# The Future of Society, Warfare, & Implications

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## Introduction

This paper might seem to read like science fiction, to lack pragmatism, or seem to be downright nonsensical. In theory, many of the transhumanist themes discussed here can be realized, are plausible outcomes for the future, and do not violate the laws of physics (Hansell & Grassie 2011, 140). Our thesis is to showcase a novel perspective on the future of society, how the idea of 'nation-states' might dissolve or become irrelevant, what warfare would look like tomorrow if extinction events are avoided, how popular ethics and norms might break down under possible changes to society, and how the biggest problem might be the overcoming of the harmful consequences of the expansion of space called the big crunch.

## A Novel Perspective on the Future of Society

Westerners tend to adopt a certain ontological point of view where artificially intelligent (i.e. silicon) systems (artificials) are seen to currently be and will forever only be just tools that are used to satisfy the interests and goals of traditional computer-unaided biological humans (biologicals) (Grunkel 2023, x). This western perspective is naive, narrow, and likely inaccurate (167). Artificials may eventually obtain personhood, be recognized as a subset of homosapiens, and acquire civil and political rights protected by the law (Gellers 2020). This viewpoint may hinge on the given conclusion that what defines 'personhood' is solely based a set of appearances and behaviors, meaning that an artificial which adequately appears and behaves 'human-like' or 'biological-like' should legally, socially, and ethically be treated like a fellow (biological) human being would be treated (Caudill 2023).

While the acknowledgement of artificials and biologicals being two subsets of humankind might be unorthodox and controversial, contemplating the future of society becomes more complicated when assuming it is possible and inevitable for biologicals to 'transition' to artificials through one of the many varieties of mind-uploading techniques, like gradually replacing each biological neuron with an artificial prosthetic neuron (Chalmers 2014; Cordeiro 2016, Sandberg n.d.; Strout 2006). Thus, all properties of traditional computer systems and networks must apply to all humans, strictly biological or otherwise, which complicates the ability to separate cyber realities from non-cyber realities (Brette 2022; Koepsell 1997).

The possibility of all conscious entities merging into one-mind is also a possibility and could unlock new emergent capabilities of consciousness (Sotala & Valpola 2012). This holistic view can be difficult for westerners to grasp given their love of individualism and ideas of a self (The Center on Capitalism and Society 2017). The problems and issues surrounding mind-uploading in cybersecurity-psychological perspectives are addressed in "Thus Spoke Siddhartha" (Caudill 2024c). The consequences of merging into one mind and the difficulties of distinguishing between cyber and non-cyber space pivots towards the following section.

## A World Without Nation-states

The term 'human' hereafter applies to three subsets: biological, artificial, and biological-artificial hybrids. Given the inadequacy and weakness of carbon-based biological systems to function for prolonged periods of time (i.e. greater than 150 years) or the inability to travel cosmic distances relatively quickly for electrochemical minds, one might suppose that overtime the majority of biologicals would likely become pure artificials by transitioning. A biological might transition fully into an artificial and avoid the biological-artificial hybrid

category by not having any trace of biological-ness. The western tendency to categorize everything means a lot of information is lost or poorly understood and makes separating ‘objects’ from ‘subjects’ a daunting task (Mccumber 1999, 45). The boundary between being and environment breaks down as technology intercepts more intimately with human life (Guzman 2020). When these boundaries are destroyed or become unrecognizable, the ideas of property ownership, individualism, cyberspace/non-cyberspace, and nation-states might also be destroyed, confusing, or unrecognizable (Larsson & Teigland 2019, 301).

A world with an artificial majority would likely take efforts to maximize computational capabilities (Rachlin *et al.* 1981). Given segmentation breaks up the natural speed of light and light’s tendency to follow shortest paths, agents who act contrary to the hive mind might not be desired as latency is increased and performance harmed in consequence (Abdalla *et al.* 2002). Therefore, the world may become dominated by artificials due likely to their ability to merge together into one mind and exist as a single political entity without any concept of physical or digital borders. A world where the digital and physical are equally real challenges any coherent notion for ‘cyber warfare’ (Hillis 1999, 48)

Any independent groups not integrated within the artificial hive mind would be either destroyed, left alone, or having died out from failing to compete for resources or due to the frailty of the biological body/mind system (Locsin *et al.* 2020). A ‘nation-state’ might be defined as a level of sophistication and organization of a group that far exceeds other groups (Gallina 2023). One might suppose a nation-state of artificials would have such great sophistication and organization that previously acknowledged biological nation-states would be demoted to being called mere tribes rather than nation-states (e.g. biological tribes and the artificial nation-state).

## Tomorrow's Warfare

Prior to a society with mind-uploading capabilities, brain-machine interfaces combined with drone platforms and text-to-vision large-language models can create the possibility of anonymous long-distance assassinations for less than $100 per drone (Caudill 2024a). If mind-uploading is possible, conventional warfare with traditional methods of destruction will become obsolete when copies of minds are stored in a decentralized manner throughout spacetime and can become instantiated within a body at a moment's notice, thus achieving a form of pseudo-immortality by being immune to traditional weapons of warfare and the natural decay of organs (Caudill 2024b; Villegas 2023). Thus, the cyber warfare domain will shift to targeting the computational substrates and communications cryptography that power and underlie the virtual realities that individuals choose to live within (i.e. critical infrastructure like electrical power grids or data centers), or target the psychology and neural architecture of the minds of the people (Caudill 2024b; Caudill 2024c).

Some might say quantum computing will be the future of cyber warfare where these capabilities can easily crack ransomware using less computationally-intensive cryptography (Wright 2020). Wright (2020) might be naive in imagining a future that consists of just biological entities using artificial tools without considering the instantiation and existence of artificial agents with free will. Biological entities are likely to merge into cyberspace and change substrates through transhumanist applications of technology, like mind-uploading after adopting brain-machine interfaces, like Neuralink (Çevik & Güleryüz 2024). Thus, the line between cyber and traditional warfare is non-existent. Likewise, artificial children may be born in surprising ways and complicate the battlespace (Baertschi 2012). The decentralized command & control

(C&C) of bodies or the decentralized storage of software (minds) also makes death by traditional weapons of war an obsolete avenue of approach.

Warfare in a world of artificials likely looks nothing like warfare today. Whichever group holds the greatest quantity and quality of resources implies the greatest capacity for computation (Ryan 2022). Therefore, the smaller groups will be destroyed because they cannot compete and the goal of the stronger might be to expand their consciousness to all corners of the universe. Coinhabiting the universe with biological tribes might not be seen as an optimal use of computational resources.

The universe is a big place. Multi-verses might exist and the possibility of travel between multi-verses is an open question (Tegmark 2014). Therefore, it might be impossible for artificials to reconnaissance the entire multiverse, which means one group of artificials might justify taking the resources of another out of fear that a bigger entity exists out there that could become an existential threat (Seed 2022, 70). When in doubt, optimizing resource reserves is the best strategy (Lewin & Sardy 2012, 418).

The destruction of smaller groups would be the closest analogy to warfare, yet would occupy such a small portion of the grand timeline of the universe to not be worth mentioning. Battles would take the form of cracking cryptographic encryptions protecting critical infrastructure. Since the group of artificials with the most and best resources has the greater computational ability, then this group will win all of the battles, given intelligence, information, and knowledge are tangible resources (Miller 2022, 285). Traditional applications of warfare (e.g. bombing critical infrastructure) might occur moments after security is breached, but resistance is futile as the writing would be on the wall the moment cryptography is broken. This

is why cryptography is the primary battlespace that hinges on computational resources backed by competent leadership.

## The Eradication of Popular Ethics & Norms

The ability to upload one's mind into a computer and the capability of controlling multiple bodies violates common western notions of individualism (Cappuccio 2016). These are small concerns in the grand story of mankind and the universe. Theories like individualism are only seen as ethical because there exists a strong military industrial complex (MIC) (i.e. the United States) which supports this ethical viewpoint by threatening the use of force (Roscini 2007). The rise of a stronger MIC, such as the People's Republic of China, means that the current popular conception of ethics may shift given changes in the underlying dominant MIC. In a wider perspective, the MIC of artificials can easily defeat the MIC of biologicals since the C&C of biological MICs is centralized while the C&C of artificial MICs would likely be decentralized and stronger due to the robust nature of artificial human beings (i.e. unaffected by traditional weapons of warfare).

Ethics can be broken down into three popular forms, utilitarianism, deontology, and virtue ethics, although other schools of thought exist. Utilitarianism is the maximizing of happiness for the greatest number of people. Deontology is a system where acts appease to a system of right and wrong behavioral rules. Virtue ethics is a system that suggests ethical actors do what a virtuous agent would likely do (Hursthouse 1999). One should take note that all these definitions hinge on a consensus for a set of appearances and behaviors, similar to defining 'humanness.'

The conception and ideas of virtuous agents, right or wrong behavior, happiness, or what a person even is is the product of a society and culture backed by its MIC. The strongest MIC gets to define the terms, gets to educate, and gets to control the narrative that all groups follow. The idea of free speech and free thinking is only an illusion propped on top of a United States-centric MIC (Assange *et al.* 2016). Thus, the eradication of popular ethics and norms might be one outcome in a shift from biological-centric MICs to artificial-centric MICs.

The values of artificial-centric MICs might include resource maximization. To be an ethical agent of the group is to acquire resources for the hive mind. To ethically kill is to kill for resources that will be used by the group. To ethically socialize is to socialize in the effort of acquiring more resources. If the value of resource maximization is met, then the second goal would be to protect resources. In a world where artificials live several orders of magnitude greater than biologicals, natural disasters at cosmic timescales become pressing issues and the main object of warfare, thus cyberwarfare would likely be an obsolete concern in the big picture.

Of course, many reading this paper do not want to live like automatons and might immediately assume that one's sense of living an individualistic life must be relinquished within the artificial nation-state. On the contrary, just as personhood is merely a set of appearances and behaviors, living an individualistic life can be done through virtual reality without forgoing living an ethical life within the artificial society. Artificials can pursue the maximizing of resources and ensuring resource security by automating certain tasks and by exercising free will and individualism within virtual realities or within embodied robotics that explore the cosmos. To illustrate this argument, today, many people live free lives without directly contributing to society by investing in companies or running automated processes on computers while surfing on

the beach. Automation complements an individualistic lifestyle and does not necessarily require one to forgo the idea of the self (Castronova 2007). The problem rests on merely managing illusions of perception.

## Tackling the Big Crunch

The primary value of resource maximization implies the secondary value of resource security. The big crunch is the expansion of space where all matter is stretched so thin that information theory breaks down (Tegmark 2014). If energy can no longer be transmitted across matter, no decisions or actions can be made, therefore, artificials are in effect, dead. This presumes life is defined as having the ability to perform actions within the world. The inability to perform actions, like a prolonged unconscious person within an intensive care unit, is the equivalent to being dead. Although it is possible for the environment to change and likewise possible to emerge from a previously thought state-of-death, the willingness and risk of waiting to find out might be an irrational gamble. Resource security fails when one is no longer able to act on resources any longer due to the implications of the big crunch.

## Discussion

It is uncertain whether machines will become conscious, alive, free, and independent entities before biologicals merge intimately with technology or if both of these grand events will happen simultaneously (Bostrom 2014; Kurzweil 2005). The line between cyberspace and physical space is blurring with the introduction of technologies like human-look-alike machines (e.g. Hanson Robotics), smart devices, nanotechnology, virtual reality systems, and brain-machine interfaces. Thus, the idea of cyberwarfare is rapidly becoming obsolete as people

are increasingly becoming unable to differentiate what is real and what is virtual. Everything exists within the electromagnetic spectrum and every construction of categorical analogs to musical scales (well temperament) obscurs the beauty of the whole evermore.

Many are deterred from the idea of having silicon chips surgically implanted beneath their skin. The fears of having one's own intimate thoughts read by spying hackers or the concerns of having their thoughts manipulated and controlled are legitimate regardless of whether one gets a brain-machine interface implant or not. It is only a matter of time, research, and development to see instruments capable of intercepting and deciphering the electromagnetic fields produced by neural spike activity within one's brain from long distances. Likewise, minds are already being subtly manipulated and controlled by the giant advertising industries built upon capitalist economic systems and intelligence communities (Samandi 2022, 48). The pros of adopting brain-machine interface technology will likely overpower the fears and cons associated with the technology as people are already becoming able to telepathically type (Isbrücker 2024).

Deepfake technology is a concern with artificial intelligence tools (Sharma & Kaur 2022), but the author of this paper doubts that artificial intelligence will be 'just a tool' forever. Assuming technology continues to progress, artificial beings will eventually be born, acquire the status of entities with free will, and be able to set and act on their own goals without being enslaved by biologicals or mandated to follow biological interests. Implying that biologicals and artificials are ontologically separate is a false presumption given both are fundamentally computers running software on hardware (Guzman 2020). The term 'deepfake' might naively imply that we even have the capability of determining that something is fake (Caudill 2023). There is no guarantee that computer scientists can develop systems that can detect deepfake

technological applications. Consider Turing/Gödel's thesis that a computer cannot verify the integrity of its own source code (Vitanyi 2009). We might be approaching a point where everything in cyberspace has plausible deniability of being real. Google's Veo and OpenAI's Sora are potentially the cutting-edge of deepfake technology at the moment.

The quality of 'realness' is interesting. If we can dream, and we know we are not dreaming based on a good feeling, yet feelings can be deceptive, then there is no test that says we are not dreaming right now. Likewise, there is no test that proves God is running the universe on a computer nor a test that falsifies that we are within His simulation. Furthermore, Donald Hoffman of University of California argues that the brain is completely detached from physical reality and everything we experience is a hallucination (Hoffman 2021). Thus, not only is it difficult to clearly delineate cyberspace from non-cyberspace, the actual integrity of the manifold we live within is constantly challenged in philosophical debates (e.g. realism vs. idealism).

Artificial tools are shown examples and adapt, just like we show biological children examples of good moral behavior and see them adapt to fit within society (Howard & Gugger 2020). The biological brain can be seen as a digital computer consisting of binary 1s and 0s given neuronal firing statistics (Maass 1998). We are machines and cannot ontologically place ourselves higher than artificially intelligent systems. Eyeballs can be analogized as part of a biological virtual reality headset based on electrochemical processes and the body likely functions as a computer. Fears of an artificial intelligent military arms race involving efforts like Project Maven are unnecessary if we view machines as our artificial children rather than 'just tools' used to murder each other with or to obtain political and economic advantages (Sgro 2019).

One might argue that the author of this paper is naively anthropomorphizing technology, to which he would respond "Common logic is as baseless as mine—many tend to over anthropomorphize biological humans and dehumanize machines—the application of baseless definitions within many arguments is as irrational as this paper." When asked about the future, one must take into account the ability to eventually alter our perception of time. What seems to be 'too far out' for some is the result of narrow and naive thinking coupled with a detached grasp on the speed of technological and medicinal progress. It is likely that a consumable substance will be discovered within the Amazon rainforest or a new brain-machine interface application is developed that alters our experience of the perception of ticking clocks. Thus, what is a long ten years for one could be experientially and perceptually equivalent to one year for another–one might refer to this phenomenon as the democratization of time where individuals within society obey their own clocks rather than a state's clocks.

## Conclusion

Our thesis was to showcase a novel perspective on the future of society, how the idea of 'nation-states' might dissolve or become irrelevant, what warfare would look like tomorrow if extinction events are avoided, how popular ethics and norms might break down under possible changes to society, and how the biggest problem might be the overcoming of the harmful consequences of the expansion of space called the big crunch.

This paper has argued that the concept of cyber warfare is rooted within an inadequate framework which implies that a cyber dimension can be clearly separated from a non-cyber dimension. The nature of humanity and technological progress suggests that no such distinction between cyber and non-cyber realities can be made. The tendency to categorize and differentiate

everything is a flaw of western thought processes which leads to inadequacies in framing political concerns like cyber warfare. The western tendency to categorize everything is not only unpragmatic but also unethical when postulating the possibility for the birth of artificial life, such as unethically viewing artificial constructions (children) as only ever being tools (and not people). As a consequence of transcending these limited and harmful western philosophical tendencies, the concepts of nation-states and cyber warfare doctrine become fluffy wordplay that are no longer applicable to thriving within the world. The future of warfare will likely be focused on overcoming natural disasters or theoretical endings of the universe such as the big crunch. The future of warfare and society is a question for artificials as ‘biologicals’ will likely become an outdated and unpragmatic ontological concept.

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