In the Machine We Trust

Cyborg Body of Philosophy, Religion and Fiction

Abstract. The idea of mind uploading shows that in the philosophical sense, we are still deeply embedded in Cartesian dualisms and Newtonian mechanical ways of thinking. Moreover, this idea neglects our material existence, i.e. our embodied reality, no matter how obsolete or imperfect or unable to cope with exponential technological advancements it may be. In this paper I will attempt to step out of Eurocentric and anthropocentric thought in two ways. Firstly, by introducing the Chinese philosophical concept of Tao - through the etymology of the written character Tao I will comparatively analyze it with the concept of the Machine-God. Secondly, the desire to leave the meat behind emerging from the body-mind split will be criticized through the concept of embodied consciousness. In order for a mind or any other immaterial phenomena to be uploaded into a machine, it first has to be measured, pragmatically proven and materialized. This shows the discrepancy between our mechanical hardware / the inert matter and dynamical wetware / living bodies. The paper will be an attempt to provide a platform for more inclusive, anti-essentialist ways of thinking and debating the complex and intimate relations with our machines and their potential to shape possible posthuman futures.

Keywords: Mind uploading, body-mind split, corporeality, Tao, Machine-God

> *The Machine feeds us and clothes us and houses us; through it we speak to one another, through it we see one another, in it we have our being. The Machine is the friend of ideas and the enemy of superstition: the Machine is omnipotent, eternal; blessed is the Machine.*
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> E.M. Forster, *The Machine Stops* (1909)

Judging by the present modes of technologically mediated communication we use on day-to-day basis, it is not exaggerating to say that the modern society is on a threshold of living and experiencing what Edward Morgan Forster envisioned as the future of interactions in his short story "The Machine Stops" back in 1909. [1] It is the vision of a society so occupied and satisfied with technologically mediated communication that individuals lost the need for contact in person as well as the ability to live on the surface of the Earth, showing no intention of leaving their underground "cocoons" in which they live isolated from one another while at the same time connected through their screens, their portal to access all the information there is. The Machine

contains everything and everything is perceived through the Machine. Direct experience or knowledge became unthinkable to the point of abjection and the very existence makes sense only through the Machine: "There will come a generation that had got beyond facts, beyond impressions, a generation absolutely colourless, a generation *seraphically free from taint of personality"*, and whose ideas will be "far removed from that disturbing element – direct observation." [1] Life in the technologically generated cacophony of images, sounds and textual formations characterizes a society which has over-reached itself in conformism leading to increasing efficiency and decreasing intelligence. In such a setting, the word progress stands for the progress of the Machine only. Similar visions are articulated in George Orwell's novel *1984* [2] as well as in the film *Equilibrium* (2002) for example, where human affection is seen as the source of conflicts and is therefore rendered illegal by the totalitarian system in which the only faith is the faith in the Machine (or the figure of Father in *Equilibrium* which turns out to be yet another simulation). Although these and other similar narratives fall under the category of science fiction, they can be read as a sort of social theory of the technologically mediated world we live in today, increasingly dependent on smart phones, tablets, GPS systems, Cloud computing, Augmented Reality (AR) systems, robots, drones, nanotechnologies, etc. through which we are becoming an integral part of the omnipresence and omnipotence of the Machine. Therefore, it is not surprising that digitally coded landscapes are often seen through the prism of transcendence related beliefs and ideas as spaces of salvation from the imperfections and limitations of both our material reality and our decaying mortal bodies.

In an interview for C-Theory, Paul Virilio addresses the transcendence in cyberspace as a highly complex concept. [3] While speaking in terms of metaphysics and not religion, he argues that cyberspace plays the role of God who is, and who sees and hears everything. Despite the fact that magic and religion have to a great extent been suppressed by rationality and science, one of the ironic outcomes of techno-scientific development is a renewed need for the idea of God, transcendence and salvation attributed to our machines. In other words, cyberspace and emerging technologies in general have been given the role of God or more precisely, the Machine-God: "All technologies converge toward the same spot; they all lead to a *Deus ex Machina*, a machine-God. In a way, technologies have negated the transcendental God in order to invent the machine-God." [3] A slightly different take on cyberspace as a supreme being can be found in William Gibson's cyberpunk novel *Mona Lisa Overdrive*. [4] Gibson addresses the idea of a Godlike super-intelligence emerging in cyberspace. He writes in terms of its omniscience, omnipotence and incomprehensibility of the matrix itself, but unlike Virilio, Gibson states that the matrix is not God, "but that it has a God, since this being's omniscience and omnipotence are assumed to be limited to the matrix." [4] (p. 115) Moreover, its omnipotence does not equal immortality as would ordinarily be the case in belief systems positing a supreme being because the existence of the matrix is dependent upon human agency. In that sense, it is not only that we have discovered a God-Machine, but technologically altered holy trinity: God-Human-Machine. Naturally, the question arises whether the matrix as such could as well be regarded as intelligent or self-aware, i.e. could its processing power give rise

to AGI as suggested in Gibson's novel *Neuromancer* [5] where intelligent entity Wintermute emerges from the substance and structure of cyberspace. Would such AI be limited to digital spaces only or is it more likely that it would strongly affect our embodied existence as well, having in mind the ever increasing boundary collapse between "real" and "virtual"? To what extent would we as humans expand our ability to adapt to our environment or techno-eco systems governed by AI in this case and, more importantly, would we at all be able to tame and control it to our benefit as so often envisioned by futurist thinkers? If on top of technological cognitive and bodily human enhancements we add a techno-sentient being to the equation, how would the notion of being human transform towards the posthuman in such couplings? Finally, given that humans no longer hold the dominant central position in human-machine interfaces, would the human attributes including psyche, memory, language, cognition, etc. simply be rendered irrelevant?

Looking back at the 5000 days of existence of the World Wide Web and predicting what next 5000 days may bring, the *Wired* magazine's founding executive editor Kevin Kelly spoke of the Web as a living organism in his 2007 TED Talk. [6] Similar to Virilio's observations, he pointed out that only a few decades ago we couldn't have imagined having a direct access to any information needed, to have the whole world right before us on our digital devices. Interestingly, "it's amazing, yet we are not amazed" [6], for in such a short time we got used to the Web so quickly and effortlessly that it became almost impossible to imagine the world without access to it where we not only get the information needed but also project ourselves into it thus becoming its constitutive part on multiple levels of interaction. On top of that, we no longer rely on our own memory only but trust and rely on search engines and social networks which function as the extension of mind and self. According to Kelly, our devices are only small windows or portals to the network as a unique machine which he refers to as the One or the One Machine. It is the most reliable machine humankind has ever built – it works continuously and its daily flow of information equals the capacity of one human brain. The only difference is that the capacity of human brain does not increase every two years, which means that in about thirty years from now, the Web will have a daily capacity of six billion human brains containing all the data we can think of. Hardware memory is already giving way to Cloud data storage accessible only via the Internet while at the same time the data location remains unknown (the users have no insight as to where exactly their data are stored nor can they be sure who has access to and control over those data). The Cloud consists of compressed abstract layers of data and is often described as the "hive-mind" emerging from hardware technical solutions and abstract software Internet models. Everything corporeal is being transcoded into the Cloud. Consequently, we are becoming highly dependent on the abstract network of digital synapses within which everything is seemingly possible. However, we can never grasp or control it in its totality but just as with deities, we can only reflect our hopes and beliefs in its reliability. As noted by Kevin Kelly, the Web functions as synapses of the human brain and in that sense he compares it with a dynamic living organism we respond to and interact with thus

giving rise to a highly complex unity in which technology acquires features of living systems:

> "There is only One Machine. The Web is its OS. All screens look into the One. No bits will live outside the Web. To share is to Gain. Let the One read it. The One is us – we are in the One." [6]

If we use the word God here instead of the One Machine, we can clearly see the renewed need to believe in a higher power, something greater than us, i.e. the Machine-God in this case that Paul Virilio spoke of. Certainly, generalizations should be avoided when speaking of differences between various religious and/or philosophical systems which are all determined by complex social discourses throughout history, but for the purposes of this paper it will be sufficient to only outline some of the features of these systems and observe them in relation to new technologies out of which a new hybrid phenomenon is emerging, manifesting itself in the form of some sort of algorithmic religion. It is based on our confidence in, and ever increasing dependence on the Machine or the Cloud into which we upload all of our being, knowledge, history, cultural artifacts, etc., hoping that in the very near future the emerging technologies will enable us to transgress the limitations of corporeality. It is in this sense that the Machine becomes perceived as the One, the supreme or meta-being. And just as the heavenly kingdom is a place which supports our hopes and prayers and holds a promise of eternal life, so can the Cloud be considered a place which provides a technical support for all our needs and desires which is only a click away.

Whether we are addressing monotheism, polytheism or any kind of non-institutionalized spiritual practice in the context of new technologies, digital datascapes can in a sense be considered the fields of tech-gnosis, neo-paganism and cyber-mysticism [7] where the transcendence is attainable for everyone through a screen as a portal to cyber-nirvana and back, or even to the eternal life in digital landscapes if we ever master the art of uploading the mind and leaving the materiality of our existence behind that many prophets of the future speak about. However, the belief that technologies can save us from the sufferings of this life is not unique to the modern era and the emergence of new media technologies. Historically, every breakthrough in technological development has been up-to-date followed by predictions and visions of the future in which humanity projects itself into the seemingly limitless potentials of technology at hand, in search for the human empowerment, longevity and the essence of life. With the advent of cyberspace, many futurists were (and some still are) prone to thinking of digitally coded landscapes as "the promised land", claiming that we will be able to leave this realm of existence and move to the place of omnipotence where the transcendence of imperfect and disappointing here-and-now awaits. Our minds already operate with ease between the realms of imagination and reality, virtuality and materiality, but the key issue here may not be how to transcend the body for we do not know yet whether such an endeavour is at all possible, but how to incorporate the body into our "electric dreams" and bridge the gap between technological hardware and biological wetware. Regardless of the lack of scientific proof that

the mind can be separated from the body to be uploaded into the machine, many futurists and especially transhumanists draw on the works of Marvin Minsky, Hans Moravec and Raymond Kurzweil and pursue the idea of mind uploading as one of the ultimate goals or Holy Grails of technological development. Although transhumanism is based on secular humanism and atheism, transhumanists very often use spiritual, mythological or parapsychological concepts such as the immortality of the mind/soul/spirit and transcendence of the body for instance, and attribute them to nano and biotechnologies, robotics and information technologies, in which they see possibilities of salvation, i.e. possibility of becoming immortal through mind uploading.

Different religious and philosophical systems incorporate the idea of human immaterial substance which lives on after the death of the body. For example, Christianity negates life after death but preaches about the eternal life of the soul after death. Western thought, whether religious or philosophical, is deeply embedded in Cartesian dualism i.e. body and mind split in which the body is usually assigned negative connotations of being sinful, dirty, decaying and thus limiting to the mind, while the mind is highly idealized. On the other hand, Hinduism, Buddhism, Taoism and other religions and schools of philosophy of the East have a more holistic approach in which body and mind constitute a dynamic unity instead of opposites excluding one another. For instance, in Chinese philosophy and religion, as well as in traditional medicine, there's a concept of Chi (　) also known as *Prana* in Sanskrit, meaning "life force", "vitality" or "energy flow", which is immaterial or rather invisible but can at the same time be physically measured and balanced through acupuncture, breathing exercises, diet, martial arts, etc., contributing to wellbeing and longevity. As such, it can neither be termed immaterial or material, and it is both at the same time. Another concept deeply embedded in Chinese philosophy and religion (Taoism, Confucianism and Zen Buddhism) is the metaphysical concept of Tao (　) which can roughly be translated as "path", "way", "principle", "logos" or "doctrine" but its essence cannot be verbalized but only experienced. [8], [9] In order to avoid a lengthy discussion on all the possible meanings of Tao, for the purpose of this paper I will only focus on the etymology of the written character Tao which shows not only the unity of body and mind but also the necessary embodied interaction with, and adaptation to environment no matter how technologically enhanced it may be. The character Tao consists of two parts:

1. Character 　 /*shou*/ means 'head', but if we break it further into its consisting parts (　　　), it has a much deeper meaning. The two strokes on the top represent the principle of Yin and Yang, i.e. the interconnectedness and interdependence of the opposites (which I prefer reading as the binary code in the context of new technologies). The horizontal stroke in the middle brings these two forces together, making them complementary instead of opposing elements of a whole. The third part is character 　 /*zi*/ which means 'self', but unlike the purely noetic nature of the self as seen and interpreted from the perspective of Western thought, in Chinese cosmology the self is considered to be a unified spiritual-corporeal whole, or an embodied mind.

2. Character 辵 /chuo/ means to go, to walk, or to move, and it can also represent the walking surface.

Now to put the character back together, Tao as a dynamic system of Yin and Yang giving rise to each other, can be comprehended through the movement, or in other words, to become one with the Tao is to experience it through the embodied mind. This means that the isolated intellectual comprehension is not sufficient enough and it requires simultaneous bodily awareness of what is within and around us. If we are to identify Tao with the One Machine as our omnipresent technologically mediated environment, then, comprehending the One and merging with it is not possible through uploading the mind only. For making this experience at all possible, it has to be based on corporeality, because it is through the body/embodied mind that we perceive the world and respond to it. [10] Furthermore, if the concepts of Chi, mind, soul, consciousness, etc. are placed in the context of the emerging technologies which hold the promise of transcending the body, it no longer matters whether the interpretations of the existence of our constitutive immateriality are true or false. If the mind uploading is to be made possible, we should first ask the question of where exactly the mind is located – is it exclusively tied to the brain or is it interwoven through every cell of the body? If the mind can exist only in relation to functional living body, does mind uploading involve hibernation or some sort of an induced coma while maintaining basic bodily functions? In a state of hibernation dominated by subconsciousness, how can the conscious processes be activated? Isn't the hardware to which the mind would eventually be uploaded also susceptible to viruses, failure and obsolescence way much faster than our imperfect, mortal bodies? Finally, in order for something to be converted and uploaded, doesn't it have to be measured, pragmatically proven or given in a sort of material form? These and similar questions might be helpful in establishing a critical distance towards techno-enthusiasm trends often found among futurist thinkers, which seem to be a way of escapism to technological imaginary, overlooking the material aspect of corporeal existence of both our biological bodies and technological hardware which contains and generates seemingly omnipotent virtual worlds. Likewise, this kind of attitude neglects the harsh reality of sociopolitical and economic conditions and challenges of present day. As Andy Clark has simply put it, we are by nature "products of a complex and heterogeneous developmental matrix in which culture, technology, and biology are pretty well inextricably intermingled." [11] Embracing the materiality and virtuality of existence and stepping out of rather limiting techno-centric views might bring us closer to more profoundly revealing and fully experiencing the perpetual change in the reality of the One.

In this paper, I have introduced the notion of Tao not in terms of its religious mysticism or poetry as often understood in the West, but in its pure philosophical and linguistic form in order to initiate a discussion on the emerging technologies and potential futures not only from the perspective of linear, goal-oriented, and/or dualistic mindset, but also to include the way of thinking that is based on interconnectedness, perpetual change, cyclic processes, networked systems, interconnectedness etc. Although originating from the traditional philosophy of Tao, these terms lay at the very foundations of the principles new emerging technologies are based on. Without any

additional effort, it is possible to reconceptualize or rethink the complex man-machine relations within the context of thusly introduced concept of Tao. The principles grounded in the Taoist philosophical thought can be offered as a sort of intuitive tool to better understand and so to govern and control the dynamics of human-machine relations. Therefore, I hope that this paper will initiate further thoughts into direction of interdisciplinary theory of technologically amplified reality based on the methodologies and terminologies merging the bodies of traditional philosophy and contemporary science.

References

1. Forster, E. M.: "The Machine Stops". In: *The Oxford and Cambridge Review* (1909). http://archive.ncsa.illinois.edu/prajlich/forster.html (27 Sept. 2013)
2. Orwell, G.: *1984*. Penguin Books, London (2003)
3. Wilson, L.: "Cyberwar, God and Television: Interview with Paul Virilio". C-Theory Articles (1994). http://www.ctheory.net/articles.aspx?id=62 (27 Sept. 2013)
4. Gibson, W.: *Mona Lisa Overdrive.* Bantam Books, New York, Toronto (1988)
5. Gibson, W.: *Neuromancer.* Ace Books, New York (1984)
6. Kelly, K.: "The Next 5000 Days of the Web", TED Talks (2007). http://www.ted.com/talks/kevin_kelly_on_the_next_5_000_days_of_the_web.html (1 Oct. 2013)
7. Cowan, D.E.: *Cyberhenge: Modern Pagans on the Internet*. Routledge, New York and London (2005)
8. Yu-Lan, F.: *A Short History of Chinese Philosophy.* The Free Press, New York (1997)
9. Needham, J.: *Science and Civilization in China (Vol.2) - History of Scientific Thought*. Cambridge University Press, Cambridge (1956)
10. Merleau-Ponty, M.: *Phenomenology of Perception.* Routledge, London (2002)
11. Clark, A.: *Natural Born Cyborgs: Minds, Technologies and the Future of Human Intelligence*. Oxford University Press, New York (2003)