cyborgs and humanity. Is it possible? I think quite so, and it is prudent that the major players in the production of artificial intelligence are pausing to understand the consequences of giving cyborgs the freedom to develop as humanity has been able to do historically. I believe that with prudent development, cyborgs can be created with sufficient freedom and capability to prevent and not produce the relatively rapid death of our species because of unchecked climatic damage; if not checked immediately, our demise could be sooner than expected. Humanity has not come up with satisfying answers to this dilemma. Still, our cyborg spawn, being cleverer and thinking thousands of times faster than us, have a similar incentive to survive and will need human life forms to help keep the planet cool for their survival (Lovelock 2019, p.105) so, ironically, the artificial intelligence entities that we create and give freedom to, could be the very thing that could solve that deadly problem for us (Williams et al. 2024).

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