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Singularity! Communism! Apocalypse!: An Exploration.

ABSTRACT: This article is first developed by exploring contemporary sociotechnological Singularity theories (most notably the utopian notions of computer scientist Ray Kurzweil and cyberneticist Francis Heylighen). Secondly, this article is developed by exploring historical theories of collective human development inspired by German Idealism (most notably the utopian notions of Georg Hegel and Karl Marx). In relation to these idealistic and utopian notional structures, this article then presents an overview of emerging common problems and tensions related to 21st century geopolitics and socioeconomics. This section is presented with the perspective that humanity is approaching a systemically immanent zero-level (apocalypse!) that can only be avoided via the mediation of a fundamental metasystem transition towards a new commons global order structured within distributed egalitarian networks. The evental becoming-space between possible systemic collapse and general idealistic attractor state is what I refer to as the "Commons Gap": a space which may be navigable with a materialist dialectic that affirms humanist universality in diversity. Finally, I conclude with a comparative reflection on theories of eschatological capitalism (end times capitalism) — Kurzweilian vs. Marxist — in relation to the increasing openness and ambiguity of the human situation vis-a-vis global capitalism and sociotechnological evolution. Although both the Kurzweilian and Marxist capitalist end times visions are almost certainly incorrect, they both provide us with interesting thought space to contemplate the necessity for humanity to discover a new level of common agency with a new level of distributed organization.

SECTIONS:

1-Technological Utopia Today

      The futurist dimension of the scientific mind has been recaptured by a resurgent cultural belief and desire for Technological Utopia characterized by a world where all fundamental problems of the historical process are resolved and replaced by a higher state of sociotechnological existence. The most influential such vision of Technological Utopia has revolved around Ray Kurzweil's notion of future Singularity, which predicts human-machine symbiosis towards phenomenological transcendence (see: 1999, 2005, 2012).[1] The "Kurzweilian Singularity" has had far-reaching and growing affects on con-temporary sociotechnological development, most notably providing the foundational vision for the technical institute *Singularity University* and the Internet giant *Google.*[2] Both *Singularity University* and *Google* are building their foundational projects around two of Kurzweil's most revolutionary futurist predictions: human-level natural language capabilities will be achieved in computers by 2029, and artificial general intelligence (AGI) towards the beginning of post-humanity will be achieved by 2045.[3]

      In Kurzweil's vision, biological humans will experience a utopian merger with technological super-lifeforms (as opposed to being eradicated by them), leading ulti-mately, not just to the abandonment of history (a constitutive archetypal feature of modernist thought), but also and more importantly, to the abandonment of our com-mon biological animality (a more radical thought, but also a common and constitutive possibility within modernist thought). Thus, the ultimate common human goal and purpose, for Kurzweil, is for humanity to eventually become (1) fully self-designed and fully technological, (2) to merge our minds with many different varieties of technological intelligences/consciousnesses, and (3) to experience higher levels of organization, knowledge, and love. From this process, Kurzweil envisions a deep future where our radically transformed descendants explore and conquer the entire cosmos in a state of super-being (a state "beyond language"), consequently leaving the collective becom-ing of humanity "historicized" (i.e. the process of humanity is a phenomenon which functions as a bridge between biological and technological life, see: Last 2015).

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[1] The term "technological singularity" was first introduced and explored by computer scientist and mathematician Vernor Vinge in a *NASA* article titled *The Coming Technological Singularity* (1993), where he ominously predicted: "Within thirty years, we will have the technological means to create superhuman intelligence. Shortly after, the hu-man era will be ended." However, 21st century visions of technological singularity, as mentioned, have been more popularly explored and influenced by Kurzweil's utopian notions of human merger with our technological creations, most notably in *The Singularity Is Near* (2005). For a more thorough exploration of the history of technological singu-larity theory see Section 3.1 of this author's work: "Big Historical Foundations for Deep Future Speculations" (Last 2015a).

[2] *Singularity* University was originally founded by Raymond Kurzweil and Peter Diamandis. The institute was de-signed to practically apply emerging information technology to tackle global challenges. For more: http://singulari-tyu.org. *Google*, originally founded by Larry Page and Sergey Brin as a search engine, has since functionally differen-tiated into several branches under a new universal umbrella called "Alphabet", which focuses on the development of artificial general intelligence, the Internet of Things, radical life extension, drone delivery/self-driving car networks, and so forth (for more, see: Page 2015).

[3] For a comprehensive list of Kurzweil's technological predictions record see: (Kurzweil 2010).

Kurzweil's vision of human-machine transcendence and the Technological Singularity is supported by his cosmic evolutionary and economic theory he refers to as the "Law of Accelerating Returns" (LOAR). According to LOAR, the universe can most fundamentally be understood as an information processor that evolves exponentially via ever-higher developmental levels of computational capacity (i.e. the "Six Epochs") (Kurzweil 2005, chp. 1):

- Epoch One: Physics and Chemistry
- Epoch Two: Biology and DNA
- Epoch Three: Brains
- Epoch Four: Technology
- Epoch Five: The Merger of Human Technology with Human Intelligence
- Epoch Six: The Universe Wakes Up

According to LOAR, each developmental platform of evolving information processors causes the speed of evolution to accelerate because higher levels can conserve the memory acquired at lower levels of organization and subsequently build new knowledge at a faster pace. Kurzweil applies this evolutionary narrative to explain (or reformulate) our contemporary understanding of exponential computational progress related to "Moore's law"[4], according to which the number of transistors within an integrated circuit doubles every ~18 months for the same unit cost, enabling increasingly powerful computer hardware for a predictable price.[5]

For Kurzweil, LOAR is a more general explanation of technological evolution than is Moore's law. This is because LOAR can be applied to understand the economic evolution of all information technology and can also be expanded "beyond" Moore's law with future computational paradigms (for example, from our current paradigm of integrated circuits to potential future paradigms like three-dimensional molecular computing). Therefore, for Kurzweil, LOAR allows us to make predictions about the types of computational power and technological devices we will be able to construct between our present moment and 2045, for example (Diamandis & Kotler 2015):

- 2020s: Nanobots merge with human biology (eliminate disease, prolong life)
- 2020s: All vehicles will become "self-driving" (i.e. automated)
- 2030s: Virtual reality will "feel 100% real"
- 2030s: Humans upload consciousness to supercomputers
- 2040s: Technological intelligence billions of times more advanced than ours
- 2040s: Nanotechnology will enable the creation of any object in physical world
- 2040s: Human brains will converge via expansion of neocortex to the cloud

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[4] Moore's law was first introduced by computer scientist Gordon Moore (1965, 1975) and has since been used by many technical industries as a reliable way to estimate future hardware capability within our current computational paradigm.

[5] Although, of course, development of software depends, for the moment, on human ingenuity.

After that, we will proceed towards the cognitive/phenomenological end of the universe in the form of the universe "waking up" and colonizing/conquering the whole of the cosmic object.[6]

However, the most interesting aspect of the Kurzweilian singularity theory is that LOAR as process does not just represent and predict future computational capabilities of human civilization, but also, that these future capabilities are understood to be analogous to the immanent emergence of future transcendence, or essentially what amounts to technological God. From this perspective, Kurzweil's cosmic evolutionary economics theory is both scientific and explicitly theological.[7]

This theological dimension is reflected most clearly in the documentary about Kurzweil's life and theories — *Transcendent Man* (2009) — where he is asked whether or not he believed in God.[8] His response was "not yet", meaning that God is a human metaphor for qualities like Absolute "knowledge" or "knowing" (i.e. love), and will eventually emerge from our co-evolution with technology. Specifically, Kurzweil speculates that the collective expansion and integration of our neocortex within a future technologically-mediated planetary unity will bring us closer to God (or what we think of as God).

Although, in this expansion and integration, according to Kurzweil, we will never reach the Godhead itself, as the infinite or Absolute qualities of knowledge and love, will always be out of our grasp (Kurzweil 2014). Consequently, in Kurzweil's cosmic system, the entire evolutionary process is practically an indefinite or virtually limitless spiritual process that brings life ever-closer to (but never quite within) the qualities of the Absolute limit of life as God, through the pursuit of higher knowledge and the pursuit of meaningful, loving social interconnection (now being mediated in the human collective by the development of exponential information technologies towards planetary technological super-life).

Kurzweil's belief in and desire for the emergence of God in Technological Utopia can be interpreted and compared in various dimensions, as this cultural archetype has many potential real-world implications and several closely related symbolic forms.[9] Consequently, it may be productive to first compare it with a similar notion that is emerging in another branch of "Singularity thought": namely, with the concept of a Global Brain (GB).

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[6] The ultimate conception, for Kurzweil, of mind achieving what psychoanalyst Jacques Lacan called the the "unattainable": the achievement of the real *objet petit a*, the "object cause of desire" (and thus, logically, the end of knowledge construction and object creation).

[7] Consequently, it is not surprising that adherents of many traditional theological belief structures, like for example, Christianity, Mormonism, Buddhism, and even Islam, have started to engage in a dialogue (both positively/optimistically and negatively/pessimistically) with "Singultarians" or more generally, with transhumanists, even going so far as to incorporate the technological singularity into "End Times" scenarios (see: Hughes 2012).

[8] For more information, see: Ptolemy, R. 2009. *Transcendent Man* (http://www.imdb.com/title/tt1117394/)

[9] For the latest works on the rise post-humans/humanity, see: Barrat 2013, Armstrong 2014, Blackford & Broderick 2014, Bostrom 2014, Goertzel & Goertzel 2015, Rothblatt 2014.

Cyberneticist Francis Heylighen, the pioneer and principle architect of GB theory,[10] understands evolution as a process bringing us closer to something "God-like" in the form of our developing planetary network of information and communication technologies (ICT) (see: 2015).[11] Heylighen justifies reference to this technological network as an emerging "global brain" via living systems analogy: the Internet has the potential to manifest functional distributed intelligence and consciousness on a planetary scale in the same coordination pattern that our individual biological brains manifest functional distributed intelligence and consciousness on the "planetary" scale of our individual personal being. Thus, for Heylighen, the human future is best understood as a relationship between freely developing human subjects coordinated within a global environment that is ultimately mediated by a higher super-level of intelligent and conscious organization.

Consequently, the global brain view is a more explicitly metasystemic view of the same "Singularity phenomenon" identified in the Kurzweilian scenario. The principle difference between the "Heylighenian" version and the "Kurzweilian" version is a difference in emphasis: global super-intelligence/consciousness via the Internet over indi-

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[10] Of course, many cite the physicist Peter Russell as the pioneer of GB theory, as many first heard of the concept "global brain" from his popular book *The Global* Brain (1982). However, Heylighen was one of the first scientists to formulate a rigorous model of human-computer network activity as analogous to a planetary nervous system (Heylighen & Bollen 1996). Furthermore, Heylighen has spent the better part of the past few decades further developing the concept scientifically with evolutionary-cybernetic foundations as the Internet has evolved qualitatively new dimensions. For an introduction to Heylighen's more recent thoughts on the future of human evolution within the global brain paradigm, see: 2007, 2008, 2012a, 2015.

[11] It is also interesting to note that most theorists who have thought seriously about the GB concept, for example Peter Russell (1982), Kevin Kelly (2010), Ben Goertzel (2002), etc. speak about this emergent global technological entity with essentially ancient philosophical and theological concepts. To give one specific example, Kevin Kelly thinks about our technological environment (or "Technium") now mediated by the Internet as facilitating the development of the "One" due to its potential for higher organism-like global unity of the symbolic order. For Kelly, this common unified medium, or the "One" will eventually self-organize and envelope all human psycho-social interaction, becoming an irresistible and irreversible hyper-personalized, super-intelligent, ubiquitous super-entity (Kelly 2007). Philosophically speaking, this reference to the "One" essentially brings us back to the roots of Western metaphysics with the ancient Greek concept of a higher substantive phenomenological reality (first introduced by Parmenides, i.e. the "Parmenidean One", and later adopted by Plato, i.e. the "Platonic One") (Russell 1945, chp. V). Of course, ultimately this would bring us back to Plato's Allegory of the Cave, i.e. we are trapped in a differentiating sensory illusion: an illusory multiplicity that appears to our being. This illusory multiplicity does not permit phenomenal access but we are none-the-less adapted to it through evolutionary selection processes related to perceptual and conceptual knowledge acquisition and construction (i.e. the "fitness" of our "knowledge-life-worlds" relative to the "Thing-in-itself" that we do not have access to) — and that we can only escape through some emergent mind function of higher penetrative thought vis-a-vis creative desire and subject-object understanding. The key difference between the ancient Parmenidean/Platonic conception, and the modernist conceptions, is the potentiality of evolutionary closure of this becoming multiplicity enabled by complexifying technological capability (a modern scientific phenomenon that was largely without anticipation in the ancient world). This is why the ancient Parmenidean One, as pure substance of Being, is insufficient, and best conceptualized in modern Hegelian terms, i.e. as Substance, but also as Subject.

vidual super-intelligence/consciousness via human-AGI merger.[12] Thus in the GB paradigm the truly transformative 21st century phenomenon is the much more subtle but rapidly advancing self-organization of our human-computer networks on a global scale, which increasingly allows us to coordinate our activities independent of centralized hierarchies. For Heylighen, this process facilitating distributed coordination of humans (irrespective of geographical location) will eventually enable an emergent level of organization capable of transcending all historical structures, like for example, nation-states.[13]

Thus, in the GB Singularity vision and theory, it is not essential to understand how one particular technology will impact human civilization (for example, future nanotechnology or artificial intelligence), but rather it is essential to understand how humans and our evolving technological networks could produce a globally distributed order in politics, economics, education, energy, etc. from the cumulative affects of local sociotechnological interactions (which will, of course, include technologies like nanotechnology and artificial intelligence, etc., but will more importantly, require a totally new way to organize human existence away from its general historical and habitual patterns of organization). This "new way to organize" will have to form from respect for the local autonomy of subjects (i.e. freedom from external institutional coercion), but will also simultaneously require the emergence of a new level of motivation and system of values within subjects themselves (presumably something that can be achieved via mediation with the global brain).

Ultimately, Heylighen is a radical optimist about this coming transition, as he predicts a future metasystem enabling "practical" properties of (2015, p. 341-342):

- Omniscience: being able to answer any question or solve any problem
- Omnipotence: being accessible everywhere at every moment
- Omnipresence: being able to produce any effect or achieve any goal
- Omnibenevolence: being ready to benefit (and not harm) everybody[14]

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[12] The paradigmatic vision of GB Singularity is derived from the works of cyberneticist Valentin Turchin who argued for such a metasystemic, super-organismic entity in *The Phenomenon of Science* (1977). Turchin, along with other cyberneticists interested in global evolution, Cliff Joslyn and Francis Heylighen, formed the *Principia Cybernetica Web* (1993), an online encyclopaedia dedicated to the exploration of evolution, cognition, and complexity within a systems/cybernetic theoretic perspective (http://pespmc1.vub.ac.be).

[13] Self-organization has become a crucial concept in various subjects related to understanding the evolution of chemical, biological, and social systems. The core of self-organization theory is that local interactions within a (chemical, biological, social) system can spontaneously generate globally distributed order and coherence from initially disordered or chaotic conditions. Moreover, the interaction rules by which the components order themselves are entirely local and can not be found in the global pattern itself. The most famous biological examples of self-organization include the activity of most superorganisms, for example ants, termites, and bees, all of which achieve a globally distributed order from simple local interaction rules that cannot be found in any centralized command structure (see: Camazine 2003).

[14] It is interesting to note that Kevin Kelly (11) has also identified these same "God-like" global properties with the development of the future Internet (without the "omni-" titles), i.e. hyper-personalized (omnibenevolent), super-intelligence (omniscience), ubiquitous (omnipresence) (2007).

Of course, these metaphorical concepts represent the traditional concepts used to describe the *Nature of God* (Wierenga 2003).[15] Consequently, in the same way that Kurzweil interprets human-machine symbiosis driven by the Law of Accelerating Returns in terms of the emergence of God (i.e. collective integration of human minds as God), in the "Heylighenian Singularity" the emergence of a GB environment driven by the self-organization of humans on the Internet is interpreted as God (i.e. technologically-mediated planetary thinking meta-level as God).[16]

And, from the GB perspective, can we not already see the precursor movements toward the emergence of "omni" properties today? For example, if all of the functional subdivisions of *Google* are extrapolated to their longer-term potentialities, we arrive at a vision of the whole of humanity as transformed into "immortal" neurons within an "omni" global system. *Google* is attempting to develop global Internet, semantic web interface, artificial natural language assistants, artificial general intelligence, automated transportation grids, full regeneration biotechnology, among other such attempts in genetics and nanotechnology to extend lifespan. And, of course, *Google* is but one (very notable) example, of many other corporate entities that are essentially engaged in identical projects.

For Heylighen, being immersed in this GB will be the equivalent to being immersed in a landscape where there exists a ubiquitous planetary thinking level above (but not dominant to) its distributed (trans- / super- / meta-)human nodes.[17] In this scenario, if any person has a question or an inquiry, the global brain will be there, capable of providing a personal response and tutor (something like a super-intelligent digital Aristotle). If any person is in trouble or danger, the global brain will be there, capable of sensing the situation and responding with, for example, fleets of robotic drones or

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[16] These predictions invite a humanist reconceptualisation of the status of God in human civilization, namely, whether philosopher Friedrich Nietzsche's "God is Dead" (1882) or psychoanalyst Jacques Lacan's (6) "God is Unconscious" (1978), is a better philosophical stance for contemporary atheism. For Kurzweil, clearly the response would be something along the lines of "God is Waking Up". Consequently, in many ways Kurzweil attempts to close the enormous philosophical gap that was violently opened when Nietzsche identified that humans had killed God: "Must we ourselves not become gods simply to appear worthy of it?" (1882, p. 125). The formula could be read in the following way: Humans kill God (who had occupied a virtual space perceived as actual) + Humans (unconsciously) strive to become Gods (i.e. experience the death of God's "actual status" as a radical openness of their own virtual potential) = God emerges within new qualitative dimension of our sociotechnological networks as culmination of historical process.

[17] I think Heylighen's notion on global brain and power here is important to emphasize, here in his own words: "The GB is not a "higher power" that we should defer to. It is merely a particularly effective network of self-organizing interactions supported by ICT in which we all play our part." (2015, p. 343). Thus, in Heylighen's conception, it is not that GB will demand a certain allegiance or behaviour etc. but will instead be a mechanism to create a type of super-environment that is more responsive to your personal needs and desires (in contrast to our current environment which does not care about your personal needs or desires). This obviously raises the critical question of what will become of us when the distance between our Self and our desires has collapsed: the essence of Singularity understood in humanist phenomenological terms.

humanoid robots to the location of distress. If any person is sexually frustrated, the global brain will… and so on.[18]

Essentially, the GB would be the ultimate technological culmination of the historical process, a global object that totally eliminates the spiritual gap between human suffering and human desire, thus producing a planetary Singularity in the form of a great revealing of the ultimate potential and/or ultimate limits of collective human actualization. Or, in Heylighen's terms, a *Return to Eden* (2015, 393-394):

"After that transition [to GB], we may experience a true *return to Eden* — an idyllic state of abundance, peace, and well-being, in which all serious threats have been tackled and people can fully dedicate themselves to further creative endeavors."

All the same, Heylighen, as a scientific naturalist, attempts to distance himself from the theological concepts he proposes as "divine" analogues (e.g. omniscience, omnipresence), for fear of the mystical or pseudo-scientific connotation. For example, he notes that the future "omni" properties of the GB are only "practical" or "pragmatic" due to scientific limitation principles like Gödel's incompleteness theorem, which

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[18] For Heylighen, this collapse between Self and desire mediated by planetary distributed intelligence could ultimately lead to humanity first discovering and then exploring a higher level of symbolic representation, or from his early works, the emergence of the "meta-human" form that would have a higher degree of control and expression with language, as well as direct access to and understanding of the whole of human knowledge (1991). In such a state — of collective meta-humanity living and representing the cosmos in relation to a God-like planetary medium — we would have indeed begun to actualize Nietzsche's (16) prophecy: "I teach you the overman. Man is something that shall be overcome. What have you done to overcome him? All beings so far have created something beyond themselves; and do you want to be the ebb of this great flood and even go back to beasts rather than overcome man? What is the ape to man? A laughingstock or a painful embarrassment. And man shall be just that for the overman: a laughingstock or a painful embarrassment…" (1882, p. 3-4).

demonstrates the impossibility of *actual omniscience*.[19] However, he also recognizes that, qualitatively speaking, systemic activity will be occurring on a "wholly new level of reality", i.e. the level of the global brain (2015, p. 342). Thus, if our phenomenological destiny is to become collectively immersed within a universal "omni" system and ultimately transformed into "immortal neurons" with higher levels of representational capacity, then even recognizing certain technical limitation principles does not allow us to escape the fact that we are now entering what has traditionally been theological territory. Or said in another way, when we approach Heylighen's technical description purely

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[19] Or, omniscience in psychoanalytic terms: the "subject who knows" (i.e. the big Other). Jacques Lacan (6, 16) proclaimed that "God is Unconscious" for this reason, i.e. no entity "knows" what is going on (i.e. there is no "big Other" to which we can defer, the burden is on humanity: thus, in this space devoid of a subject that knows, we have our freedom). In this quote we can also find the point of (Lacanian) psychoanalysis: that in the modern age of science where "knowledge" of the cosmic "object" is itself subject to a type of deification as Truth (with empirical justification), there still remains the fact that nobody "knows" (i.e. science is not the big Other, as it does not give us direct objective knowledge of the "Thing-in-Itself", but instead operates with subjectively motivated and controlled experimental procedures designed to rationally observe the object that we are perceptually separated from) (Verelst 2004). And, even more troubling, psychoanalysis grapples with the phenomenological fact that human minds do not spend most of subjective self-reflection thinking in scientific terms about the cosmic object (inhabiting rational knowledge), but rather, most human minds spend most of subjective self-reflection within an idealized (mad) superspace of their own construction (the imagination) (laws of physics be damned!). Thus the modern subject, in psychoanalytic terms, is understood as torn (perturbed in the scientific age) between knowledge and fantasy, rationality and imagination, experiment and experience: tensions that can never be totally reconciled/unified. Consequently, the point of (Lacanian) psychoanalysis is not to be a science in the same way that physics or biology are sciences (the often repeated critique of psychoanalysis), but rather, psychoanalysis is a historically contingent consequence of science existing in the first place (i.e. in the deification of finding Truth in the "objective" "Thing in-Itself" separated from the "Self-itself"). Or, in other words, psychoanalysis is an offshoot of empirical rational inquiry that emerged in response to the fact that the modern scientific world cannot handle (explain) this radical excess within the imaginative Subject who (thinks) s/he can know the totality of the cosmic object (i.e. that the Truth of reality is not to be found in the "Thing in-Itself" (e.g. modern science), or in the "Self-Itself" (e.g. Buddhism), but in an interaction between the "Thing in-Itself" and the "Self-Itself" (i.e. Hegelian), a process whereby the Self-itself internalizes/sublimates the "Thing in-Itself" because it feels alienated from it and enslaved by it, and in this natural life movement of spirit attempts to overcome the "Thing in-Itself" for a self-made home (i.e. Marx). In other words Lacanian psychoanalysis studies the human as existing in a world above physics, biology, and social history, and in a transcendental self-made world (i.e. true psychology and anthropology). Thus, Lacan notes that "psychoanalysis deals with slaves who think they are masters" (1966, p. 293). This cuts most deeply when thought about in the context of the scientific naturalist who thinks s/he is an objective master (of knowledge and thus the universe), when, in actual reality, the desires of the imagination (which are not at all rational, but instead, an insane mystery) hold the true self-made ground (thus, the scientist, however knowledgeable, is still a dehumanised slave to the cosmic object). Perhaps this was best communicated by Christian theologian G.K. Chesterton: "Far away in some strange constellation in skies infinitely remote, there is a small star which astronomers may some day discover. At least I could never observe in the faces or demeanour of most astronomers or men of science any evidence that they have discovered it; though as a matter of fact they were walking about on it all the time. It is a star that brings forth out of itself very strange plants and very strange animals; and none stranger than the men of science. That at least is the way in which I should begin a history of the world, if I had to follow the scientific custom of beginning with an account of the astronomical universe. I should try to see even this earth from the outside, not by the hackneyed insistence of its relative position to the sun, but by some imaginative effort to conceive its remote position for the dehumanised spectator. Only I do not believe in being dehumanised in order to study humanity. I do not believe in dwelling upon the distances that are supposed to dwarf the world; I think there is even something a trifle vulgar about this idea of trying to rebuke spirit by size." (1925, p. 10).

in phenomenological terms, we might as well be interpreting the Global Brain as what theologians, idealists, and spiritualists have called the Godhead.[20]

The basic scientific "formula for the Godhead" in Heylighenian-Kurzweilian terms is presented by positing a cosmic evolutionary mechanism: self-organization plus some iteration of LOAR.[21] Is this not scientific naturalism at its most daring, its most ambitious, and its most progressive? From the Heylighenian-Kurzweilian understanding of God as a global technological artifact produced by the self-organization of highly advanced human-computer networks: all friction and scarcity will have been permanently eliminated (no more traffic jams and grocery store line ups!), there will be reduced material constraints on the will (universally accessible global communication and transportation networks!), and increasingly engaging stimulus for motivation (life as unbounded sociocreative activity!).

However, and this must be stressed: although both Kurzweil and Heylighen offer scientifically-grounded and radically optimistic visions of Technological Utopia, we are still left here in our present (tension-filled and God-less) historical moment with no serious (real) socioeconomic or geopolitical plan of escape. Thus, the crucial question is the following one: if some cosmic evolutionary mechanism is going to facilitate the development of a higher coherent planetary universality, and ultimately, some utopian Technological Singularity, then how exactly do we solve the intensifying problems of our common spaces?[22]

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[20] There are a number of philosophers and theologians who have suggested that the divine attributes of God exist within a higher qualitative "divine" realm of order. For example, the 19th century existential philosopher Søren Kierkegaard famously remarked that: "God and man are two qualities between which there is an infinite qualitative difference" (1849, p. 101). For Kierkegaard, this infinite qualitative difference could be crossed through defining the inner self's ultimate measure as, not another human, but God (1849, p. 65-66): "The self is potentiated in the ratio of the measure proposed for the self, and infinitely potentiated when God is the measure. The more conception of God, the more self; the more self, the more conception of God. Only when the self as this definite individual is conscious of existing before God, only then is it the infinite self". And, for Kierkegaard, in the infinite self there would be the view of infinite possibility, of the self as totally potentiated (which would, of course, be nothing short of the total destruction of the self). Fundamentally, this assertion is grounded in a view of the self as two divided but interacting parts (a circle, a loop: autopoietic): what you are (memory/knowledge), and the self you strive to create (transcendental self of the imagination). Again, in the words of Kierkegaard: "the self is the relationship to oneself." (1849, p. 12), or finally, in the famous equation of philosopher Johan Fichte: I=I.

[21] Despite this similarity, the crucial distinction between Kurzweil and Heylighen remains in the prediction of, what essentially amounts to "digital immortality" via uploading human consciousness into supercomputers. Whereas Kurzweil, and many other "Kurzweilian" Singultarians (see, for example: Rothblatt 2014), believe that humans will be able to upload their minds into supercomputers where we live a life of unbounded future potentiality in a purely virtual medium, Heylighen believes this would eliminate a crucial element of embodied physical identity, namely, phenomenological continuity with the actual world. Although Heylighen is open to the possibility of physical immortality (see: Heylighen 2012b), he prefers to interpret the future of humanity in terms of how we will become actualized in physical reality, as opposed to how we will leave physical reality for a digital super-world.

[22] In *The Singularity Is Near*, Kurzweil stated, I think quite well, that "The Singularity has many faces." (2005, p. 24). I take this to mean that every individual will confront their own personal-subjective dimension of Singularity, and thus, the Singularity can only be approached in radical phenomenological terms (i.e. what does it mean subjectively to leave history? To leave our animality?). But at the same time, the Singularity has one common face, because it will be something we all face together. Thus, the Singularity is the ultimate individuated universality (i.e. the paradox of radical diversity and commonality).

Or, put in another way: how do we transition from our current global reality characterized by high fragmentation. In this global reality there is no sign of an emerging common goal, common purpose, and certainly no sign a common God.[23] Is a utopian universal integration of humanity even possible? Is humanity really capable of producing and becoming on a totally new level of the evolutionary process?[24] And if so, can humanity really just transfer our need for faith in LOAR or self-organization, i.e. abstract

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[23] American transcendental philosopher Ralph Waldo Emerson warned of our growing spiritual or religious fragmentation in *Nature* (1836): "We are now so far from the road to truth, that religious teachers dispute and hate each other, and speculative men are esteemed unsound and frivolous." (1836, p. 2) This is still true today, but he did also offer a way out of fragmentation: "Whenever a true theory appears, it will be its own evidence. Its test is, that it will explain all phenomena." (1836, p. 2). Thus for Emerson, a "true theory" would be in essence, not just an experiential feeling, but an experiential feeling of Truth within the One (a Platonic idealist vision if there ever was one). This belief was derived from his now famous (and remarkable) "transparent eyeball" reflection: "I have enjoyed a perfect exhilaration. I am glad to the brink of fear. […] Standing on the bare ground, — my head bathed by the blithe air, and uplifted into infinite space, — all mean egotism vanishes. I become a transparent eyeball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part or particle of God. The name of the nearest friend sounds then foreign and accidental: to be brothers, to be acquaintances, — master or servant, is then a trifle and a disturbance. I am the lover of uncontained and immortal beauty." (1836, p. 7-8).

[24] Higher-order cyberneticist Anthony Judge refers to this problem with the metaphor of the "corpus collosum". In our biological brain the corpus collosum provides a crucial integrative function allowing different hemispheres of the brain to interact, and ultimately, produce a higher-level of consciousness. When we approach global development in the 21st century, what mechanisms can help us develop higher integrative functions, and ultimately, help us produce a higher-level of global consciousness? (Judge 2014). The problem is non-trivial, and Judge, I think, offers the key problematic when discussing globality today when it comes to the "language of integration" that "we" use (namely: US and THEM): "US, understood as *Universal Synthesizer* or Universal Sympathizer — aspiring to global organization and expression of identity, through the embodiment of the highest values. This cognitive dynamic is recognized as challenged by the negativity of *Terrifying Hypothetical External Mentalities* (THEM) seeking to undermine the coherence articulated and sustained so positively by US." (Judge 2015a). The problem is a problem of higher-order cybernetics in regards to self-reflection and linguistic dialogue: how to approach sensible multi-dimensional discussion of the intersubjective domain without falling into illusory binaries? How to develop a method of linguistic articulation that simultaneously exhibits respect for the legitimacy of multi-dimensional individual narrative (which, of course, arises from contextual historical experiences which are in themselves legitimate and authentic aspects of subjective reality), while also practically confronting the fact that human history is a process leading US (i.e. the whole of humanity) towards universality, and is thus, a process leading towards an integration of the subjective domain (i.e. from intersubjective processes to intrasubjective processes)? Do traditional rational dialectics (the true core of philosophy) offer US (the synthesizing sympathizers) anything at all? Or is it that something within human interaction is simply not reducible to a dialectic? Is it that the real of being cannot be unified symbolically? Perhaps the only way out is in a dialectics beyond Hegel, beyond the Slave/Master, and in a dialectics of positive and open experimental affirmation of the new in the real of being (Badiou 2012). In other words in the development of a dialectic that affirms a new inclusive and communitarian movement of human spiritual life in the world by actually bringing forth the organizations promoting collective liberation, growth, and social interaction.

mechanism?[25] Here, to contextualize contemporary notions of Singularity, it may be useful to recall particularly relevant modernist historical notions of God and human civilization as achieving a transcendent state. From this context perhaps it will be easier to understand how the classical modernist dreams inspired real action to overcome the historical human condition, thus informing us about our own dreams of transcendence today, and possibly, whether or not they can be improved and modified in a truly new way.

2-The Evolution of Future God

The idea that God was the culmination of the historical-evolutionary process dates back to ancient theological and general philosophical concepts of human development and universality (Zimmerman 2008). However, the Idealist philosopher Henri Bergson was one of the first and most influential thinkers to propose a modernist evolutionary vision of God in *Creative Evolution* (1907). For Bergson, the universe was a "machine for producing God[s]" (1932, p. xv) through functional differentiation of higher novelty production. In this Bergsonian system, as in the systems of thought detailed above, human beings play a frontier role as cosmic evolutionary agents of novelty ca-

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[25] In 2045 We Trust (?). Here we have another crucial distinction between Kurzweil and Heylighen (19), i.e. our scientific naturalist prophets of transcendence. Whereas Kurzweil has confidently asserted the inevitability of Singularity sometime in the 2040s, Heylighen is explicitly more cautious of predictions of Singularity, and I think his opinion on this is worth repeating here: "Different authors have estimated such a singularity to take place around the year 2040, give or take a decade or two. While I do not want to put too much emphasis on such a number, which I consider to be much less reliable or important than the qualitative transition that it represents, these numbers agree with my intuition that a momentous change is likely to happen within a surprisingly short term" (2008, p. 306). The difference between Kurzweil and Heylighen here is one of predictability, whereas Kurzweil believes contemporary sociotechnological processes can be confidently extrapolated decades into the future, Heylighen recognizes that sociotechnological processes are inherently unpredictable and chaotic, and consequently, a future Singularity event is not predictable in the same way that astronomers, for example, can predict the occurrence of planetary events. However, there is yet a third way to approach Singularity, which is, as an affirmative dialectical process (24). The difference here is to recognize that the Singularity is not a "single qualitative transition" (even an unpredictable "qualitative transition") where we can all agree in our shared narratives that "the Singularity is happening". Instead, we can think of the Singularity as something that will be experienced as a gradual accelerating process of change, which is already happening, and that must be mediated in a multi-dimensional framework between aware minds who are in a state of radical becoming and self-change: the state of realizing that their horizon of actual potentiality is expanding dramatically, and can be even further opened depending on their own free acts (the positing of their own necessary transcendent future). In other words, in an affirmative dialectics we can also see that the Singularity is not (just) something "that happens to us" (an immanent wave of super-technology), but is also something that we radically co-create together in our free acts, where we posit a transcendental future as a necessary consequence of becoming.

pable of producing future freedom and immortality (becoming "like" the metaphorical gods of our imagination, etc.).[26]

Thus, in Bergson's evolutionary system, change was not *best* represented by traditional Darwinian process, i.e. as directionless, unconscious, and indifferent external environmental pressures selecting for the fit and selecting against the unfit (what could be referred to as reproductive-environmental reductionism);[27] but instead by internal spiritual or phenomenological "life forces" of desire for creativity and wholeness (what

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[26] And when you look at the living or the physical world around us, we biocultural primates with our self-built planetary technological networks, are the definition of a novel interruption in the natural order of things. In the words of Chesterton (10): "The simplest truth about man is that he is a very strange being; almost in the sense of being a stranger on the earth. In all sobriety, he has much more of the external appearance of one bringing alien habits from another land than of a mere growth of this one." (1925, p. 19). Bergson's notion of human beings as mechanisms of novelty for the generation of higher cosmic creativity and eventually immortality were crucially influential to other famous evolutionary processual philosophers like Alfred North Whitehead (1923), Pierre Teilhard de Chardin (1955), and Terence McKenna (1998), all of whom developed similar systems of thought that focused on a dialectic of human evolution leading towards creative reflection on the Godhead. In all of these systems of thought, the common assertion is that the individual identity of any particular human becoming would be overcome or sublimated into a universal medium, and that this overcoming or sublimation would be a process involving the linguistic order itself achieving its own qualitatively higher level of autonomy. This immanent future manifestation of the Godhead as a phenomenon consuming particular human beings was perhaps best expressed by the master poet of modernism, Rainer Maria Rilke: "The god's head contains nothing that might keep the luster of all poems from striking us with almost lethal force like the arrows of the real god Apollo, whose epithet in Homer is the one who strikes from afar." (1989, p. xviii) For Rilke human existence in the modern world was an opening metaphorically comparable to a winter morning sunshine, where the cold and darkness of the winter is momentarily overcome by the shining of the immanent spring to come. This modernist "winter morning sunshine" displayed itself in the free work of art — free art as the mouth of god that is "still silent" and "never used" — but yet "this mouth, which does not yet speak, merely smiles as if it were drinking in the substance of its future song." (Rilke 1989, p. xix).

[27] In a recent *Nature* article on the state of evolutionary theory (see: Laland et al. 2014) several researchers in the life and social sciences called for a fundamental revision of our theoretical evolutionary foundations from "Standard Evolutionary Theory" (SET) to the "Extended Evolutionary Synthesis" (EES). The EES would recognize and explicitly incorporate active and constructive developmental processes in empirical analyses, as opposed to SET, which places almost exclusive emphasis on the reproduction of genetic programs and environmental pressures (i.e. "gene-centric" and "natural selection" centric). Supporters of EES argue that the extension of evolutionary theory into higher level processes (social, cultural, phenomenological) and a renewed focus on internal development (what we cannot "observe" and "control" in reproduction-centric experimental procedures) could help us better apply evolutionary theory in the social sciences and humanities (not to mention many areas of the life sciences). And maybe that is true, I am certainly sympathetic. However, still, what many evolutionary theorists do not realize is that the historical process of civilization development is *not* the same nature as biological evolution proper, i.e. the historical process is *not* driven by directionless, unconscious, and indifferent forces, but very much by absolute (e.g. states, corporations), conscious (e.g. persons), and purposeful (e.g. morals, values) forces; forces which Darwinian theory has little or nothing to say, at least within its contemporary articulation.

Bergson called *Élan Vital*).[28] Throughout evolution, Bergson believed that higher reaches of life force were enabled by higher internal reflection that could be conceptualized to rise with the historical accumulation of memory (i.e. functional knowledge acquired via interaction with an environment and retained to maximize future functional fitness interaction with an environment).[29]

From this spiritual evolutionary process of self-reflection, for Bergson, each living moment becomes more deeply internalized leading towards the conscious realization of new possibilities for action (or choices to explore). Thus, a dynamic internal interaction between memory of the past and informed action in the present, for Bergson, allows living systems to construct increasingly complex future-oriented creation goals within the secular domain, i.e. in the world. Consequently, when Bergson analyzed the future of humanity in the world, he saw it as an as-of-yet unrealized creative space of potentiality which could manifest in the social, cultural, and technological domains of novelty, or in his words: "the absolutely new" (1907, p. 14):

"The universe endures. The more we study the nature of time, the more we shall comprehend that duration means invention, the creation of forms, the continual elaboration of the absolutely new."

In this progressive evolutionary emergence of "the absolutely new" "creation of forms", Bergson posited that individual human habit, as well as our limited and decep-

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[28] Many contemporary scientists would call this internal spiritual "life force" self-organization (instead of *Élan Vital*). For example, theoretical biologist Stuart Kauffman stated in *At Home in the Universe* that (1995, p. 71): "We are the children of twin sources of order, not a singular source [i.e. natural selection]. […] I believe that this order for free, which has undergirded the origin of life itself, has also undergirded the order in organisms as they have evolved and has even undergirded the very capacity to evolve itself." However, Kauffman (1995, 2000) and other evolutionary theorists (e.g. Holland 1998, Heylighen et al. 1999) focused on understanding the power of self-organization in auto-catalytic chemical cycles or complex biological systems, have not received universal praise. For example, complex systems scientist Peter Corning and theoretical biologist Eörs Szathmáry referred to theories of complexity focused on self-organization as "non-Darwinian", claiming that they support a physically "reductionist" version of evolutionary change with the application of an "inherent force" or "law" which ignores the "contingent" nature of evolution (2015, p. 47). Instead, Corning and Szathmáry prefer to explain the evolution of complexity as a process driven by naturally selected "functional synergies" which generate adaptive "mutualism" or "symbiosis" between differentiated parts to form a coherent system in relation to context-dependent environmental circumstances (2015, p. 51). However, interestingly, both the evolutionary philosophy of Stuart Kauffman, and the evolutionary philosophy of Peter Corning, supports a view of evolution as tending towards higher creativity and wholeness (i.e. Kauffman's creatively-focused *Reinventing the Sacred* (2008) and Corning's higher-levels of *Holistic Darwinism* (2005)). Thus, is it not possible that those interested in self-organization (internal development) and those interested in higher-level selection (external systemic pressures) are simply talking about different "sides" of the same coin? After all, as contemporary processual evolutionary theorists attempt to remind us: evolution is itself a process of interactive duality, a process of rational-imaginative inner development in relation to challenging (problems/opportunities) external circumstances (Stewart et al. 2010). In other words, you cannot just understand evolution as external environmental pressures selecting for agents with no inner "subjective" life world (i.e. reproductive-environmental reductionism), and at the same time, you cannot just understand evolution as phenomenological inner life worlds devoid of external "objective" constraints to their future "fitness" potentiality (either biological or cultural).

[29] We may recall that this idea is similar to the foundations of Kurzweil's Law of Accelerating Returns (LOAR) which identifies the accumulation of computational capacity to be a product of developmental levels which accelerate the speed of evolution (novelty) due to achieved higher memory and knowledge.

tive perception of space-time, would eventually become subordinated by desire for qualitatively higher creativity and wholeness (at least from the perspective of biocultural primates).[30] Or, in his own words, we would "derive the impetus necessary to lift us above ourselves" (1907, p. 56).[31] This "necessary" "impetus" would become possible through an evolutionary attraction to free spontaneous acts within a universal level of artistic creation with higher dimensional properties, i.e. the inner self-positing of a transcendental future as necessary for human becoming.

But at the same time, it is important to articulate, this higher creation and wholeness, for Bergson, was not a "final end" or "final purpose" (i.e. a teleological process), but simply a necessary consequence of the creative surge of life force for ever higher expression of potentiality.[32] Thus, if evolution was a process leading towards "freedom", "immortality", and "God" it was only from our primitive vantage point that we would see this as an "end", as opposed to a new level of evolutionary mind that will be able to express itself in qualitative dimensions that we cannot comprehend with our code of symbolic representation (i.e. beyond our imagination).[33] Here the similarities between Bergson's philosophy and contemporary Singultarians should prove fairly straightforward.

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[30] Thus Bergson utilises an evolutionary process focused on the relationship between life, time, and creation to flip mechanistic Newtonian science, while at the same time avoiding the temptation of ontologizing the Platonic Idealist realm of Ideas. In Newtonian mechanics space and time are Absolute and unchanging properties of a perfectly predictable cosmic clockwork, but in Bergsonian evolutionary philosophy space and time are relative to the relational properties of creative minds interacting within an environment, which are at the same time, not always rational, but also spontaneous, imaginative, unpredictable, and openly developing towards a new level of spiritual growth. Consequently, a Bergsonian evolutionary philosophy is hard to imagine without also understanding that it emerged with the scientific Einsteinian revolution of relativity, a revolution that ushered in the notions that space and time were relative to a mind's perception and action, i.e. space and time were less Newtonian Absolutes existing independently of human beings, and more simply Kantian "categories of understanding". Thus the evolving relational properties of mind had the ability to organize new properties in the universe that simply had no historical parallel or equivalent, i.e. the human mind and its relation to the world was not a relation of being trapped in a predictable, and unchanging Newtonian clockwork, but was rather a relation of being that could bring forth "the absolutely new", i.e. mind as a force of spiritual becoming, and thus, in retrospect capable of changing the very conditions of the world it is perceiving and acting within. In other words, the universe was not complete, it was incomplete, and totally open to the future creative penetration of the human mind.

[31] It is hard not to see the similarities here between Bergson's thought and the thought of Friedrich Nietzsche (16, 18) who posited that each individual should attempt to "overcome" both themselves and the institutional structures and values of history to create a higher humanity and a higher society. For Nietzsche each individual had the ethical duty to pursue self-glorification to its furthest extent, i.e. Overman, while simultaneously existing on the moral ground of a shared social field. Consequently, the Nietzschean formula was not individualistic self-glorification even at the expense of other humans, but rather, how to find a world where all can be self-glorified (and thus, to "overcome" humanity itself)?

[32] A Nietzschean affirmation of life's desire for exploration of higher experience.

[33] Thus, Bergson can be seen to express a view of evolutionary mind and God which is somewhat analogous to the view of physicist Freeman Dyson who famously stated that "God is what mind becomes when it has passed beyond the scale of our comprehension" (1988, p. 119). In some ways this can also be conceptualized as falling in line with the Kurzweilian view of creative evolution and God, i.e. that "God" will always be at a critical distance in terms of the future evolution of knowledge, love, organization, and so forth, always attracting us forward, but never allowing for total sublimation, i.e. the (Bergsonian) flow of creative evolution (reality as spiritual life force) will continue indefinitely.

However, Bergson's philosophy was not totally novel to modernist thought. In fact, his ideas were more of a post-Darwinian repetition of idealist, romantic, and transcendental philosophical hypotheses of the future of human development that date back to 18th and 19th century enlightenment thinkers, like, for example, Friedrich Schelling, Johann Fichte, and Jean-Jacques Rousseau. The most notable encounter with the nature of God among these enlightenment thinkers was perhaps in the Hegelian vision of God, which for the philosopher G.W.F. Hegel, was an immanent consequence of a spiritual and progressive historical process. Thus, if there is a fundamental novelty in Bergson's work (i.e *the absolutely new*), perhaps it comes from shifting the category of processual totality leading towards God from "human history" to "cosmic evolution".[34]

The Hegelian vision and system proved to be a fundamental shift in the history of modern thought because he offered philosophers a universalist closure to the logic of the modern project in general. In the pre-modern world, history was often conceived to be circular, an eternal suffering with no clear secular direction for escape (i.e. transcendent imaginary realm with no actual escape-route connector). However, for the modern mind, history became a directional spiritual process related to the scientific accumulation of higher knowledge of the external world that could (ideally) be used to create new collective structures and technologies that reduce the gap between human suffering and desire.[35] Moreover, this directional knowledge process is often conceived

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[34] A philosophical shift that became possible between Hegelian historical philosophy of God and Bergsonian evolutionary philosophy of God due to the natural science advances by Lyell, Darwin, Einstein, but also the philosophical cosmic systems developed by, for example, Marx, Humboldt, Spencer, etc. But at the same time, from a philosophical point of view, has the shift been an advancement? Since sublimating the overwhelming spatial and temporal infinity of the cosmic object that we perceive via our cyborg technological extensions, have we learned anything absolutely new about our future infinity of reflection upon the Godhead? Or said in another way, does shifting the fundamental proposition from the historical process leading to God towards the contemporary assertion of cosmic evolution leading to God (i.e. Kurzweil, Heylighen), allow us to cover new ground? Or, even, is some crucial perspective from pre-Bergsonian Hegelian thought lost in the shift? (19).

[35] C.P. Snow predicted that a deepening of the "Two Cultures" divide (1959) (i.e. between scientific technologists with epistemological grounding in law and measurement and humanist intellectuals with epistemological grounding in narrative poetics and human subjectivity) would cause very specific problems; first: a deep humanist skepticism of the technologists ability to understand the nature of sociopolitical process and the lived experiences of the masses, and second: a fundamental problem of humanist intellectuals often being intimidated and/or generally ignorant of technical knowledge, and consequently, potential technical solutions. Today, not only does this divide still exist, but this divide has become only further intensified by capitalist academic policies, i.e. the transformation of the academy into an industrial assembly line for "STEM" fields: an academia that under-values the arts and humanities because general philosophical knowledge, for example, is not necessarily beneficial for a society which only (actually) cares about profit. Or, said quite bluntly, why would a capitalist model of the academic structure support legions of humanists to critique inhumane structures and argue for inclusive and accessible structures? What are the real practical consequences of this "Two Cultures" divide? As philosopher Alain Badiou has pointed out, the (sad) consequence is that "broad sectors of working-class youth have fallen prey to nihilistic despair" while "the vast majority of intellectuals [have become] servile" (2010, p. 259). Today, you will find many places for STEM thinkers who can produce "useful" functional technologies (for whom? for what?), but very little genuine critical thought that reflects on the ways in which technology is related to human freedom and power. Consequently, the best way to become an outsider in modern academia is to challenge and critique the concentrated power structures of our world, something that is, without question, more necessary today than ever before. Here, we (obviously) do not need to negate STEM, but rather, to affirm a supplement to STEM with HEART, i.e. with History, English (literature), Art, Religion (egalitarian spiritual community), and Theatre.

in eschatological terms, with an end to or transcendence of the project itself, in the form of a higher qualitative relationship between human subjects and our common objective world: history as a spiritual journey leading to a transcendent culmination.[36]

Hegel posited that this modernist opening towards higher knowledge of the object was a process that would culminate in Absolute Knowledge (or Knowing) in God, and attempted to create a processual dialectic to explore the relationship between mortal humans (who do not know, i.e. the "Slave") and immortal God (who knows, i.e. the "Master").[37] In this dialectic of history humans struggle for subjective freedom (of spirit as its own necessary ground) in the face of objective oppressions (for example: biological limitations, material scarcity, structural violence). And it is this processual struggle for subjective freedom versus the cosmic object (physics, biology, historical society) that is itself necessary for higher self-realization of a concrete universality between the subjective and objective worlds (i.e. self-realization: the subject as its own notional universal object, generated by its own internal work, a crucial Idealist break from Platonic ontology of a pre-existing realm of Ideas).[38]

Thus, Hegel's foundational dialectic (of Spirit/Nature) follows a triadic structure whereby, originally (1) the identity of spirit becomes completely embedded in the external object of nature (spirit alienated from its self-identity, its essence), (2) this external object is internalized (sublimated) into spirit, and (3) through this process of sublimation nature becomes simultaneously understood and negated, in the process enabling spirit to recognize its own positive self-identity and essence in rejection of nature (Žižek 2012, p. 459):

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[36] A classic archetypal example of this pre-modern-to-modern break can be represented with Francis Bacon's *New Atlantis*, where, the totality of the human form can finally be rest assured that its natural motion (in thought, desire, and action) will be carried towards a general post-historical utopian attractor: "The end of our foundation is the knowledge of causes, and secret motions of things; and the enlarging of the bounds of human empire, to the effecting of all things possible." (1626, p. 19). In other words, science in the modern world is conceptualized as the actual connector program between humanity as trapped in a world of physics, biology, and social history, and humanity as liberated towards a divine transcendental realm created by free imagination and open to infinite possibility.

[37] Thus it is the Nietzschean affirmation of God's death and the Lacanian affirmation of God's unconsciousness (16), which represents a clear break with modernist philosophy and opens up the possibility for a post-modern anti-philosophy. For example, the system of transcendental empiricism developed by philosopher Gilles Deleuze posits the inexhaustible nature of virtual growth and becoming in the world (see: Weinbaum 2015), i.e. there are no limits to our living system growth, no Hegelian connectivity and closure between the essence and identity of the creature and the creator, just an unending expression of difference towards qualitatively higher domains of virtual attraction.

[38] In other words, for Hegel, God will not be found in the depths of the Hubble deep field, nor in the mathematics of big bang singularity theory, nor in the world of tiny vibrating quantum strings, but only in a traumatic encounter between the fully realized potentiality of the collective subjective body of humanity at the "End of History". This is a pathway that can only be walked by meaningfully internalizing the object in knowledge creation: "The aim of knowledge is to divest the objective world that stands opposed to us of its strangeness, and, as the phrase is, to find ourselves at home in it." (Hegel 1817 § 194). Consequently, the Hegelian concept of "Absolute Knowing" is a very conservative one when compared with contemporary Singultarians who mostly ground their futurist ontology in a Bergsonian or Deleuzian (37) quest of never-ending virtual formation exploration. Or in the words of Slavoj Žižek: "What if [Hegel's] Absolute Knowing is the assertion of a radical closure: there is no meta-language, we cannot climb on our own shoulders and see our own imitations, we cannot relativize or historicize ourselves? […] What Hegel's Absolute Knowing deprives us of is precisely this minimal self-distance, the ability to put ourselves at a "safe distance" from our own location." (2012, p. 390).

• Alienation: we feel alienated (fragmented, incomplete, foreign) in relation to nature

• Externalization: we attempt to gain knowledge of nature to (re-)discover a stable ground in ourselves

• Sublimation: knowledge is internalized (spiritualized) as pure notional identity (i.e. full identity in self-reflection) (but this act is always plagued by an inconsistency — because sublimation produces an illusory union (i.e. you are still alienated vis-a-vis nature) — and so, the triadic process repeats)

From this spiritual dialectic struggle against the indifferent cosmic object, according to Hegel, the Slaves eventually sublimate the object and encounter the Master: Absolute Spirit. In other words, the particular creature in its own contingent self-exploration of becoming finds in its own work the universal necessary Creator.

However, in this highest freedom of spirit, the Slave is not granted a higher level of exploratory creative becoming from the Master.[39] Instead, the Master completely consumes each particular individual being into its larger totality, i.e. the disintegration of our subjectivity into a higher universality.[40] Consequently, to be Hegelian is to be *radically eschatological*, to be in a quest, not just for an escape from history or our animality, but from the cosmic object (nature) itself. Thus, the historical process of knowledge accumulation is thought of as leading towards a negative, or an escape: an infinite nothing outside of material reality; as opposed to history leading towards a positive: a higher something as a part of the continuation of material reality with the development of a post-human metalanguage (i.e. the Bergsonian continuation of the absolutely new).

Or, in other words, the ultimate cosmic prize is *not* a divine "higher world" at the end of the historical tunnel (complete with qualitatively new desires for higher knowledge or love), but rather *the suffering within the secular historical tunnel was itself the prize* (i.e. the process of being lost, attempting to find, and eventually (re-)discovering one-Self (essential identity) in actualization: spirit's attempt to "return" to itself as its own center was the prize), even if that "return" leads to the end of conscious awareness

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[39] As is clearly the likely future scenario for both Kurzweil and Heylighen, but also, Bergson. For example, in Kurzweilian thought, he, in what must have been a fit of total madness, posits that we will wake the entire universe up. And for Heylighen, he, with a determined restraint, simply posits the continuation of creative becoming on a higher qualitative dimension via the formation of a higher language that enables "meta-representation" (18).

[40] For Hegel, human beings are on the menu at the *Restaurant at the End of the Universe* (Adams 1980). But, unlike the Douglas Adams classic, where the "Ruler of the Universe" is skeptical of whether He really exists in the first place, leaving His "Slaves" desperate and lost in the unknown of the alienating universe, the Hegelian "Master" knows Absolute(ly) that its own ground is the True eternal reality, and accepts his "Slaves" desire, allowing them to "return" Home (after their suffering is complete). This is why Rilke's (26) notion of free modernist art as the sign of a silently smiling Godhead still awaiting its immanent "true song" reflects the Hegelian notion that the spiritual journey of history will culminate, not with a disappointing and inconsistent God, but instead with a triumphant artistic-musical event with a God that knows.

(i.e. the end of the Slave/Master game of defiant self-assertion vis-a-vis the oppression of natural reality).[41]

  In this completion, in this total sublimation of subjective substance in our return to the void point of being, brought about by our own ignorant (but free) pursuit of higher knowledge and love, we encounter a (terrifying) height — the highest pole of mind — in the form of a radical existential intrasubjective collision with Absolute Spirit (Hegel 1807, Φ 194):

  "For this consciousness was not in peril and fear for this element or that, nor for this or that moment of time, it was afraid for its entire being; it felt the fear of death, the sovereign master. It has been in that experience melted to its inmost soul, has trembled throughout its every fibre, and all that was fixed and steadfast has quaked within it. This complete perturbation of its entire substance, this absolute dissolution of all its stability into fluent continuity, is, however, the simple, ultimate nature of self-consciousness, absolute negativity, pure self-relating existence, which consequently is involved in this type of consciousness. This moment of pure self-existence is moreover a fact for it; for in the master it finds this as its object. Further, this bondman's consciousness is not only this total dissolution in a general way; in serving and toiling the bondsman actually carries this out. By serving he cancels in every particular aspects his dependence on and attachment to natural existence, and by his work removes this existence away."[42]

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[41] In the words of Hegel: "This identity is absolute negativity, because the notion has its complete external objectivity in nature, and it has become identical with itself. At the same time therefore, it is only as this return out of nature that the concept constitutes this identity." (Petry 1978, p. 24-5). Or: the achievement of the pure and void point (ground) of being itself, the "Night of the World", or the "view from nowhere" (Bartlett et al. 2015, p. 53). Thus the void is not, as is sometimes believed, substance or substantial, it is instead, a necessary emptiness that nevertheless produces the whole of substantial reality (i.e. the "something" of a positively charged illusory ever-changing multiplicity).

[42] Hegel may be mad and radically eschatological (38, 40), but is it not even equally mad and equally radical for contemporary Singultarians to posit essentially infinite knowledge creation with no end, within, but at a distance from, God? For example, both Kurzweil in *The Singularity Is Near* (2005), and the physicist David Deutsch in *The Beginning of Infinity* (2011) posit that the future of human process is, essentially, unending cognitive exploration of the cosmic object via the accumulation of knowledge and the creation of, what Bergson would call, "the absolutely new" and what Deleuze would call the "virtual plane of immanence" (37). In these contemporary Singultarian notions the illusory multiplicity does not exhaust itself but can instead produce endless forms and higher qualitative levels for the exploration of mind (or, according to Kurzweil, at least until the entire universe is sublimated into Spirit, i.e. the entire universe as one Absolute Spirit). Will there be an end or won't there be? Arthur C. Clarke offered an interesting take on an end and an endless cosmic evolutionary future by utilizing a Hegel-like Master/Servant dialectic in *Childhood's End* (1953). In *Childhood's End* there exists two potential cosmic evolutionary pathways for higher intelligence: either consumption into the "Overmind" (the ultimate eschatological fate of humans), or endless exploration of the universe without ever fully understanding the essential process of sublimation into the Overmind (the ultimate fate of the Overlords). However, interestingly, from the perspective of the Overlords, this endless exploration of the universe, and permanent distance from sublimation into the Overmind, was the equivalent of being within a terrible and permanent cosmic entrapment (i.e. the Overlords *knew* that nature was not their home, yet they were doomed to forever remain within nature). This is why the last (eternally chilling) global message Karellen (chief Overlord) gives to humanity before the "incomprehensible metamorphosis" (i.e. human beings becoming sublimated into the Overmind) was the following: "And remember this — we shall always envy you." (1953, p. 185).

   In this Hegelian dialectic we see the clearest difference between Hegelian thought and the thought of contemporary Singultarians like Kurzweil and Heylighen. For Hegel, history is a spiritual process towards vanquishing all objective "otherness" and gaining an Absolute self-relating existence (the Slave at "home" with the Master).[43] In contrast, contemporary Singultarians appear confident in the cosmic evolutionary extrapolation of spiritual process towards some qualitatively higher creative purpose (for example, the Kurzweilian spiritualization of the whole cosmos). This is a jump that Hegel could not make because, for Hegel, the cosmic object did not need to be physically conquered, it is anyway totally internalized cognitively in the development of humanity, so there is no need to expand.

   Thus, as is the case with most Hegelian thought, we receive the offer for a synthesis: for a logical coherence between religion and science, between the pre-modern faith based spiritual mind (which has desires for a belief in a higher world), and the modern fact-based scientific mind (which has desires to create such a higher world in secular reality). Essentially, the shift from the pre-modern to the modern world, for Hegel, may have radically decentered the subjective body of humanity in relation to the cosmic totality (i.e. we are just contingent biochemical entities on an insignificant planet in an infinite cosmos with no purpose), but we can still reclaim our transcendentally divine subjective centrality through commitment to the frontier of higher knowledge (the ultimate justification for modernity).[44]

   Hegel's system represents the pinnacle or highest pole of modernist Idealism. However, the philosophical foundations of the modern world are not just idealist foundations. Today, perhaps now more than ever before, it is important to remember that, although idealists start in the eternal perfection of heaven, and then descend into the practical secular domain; for materialists, theory starts here in the secular domain through an understanding of the processes that we can observe and measure, and

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[43] Or, what Pierre Teilhard de Chardin (26) called "Omega": "the complex unity in which the organic sum of the reflective elements of the World become irreversible within a transcendent Super-ego." (1950, p. 39).

[44] For Hegel the "strangeness" (38) felt by our "Subjective Spirit" (SS) applied as much as to the unconscious State/institutional structures (i.e. "Objective Spirit" (OS)) of history as to the rest of nature. This is why, the Hegelian formula to reach God's "Absolute Spirit" (AS) is as follows: the work of SS (the passionate action of human beings) against (>) OS (the unconscious symbolic "other" (order) of history (=) revelation of AS (the true Other as our intrasubjective ground) (SS>OS=AS). Or in the words of Badiou (24, 35): "we slaves we can and want to return home."

then, with that knowledge, we can strive towards a creative ascendence, which is in no way guaranteed.[45]

Thus, the materialist does not a priori deny a qualitatively "higher" or "divine" world as such (i.e. maybe the Hegelian dialectic is in some way correct, maybe everything will become subordinated to the freedom of spirit, etc.), but instead is *deeply critical and skeptical* of the Idealist conception of an immanent universal realm (either future God, or future Singularity). The materialist, instead, assumes that we — contingent biochemical entities on an insignificant planet in an infinite cosmos with no purpose —- are ignorant of too much to be sure of what this higher world could be, when it will arrive, or how we can reach it. After all, can we be so sure that we understand the cosmic object, or even more crucially, our own intersubjective domain, well enough to suggest that "the way" towards common transcendence is near?

Considering that the God symbol is powerfully and radically re-emerging in the contemporary Idealistic imaginings of Singularity theory, it may be instructive to consider that it was in reaction to the Hegelian proposition of an immanent encounter with Absolute Spirit — which today is a cosmic Kurzweilian madness of positing an immanent awakening of the whole universe[46] — where modernist materialism originally

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[45] We are alone and we have our freedom, which means we are free to fail. To what extent can we read contemporary Singultarians as "starting in heaven" (which is often denoted as the year "2045") before "descending" to the secular domain to tell us the "good news" of our immanent post-human technological transcendence? This is where Lacan's (9) "God is unconscious" proves insightful: we are Slaves — biological bodies colonized by language — not the Master. Thus, we do not know what is going on, nor what is in store for us, i.e. we have no idea what happens to animals possessed by the symbolic order. Or perhaps said in a slightly more useful way, the future of the symbolic order, although almost certainly displaying an Absolute universalizing tendency, is itself highly unpredictable, i.e. we have no idea how to get from "here" (our present terrifying moment) to "there" (utopian transcendence). Consequently, the problem with extreme interpretations of Hegel is not in the positing of Absolute knowing in Absolute Spirit at the End of History, but rather that the openness and contingency of the New is consistently downplayed or underestimated: the crucial distance between "here" and "there" (something also downplayed by Singultarians between our present moment and Singularity).

[46] Philosopher Michael Zimmerman, I think correctly notes: "An updated reading of Hegel's view of world history may help to illuminate aspects of the Singultarian/post-humanist vision of the future. The updating is needed because post-humanism: a) emphasizes much more than did Hegel the role played by technological innovation in bringing about the post-human future; and b) posits that humankind itself will be eclipsed by beings endowed with far more God-like power and intelligence than envisioned by Hegel. Despite such differences, however, neo-Hegelian theological and eschatological themes abound in post-humanist discourse, even though many post-humanists profess to be atheists." (2008, p. 362-363). In other words, scientists may have to confront what Michael Foucault once famously warned all philosophers about, namely being "doomed to find Hegel waiting patiently at the end of whatever road [they] travel." (Bowie 1993, p. 2).

found its most effective practical response in the theoretical form of the radical atheist Karl Marx, who posited a much different madness.[47]

The foundations of Karl Marx theories of humanity and our future were strongly influenced by German Idealism, and specifically the work of Hegel and its subsequent elaboration and critique by the Young Hegelians. Marx saw the Hegelian system as, not a new post-Christian gospel, but as a framework that could help build a radically new world in material reality. In other words, Marx saw in the Hegelian imagination something that, somehow, had the potential for humanist global actualization.[48]

Whereas, for Hegel, his system represented a new modernist conception of God that broke from Christianity (a revolution of religion), Marx saw the Hegelian system as an open invitation for the death of God, and the realization that the supernatural in general was simply the imaginary projection of humanity alienated from its own creative abilities (i.e. a secularization of Hegel's spiritual dialectic). Thus the religious, for Marx, become alienated reclusive inhabitants of an inner world that only exist in the idealist mental realm of the divine imagination, and consequently, become self-castrated from changing or further actualizing the New in material reality (which is what Marx meant by "Religion is the sigh of the oppressed creature, the heart of a heartless world, and the soul of soulless condition. It is the opium of the people." (Marx 1844)).[49] Thus, Marx

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[47] The essence of enlightenment is often thought to be, as Immanuel Kant proclaimed (1784), a grand global illumination of every individual mind without exception, enabled by the ground of reason, destined to forever obliterate the ignorant darkness of early developmental immaturity (a notion that became popular in enlightenment evolutionary thought: human development from tropical forest ape to global civilized man). But, for Hegel, this illumination does not lead to eternal light of Heaven but instead, the true "Night of the World" (38) — a radical negativity that "haunts" the subject (Sinnerbrink 2008) — or what Anthony Judge (22, 40) refers to as an inner "endarkenment" (2005). For Hegel: "Man is this Night, this empty nothing that, in its simplicity, contains everything: an unending wealth of illusions and images which he remains unaware of — or which no longer exist. It is this Night, Nature's interior, that exists here — pure self — in phantasmagorical imagery, where it is night everywhere… where, here, shoots a bloody head and, there suddenly, another white shape — only to disappear all the same. We see this Night whenever we look into another's eye — into a night that becomes utterly terrifying — wherein, truly, we find the Night of the World suspended." (Hegel 1805-06).

[48] Thus, Marx finds his version of materialism (what would become dialectical materialism) in a Hegelian synthesis between materialism and idealism, i.e. that the idea (virtual) and the material (actual) should be One, that the divine imagination of the mental realm and the material world of the physical realm can be made to co-exist at the height of the human forms becoming, at the height of the human forms intensified collective production. Or, said in another way, can the Platonic realm of eternal Ideals exist as the very foundation of the Marxist material realm, and if so, how to achieve such universality?

[49] Or, as Sigmund Freud later noted: "I have never doubted that religious phenomena are to be understood only on the model of the neurotic symptoms of the individual." (1937, p. 89) Thus, for both Marx and Freud, the crucial location for an explanation of religious belief is in psychological developmental trauma that prevents full self-actualization of the human mind, which of course, has innate desires to become not only immortal and omniscient, but also, desires to become an Absolute cause in and for itself (a contingent necessity), as opposed to being a result of any external impersonal force or law (a necessary contingency) (as Hegel also knew). Consequently, constraints on this self-actualization towards transcendence of the Self, lead to, for Marx, a self-constructed imaginary world totally detached from the secular domain, and for Freud, deep neuroses that transform adults into hysterical prisoners of the past. In both cases the religious individual has lost all mad (Kantian) hope for a transcendent free actualization in physical reality, thus positing and inhabiting an ultimate supernatural fantasy. From this perspective religion is a tremendous cosmic distortion caused by materialist repression of the idealist mind: a tremendous "sigh" of an "oppressed creature" capable of knowing that it is in fact being externally prevented from its highest and its truest potentiality (consequently, it successfully fulfils its function as a belief).

thought that society built on the foundation of imaginary God (or gods) was itself the problem, and that there would need to be a total re-organization of society on scientific materialist foundations (a religion of revolution): Hegelianism transformed into what we now know as Marxism.[50]

In this humanization of the Hegelian system, human history was transformed from a process culminating in our spiritual freedom in Absolute Spirit, towards a process of the self-actualization of human society. Instead of Hegel's spiritualist Master/Slave dialectic of immortal God and mortal humans, Marx developed the materialist socioeconomic Bourgeoisie/Proletariat dialectic, where the Bourgeoisie played the role of Master (i.e. capitalist owners of production who think they are immortal Gods), and the Proletariat played the role of the Slave (working class people of the world who are systematically coerced to believe that they are just indispensable mortals whose divine productive creation force can be externally controlled).

Thus, for Marx, in order for humans to overcome alienation, it was not that spirit had to overcome nature itself, but rather (the much more modest proposition), that the proletariat would have to overcome the bourgeoisie so humans could regain their individual creative essence (i.e. to control their own labour).[51] Consequently, if humanity was to find a higher relationship with nature it would not come from the revolutionary imagination of a philosopher (e.g. Hegel), but instead from a revolutionary imaginative philosophy committed to the actualization of the collective social being of humanity (which is what Marx meant by "Philosophers have hitherto only *interpreted* the world in various ways; the point is to *change* it" (Marx 1845)).

For Marx, this required a fundamental reorientation of the Idealist "end goal" of history as "freedom" (e.g. Kant, Schelling, Hegel) with an analysis of the necessary materialist preconditions for the achievement of subjective freedom (i.e. abundant and equitable distribution of resources, etc.). From this analysis human society at its most fun-

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[50] Marx rejection of religion and reinterpretation of the Hegelian system was in many ways the product of German philosopher Ludwig Feuerbach's work *The Essence of Christianity* (1841), which argued for a radical humanization of religion: "If man is to find contentment in God, he must find himself in God. […] God is the infinite, man the finite being; God is perfect, man imperfect; God eternal, man temporal; God almighty, man weak; God holy, man sinful. God and man are extremes: God is the absolute positive, the sum of all realities; man the absolutely negative, comprehending all negations. Our positive, essential qualities, our realities, are therefore the realities of God, but in us they exist with, in God without, limits. But what then withdraws the limits from the realities, what does away with the limits?" (1841, p. 5). Of course, in the context of our analysis of Kurzweilian (2005) and Heylighenian (2015) thought on the future of evolution, what does away with these limits is trans-/super-/meta-human application of technology and the emergence of an integrated global technological metasystem. Hegel's response to not only Marx and Feuerbach, but both Kurzweil and Heylighen, would be that yes, it is true that we can enhance our mind's potentiality by gradually removing the limitations imposed on us by nature (physics, biology, historical society), however, this removal of limitations will lead us to an immanent encounter with an actual limitation, i.e. the total closure of the intersubjective sphere (intrasubjective integration of the symbolic order/universe) and our individual/particular immersion into a higher level of collective/universal Thought (Absolute Spirit), which represents the "end" to the "game of consciousness", i.e. the final positive assertion of self-identity in negation of nature as the essence of spirit.

[51] For Marx, the Hegelian Master/Slave dialectic was a reflection of the fact that Hegel himself saw the flow of world history through States towards the formation of a global State, i.e. the State-itself as divine, an Absolute outside of and superior to his own particular subjective substance.

damental was understood from the perspective of the qualitatively different types of relationships/interactions that people must forge in order to meet basic needs.

Thus, for Marx, it was the point of the historical process for the universal proletariat class, i.e. the people whom are terrorized by the State, exploited for their labour, and owned no property, to rebel against this historical organizational foundation which produces a distorted mirror of human nature, and once again erect an "eternal" common world on the global stage of collective actualization, i.e. a world of common property and common labour, or: World Communism:

- • Primitive Communism
- • Slave Society
- • Feudal Society
- • Market Capitalism
- • State Socialism
- • World Communism

Here the ultimate metaphysical goal was not, as in the Hegelian system, for the Slave to work for the Master, only for the Master to in the end obliterate the particular individual being of the Slave. Instead, the goal was for the Slave to work to undo the very foundations upon which the Master exists (or rather, exploits), and in the end, obliterate the Master (who is after all, as an exploiter, only a false God). Thus, the End of History, for Marx, was not to have your individual Self consumed into an infinite universal God (Hegelian), but to, as a free individual in control of your own labour, to actualize your imagination and transcend your mundane ego within a radically free emancipatory collective (i.e. self-actualization towards a common state of unbounded future creative potentiality).[52]

Marx created the system for this new materialist foundation in the much larger philosophical system of dialectical materialism (48), which was moreover an attempt to be an all-inclusive cosmic system of thought to replace religion, guide humanity towards a transcendent ideal organization, and explain the whole of reality, the principle features of which include (Žižek 2012, p. 71-72):

- • Nature is not a conglomerate of dispersed phenomena, but a connected Whole
- • The Whole is not immobile, but in a state of constant movement and change

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[52] Thus, the proper Marxist response to contemporary Singultarian thought (Kurzweil-Heylighen) is that these notional structures have prematurely jumped to a higher dialectical level of struggle (i.e. the trans-/super-/meta-human level of becoming) without realizing that the contemporary level of struggle is the struggle towards World Communism, and that, only in a state of World Communism, can we safety proceed towards a higher level of trans-/super-/meta-human transcendence. In other words, contemporary Singultarian thought is trying to "jump ahead of its time" without first properly addressing the struggles of the present moment, which are problems of material distribution of resources and large-scale labour exploitation, i.e. problems that can only be overcome by overcoming capitalism (an intrinsically exclusive pseudo-utopian sphere) for a a state of communism (an intrinsically inclusive utopian sphere) (Sloterdijk 2005).

• This change is not just quantitative, but also involves qualitative jumps and ruptures

• And this qualitative development is not a matter of harmonious deployment, but is propelled by the struggle of opposites

Of course, applied to our world, human society is not just a dispersed phenomena, but a connected whole (which is becoming increasingly interconnected as One); our whole is not immobile, but in a constant state of movement and change (a movement and change that is itself accelerating towards One); that change is not just quantitative increases in, for example, the number of people or technologies, but also involves qualitative ruptures towards new possibilities and opportunities (specifically in the sociocultural spheres of life); and this qualitative development is characterized by extreme physical and mental battles which, in struggle towards synthesis, produce new realities characterized by totally new struggles (which, today are becoming truly global struggles).[53]

Consequently, in the dialectic of materialist struggle today, Marx would emphasize that, if we are to find a higher ideal world organization in synthesis — our Kurzweilian or Heylighenian "Technological Utopia" — the goal for humans is not to have faith outside/external to us (i.e. in God, technology, or abstract mechanism), but to find faith in ourselves and our ability to use technology in a new way to build a Humanist Utopia.[54] And in order to use technology to build a Humanist Utopia, the economic and political foundations of our shared social reality must be fundamentally challenged (i.e. we must once again find a way to articulate a common vision of collective freedom in material reality) (Marx 1844):

"The criticism of religion disillusions man, so that he will think, act, and fashion his reality like a man who has discarded his illusions and regained his senses, so that he will move around himself as his own true Sun. Religion is only the illusory Sun which revolves around man as long as he does not revolve around himself. It is, therefore, the

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[53] In the context of dialectical materialism the focus of our attention should be on the New qualitative ruptures and jumps, the emergence of New struggles and oppositions in society, i.e. what Marx could never have anticipated on the path to global organization. The 21st century will be a century of unprecedented novelty, and this novelty will unquestionably produce ruptures which increase the chances of the Old becoming "stuck" or "out of place" (i.e. religious structures, nation-states, free-market capitalism). Furthermore, this novelty will also reveal struggles for the Self and for whole societies, which have no historical parallel (how do we best "shed" the "Old" and "become" something "New"?). Thus, the more attentive we are to this situation, the better we will be able to adapt ourselves to a state of accelerating change and constantly unpredictable novelty production which leads to consequences that we will only be aware of in retrospect, i.e. after a transformative event changes the conditions for our collective perception and action in the world, which changes our interpretation of the world, etc.

[54] Marx, although a radical atheist in the sense that he posited that a divine idealist realm could not be achieved without new material foundations that humans would have to construct (i.e. God is not coming to save us); he was at the same time *not* opposed to the notion that there existed some form of Supreme Being. Or in the words of Marxist historian Robert C. Tucker: "[Marx] denial of transmundane God was merely a negative way of asserting that 'man' should be regarded as the supreme being or object of ultimate concern." (1972, p. 22). Thus, Marx was as radically committed to humanism and the human project as it is possible to be. And, logically reasoning from this aspect of Marxist metaphysics, the space between Hegel and Marx is not necessarily as large as is sometimes conceived, even by Marx himself.

task of history, once the other-world of truth has vanished, to establish the *truth of this world*. It is the immediate task of philosophy, which is in service of history, to unmask self-estrangement has been unmasked. Thus, the criticism of Heaven turns into the criticism of Earth, the criticism of religion into the criticism of law, the criticism of theology into the criticism of politics."

3-The (Terrifying) Commons Gap

The becoming-space between here and there (between our present moment and the contemporary Idealist notions of Technological Utopia), is what I will call the "Commons Gap".[55] The function of mentioning this Commons Gap is to soberly acknowledge that, in actual reality today, we are more and more confronting fundamental, and even potentially existential at their most extreme, problems of "commons" with no practical solutions. Thus, commons problems create an enormous "gap" specifically in regards to geopolitics and socioeconomics, i.e. how to bring coherent order to the processual struggle of chaotic global becoming?[56]

First, what is the commons? The commons, generally, can be defined as the natural and cultural resources and spaces that all humankind shares as a consequence of being human and existing on planet earth. Consequently, the commons has multiple dimensions: ecology, economy, social, cultural, political, technological, and even biological. Thus, it is practically confronting these common problems and developing common solutions, which necessarily force us to inject a political dimension to the commons, i.e. how to "govern the commons", how to develop distributed institutions for collective perception and action related to the common resources and spaces of the shared human whole (Ostrom 1990).

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[55] This becoming-space requires not just the classic Marxist Master/Slave dialectic (inspired by Hegelian metaphysics), but also the addition of the "anti-Hegelian" Deleuzian notion of affirmation (37, 42). In other words, our becoming-space requires an affirmative dialectic, not simply a dialectic of negation, i.e. we must overcome our Masters, the super-rich who own property, labour, and consequently, State organization, but also we must find a way to affirmatively embody what a new order would look like and in the actual world: "The negative is not present in the essence as that from which force draws its activity: on the contrary it is a result of activity, of the existence of an active force and the affirmation of its difference." (1962, p. 8).

[56] The most important and powerful aspect of the commons concept is to realize that even though our particular human histories were largely separate and distinct (e.g. European, American, Asian, African, Australian, etc.), the future of humanity is undoubtedly common (e.g. Global). There is no escaping the fact that, if the human experiment is to survive long-term, we will have to do it together as a united planetary whole. Thus, the commons is a concept that can help us make practical development plans for that deeply integrated world.

TABLE 1: GLOBAL COMMONS GAP

COMMONS GAP	EXAMPLES
ECOLOGY	Global warming (ocean acidification, disappearance of glaciers/ice sheets, sea-level rise, extreme weather events), mass extinctions (flora, fauna, diverse ecologies), resource exploitation/depletion
ECONOMY	Income and wealth inequality, privatization of public/social goods, monopoly control of production, youth unemployment, unsustainable energy production
SOCIAL	New apartheids/State divisions, refugee crises, human rights, health and education infrastructure/access, food and water infrastructure/access, demographic divide
POLITICAL	Centralization of power, disintegration of representative democracy, State war, lone-wolf terrorism, rise of multi-local radicalism, State-corporate relations (i.e. corporate ownership of State activity)
TECHNOLOGICAL	Automation of labour from general purpose robotics, artificial intelligence (AI), and big data applications, disproportionate access to advanced technology, socioeconomic unpredictability due to emergent technology
BIOLOGICAL	Novel and quickly spreading epidemics/pandemics, active exploration of transhumanism (genetics, nanotechnology, robotics)

The most obvious (and perhaps the most urgent) commons problem is the problem of anthropogenic climate change, which of course, is an enormous problem of common ecology. In our current situation we are well on our way to producing damage to global ecology that, does not threaten earth itself, but rather, threatens humanity itself. The following data is from the *Intergovernmental Panel on Climate Change* (IPCC) (2014) report, which suggests that the following ecological and social trends are occurring with "*high confidence*" to "*very high confidence*" (in statistical probabilistic terms) and are being caused by anthropogenic industrial processes:[57]

- Abnormal extinction rate (could rise to previous mass extinction levels)
- Disruptions of global ecosystem migration, interactions, and ranges (unpredictable and often detrimental to both species diversity and human agriculture)
- Crop yields have been severely reduced and are increasingly unpredictable (e.g. wheat, maize, rice, soybean), especially in mid-latitude regions (e.g. Africa, South and Central Asia, South and Central America)
- Low-income "developing regions" level of vulnerability and ability to adapt to changing climate is becoming an increasing challenge, rendering social, economic, cultural, political, institutional stability more problematic

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[57] Of course, I will also add the obligatory statistic that 95% of climate scientists believe that the global warming trends of the Industrial age are not only intensifying but also unquestionably being caused by human activities.

- Extreme weather events (e.g. heat waves, droughts, floods, cyclones, wild-fires) are increasing in both quantity and severity altering fundamental ecosystem dynamics, threatening infrastructure security, disrupting food and water supply, etc.
- Increases in regional violent conflict over resources, land, and future climate uncertainties
- Irreversible ecological changes ("tipping points") have already started happening (e.g. Arctic ice levels, coral reef stability) and signal the beginning of potentially devastating shifts, especially relevant to coastal regions (risks of submergence, coastal flooding, and coastal erosion)
- Some regions of the planet are literally becoming unliveable or dangerous for working outside during certain times of the year due to rising heat levels (for example, in some areas of Australia, Middle East, Africa)
- Fresh water resources are becoming increasingly scarce or severely vulnerable (especially in tropical and subtropical regions)
- Ocean acidification increasing rapidly leading towards faster rates of global warming and decreasing oxygen levels that will have further complex impacts that are difficult to predict, but can be expected to at least destroy many interconnected marine ecosystems
- Future impacts of intensifying climate change could destabilise global economic activity, especially considering that catastrophic changes, tipping points, and other complicated interconnected processes are difficult to predict or accurately incorporate into projections of economic development
- Future impacts of intensifying climate change could severely affect human health and human social development due to increasing problems with food security, water availability, higher rates of disease transmission, etc. with extreme future climate projections to 2100 rendering large regions of earth unliveable

The most unsettling aspect of reading the IPCC (and other related) reports is that all stress the fact that global climate problems are becoming increasingly complex, interconnected, and likely to produce feedback affects and qualitative changes that cannot be predicted or anticipated with any degree of certainty.[58] Moreover, there are a number of processes (e.g. melting ice sheets, ocean acidification, etc.) that could lead to changes so drastic that even our technological ability to adapt will not be enough to maintain the basic stability of human civilization, especially around our contemporary

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[58] In other words, we have no idea what is really going to happen with the future of global climate, which makes it all the more terrifying. Perhaps this is best demonstrated by looking at recently released NASA climate data that is organised into 21 different climate models (NASA 2015). These models project global temperature to 2100 based on estimates of carbon dioxide (CO_2) and other greenhouse gas concentration levels. Various models predict various outcomes, with of course the main unknown variable being the human geopolitical dimension. In 2015, earth passed 400 parts per million (ppm) CO_2 in the atmosphere (with 350ppm representing the "safe level"and 280ppm representing pre-industrial levels). In NASA's projections to 2100 some models suggest a further rise in CO_2 concentration to 500-600ppm whereas others suggest a rise closer to 900-1000ppm, which would have catastrophic implications.

urban coastal regions (i.e. where most humans currently live, and will increasingly live, given the general migration trends so far this century).[59]

Basically, humans have become a tremendous and monstrous psychosocial force with geophysical implications. This is why geologists have now agreed that we are in the midst of a new geological epoch: the Anthropocene (Zalasiewicz et al. 2008).[60] The Anthropocene essentially denotes the fact that whatever happens to humanity this century, whether it is extinction, collapse, persistence, or transcendence, our international industrial civilization has left its geological imprint (Zalasiewicz et al. 2008, p. 4):

"Since the start of the Industrial Revolution, Earth has endured changes sufficient to leave a global stratigraphic signature distinct from that of the Holocene or of previous Pleistocene interglacial phases, encompassing novel biotic, sedimentary, and geochemical change. These changes, although likely only in their initial phases, are sufficiently distinct and robustly established for suggestions of a Holocene-Anthropocene boundary in the recent historical past to be geologically reasonable."

Thus, millions or billions of years from today, if there were minds present to conduct a paleontological survey, they would know that a global intelligence mediated by agricultural and industrial systems had emerged, seemingly out of nowhere, almost like an asteroid impact; only instead of being an impact from without via a large physical body bound to physical laws, it was an impact from within via a collective planetary mind striving to achieve its highest potentiality free of physical laws.

The question becomes, simply, how do we react to the Anthropocene? How do we react now that our common ecology, our foundational support system, is itself threatening the future existence and development of civilization? It is a decision that will require systemic change, and although we are effectively ignoring common ecology in terms of real action now, it is a problem that will become impossible to ignore in only 20 or 30 years (probably less). And, most dangerously, by the time it becomes impos-

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[59] Of course, people also sometimes underestimate our ability to adapt. Our cultural and technological nature give our species the ability to adapt in real-time to highly complex challenges that require the application of collective intelligence (i.e. problem solving capabilities of many minds in aggregate). This ability makes our system, generally speaking, more resilient than is often acknowledged. However, at the same time, we do not do ourselves any favours by not taking these challenges seriously, even on existential level of seriousness considering how poor our geopolitical response has been to news that we are undermining the very foundations of our survival.

[60] The human phenomenon — in the Teilhard de Chardin (26, 43) sense of the term — is now on its accelerating pathway to what the theologian originally identified as the "ultimate earth" where the human shoot of evolution would surpass all nations for the "inevitable taking-as-a-whole" of humanity. Thus, humans are not best conceptualized as one species among the rest of life living in harmony with nature; the more we explore our own virtual space of becoming, the more we differentiate ourselves from the rest of nature and become increasingly alien to the rest of nature (26), composing an entity so inherently strange in its own nature that it requires a geological epoch of its own. The Anthropocene marks an irreversible "no going back to the primitive cave" moment: humanity can only choose to move further away from the domains of physics, biology, and social history, and deeper into our own self-constructed sociotechnological cave (away from the world and into a world totally of our own), on the pathway affirming an adventurous and mysterious search for the highest creative levels of self-expression and self-reflection.

sible to ignore, significant damage to the foundations of civilization will be practically unavoidable.[61]

As overwhelming as the problem of common ecology currently is, the problem of common economy, necessarily coupled with common social and common political problems, appears to be approaching a similar dramatic tension. First and foremost, since the 1970s and 1980s, human civilization has been more and more erecting the foundations for a global economy. These foundations have been enabled by the emergence of advanced telecommunications, computer networks, and increasingly efficient international transportation networks.

However, the formation of this global economy has been characterized, not by the development of transparent democratic international systems of governance (political commons) ensuring equitable socio-psychological development of a common global society (social commons), but instead the formation of common economy has been characterized by a process that directs the geopolitical and socioeconomic contours of globalization more and more towards oligarchic and authoritarian forms of international decision-making.[62]

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[61] Philosopher Jean-Pierre Dupuy argues in *The Mark of the Sacred* (2013) that our lack of a psychosocial response to global warming, even despite its potential existential dimensions, is evidence that we have totally lost the sense of our own divinity as well as the belief that our planet is a sacred developmental home. Thus, Dupuy argues that we must revive and reclaim an image of ourselves and our planet that is not just rational and technological, but also spiritual and sacred, if we are to find the political will to radically change course and save humanity from humanity. As the ancient historian and psychoanalyst Norman O. Brown recognized: "the issue is not the replacement of the search for divinity by a technological rationality, but always (so far anyway) a search for the right relationship to divinity, and the right name for the divine." (1981, p. xxix). And if we cannot find it within ourselves to find the future of human potentiality and the foundations of our future relation to the world as truly divine and sacred, then perhaps we do not deserve either anyway: "when we turn towards the summit, towards the totality and the future, we cannot help engaging in religion." (Teilhard de Chardin 1955, p. 285). For this turning towards the summit it is precisely the future of the religious institution that requires new attention and new thinking. Religious institutions must change into something totally different for the 21st century structure of a distributed global brain, and whether they can or not is a matter for the future of global brain theory (Last 2014).

[62] One of the most powerful centers of global oligarchy formation, the United States of America (USA), has functionally speaking, become the property of international corporations. This was most depressingly demonstrated by Princeton University political scientists Martin Gilens and Benjamin Page who tested for popular and elite influence on policy-making in 1,779 instances between 1981 and 2002. There results suggest that "economic elites and organized groups representing business interests have substantial independent impacts on U.S. government policy, while average citizens and mass-based interest groups have little or no independent influence", data which provides "substantial support for theories of Economic Elite Domination and for theories of Biased Pluralism, but not for theories of Majoritarian Electoral Democracy or Majoritarian Pluralism." (Gilens & Page 2014, p. 564). They ended their study by claiming that "America's claim to being a democratic society are seriously threatened." (Gilens & Page 2014, p. 577). Of course, these data just confirm what many have known for decades, which is that the USA has for some time now, abandoned representative democracy. Even the, by all measures fairly moderate or center-left economist, Thomas Piketty, acknowledged the severity of the situation: "The history of progressive tax over the course of the twentieth century suggests that the risk of a drift toward oligarchy is real and gives little reason for optimism about where the United States is headed." (2014, p. 514). But the USA is not alone, representative democracy is failing everywhere and income and wealth inequality is becoming more extreme everywhere (literally, apart from maybe a handful of socialist countries in Europe, try to think of where exactly representative democracy is successfully functioning, and where socioeconomic equality is improving). The emerging twin global socioeconomic issues of our time are global geopolitical centralization and the concomitant rise in socioeconomic inequality that centralized political organization is prone to generate and exacerbate.

Thus, the key point to emphasize (and re-emphasize) is that we are experiencing problems of building an economic, social, and political commons, essentially because we are now confronting the formation of a dictatorship of the global market economy (Carter 2005), which operates via the formation of authoritarian shadow agreements (e.g. Transatlantic Trade and Investment Partnership TTIP)-Trans Pacific Partnership (TPP)-Trade in Services Agreement (TISA)) (Judge 2015b).[63] This global economic dictatorship consequently operates via what are called "neoliberal free trade agreements" that function as financial infiltration mechanisms designed to undermine democratic processes (thus "capturing" State "representatives") in favour of maximizing corporate profit (i.e. exchange value of capital), by exploiting unstable labour markets and violating international human rights agreements.[64] Thus, neoliberal policy, generally, gives corporations access to global labour without any concomitant responsibility for non-monetary value of social or ecological welfare, which is, of course, not just a problem for income and wealth inequality, but also for the aforementioned problem of anthropogenic climate change.

Consequently, the most fundamental feature of the formation of the global economy has been the following crucial development: *a permanent de-coupling of the virtual exchange value of capital from the materialist human use value of capital*. The de-coupling means that what matters (what is valued in economic analyses) is the circulation of capital *in and for itself* (i.e. for its own ends), as opposed to the circulation of capital *in and for human beings and the planet*.

In this (terrifying) global economic climate, which is more and more in the unconscious control of capital, the crucial question is not whether or not capital has led to the development of a feudal global political structure destroying any reasonable humanist-ecological planetary foundation (that much is obvious), but whether or not it can be

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[63] What would be a dictatorship of the proletariat? In a dictatorship of the proletariat there would be no central location of power, as the power would be totally distributed: no leaders, no Gods. Foundational decision-making for community formation would be based on real face-to-face relationships — local trust and reputation — and global order would be emergent from these local, radically democratic acts: a democracy which does not function in anyway like democracy as we have known it in the historical process, because it is not based on representation, but instead, principles of presentation. The wrench in this notion of future "distributed governance" can be found in the future of technology, and specifically the future of virtual reality systems which could (and probably will) very much blur the distinctions between physical and virtual interaction potentiality, i.e. "face-to-face" relationships and "local" trust and reputation will in reality (physical or virtual) be independent from "actual" geographic proximity, and instead be mediated within a common medium that eradicates spatial-temporal limitations on interaction potentiality.

[64] Essentially, from an anthropological point of view, the modern form of state capture (subversion of democracy leading towards the exploitation of common economy and ecology) is the financial equivalent of pre-modern state raiding, where kings or emperors would violently control formerly autonomous surrounding villages and bands (if they could), exploiting their common economy and ecology in the process for its own Absolute ends.

stopped, i.e. whether or not an alternative system can emerge that enables the forma-
tion of human societies that can accurately assess value in the real.[65]

The basic philosophical justification for neoliberal policy is built on the founda-
tional assumption that state interventionism destroys and a free marketplace creates the
conditions for individual freedom and self-development (Springer 2015). Thus, the fun-
damentalist religious faith is: self-organization of a free and unregulated global market-
place (of everyone following their own self-interest) is not only sufficient but the best
way to create a harmonious and stable planetary society.[66]

The neoliberal perspective on the horrors of state intervention emerged in an
anxiety-ridden reaction to the humanitarian catastrophes caused by militarized states
like Fascist Germany and Japan during World War II and anti-market states like the So-
viet Union and the Communist Party of China during the Cold War (Mirowski & Plehwe
2009). Consequently, with the state eliminated as a potential mechanism for socioeco-
nomic growth, neoliberal free market policies are often advanced under the acronym
TINA: There Is No Alternative. Thus, neoliberal globalization and the sublimation of
every aspect of human life to individual market activity is seen as the only route to
Utopia.[67]

However, TINA is leading to the production of a potemkin village (a fake village)
that is increasingly torn between two economic poles: the pole of the wealthiest 1% (or
even the wealthiest one-tenth of 1%) and the pole of everybody else. For example, the
total wealth of the richest 1% of humans amounts to approximately $110 trillion dollars,
which is 65 times the total wealth of the bottom half of the world's population. Or, pre-

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[65] Such a system has been theoretically explored and postulated by various academics interested in the potential of a
(so-called) "post-capitalism" (Mason 2015). These systems typically include the fundamental idea that a future econ-
omy can be built on the non-rivalry of intellectual property (thus escaping the markets ability to capitalize (feed) on
its scarcity), and with the continued advance of information technology and informational goods and services, enable
new internationally networked distributed organizations for social sharing and resource access, i.e. a real "common"
economy (Rifkin 2014). From the global brain paradigm, theorists have envisioned this future system to function as a
universal network for intelligently coordinating "offers" and "demands" devoid of any monetary component (i.e.
beyond the one-dimensional nature of monetary exchange and into the multi-dimensional realm of social offers) (see:
Goertzel 2015; Heylighen 2016).

[66] Consequently the challenge for global brain theory is not to identify whether self-organization is a cosmic evolu-
tionary mechanism sufficient to generate an emergent distributed level of planetary order and stability, but rather to
ask: what exactly is the best socioeconomic mechanism for global self-organization? Is the market the principle
mechanism and foundation for the self-organization of global human civilization? Or is there a humanist and socialist
alternative mechanism? And if so, how can we, as quickly as possible, utilize such a mechanism to alter the course of
socioeconomic development? The result would be a global brain theory that is not just abstract and mathematical,
but also a theory with radical emancipatory humanist potential.

[67] Notice the twisted logic in calling corporatization of the world "globalization" when in reality it is actively against
genuine globalization, i.e. the free movement of peoples via the elimination of national borders and the international
union of humanity. Thus, it is ironic that various activist groups fighting against the expansion of global authoritarian
capitalism, and for democratic and transparent alternative forms of socialist-anarchist globalization, are themselves
labelled as part of an "anti-globalization" movement. Again (52), in reality, the only way to create an inclusive utopi-
an sphere is to overcome capitalism, which is inherently structured with an exclusionary sphere which never elimi-
nates tensions and exploitation, instead it merely shifts them around with its universal capability to adapt to any local
cultural human background for its operations.

sented in a slightly different and more horrifying form: "The bottom half of the world's population owns the same as the richest 85 people in the world." (Oxfam 2014, p. 2).

But the global or macro perspective on inequality is not the only perspective we can take. Although the global divide is enormous, so is the divide within developed and developing countries alike (i.e. economic class antagonisms are developing a Marxist form universally). For example, the Organization for Economic Co-operation and Development (OECD) recognizes that income inequality is "at its highest level for the past half century" with "the average income of the richest 10% of the population is about nine times that of the poorest 10%" (2015). In the United States of America, Greece, Spain, China, India, Russia, Brazil, Mexico, Turkey, Chile, and many other countries, a radical and growing concentration of wealth among the richest sliver of the population is accelerating. Consequently, the large majority of humans are failing to see benefits from the enormous levels of corporate profit generated by international free trade agreements.

What can we conclude from the manifestation of insane 21st century levels of socioeconomic inequality? Clearly, a global marketplace developed on neoliberal principles (i.e. market activity devoid of democratically-mediated state intervention) is an insufficient mechanism for the equitable distribution of resources and the formation of a common economic foundation. Instead such unregulated global market activity appears to be the best way for humanity to ensure the deepening of an already unbearable economic divide between those who have every and all opportunity in the world, and those who have no opportunity in the world.[68] Most humans are being systemically exploited and excluded from participating in whatever chance we have to build a real 21st century global society.[69] At the same time, it is clear that local self-organization projects and maybe even Keynesian-style state interventionism would not be enough to combat the problems of the economic commons. In the end, we will need new forms

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[68] Here we get the image of our planet being transformed, ultimately, into some version of the movie *Elysium* (2013) (see: http://www.imdb.com/title/tt1535108/). In the world of *Elysium* super-wealthy trillionaires are able to build their own hyper-technological moon environment above the earth, where they enjoy radically longer and healthier lifespans, and have every imaginable sociotechnological convenience. Whereas, on earth, the suffering masses labour in ecologically degraded post-industrial slums, unable to meet even their basic creature needs, and to make matters worse, are under the controlled supervision of a robotic police force commanded from a super-elite spaceport. Although an extreme future vision, do we not run into such a world if contemporary processes are allowed to continue without a fundamental systemic change in our organization? In other words, without commitment to an egalitarian internationale?

[69] Recent mathematical modeling of human civilization related to historical and contemporary economic stratification and ecological exploitation (i.e. failure to develop common economy and ecology) suggests that such conditions have led to complete civilization collapse in the past and could also lead to collapse in the near-term future (Motesharrei et al. 2014). The researchers concluded that "economic stratification and ecological strain can independently lead to collapse [… but] collapse can be avoided, and population can reach a steady state at maximum carrying capacity if the rate of depletion of nature is reduced to a sustainable level and if resources are distributed equitably." (Motesharrei et al. 2014, p. 90). Thus, there models suggest the common sense conclusion that if a society does not function as a society i.e. becomes separated from itself through inequality, and separated from the environment through ecological exploitation; then it will start to internally degrade and eventually collapse. However, certain models suggested that global stability could be achieved, and global instability avoided, if we were to consciously facilitate a transition towards something similar to a post-capitalist egalitarian internationale.

of institutions for large-scale international collective action (Ostrom 1990). These new collective institutional forms will necessarily have to challenge the dominance of both nation-states and the global flow of authoritarian capitalism.

This failure to construct a common economy leads to tragic consequences for a whole host of other commons problems, like for example, in the social, technological, and biological dimensions of common resources and space. The fundamental issues of the social commons include (1) the creation of increasingly complicated and inhumane bureaucratic structures to regulate the movement (or prevent the free movement) of peoples, as well as (2) the crisis of a growing number of people, especially in the developing world, without any access to health care, education, security, food, or water, as all of these public services become privatized, i.e. the financialization of everyday existence. In short, in the process of building a real globalized social commons, necessities of existence and actualization like health care, education, security, food, and water should have been classified as essential human rights (i.e. you have access to such necessities simply because you are a human being), instead of creating structural conditions where these necessities of existence and actualization become commodities, where access is only permitted on the capitalist condition.

Essentially then, the social commons problem is a general problem with actually existing globalization as corporatization, namely that governments (in the process of corporate state capture) become agents for the over-regulation of human life, the under-regulation of corporate pseudo-life, and have failed in and/or forgotten their fundamental modernist duty: to free humanity from the structural oppressions of basic necessity and labour exploitation, and aid in the establishment of a cooperative world of perpetual peace and well-being (Kant 1784). Instead, modern states have opted to facilitate the establishment of corporate oligarchy and invest in large-scale militarization projects to protect imaginary symbolically-constructed borders (as evidenced by the new attempts of both the European Union (EU) and the United States of America (USA) to deal with problems of socioeconomic inclusion by building large (militarized) walls to keep out those systematically marginalized by unequal global development systems, e.g. Hungary/Balkans region; USA/Mexico region).

What will be the larger international consequences of further globalization that operates under "pseudo-socioeconomic-unity" (i.e. a corporate integration) and that lacks the concomitant social human integration (which would at least represent an at-

tempt at unity)?[70] Further planetary corporatization of our social space could generate the potential for further larger-scale multidimensional social conflict, and a deepening of the socioeconomic divide between "North" and "South", i.e. the continued active construction of a potemkin village.[71]

And these are social problems on the near-term horizon (2015-2020 or 2015-2025) as many countries of Latin America, Africa, and Asia are also pursuing higher economic unions. For example, in the talks of an Asian Monetary Union (AMU) (Kim 2014), the goal is not to enable more social freedom and flexibility, opening up a world of access to basic human necessities, but instead to help corporations exploit ever-cheaper and more vulnerable labour markets.[72] Thus, discussions of globalization are only ever about corporate integration based on economic growth towards some formalized global corporate oligarchy, not social integration based on psychosocial growth towards some form of egalitarian internationale.

Moving forward, are we capable, are we mature enough to discuss equitable humanist social integration? This would require substantive plans for global development that includes the elimination of basic human needs related to possession of capital (i.e. human emancipation): food, water, shelter, health, education, etc. This is necessarily a project that must be de-coupled from contours of problem solving dictated by nation-states (which are no longer representative democracies anyway), and unregulated global finance capitalism (which is only serving a small elite anyway). Economic integration without social integration generates unpredictable and extreme divisions and

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[70] And if we need a social integration beyond the State, we are either entering "global state" territory, as suggested by Thomas Piketty in *Capitalism in the Twenty-First Century* (2014), and echoed by techno-philanthropists like Bill Gates, both of whom claim such a structure is necessary to regulate market activity and to ensure equitable global development. Or, it could be that we are entering anarchist territory: a global structure with a new universal economic ground floor and no central control. In *Fragments of an Anarchist Anthropology* (2004) anthropologist David Graeber accurately points out that the (so-called) "anti-globalization" movement has from the very beginning emphasized an emancipatory humanist globalization with a clear end goal: "In the long run the anarchist position on globalization is obvious: the effacement of nation-states will mean the elimination of national borders. This is genuine globalization. Anything else is just a sham." (2004, p. 77). The question becomes how best to proceed? How to lead a socially-focused movement towards a higher human universal that does not require a higher central power (i.e. global state)? Is it possible for us to imagine a world where power is truly distributed, a world where bureaucratic and militarized structures are no longer necessary? In short, can we imagine a truly self-organized world?

[71] Marshall McLuhan was one of the first social theorists to recognize the long-term global implications of emergent "electronic" information and communication technology (ICT). For McLuhan, the future of ICT was going to create a world of extended planetary consciousness eventually forcing historical social and political institutions to transform into new global structures (1962, 1964). In our current attempts to form a global whole, led primarily by international corporate activities, the process has led to large-scale structures that seek to homogenize thought and culture and pre-determine socioeconomic arrangements. However, McLuhan predicted that, in true global village conditions (not potemkin village conditions), local communities would become increasingly autonomous, local diversity would become maximized, future conditions would become less predictable (not determined), and full cultural differentiation would lead towards a "global theatre" of the human mind. In essence, for McLuhan, any human universality in the global village (if one were ever achieved) would not come from external top-down corporate imposition of mass consumption detached from local production, but instead, from a bottom-up explosion of creative and artistic diversity with individual humans playing the role of intimately engaged multi-local producers within distributed networks (or "prosumers") (1972).

[72] As if they weren't cheap and vulnerable enough.

conflicts, and leaves the poorest people in ever more vulnerable situations as traditional sources of labour disappear and local governments become captured by the international interests of capital. The problem is that, often times, the people who suffer the most from the erection of militarized walls (for example, the impoverished and perpetually demonized millions of Mexico), are the people who nobody ever hears from.[73]

Then there are the commons in relation to technology and biology. Both present different but in many ways convergent challenges (as with the economic, ecological, and social commons). In terms of technological commons we are approaching novel problems that can only be described in relation to the emergence of revolutionary technologies. For example, corporations and states around the world are now quickly developing advanced forms of artificial intelligence, robotics, nanotechnology, genetic engineering, as well as many other potentially transformative information technologies. The question for the technological commons is a simple one: who exactly should own all of these technologies which give us the potential to generate abundance with minimal need for labour? And, crucially, how can we ensure that everyone benefits from their practical application in society?

Consider, for example, that "autotech" is enabling (and will increasingly enable) individuals and small groups to create "autonomous" and "distributed" corporations with global reach. Autonomous and distributed corporations essentially achieve what the name implies, fully self-organized corporations that require little or no human labour or regular maintenance beyond the actual technical development of the organi-

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[73] When it comes to the social commons and finding a true humanist international union, we can only look to and hope for a tremendous expansion of human empathy that enables the active construction of new more equitable material foundations. Here Freud (49) anticipated our psychological situation: "If civilization is an inevitable course of development from the group of the family to the group of humanity as a whole, then an intensification of the sense of guilt… will be inextricably bound up with it, until perhaps the sense of guilt may swell to a magnitude that individuals can hardly support." (1930, p. 80) Thus, whenever technologists talk about the "rising billions" expected to be coming online and entering the global dialogue in between the present and 2030, I can't help but think that a Freudian "sense of guilt" will also become interdependent with this process. Far too many people that people in the developed world never hear from, and never think about, will all of a sudden be impossible to ignore. The human family can only form with a deep internal and collective self-reflection on what it is we have done to each other in the name of progress, in the name of creating new dimensions of globality, in the chaos of becoming. Consider, for example, what the children from the slums of Congo, Yemen, Afghanistan, Syria, North Korea, Haiti, or Mexico think about modernity and the human family. Freud knew that true psychosocial formation of a human family would have to come from new attempts at global egalitarian organization. He stated clearly that the benefits of civilization are "vouchsafed to a few, with hardly any effort" while the many are "ceaselessly groping amid torturing uncertainties." (1930, p. 80). Freud remained cautious as to whether or not humans could achieve such an egalitarian future, but maintained that the "fateful question" for our civilization was "whether and to what extent cultural development will succeed in mastering the disturbance of communal life with the human instinct of aggression and self-destruction" (1930, p. 92). Will we find the hope and courage to build a true world community, or will the future be the emergence of new militarized state walls and corporate socioeconomic authoritarianism?

zation itself. At no time in history have we approached the problem of producing large-scale abundance with little to no required human labour beyond initial establishment.[74]

And indeed, we are already seeing that new digital companies are more and more able to radically disrupt global industries and, in some cases, positively impact billions of lives in ever-shorter durations of time with less and less need for labour. This appears to be the case in the domains of communication, transportation, health, education, energy, and a number of different vital functions. In short, we are acquiring the technological capability to build a real global commons built around principles of access to basic needs, basic conveniences, basic tools of psychosocial development, and so forth. However, this dynamic is increasingly problematic and generating new labour tensions from the threat for mass technological unemployment, which only further exacerbates rising income and wealth inequality.[75]

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[74] Technologist and entrepreneur Peter Diamandis (2) frequently notes that exponentially evolving information technology is a force that allows "individuals" and "small groups" to "accomplish what was once the sole province of large corporations and governments" (2012, p. 10). Indeed, that is the whole philosophy driving the development of *Singularity University* (2). And, of course, if technology is empowering individuals to become entrepreneurs and affect positive change in the world for billions, that is a great development. However, the very economic structure of our world is not set up to help every individual become a global entrepreneur to solve all world problems, as such a structure would need to provide a much more stable socioeconomic foundation for trial-and-error and much fewer restrictions on international cooperation. Diamandis himself recognizes this need for a new, more stable, simple, and international socioeconomic foundation: "Although I consider myself a libertarian capitalist, we are moving towards a world of socialism" (Diamandis 2013). According to Diamandis's book *Abundance* this would be a world socialism capable of supporting "nine billion people with clean water, nutritious food, affordable housing, personalised education, top-tier medical care, and nonpolluting, ubiquitous energy." (2012, p. 11). However, it is quite clear that, there is no geopolitical socialist plan of action to create such a world. But if there exists practical technological reasons to believe that utopia is possible, than that practical technological vision of creating utopia *must be coupled with real substantive critique of contemporary power structures and their long-term function in the 21st century*. The failure to successfully challenge the power structures of our world will keep the large majority of humans in basic scarcity, fundamentally exploited, systemically marginalized, and on the outside of exponential growth looking in. This leads to the feeling of increasing alienation when wealthy privileged tech-elites jump up on the global stage proclaiming that we are going to merge with super-robots and live forever. Can everyone please just have food and water first? That is something that would change the world for billions of people.

[75] Some basic examples can illustrate the absurd contemporary dynamics between new digital entrepreneurship and global capitalism. Take, for example, Instagram (photography), WhatsApp (communication), and Uber (transportation). Instagram was founded in 2010 with a team of fifteen individuals who enabled a global revolution in photography and sold their company in 2012 to Facebook for one billion dollars. WhatsApp was founded in 2009 and enabled a revolution in international messaging with only 55 employees before being sold to Facebook for nineteen billion dollars. Uber was founded in 2009 and has started to revolutionize urban transportation by utilizing an app to crowd-source drivers (thus complicating even the category "employee" and circumventing the need for traditional private and public transportation services). As of May 2015, Uber, a company with no real commitment to a stable labour force, is valued at close to 50 billion dollars. Equality!

Again, how can we ensure that these technologies are both used for the common good *and* lead us towards a more equal socialist world?[76] Without addressing these concerns, which are fundamentally geopolitical and socioeconomic in their nature, the exponential advance of technology will continue to generate social fear, skepticism, and volatility as traditionally stable forms of labour simply disappear.[77]

What about common biology? There are many potential problems of common biology, but the two most significant for the future of social stability and our future in general include the risk of international epidemics or pandemics, and the novel sociocultural movement of "transhumanism". Pandemics may become a larger concern due to increasing interconnection of the human population without a concomitant international plan for medical health. Specifically, due to inadequate and incoherent medical standards there is increasing risks of antimicrobial resistance, distribution of low-quality antibiotics and many varieties of substandard or fraudulent medical drugs, as well as an inability to respond effectively to urgent medical emergencies, especially in developing countries (National Institute of Health, 2015).

The implications of not addressing global health and medicine could be devastating to both geopolitical and socioeconomic development. We face the danger of particularly virulent pathogens spreading faster than ever, negatively affecting the lives of more people than ever, raising the chances for an emergent pathogen to become a pandemic within weeks or even days. Consider, for example, the West African Ebola outbreak in 2014. Although this outbreak was contained mostly to West Africa (e.g. Liberia, Sierra Leone, Guinea) from the efforts of local and international health care workers, this success was partly luck because the Ebola virus itself can only be transmitted via direct contact with blood, secretions, organs, or other bodily fluids of infected people (World Health Organization, 2015). In other words, the Ebola virus was not "air-

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[76] The failure to address basic political foundations could lead to us having to take more seriously the very real negative-side of exponential technology empowering "individuals and small groups" to engage in incredibly destructive acts of violence (i.e. the rise of "Lone Wolf" terrorism, see: Gordon et al. 2015). Take for example the rise of radical Islamic terrorism, which, as most people forget to mention, is directly connected to the rise of neoliberal trade policies and neocolonial activities of the USA throughout the Middle East (Hadiz 2006, p. 235): "US policies have actually led to the erosion of secular and democratic forms of politics [in North Africa, Middle East, South Asia region], as well as the rise of authoritarian regimes that frequently legitimise their position by calling on religion. Both the democratic process and secularist ideals were to be sacrificed in so far as the interest of US policy was the containment of socialism. Thus, the environment for the emergence of anti-US Islamism in the region, was partly facilitated. The consequences of these past policies are all too glaring to overlook in today's world [...] where democratic secular politics has been under continuous and severe assault - in light of the historical legacies of superpower politics."

[77] Economist Martin Ford was one of the first academics to realize that technological automation was going to be a fundamental problem for global socioeconomic development in the 21st century. In his first works on the topic, *The Lights in the Tunnel* (2009), he was quick to point out that the "severity" of the financial collapse in 2008, and our inability to fully recover, could have a lot to do with technological automation and the decreased need for labour. He warned that "machines are likely to permanently take over a great deal of the work now performed by human beings" and that this process "will be a threat to the very foundation of our economic system" (Ford 2009, p. 19). In his follow up, *The Rise of the Robots* (2015), he suggests the gradual implementation of a universal basic income (UBI) as a first step towards ensuring that unequal distribution of resources does not itself impede sociotechnological progress.

borne", thus making it far easier to contain the spread, even though we were, in terms of health care infrastructure and strategy, totally unprepared.[78]

Furthermore, issues of common biology must now engage with the sociocultural movement of transhumanism, which is advancing a political agenda towards the "enhancement" and eventual "transcendence" of human biology itself, with the specific goals of radical life extension and life expansion (Benedikter 2015). In this section I do not want to pass moral judgement on transhumanism, but rather to identify it as an emergent social movement that requires global attention and global conversation, as we are currently one common species in biological terms.[79] The pursuit of a transhuman future could cause a fundamental fragmentation in our very common biological nature through the application of genetic engineering (i.e. manipulating the human genome), nanotechnology (i.e. the replacement of cellular functionality with microscopic computers), and robotics (i.e. the replacement of biological organs and limbs with technological or human-designed organs and limbs).[80]

Of course, humans have always modified their biology with technologies of various forms, and have altered their biology with various surgeries and prosthetics.[81] But there is something deeper and more fundamental about what is emerging in the world of genetics, nanotechnology, and robotics today, and many of their applications are incredibly intriguing, even psychosocially emancipatory, specifically in relation to life extension and cognitive enhancement. However, issues of common access, long-term implications for human culture, potential bifurcation of human society (again between the "haves" and the "have nots"), or potential abuses of individual rights from state

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[78] Consequently, philanthropist and activist Bill Gates (67) has identified a "global epidemic" as top global concern for the next decade, arguing that due to the nature of contemporary health infrastructure and the increasing interconnectedness of human society "time is not on our side" and that we need a qualitatively new level of organization to successfully move forward with the challenges presented by global health if we are to avoid global pandemic (Gates 2015).

[79] Currently there is a large, growing, and enthusiastic transhuman subculture actively attempting to create the foundations for an, effectively, post-human world. However, if we are indeed approaching an age of the transcendence of our historical biological condition, then this conversation must make the attempt at broader engagement with the global community.

[80] In *The Singularity Is Near* (2005), Kurzweil refers to these transhuman potentialities as the GNR (genetics, nanotechnology, robotics) revolutions.

[81] As philosopher Andy Clark argued in *Natural Born Cyborgs* (2003), to be human is to be cyborg, if the definition of a cyborg is an organism which has restored or extended its abilities with the application of "artificial" or "technological" devices.

power structures, could generate immense problems especially if left unresolved over the course of the next 20-30 years.[82]

This survey of "common problems": ecology (global warming), economy (income and wealth inequality), social (new walls, divisions, conflicts, lack of basic services), technological (autotech), biological (pandemics, transhumanism), only touch the surface of the larger and growing domain of commons problems, or specifically: the practical problems of existing in an increasingly integrated, hyper-technological, planetary whole. However, the point of this overview was to demonstrate that these problems are increasingly complex, increasingly interconnected, and increasingly in need of qualitatively novel structural solutions (i.e. outside the contours of nation-states and capital). Consequently, if a new stable global humanist organisation is not achieved, we can expect the multi-local and multi-dimensional nature of contemporary globality to continually stress and challenge human civilisation throughout the first half of the 21st century, with potentially serious existential consequences for the future of humanity.[83]

Thus, if the foundations of contemporary globalization are to be seriously challenged in favour of higher social integration, there will have to be a new commitment to a popular and radically eschatological socialism, i.e. a socialism that does not end in a bureaucracy (i.e. contemporary state capitalism or pseudo-socialism), but a socialism that ends the state structure itself.[84] For this end a new theory of anarchist socialism or anarchist Marxism, principally founded on radical commitment to local democratic action, a fundamental reassessment of labour, property, and the state, and new tech-

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[82] Again, visions of Elysium (63) come to mind: a world where small minority of human populations have access to incredible technologies that allow them to extend their lifespan and cognitive capabilities, while the vast majority are left behind. Or consider the possibility of States, like for example China, engaging in mass eugenics campaigns to cognitively enhance its population for the benefit of the State. Perhaps then, the answer to many of these future "problems of transhumanism" will depend on whether or not the transhuman movement can develop a sense of socialist egalitarian unity in regards to access, and at the same time an anarchic critique of power structures. The current dominant incarnation of transhumanism, in the form of libertarian capitalist transhumanism, appears inadequate to deal with the challenges of actually existing global transhuman experimentation. However, transhumanism is also very socially and politically diverse, and always has been since its emergence in the 1950s and 1960s. And even today, the second largest sociopolitical subculture in transhumanist movement is the "techno-progressive" movement, which seeks to unite more traditional humanist notions of world socialism, with contemporary futurist notions of transhumanism and singularity theory (Hughes 2004).

[83] Or, perhaps, a new order can *only* emerge in this chaos.

[84] This was always a foundation of the modernist left and scientific socialism in particular. As Kant (47) (1784) first realized, the State was never meant to be an end in itself, but a means to an end: facilitating a transition towards an abundant, equal, and self-organized world. But if we are to work towards ending the State then a new Left is going to have to devise a new theory of the State that can effectively undo our contemporary reliance on debt and bureaucratic welfare structures. I think the beginnings of such a theory can be found in anthropologist David Graeber's (70) critique of debt in *Debt: The First 5,000 Years* (2011) and bureaucracy in *The Utopia of Rules* (2015). There is no law of the universe that says nation-states must enslave citizens with debt and trap citizens within bureaucratic structures. An emancipatory state will be a state that, as philosopher Henry David Thoreau noted "comes to recognize the individual as a higher and independent power, from which all of its power and authority are derived, and treats him [or her] accordingly." (1849, p. 18). This means economic freedom, this means unconditional relief from basic animal needs, and unconditional access to the structures that will enable full development, full actualization; as opposed to a "market freedom" that leads to the actualization of multi-national corporations as "persons" (i.e. neoliberalism as promoting the "self"-actualization of Walmart). In order to achieve such a world, we will have to go beyond the nation-state.

niques for maximizing the emancipatory potential of new technology, could potentially challenge the foundation of illegitimate and unjust power structures, while at the same time facilitating the development of a human-centric psychosocial global development program.

In our current situation, there is no coherent plan for the use of state power in creating an authentically international world.[85] Instead the state has simply become a permanent sociocultural reality destined to define international human relations until the end of time.[86] Perhaps then it is important to note that national borders are not real physical structures embedded within the foundations of continental geology, but instead imaginary socially constructed entities built on militaristic violence and authoritarian command structures.[87]

Humanity has been here before. Consider, for example, Buckingham Palace (or for that matter almost any pre-modern monarchy), once a tremendous political structure built on militaristic violence and authoritarian command structures, but today, it is in sociopolitical or geopolitical terms, completely functionless. Is it not possible for an analogous process to occur to say, the White House (or for that matter almost any modern nation-state), which is currently a large political structure built on militaristic violence and authoritarian command structures, but could one day in sociopolitical or geopolitical terms, become completely functionless?[88]

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[85] Again, a problem foreseen by Kant (47, 84), who, although he foresaw international union as our destiny, also foresaw the critical problem in the formation of such a union: "States must form an *international state*, which would necessarily continue to grow until it embraced all peoples of the earth. But since this is not the will of the nations, according to their present conception of international right, the positive idea of a *world republic* cannot be realized." (1784, p. xxx). In response to Kant, Marx foresaw that the formula to such an international union would be through a combination of Kantian enlightenment (follow your own understanding, not the understanding of institutional hierarchies) and that self-enlightened populous committing to democracy (i.e. the road to socialism is democracy, democracy, democracy). However, given our current predicament of corporate state capture, democracy is failing, and protest does not seem to improve the situation (or in the terms of dialectical materialism, the "Old" is stuck and the pathway to the "New" emergence is not (yet) clear).

[86] Or as Slavoj Žižek (38) (2011) constantly and correctly points out, we have all become "Fukuyamists", convinced that the End of History was actually the end of the Cold War, and that our final structural form would be the neoliberal capitalist nation-state.

[87] In this sense nation-centric "world maps" are a type of social violence on the imagination, i.e. Edward Said's concept of "imagined geographies" as representational impositions that strongly influence our perceptions of the world and each other (1979). If we are going to create a new world we must be willing to imagine and perceive the contours of a world that has transcended national borders. This needs to be a very real and a very serious international project, a totally fresh symbolic representation of the human-earth relation. In this quest Benedict Anderson's *Imagined Communities* (1983) can also be of intellectual guidance. Anderson argued that nation-states are not and cannot be real communities because they are not built on substantive face-to-face social interaction. From the perspective then, of Said and Anderson, globalization must be a process that facilitates authentic bottom-up local community and ecological development built on substantive face-to-face interactions (even if the lines get blurry between the physical and the virtual, which they likely will).

[88] Understanding how large-scale forms of political control become rendered obsolete due to fundamental qualitative transitions to higher-levels of organizations is the purpose of Human Metasystem Transition Theory (HMST) (Last 2015b), and the Information-Energy Metasystem Model (IEMM) (Last 2015c). Both HMST and IEMM are focused on understanding how the emergence of higher information mediums (e.g. Internet) re-orient fields of political control (e.g. nation-states) via the ability to actualize new energy regimes (e.g. renewables).

From the perspective of growing commons problems humanity will only find Technological Utopia when the geopolitical and socioeconomic structures preventing its emergence are seriously challenged. *This is the essence of the (terrifying) Commons Gap.* How do we get from our present state (of global warming, global oligarchy, global social chaos, etc.) to Technological Utopia (i.e. self-organized universal free of physical, biological, and societal constraints)? There must be a radical jump, but the question is how to jump? And the time for *new ideas*, and *new action* is fast approaching, as the problems of common ecology, common economy, and so forth are also fast approaching. Common problems represent a dire warning, a warning that we can no longer ignore the actually existing dimensions of contemporary globality, which are making the world far too dangerous for anything less than Utopia.[89] Thus, the warning of commons problems is simultaneously an opportunity, the opportunity of a revolutionary socialist and scientific possibility space.[90]

However the revolutionary socialist possibility space will not just magic into existence a Technological Utopia as if reality is simply achieving what already exists in the divine idealist space of our collective imagination: humans must build Utopia (actualize

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[89] Here it is heart-breaking to read the radical technological utopian, Buckminster Fuller, who, before he passed in 1983, published *Critical Path* (1981). In *Critical Path*, Fuller opened by explicitly identifying that if humanity were to indeed walk the critical path to Utopia, it would have to be by abandoning our historical power structures (thus why his introduction is subtitled: "Twilight of the World's Power Structures" (p. xxx)), and by forging a new global order founded on universal materialist respect for the individual (not just Platonic idealist respect, i.e. Universal Declaration of Human Rights (1948), etc.). In this aim, Fuller recognized the cosmic evolutionary nature of the transition (as do Kurzweil and Heylighen, for example), but also crucially recognised that our current geopolitical organization was not only insufficient to build Utopia, but itself an existential challenge to the success of Technological Utopia, and therefore, must be challenged at a fundamental level. That is what we have lost today. Intellectuals do not adequately and explicitly challenge power or ideology anymore. We have become too timid and scared of being labelled "extreme" or "radical" (or even worse, are just comfortable with the status quo, i.e. everything is fine). And although Fuller underestimated the power of the neoliberal order that would reign after his death, assuming that by 2015 we would have already built a true global village, a true technological utopia, he still held the highest hope for our future: "Ninety-nine percent of humanity does not know that we have the option to "make it" economically on this planet and in the Universe. We do. It can only be accomplished, however, through a design science initiative and technological revolution." (1981, p. xxx). Today, institutes like *Singularity University* (74), are attempting to carry out this design science initiative and technological revolution, but have yet to adequately challenge the "World's Power Structures" which are indeed still in their "Twilight".

[90] Futurist and philosopher Jerome Glenn, co-founder of *The Millennium Project*, always manages to successfully balance an understanding of the dynamic nature of our enormous problems and opportunities: "The future can be much better than most pessimists understand, but it could also be far worse than most optimists are willing to explore. We need serious, coherent, and integrated understandings of mega-problems and opportunities to identify and implement strategies on the scale necessary to address global challenges." (2015, p. xxx). This means humanity needs 21st century systems visions like Buckminster Fuller's (84), but these visions, in the tradition of Fuller, must be connected to critique of power and critique of ideology. We have the scientific know-how and technological capability to build technological utopia, but we do not have the ability to successfully overcome our socioeconomic and geopolitical structures, which are now becoming our biggest constraints to progress. Or in the cybernetic language of Heylighen, we need a new metasystem structure (global organization) that will eradicate the constraints on variation which are restricting individual psychosocial actualization (thus rendering the modernist national-industrial complex "exhausted"), and enable a new level of global variation (creative symbolic explosion of the Whole of humanity).

Utopia) and that requires taking a leap of faith, not in technology, but in ourselves. God is not coming.[91]

　　Consequently, and fundamentally, the solutions to the problems of the 21st century cannot come by applying the New technology within the Old neoliberal order, but rather must come by applying the New technology within a New commons order. Human civilization does not have to be a historical trap of scarcity, war, ecological degradation, with no hope of escape.[92]

4-*The Communist Manifesto* (1848) vs. *The Singularity Is Near* (2005)

　　In the 21st century dominant eschatological notions revolve around Technological Singularity.[93] However, this modern eschatological notion is very different in crucial ways to the original modernist eschatological notions of World Communism, which matured in both the revolutionary and evolutionary intellectual environment of 19th century modernist Idealism.[94] What can we learn from comparing the most influential 19th century "end" with the most influential 21st century "end"? In order to explore this it may be instructive to compare the Marxist vision from *The Communist Manifesto* (1848) to the Kurzweilian vision from *The Singularity Is Near* (2005).

　　What was *The Communist Manifesto*? First and foremost, *The Communist Manifesto* was a class-based critique of capitalist socioeconomics that argued (on moral grounds) for a socialist revolution, and eventually inspired labour movements on every continent in the world. In essence, in every region of the world colonized by the superorganism of Capital (for better or for worse), it has been followed by a shadow, in the form of Marxist socialism, which is typically relegated to operation within a controversial ideological background.

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[91] At least not yet. Again, the proper Hegelian formula is the following one: SS>OS=AS (42). This means that in order to reach Absolute Spirit, humanist Subjective Spirit must, through its own passionate action, overcome Objective Spirit (unconscious symbolic order (big Other) of history), through a leap of faith, a belief that our own ground in SS (our own organization without concentrated power as big Other: the emancipatory egalitarian collective), is possible, and that the ground of the State is what it is: an imaginary illusion to be overcome in our own substantive maturity.

[92] Today there is even an emerging consciousness in anthropology related to rethinking egalitarianism and the historical process itself. For example, in *The Creation of Inequality* (2012), archaeologists Kent Flannery and Joyce Marcus survey the evidence which suggests that human foragers were universally egalitarian, only forming organizational structures of inequality through the multi-local process of agricultural development and State formation. Thus, if humanity followed a developmentally constrained common evolutionary pattern from equality to inequality within the State structures of the historical process, can a developmentally constrained common evolutionary pattern be found from inequality back to equality, by challenging state structures and creating a truly global political body?

[93] See: Section 1-Technological Utopia Today

[94] See: Section 2-The Evolution of Future God

Marxist socialism and its many interrelated fields of social, political, and economic critique, function *not* as a specific prescription for a socialist world order (a common misconception), but instead as a reminder that although capitalism is better than previous historical modes of economic organization (of course, nobody wants to return to monarchical feudalism), it is by no means the omega of economics. Thus, according to Marxist evolutionary theory, capitalism will eventually be undone for a more inclusive and moral socioeconomic system, or in other words, something that will likely place far more emphasis on common social cooperation in an egalitarian order and far less emphasis on individual financial competition in a hierarchical order.[95]

In Marxist theory, the ultimate and ideal system would be a classless socially equal society that at the same time enabled an even higher transformative psychosocial potentiality than offered by the capitalist system. Of course, in the specific vision of Karl Marx, the capitalist marketplace, due to its inherent tendency to serve the circulation of capital over the circulation of human well-being (i.e. to value the virtual profits from exchange value over real human use value), and also its inherent structural contradictions to revolutionize the means of production at the expense of labour security, would inevitably lead to its own demise.[96]

As discussed, this demise, for Marx, would come in the form of a global World Communist revolution carried out by a revolutionary Universal Humanity (i.e. each member of the proletariat would, within themselves, discover the universal dimension and emancipatory essence of spirit's nature). This would be a universality formed in response to structurally imposed slavery and spiritual impoverishment: massive unemployment, the end of subsistence-level wages, the end of meaningful labour, etc. From total alienation to total revolution, the proletariat would be forced to undergo a revolutionary "self-change" in response to "infinite degradation" (Marx 1848, p. 74):

"Society as a whole is more and more splitting into two great hostile camps: Bourgeoisie and Proletariat. [The bourgeoisie] is unfit to rule because it is incompetent to assure an existence to its slave within his slavery, […] society can no longer live under this bourgeoisie, in other words, [because] its existence is not compatible with society.

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[95] Marxist theory predicts that the future will be a highly moral future. There is no question that many of Karl Marx early theories were driven by a religious-like desire for a higher moral world, that humanity should strive as its highest goal, a higher good: a world of common social morality based on collective creative freedom. This belief was itself a product of the German Idealist thinkers which massively influenced him, like Immanuel Kant and, of course, Georg Hegel, who identified freedom as the highest desire of spirit's position vis-a-vis nature. Moreover, this foundation of modern scientific socialism resurfaced at the foundation of early global brain theory, where Valentin Turchin (12) also asserted that a world of common social morality based on collective creative freedom would lead humanity towards the highest goal and the highest good (which Turchin conceptualized as the same thing) (1977).

[96] Returning to economist Martin Ford (74), a self-described capitalist, who, in his first book on the potential for large-scale technological unemployment, *The Lights in the Tunnel* (2009), proposed the central thesis that "as technology accelerates, machine automation may ultimately penetrate the economy to the extent that wages no longer provide the bulk of consumers with adequate discretionary income and confidence in the future." (p. 237). He then went on to admit that he was in the "uncomfortable position" of admitting that Marx was "perceptive" about the fate of capitalism.

What the bourgeoisie, therefore, produces, above all, is its own grave-diggers. Its fall and the victory of the proletariat are equally inevitable."

In the aftermath of revolution, the universal proletariat would become committed to principles of common socioeconomic development achieved via the establishment locally democratic worker communes networked into an egalitarian internationale.

However, in stark contrast to the Marxist capitalist eschatological narrative, our contemporary utopian notions of Technological Singularity present a very different eschatological scenario, as detailed in Ray Kurzweil's *The Singularity Is Near*. Specifically, Kurzweil celebrates the revolutionary technologies that can, and may one day be produced from the dynamic production capabilities of a capitalist marketplace, like robotics, nanotechnology, and artificial intelligence.

Kurzweil predicts that the marketplace will not be its own undoing by producing a revolutionary Universal Humanity alienated from their own productive forces, as predicted by the Marxist materialist dialectic, but instead, will be its own undoing due to the Law of Accelerating Returns (LOAR), that will enable greater and greater technologically-based information processing returns on capital investment, eventually producing a network of trans-human and/or post-human artificial general intelligences (AGI) that enable humanity to transcend biology and the animal kingdom itself (Kurzweil 2005, p. 74):

"The law of accelerating returns is fundamentally an economic theory. It's the economic imperative of a competitive marketplace that is the primary force driving technology forward. By the time [this process leads] to the Singularity, there won't be a distinction between humans and technology. *This is not because humans will have become what we think of as machines today, but rather machines will have progressed to be like humans and beyond.*"[97]

Thus, we are presented with two very different visions of the future fate of the marketplace and our human relationship to society. In this comparison I am not interested in emphasizing whether or not Marx or Kurzweil is right or wrong about the "societal object". Maybe both will be proven right, maybe both will be proven wrong, or maybe, there are elements of prophecy in both.

Instead, what I want to emphasize is this critical difference between the ultimate utopian function of the capitalist marketplace: **For Marx**: alienating marketplace produces revolutionary Universal Human atheists that generate World Communism — Ver-

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[97] Indeed, even though Kurzweil states that post-human Singularity is "immanent", he does concede that this era could be prevented if we were to "repeal capitalism and every vestige of economic competition" (2005, p. 74). The interesting thing to note is that many "Singultarians" do not view Singularity theory as a theory of the end of capitalism, but instead simply a theory about the evolution of technology. For this reason I thought it was important that R.U. Sirius and Jay Cornell opened their book *Transcendence: The Disinformation Encyclopedia of Transhumanism and the Singularity* with the consideration that the transhumanist movement may be a "wild and wacky expression of the madness of late capitalism" (2015, p. 5). Of course, it could be both scientifically sound *and* a wild and wacky expression of the madness of late capitalism.

sus — **For Kurzweil**: infinitely dynamic marketplace produces god-like AGI post-humans who generate Technological Singularity.

These differences — between 19th and 21st century revolutionary visions of emancipation from the historical process — perhaps speak less to what we can expect to happen in the future, and more about how we view ourselves, and in particular, how we view ourselves in relation to the modern intellectual project, the development of technology, and the nature of capitalism.

In short, whereas in the 19th century it was possible to imagine the modern project leading towards a global human society built fundamentally on common socialist terms; in the 21st century, it appears at least very difficult to imagine the modern project as a process leading towards such an end. Instead, it can only be imagined as a process leading to a world so radically out of control that it will lead towards the robotic transcendence of humanity itself.[98] In this sense, capitalism is a far more serious and dynamic socioeconomic force than Marx recognized: a force, not to find our humanity in the most radical way, but a force to, potentially, lose our humanity in the most radical way.[99]

But what is most interesting about the differences between Marx and Kurzweil is how they are convergent in many dimensions of contemporary human-world reality, both resonating strongly in a radically subversive way within the contemporary socioeconomic and geopolitical climate.

From the Marxist perspective, is it not true that income and wealth inequality has risen to levels and within qualitatively new global dynamics, that are not rivalled by any previous age?[100] Consequently, today we see new social movements and calls for Universal Humanity in the form of Occupy Wall Street, the Arab Spring, and the revival of many progressive socialist or democratic socialist parties throughout the developed world, as well as a general return and reflection on the meaning of the communitarian desire. In almost exactly the way Marx predicted, capitalism is splitting global society into two great halves — global neoliberalism as a great class war — due to monopoly ownership of the means of production, and consequently a monopoly ownership on property and labour. This process leads to massive labour instability and exploitation, and generates a great underclass of humans who do not own property and cannot accumulate wealth and security for themselves and their families.

Whereas, from the Kurzweilian perspective, is it not also true that, computers are now starting to solve problems and functionally operate in a way that replaces even the

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[98] Or in other words, the highest "madness" of late capitalism.

[99] Perhaps social theorists should consider this potentiality when referring to our current socioeconomic state as a state of (so-called) "late" capitalism. Maybe we are in a state of "late" humanity. Or in other words, maybe capitalism will even be so dynamic, universal, and totalizing as to literally end humanity through the generation of a completely machine-dominated economic system that eliminates the need for human beings.

[100] This is perhaps best evidenced by the fact that the most popular economic book in recent memory — Thomas Piketty's (62; 70) *Capitalism in the Twenty-First Century* — essentially posited that global market capitalism has become so radically out of control as to require nation-states to strive towards the "utopian" ideal of instituting a "global wealth tax", i.e. global state to control global market.

basic need for human physical or cognitive labour. Today there are a number of tech-
nologists and economists warning that the coming wave of computation, especially in
the domains of machine learning software, will be able to eliminate mundane and rou-
tine labour (e.g. Brynjolfsson & McAfee 2014; Rifkin 2014; Ford 2015). Although these
experts disagree on specific timelines, we are already seeing that major retailers, major
industrial manufacturers, major transportation companies, major areas of the service
sector, are already preparing the grounds for mass automation; or something like Mar-
shall Brain's "Robotic Nation" (2011).

        Thus, it does not take very much imagination to envision a future, maybe even
10 or 20 years away, when the marketplace really does become hyper-automated, elim-
inating the need for most human labour, generating even more extreme levels of in-
equality, and maybe even producing Kurzweil's super-intelligent, super-conscious God-
machines exhibiting self-reflexivity, self-direction, and self-replication, either sublimating
humanity, or leaving humanity subject to whatever "they" decide to do, i.e. the "control
problem" predicted by philosopher Nick Bostrom (2014). At least in our current mo-
ment, it certainly does take less effort to imagine the Kurzweilian end — of capitalism
producing a post-human world — in either its Utopian perspective, or its more dystopi-
an Vingian form (1993), than it does to imagine the Marxian end, with a pure collective
triumph of Universal Humanity.

        After all, regardless of how many protestors gather in solidarity within the centres
of concentrated power demanding fundamentally new socioeconomic arrangements
built around basic human dignity and equality, there will always be equally large milita-
rized state forces there to criminalize the dangerous emergence of an authentic democ-
racy that challenges the contours of authoritarian capitalism.[101]

        Or, to say it another way, it takes less imagination to envision the Kurzweilian end
because it takes less actual effort to imagine the Kurzweilian end: we sit and wait for
technological God to emerge from the infinitely dynamic and resourceful marketplace,
which solves all of the problems, maybe even the problem of humans existing in the
first place.

        In conclusion, considering the inherent (and increasing) strangeness of the 21st
century, there is certainly the need for discussions about the emerging "New", and in
particular, discussions in relation to the technological possibility space that is (rapidly)
opening, and the consequences of that technological possibility space in relation to the
potentialities for societal actualization, i.e. not just actualization of individuals, but for
the actualization of the planetary whole. In other words, humanity is approaching a
time when civilization is set to become something totally different and unprecedented
on the "stage of the world", and perhaps something so radically different in its nature
that the human phenomenon ends up leaving this world for a world on its own ground.

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[101] In *The End of Protest* (2015), activist Micah White suggests that what can be learned from say, the Occupy Wall
Street (OWS) movement, (which he calls a "constructive failure"), is that those fighting for economic freedom, dignity,
and social solidarity, should never "protest the same way twice". In the digital age, new tools enable qualitatively
new types of protest that can take radically unconventional forms, but in this age, we must also be careful not to be-
come "spectators of our own protest". Fundamentally, White's thesis is a challenge to our notion of representative
democracy and how we engage with such structures.

This makes the site of the emerging New a radical political site, i.e. important decisions need to be made about the future structure of the world, and these are exactly the types of discussions that are actively avoided. This is because political structure often defines the domain of possibility, and whether or not we are being "realistic", i.e. this or that is possible (if it stays within the contours of the nation-state), or this or that is possible (if it stays within contours of representative democracy, which is actually controlled by finance capitalism), and so forth.

However, in the context of our analysis of Marx and Kurzweil capitalist eschatology, the possibility space opened up (ultimately by capitalism controlling state activities) leads to, on the one hand (the utopian Marxist hand): total freedom, equality, and liberation of a unified human species; and on the other hand (the utopian Kurzweilian hand): total freedom from physics and biology ("transcendence of biology"), towards the construction of post-human super-beings. In between these two (not necessarily mutually exclusive possibilities for actualization), the first reaction of concentrated power to the New appears to be (unsurprisingly) actualizing only potential activities that are perfectly pro-Kurzweilian (i.e. post-human cyborg enhancements) and at the same time perfectly anti-Marxist (i.e. anti-emancipation from labour exploitation, structures of inequality, and authoritarian domination).

Here is the crucial location of a tension within the contours of contemporary state activities controlled by finance capitalism (i.e. its potential for revolutionary technology, and its potential for revolutionary inequality) that will, if left unresolved, lead to deep social conflicts.[102] In this world it is believed we will be able to genetically engineer the human body closer towards forms we desire (increasing longevity, health, intelligence, well-being, etc.); we will be able to directly link our brains (via neural implants/cortical modems) to the Internet and transcend the sensory world by inhabiting hyper-social virtual worlds either interconnected with, and/or totally de-coupled from, physical reality; we will be able to merge with brain-machine interface devices which will allow us to directly communicate our thoughts and feelings from mind-to-mind (telepathy) and control and transform objects with our minds (telekinesis); and we will be able to produce machine brains that totally simulate the cybernetic functioning of biological brains, enabling among other things, the transference of our minds to a technological substrate towards digital immortality.

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[102] Is an actual Marxist universal proletariat revolution possible? The Occupy Wall Street movement (95) demonstrated that it was possible for the Master/Slave dialectic (i.e. Bourgeoisie (1%) / Proletariat (99%)) to effectively function in a universal context (i.e. spreading to over 90 countries), although its actual manifestation as protest against the ineffective and corrupt functioning of "representative democracy", failed. Furthermore, and at least at this point, it appears unlikely that the type of "infinite degradation" and "self-change" (predicted by Marx) would manifest towards the establishment of a distributed global organization constructed on principles of equality and freedom. But there are trends and forces related to global finance capitalism which suggest future conditions could reach a type of "infinite degradation". And at the same time, there have been several anti-neoliberal movements — most notably starting after the 1999 Seattle World Trade Organization (WTO) protests — that signal the emergence of a 21st century cultural desire for globalization built on universal equality and freedom (i.e. World Communism as the ultimate, thus far unrealized, *objet petit a* or: object cause of desire). Here, history is still very much open to our cognitive penetration in self-change, in our potential to release ourselves from our own "bad habits" currently in actualization.

        In short, apparently, everything and anything is possible — if you have access to capital — and that is the fundamental problem with the contemporary notions behind the Kurzweilian Singularity. At the same time, the emergence of Universal Humanity as an immanent dimension of Marxist theory, has failed to materialize, as the exploited slaves of the world continue to fight among each other instead of displaying the subjective capacity necessary to affirm a new equal and free collective existence. Can we rediscover and actualize the fundamental notions behind modernist Idealism by applying the New of contemporary Technological Utopian visions in a New way? In other words, can the New technologies of the 21st century be used in such a way as to achieve a collective freedom for the whole of humanity in a new abundant and common mode of socioeconomic existence? This is the geopolitical challenge of our time, and the challenge for global brain theory.

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