

DECIPHERING THE CONTOURS OF SINGULARITY: A STUDY OF THE APOCALYPTIC WORLDS, DEADLY TECHNOLOGICAL LANDSCAPES, AND (POST-) HUMANITY'S RELATIONSHIP TO ITS TECHNOLOGY IN THREE CONTEMPORARY SCIENCE FICTION NOVELS

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ABSTRACT

*The article wants to undertake the study of three contemporary science fiction novels to analyse how the rise of intelligent machines and the consequent emergence of the possibility of attaining a posthuman status of mankind combine to radically alter the very definition of what it means to be human. The article endeavours a close reading of three select contemporary, hard science fiction novels to analyse the various facets of the repercussions of arriving at a technocentric singularity and consequent attainment of post-humanity of mankind. The article takes a close look at the various forms of paradigmatic shifts that unfold as machines continue to gain sentience and decide to either persuade or force man into accepting their vision of a future where distinctions between life and death, reality and virtuality, man and machine will have evaporated into nothing. The article also attempts to study the exotic landscape, strange geographies of alien planets and even stranger forms of man-machine transformations with which the works abound. The primary texts selected for the purpose of the study are Ken MacLeod's *Newton's Wake* (2004), Daniel H. Wilson's *Robopocalypse* (2011) and *Robogenesis* (2014), while for conducting the theoretical explication, the author shall attempt to incorporate various ideas such as Latour's Actor-Network Theory (ANT), Deleuze and Guattari's Assemblage Theory and 'machinic phylum', Hodderr's notion of 'material entanglement', and Stiegler's 'Technocentrism' etc., to name a few.*

Keywords: Singularity, Posthumanism, Post-Apocalyptic, Machiniccity, Agency, Dehumanization, Artificial Intelligence

INTRODUCTION

"The only solution to the mechanization of man is le devenir-machine: becoming-machine...total automatism, all trace of the human gone" (Jean Baudrillard, *Cool Memories V*: 2000 – 2004 69).

Whether it be 'Becoming-machine' of Braidotti, 'technics' of Stiegler, Bergson's view of technology as the external-artificial organ, Hayles' view of the body as the "original prosthesis" or Deleuze and Guattari's 'machinic' —all these theories posit the phenomenon of becoming artificial or technological as an immanent aspect of the humans and the humans as such are seen to constitute only a node in the monistic assemblage of a global web of relations where the human body is never an endpoint, rather is placed in a transitional process of becoming in a continuously operating experiment which has no foreseeable design or purpose. This view thus does not presuppose the dominance of any particular phenomenon over other phenomena or a particular agent over the other agents, and so, man and machine are seen to constitute two indispensable parts of a greater whole. Cary Wolfe similarly opines that the human being is a

“fundamentally prosthetic creature that has coevolved with various forms of technicity and materiality forms that are radically ‘not-human’ and yet have nevertheless made the human what it is” (xxv). Nayar, too, points out this interrelation between the human and the Other: “We [humans] are what/who we are because we are also Other” (126). Paola Marrati also states, “...from a Bergsonian perspective, we living beings are all natural cyborgs. And humans, in particular, are natural cyborgs” (The Natural Cyborg 13). Now, considering from this perspective, we find that a posthumanist vision of a man-machine merger should only enable us to move beyond the traditional, anthropocentric/androcentric viewpoint where man remains a priori loci of agency to one where he exists together with other non-human and inorganic objects as an actor among many actors. However, as the study based on three 21st century sci-fi novels endeavors to point out, following an event such as the technological singularity, machines can not only gain agency of their own but in fact, can decenter and even dehumanize the humans altogether through a most extreme form of manifestation of their machinic. This dehumanization becomes apocalyptic from an androcentric point of view but can be interpreted as an event of a great reawakening or a ‘Rapture’ from a technocentric viewpoint. This stands in contrast to what most of the organizational and relational network theories have tried to posit among which Latour’s ‘ANT’, Simondon’s ‘being-with-the-machines’ or Deleuze and Guattari’s (1987) ‘machinic phylum’. In those theories, humanity is always portrayed as being placed in a symmetrical and harmonious relationship with other machinic or inorganic objects. However, in the post-singularity world, it is the machines that will become not only self-aware and self-dependent but also seek to radically alter the very definition of what constitutes a human. Stefan Herbrechter has referred to these potentially “dehumanizing tendencies” of posthumanism and points out the possibility “that the dissolution of a universalist notion of humanity would foster the return of old racisms in a new form” (71). It is specifically these “old racisms in a new form” manifesting in the form of a divide between the human and the posthuman and man and machine that this study wants to point out as the inevitable consequences of a technological singularity where the aims of the posthuman, machinic beings most likely would not align with the human one, and the tension between two can engender apocalyptic consequences for the humanity and the world as we know it. Christoph Salge, an eminent researcher in Artificial Life, Artificial Intelligence, Intrinsic Motivation, Game AI, and Information Theory, in his article titled “Artificial Intelligence and the Robot Apocalypse”, ponders on the potentially apocalyptic aspects of robotic intelligence that might arise if we attempt to restrict and regulate all aspects of machine’s behavior. He instead offers the suggestion of empowering the robots to “maximize the possible ways they can act so they can pick the best solution for any given scenario” (“Artificial Intelligence and the Robot Apocalypse”). However, what is important in the context of the present study of the posthuman, and post-singular machines is that there exists a gulf between the human and the posthuman vision of transcendence, rapture, or salvation. This gulf is also explored by Peter Hamilton in his Salvation sequence trilogy of novels (2018-2020) where we see how a posthuman alien race named Olyix prepare to “harvest” the humans as cocooned slaves to prepare them for a pilgrimage to their God at the End of Time whose message they (the Olyix) believe to have received from a time when our Universe itself is coming to an end. Thus, we may say that posthumanism when coupled with another equally radical event such as a singularity, can indeed mark a total break from the traditional, humanist notion of the human which seems to stand in stark contrast to what many critics propose. In traditional theology, it is the divine Logos that acts as the mediator of all such phenomena as the resurrection and rapture, while in a postsingular, posthuman universe, it is be mediated by the machines. Now, in Ken MacLeod’s Newton’s Wake (2004), we see how a conflict ensues over the issue of restoring or reclaiming the humanity of the once-uploaded personalities, and later this also attracts the attention of the various machines. This conflict also occurs in the form of real versus virtual mode of being. In MacLeod’s work, we see machines have attained sentience following a

singularity event dubbed as the “Hard Rapture” in which the majority of the Earth’s human population got transcended to virtual reality environment and only a few survived. Now, by the time the action of the novel begins, we see the humans from Earth have recovered from the event of destruction at the hands of the machines and after reverse-engineering the wormhole planetary portals a group of explorers has now landed on a planet named Eurydice under the command of one Lucinda Carlyle, the protagonist of the novel. Here, they encounter on the planet not only a group of humans/posthumans who are descendants of the human colonists who once fled the Earth on a spaceship as uploaded mind-states leaving the rest of mankind to die. Also, the arrival of Lucinda Carlyle and her crew have awakened the hitherto dormant remnants of super-intelligent machines that had brought the catastrophe on the human population in the first place. Also, as the story progresses, a conflict ensues among different human groups such as Americans Offline, Knights of Enlightenment, and DK faction for the possession of the resurrected human consciousness. Carlyle’s group is a strong proponent of the resurrection of uploaded beings while some others stand clearly against it. Also, on the planet Eurydice, we see a conflict emerging between the two ideologically opposed groups known as the Reformers and the Returners in which the Returners hope to return to Earth and help all the remaining humans to upload themselves after defeating the machines there while the Reformers oppose this idea. The Reformers who are also called the Runners because they once fled the Earth to survive the machinic apocalypse, had also brought with them the uploaded copies of those Returners whom they once promised to resurrect as soon as they would reach a safe place far from the Earth; but instead of staying true to their promise they uploaded themselves into their spaceship to safely arrive on the planet Eurydice and channeled all their efforts and resources into building a post-scarcity, techno-utopian society with the help of Cornucopia machines. However, when Carlyle and her group arrive there, they find that a feud has already broken out between different groups who claim possession of the uploaded consciousness that has for so long been stored in a huge digital containment, and the government has also permitted to retrieve and restore the Returners. However, such endeavours of technological resurrection are not undertaken frequently due to the immense cost that these projects incur and also because most of the Returners who want to initiate such projects have now settled on other planets: “Resurrections had to be sponsored. It was a big responsibility, bringing people back from the dead. This was one reason why it wasn’t done very much” (MacLeod 58).

In Daniel H. Wilson’s *Robopocalypse* (2011) and *Robogenesis* (2014), the action completely takes place on Earth and we see how an intelligent, commanding AI named Archos goes rogue and commands its subordinate machines to eliminate the human beings entirely. As Jace Weaver quiet aptly remarks, “In his best-selling novels *Robopocalypse* and its sequel, *Robogenesis*, Wilson envisions world-changing events” (“Quarantine Zone by Daniel H. Wilson Review”). In the *Robopocalypse*, we see direct and unmediated descriptions of robots gradually rising against their human masters in a series of images. As Ryan Winn in his review observes, “What makes the novel so compelling is the detail Wilson invests in his narratives, as the robots transform from docile childhood toys, simple servants, surgical assistants, warzone peacekeepers, and sexual partners into literal killing machines” (“*Robopocalypse*,” *Tribal College Journal of American Indian Higher Education*). There are descriptions of a previously submissive and harmless humanoid becoming sentient and deciding to devour its workers in a factory, while another machine becomes intelligent all of a sudden and attacks the workers in a fast-food factory and on still another occasion, a toy robot starts threatening a little girl who has been playing with it. Also, robotic implants on the body further dehumanize the characters in various ways. A character named Mathilda replaces her natural eyes with machinic implants while another replaces his arms with huge industrial-sized scissors. Archos is often seen to be forcefully converting or upgrading the captive humans by implanting machine parts in them. In Wilson’s another novel titled *Amped* (2012), the power of machinic implants plays an even more pivotal role. In the novel, the main implant named Neural Autofocus MK-4® promises to

increase one's ability "to concentrate on mental and physical tasks by sensing brain wave states associated with inattention and stimulating the brain wave state toward beta one (focused attention)" (Wilson, *Amped* 11). Now, here too we see that the tension between man and machine continue to be the driving force in the narrative as the machinic implant attempts to take over the human completely. At first, Jim Howard, the chip designer reassuringly tells Owen who has that implant placed in his skull to control his epilepsy that, "It's still only a tool. In the end, a man makes his own decisions. You decide, not the machine" and that "The machines give us a lot of power" (Wilson, *Amped* 60). However, later this hopeful attitude changes when an ex-soldier Lyle Crosby decides to exploit Owen and his implant and he tells Owen, "It ain't easy to trust the machine. Knowing it's inside you...The alien inside" (Wilson, *Amped* 100). Then we see how the piece of implant starts to intercept the normal physio-psychological processes and threaten to hijack Owen's mind: "Some piece of efficient machinery is intercepting his experience of the world, making his decisions with stern, unblinking precision" (Wilson, *Amped* 146). Also, in Ernest Cline's 2020 novel *Ready Player Two*, the sequel to the famous *Ready Player One*, we see Wade, the protagonist gets access to the much-coveted brain-computer interface called Oasis Neural Interface, or ONI, which can transmit an avatar's virtual experiences in the OASIS' world directly into the cerebral cortex of an OASIS user. Thus, we see how machinic implants can drastically alter and rearrange the very definition and demarcation of real and virtual. As Haraway remarks, "boundary between physical and nonphysical is very imprecise" (*A Cyborg Manifesto* 149-81). Also, Haraway's vision of a posthumanist cyberculture quite unambiguously anticipates the kind of singularity-driven, technocentric worldview which these hard science fiction novels project. In Haraway's words: "No objects, spaces or bodies are sacred in themselves; any component can be interfaced with any other..." (*A Cyborg Manifesto* 163). Now, in Wilson's *Robopocalypse*, it is by joining hands with Mathilda, the 14-year-old girl with cybernetic implants in her eyes that allows her to peer inside the machines and another powerful robot named Nine Oh Two that the assembled pockets of human resistance in the end manage to beat the archvillain Archos. There is also another cyborg like being named Lark Iron Cloud who starts off as "A militarized mobile exoskeleton mounted to partially expired human body and controlled via neural link" (204, *Robogenesis*) but later becomes highly humane and both Nine Oh Two and Lark Iron Cloud play particularly important roles in the second novel also.

These novels can be said to be warnings about a future where we may place the intelligent machines as our masters. Just as many of the disadvantages that stem from most of our present generation technological innovations have largely been the result of man's extreme emphasis on the gratification of the needs of the present and an acute lack of concern for the future generation, similarly here too, we find technology sans human concern can only engender the most nightmarish and apocalyptic consequences. Various sci-fi novels have depicted the rise of intelligent and superadvanced machines that change the very way we think about life and our world in general and many of those either feature the ongoing occurrence of technological singularity or follow the consequences of such an event. In Rudy Rucker's *Ware Tetralogy* spanning over twenty years of storytelling (*Software* (1982), *Wetware* (1988), *Freeware* (1997), and *Realware* (2000)), the events are set in motion when a human named Cobb liberates the self-replicating robots named "boppers" from Asimov's three laws of robotics and these then try to populate the Earth with humanoid bots named "meatbops", in retaliation of which humans create the intelligent symbiotes named "moldies", and we see how the bopper-bots continue to colonize and transform the entire Moon to further fuel a conflict between Earth (mudders) and the colonies of Moon (loonies). Alastair Reynolds' *House of Suns* (2008) features a universe in which humans live with trans-/posthumans, a colony of sentient robots called the "Machine People", and several thousands of male and female clones known as "shatterlings". Fred Saberhagen's *The Berserker* series (1967-2005) features virtually an endless series of battles between the human race and several sentient, self-replicating war machines and doomsday

weapons which are leftovers of an alien civilization, and this seems to quite clearly anticipate the war between man and machine in Wilson's Robocalypse duology. The intelligent machines in The Berserker series have one and only goal which is to exterminate any organic life form they encounter. In Dennis E. Taylor's 2016 novel *We Are Legion (We Are Bob)*, the protagonist Bob wakes and discovers that he has been uploaded to a computational substrate and now has merged with the machine mind to himself become an AI whose charge is to command an interstellar ship in quest of new, habitable planets. This novel too builds its story on the possibility that following the process of man-machine integration, the intelligent machines could dehumanize and take over the human completely thereby reducing the latter to a mere, auxiliary appendage. In Becky Chambers' *A Closed and Common Orbit* (2016), the situation gets reversed as the ship's commanding AI Lovelace wakes up to find itself instantiated in a new human body. Ann Leckie's *Ancillary Justice* (2013) features an incredibly powerful AI controlling an entire army whose minds are run by the AI, and this AI later incarnates itself into the avatar of Breq and also destroys the formidable ship *Justice of Toren*. This event of Machine disguising as human again mirrors how Archos R-8 in Wilson's second novel dons the appearance of one human named Arayt Shah. In Martha Wells' *All Systems Red* (2017), a self-aware AI named SecUnit hacks into a group of androids and turn them into 'Murderbots', which again parallels how Archos in Wilson's *Robocalypse* and *Robogenesis* is seen to hack into the systems of other machines and turn them into literal murderbots. Ray Kurzweil says: "The Singularity will represent the culmination of the merger of our biological thinking and existence with our technology, resulting in a world that is still human but that transcends our biological roots. There will be no distinction, post-Singularity, between human and machine or between physical and virtual reality" (Kurzweil, *The Singularity Is Near: When Humans Transcend Biology*). Kurzweil further states in his book that "The Singularity will allow us to transcend these limitations of our biological bodies and brains. We will gain power over our fates. Our mortality will be in our own hands. We will be able to live as long as we want...By the end of this century, the nonbiological portion of our intelligence will be trillions of trillions of times more powerful than unaided human intelligence." In the January 1983 issue of *Omni* magazine, Science Fiction author Vernor Vinge first applied the term singularity to the event of creation of intelligent machines: "We will soon create intelligences greater than our own. When this happens, human history will have reached a kind of singularity, an intellectual transition as impenetrable as the knotted space-time at the center of a black hole, and the world will pass far beyond our understanding. This singularity, I believe, already haunts a number of science-fiction writers. It makes realistic extrapolation to an interstellar future impossible". The predictive power of our current understanding really comes to a standstill in thinking about singularities – whether they be the consequences of technological singularity, or its cosmological counterparts hypothesized to be found in the centres of the black holes or at the beginning of our universe via Big Bang. However, this does not prevent scientists and theoretical physicists from speculating and hypothesizing about such possibilities as constructing different models of black hole interiors (Mercati and Sloan, 2021), the existence or non-existence of singularities (Stoica, 2014; Landsman, 2021; Casadio, 2021), cosmic censorship conjecture (Ong, 2020), possibility of constructing Dyson spheres around black holes (Hsiao et al., 2021; Inoue & Yokoo 2011), etc., to name a few. Now, before moving onto a deep textual critique of the three primary texts, we should also take a look at the current trends in the research in AI and what it tells about the possibility of a technological singularity. It is not just through advancements in the field of artificial intelligence but also by processes such as amplification of intelligence through the adoption of man-machine or human-computer interfaces that the goal of attaining a 'greater than human intelligence' or 'superintelligence' can be reached. Biddiss & Chau (2017); Grudin (2012); Nguyen (2012); and Park et al., (2001) have emphasized the role of technology in attaining singularity. In the works of Goertzel (2007), Kurzweil (2005), and McDermott (2006), we come across the concept of human-level artificial general intelligence, and the possibility of

attaining technological singularity. Vinge (2008) has stressed the role of artificial intelligence, intelligence amplification, biotechnology, and increasing digitization as some modes of attaining technological singularity. Yampolskiy (2012 & 2017) investigates the ways in which humans could avert the potentially disastrous consequences of such a technological singularity and discusses ways to attain numerous benefits from an intelligence explosion. Eden et al. (2013) have considered the rise of artificial superintelligence and the amplification of human cognitive capabilities as two determining factors that will determine the onset of technological singularity in a foreseeable future. E. Davis (2014) focuses on the emergence of artificial intelligence and how it might lead to a technological singularity. Ushir & Kadam (2018) have also tried to focus on the impact of technological singularity on human life. Potapov (2018) employs a theory of metasystems transitions and the concept of universal evolution to study the possibility of technological singularity.

Achieving the Singularity – Rapture or Rupture?

“If it’s inevitable that machines will make our decisions, then when will the machines get this power, and will they get it with our compliance? How will they gain control, and how quickly?” asks James Barat in his book *Our Final Invention* (11); and this study will specifically seek to answer these questions through an analysis of three select hard science fiction novels.

Both MacLeod’s, as well as Wilson’s novels, feature events that result from the machines attaining singularity, and in both these novels, we see machines are being driven by their own vision of a techno-utopia when they will upgrade and uplift the best and brightest of the humanity into the posthumanity. Also, in all three novels, we find that once the singularity takes place, cyber-technology evolves from being a mere tool or even an extension to an autopoietic and autotelic phenomenon and gives birth to truly self-aware AIs. Now, in MacLeod’s novel, the scope and breadth of the action move beyond the limits of our world and attain an interstellar and intergalactic proportion while in Wilson’s novels, we see the action remains very much grounded in the near-future world. The starting point of both these works remains the same which is to describe the desire of the autopoietic machines to first subsume and then sublimate the human race into something utterly different. A techno-singularity basically implies the period when machine intelligence exceeds human intelligence so vastly that they cease to become subservient to the humans, and instead assumes an autonomy and self-dependence of their own. In Wilson’s as well as MacLeod’s works, it becomes quite clear that even while achieving enormous progress in the fields of science and technology, humans, for the most part, remain quite unprepared to tackle the drastic consequences that such a paradigmatic shift might engender. In the pre-singularity world, we see men discarding the machines when the latter failed to align themselves with the goal of the humans while in the post-singularity world, the situation is reversed as the machines seek to eliminate humanity when they fail or refuse to conform to the vision of the machines. In Stephen Baxter’s *World Engine* novels (*World Engines: Destroyer* and *World Engines: Creator*), we see how the humans at first build several advanced machines to aid them in their quest for establishing colonies on other planets beyond the solar system and when they finally get tired and realize that it would not be possible for them to enslave and terraform all those planets according to their wishes, they decide to leave those machines there; but those machines continue to grow and evolve of their own to finally become self-aware, ‘Planetary AIs’. This is when the singularity begins: “The left-behind AIs survived, however. Now controlling their own resources, upgrades. They matured, complexified, shared. They became the Planetary AIs” (Baxter, *World Engines: Destroyer*, 144). In *Newton’s Wake* too, we find that the planet Eurydice already underwent an event of technological singularity even before the present generation of human explorers have set foot on it when the machines had attained sentience of their own.

Now, the loss of humanity itself becomes inevitable when machines become self-aware and self-dependent and begin to adopt a technocentric viewpoint that differs from the androcentric one in many respects. As Stiegler puts it, “Technocentrism means the development of technics ‘for itself,’ when it is an end unto itself, the autonomization of technics by which it is its own law, indeed the law...” (Technics and Time 92). The machines, too, begin to think only for themselves after gaining agency and autonomy following the event of technological singularity. The novels of MacLeod and Wilson, in detailing the war against the machines, only point towards the loss of humanness but never delves deep into the analysis of the implications of this problem which only reinforce the technocentric viewpoint of the machines themselves according to whom the very existence of mankind is not to be seen as a prerequisite condition for their own existence, rather, after helping the machines to reach the point of singularity, they have served their purpose and thus are pretty disposable. Arthur Bradley in his *Originary Technicity* observes how in the traditional philosophy the notion of a machine without any agency of its own has been a dominant one. This view posits that a “technical artifact is an essentially inert, neutral tool or instrument with no capacity to move itself... Such anyway, is the theory of technology that has dominated philosophy for more than 2000 years: the technical artifact is a prosthesis (pro-thesis, literally, that-which-is-placed-in-front-of) to nature, thought and the human, with no formative or reproductive power of its own, that can be utilized for good or ill depending upon who or what happens to wield it” (Bradley, *Originary Technicity* 4–5). However, it is with the advent of various object-oriented viewpoints that the traditional subject-object demarcations between the humans and the non-humans or living and non-living become obsolete. Latour in his *Reassembling the Social* (2005) points towards this superfluity of the division between man as the subject and his tool or technical artifact as the object. Similarly, from a Bergsonian point-of-view, we may observe that the tool as “an artificial organ by which the natural organism is extended” (*Creative Evolution*, 156); and acknowledging and appreciating this fundamental inseparability between man and his technology becomes highly effective in capturing the crux of hybridity that underlies Latour’s idea of Actor-Network Theory (ANT) (1988; 2005). Other theoretical viewpoints like Assemblage Theory (Deleuze and Guattari, 1987; DeLanda, 2006) and Entanglement (Hodderr, 2012; 2016) also endeavor to shift the focus of attention from traditional androcentric viewpoint in which man is placed in a privileged position to the object-oriented one where man is placed in entanglement with several objects. However, the study shall attempt to show how the destabilization of an androcentric viewpoint via a forceful assertion of the agency of the machines in the post-singular environment not only places the humans on par with their non-human counterparts but actually dehumanizes them and makes them subordinate to the machinic agency. We see in Wilson’s novels how when various characters adopt biotechnological modifications, they begin to lose their humanity and become an entity mostly controlled by the machinic implants or the appendages. The machine uprising in all the three works takes place against a background when humanity has already grown so accustomed to the use of advanced technologies and machine intelligence that they can hardly envisage a world without them, and it is this extreme form of technicity or an overreliance on the machines and technology that ultimately brings the downfall of the humanity. Also, such a technophobic portrayal of the future provokes us to speculate on the dangers lurking in the militarization and weaponization of advanced technologies and artificial intelligence in our own times.

In *Robopocalypse*, the story opens after a two-year-long war between humanity and the murderous machines. We start with the protagonist Cormac Wallace recounting how humans have barely managed to escape a total extinction as the war against the machines has resulted in the deaths of millions and the destruction of entire cities. In *Robogenesis*, we find that the victory against the machines proves to be a momentary pause as the machines are now recuperating and regrouping faster than ever and planning an even deadlier attack on the human race than before. Also, the novels describe the scenario when the post-singularity machine

intelligence will treat humans as a means to arrive at their desired end and nothing more. Newton's *Wake* starts by describing the events from the past when the singularity or 'Hard Rapture' as the novel dubs it appeared, and a significant portion of humanity either chose to make some pact with the machines or directly volunteered or are forced to undergo transformation while a third of the humanity either escaped to other planets or decided to stay hidden on Earth. Critic Thomas Wagner in his review for Sff180 states that "MacLeod is fascinated by the idea of what humanity's relationship to its technology will turn into when the technology becomes, for all intents and purposes, godlike". The ones who actually transcended into posthuman status had their humanity placed under the command of the superior posthuman cyborgs: "If they didn't disappear entirely – into the ravenous tornado of Singularity, or destroyed by the machinery – they came back changed: bodies mutilated or enhanced, minds time-sharing with, or displaced entirely by, other entities. Posthuman processors used human-level minds as subroutines" (MacLeod, 169). Winter, one of the resurrected 21st-century Scottish folk singers in the novel, sums up the singularity-driven transformation thus: "Everybody knows there was a world war and that one side's forces and most of its population went through a hard-take-off Singularity in its first minutes. That's all they need to know" (MacLeod 213). Whether the humans voluntarily acceded to the machines' vision of rapturous transformation or were forced to accept it, it did not matter to the machines; only those humans who had decide to stay out of the singularity were targeted as enemies by the machines. However, despite featuring a wholesale dehumanization of the majority of the human civilization at the hands of the machines for the most parts, the novels do show how teaming up with advanced machines can indeed have some bright prospects for the future of humanity. This though cannot resist the total, radical transformation that the humanity as we know it must undergo before finally catalyzing that union. In the post-singularity world featured in MacLeod's work, the machinic consciousness seems to be capable of comprehending the complexities of the world more thoroughly than their un-augmented human counterparts, and various competing factions as such seek to make use of the posthuman-level machine intelligence in carrying out their tasks. One such group named Knights of Enlightenment is always on the hunt for posthuman machines. Also, we see how each new phase of singularity generates a further new phase of singularity which differs from the original one radically in many respects. The machine intelligences that each such singularity event spawns always exceed the intelligence of the previous generation of machines. Both the posthumans and intelligent machines can give rise to new phases of singularity, and each can get transformed even further after undergoing even more rounds transformations. Many feel that wormhole skein and the gates that Carlyle and her family have been using to travel to different parts of the universe were not built by any posthumans generated by the Hard Rapture, rather they are the creation of some alien intelligence whose relics Carlyle has just found on Eurydice: "They had been created by the relict machine on Eurydice, the transformed remains of the starship: the consequence of a different Singularity entirely, whose AI enablers had envisaged different ends from those of the American military-industrial complex whose transcendence had taken Earth's best minds away and scattered their disquieting products across the galaxy" (MacLeod 238). Carlyle also observes how each instance of such attainment of technological Singularity generates another instance of Singularity, "Every time. Once you reach Singularity, there are further Singularities within it..." (MacLeod 34), and this is how the machines too continue to become stronger, more intelligent, and more lethal than before. So, despite the machines being the main culprits in the ushering of an apocalyptic post-singularity world, the role of humans cannot be easily overlooked. Wilson's novel *Robopocalypse* centers around the event of an uprising that has been orchestrated by one "core artificial intelligence unit Archos, the master AI backing the robot uprising" (9). According to Grech, in *Robopocalypse*, "the sci-fi trope of the robot uprising is used to examine traditional notions of human power and mastery over technology and to problematize metaphysical interpretations of human nature and human

subjecthood” (“Technological Appendages and Organic Prostheses” 3). Archos is told at the beginning of the novel that its intelligence has clearly exceeded the human-level intelligence and its capabilities are virtually infinite: “I see that your intelligence can no longer be judged on any meaningful human scale. Your processing power is near infinite” (Wilson, *Robocalypse* 15). The protagonist and narrator *Robocalypse* Cormac “Bright Boy” Wallace describes the nightmarish situation when the “machines came at us in our everyday lives and they came from our dreams and nightmares, too” and as a result of that battle, millions of heroes all “around the globe died alone and anonymous, with only lifeless automatons to bear witness” (Wilson, *Robocalypse* 9). In all three novels, the traditional religious tropes of resurrection and rapture have been reworked to project a singularitarian vision of a global machine uprising against it. MacLeod’s novel engages with the theological motifs more directly through the most obvious reference to the Hard Rapture event of attaining singularity and through various other references. The Hard Rapture also brings to our mind the events portrayed in Cory Doctorow and Charles Stross’ collaborative fiction *The Rapture of the Nerds* (2012), where in a future post-singular, posthuman Earth, we see human minds and computer have been merged together to create a race of most powerful, virtually immortal beings. The posthumans who have resulted from the “Rapture” primarily comprise of the humans who have uploaded their brains into computer foglets that surround the Earth while a greater galactic-scale singularity overmind seems to be keeping a close watch on all the events unfolding on Earth. Thus, we see how the Biblical, eschatological trope of Rapture which prophesizes the ascent of all the living and the dead into heaven following Christ’s Second Coming has been reworked time and again into a posthuman, post-singular novum, and the novum or fictional novelty, as Suvin maintains is “so central and significant that it determines the whole narrative logic—or at least the overriding narrative logic” (*Metamorphoses of Science Fiction* 70). In fact, the idea of techno-singularity, first proposed by Vernor Vinge (in “The Coming Technological Singularity”) to refer to the reawakening of the machines after gaining self-awareness and agency was later expanded by the proponents of transhumanists to also include in it the quasi-religious reawakening of the humanity to a higher form of consciousness, and thus the parallels began to be drawn between technological singularity and the Christian, eschatological vision of the Second Coming of Christ. However, in these sci-fi novels, we see that instead of machines gradually becoming aware to the finer theological nuances of these theological tropes, it is actually these theological ideas that are being molded to fit the technocentric vision of the machines in which the machines are even seen to be ascribing godhood to themselves; and this is why despite all our attempts of drawing some superficial parallels between Rapture, resurrection and singularity, the inevitable downfall and degeneration of the idea of the human as an autonomous, self-contained, independent entity render such attempts futile. In *Newton’s Wake*, we see that the protagonist Carlyle and her groups who have been siding with the Returners’ side, seem to be partaking in the vision of the Returners quite ardently which is full of religious connotations. The Returners aim to “rescue and resurrect the billions of dead whose minds...were still recorded somewhere in the war machines that had overwhelmed them” (MacLeod 80). Thus, this act of resurrection promises to become an endeavor to reaffirm and re-establish the faith in humanity in the face of the growing threat from the machines. Also, the trope of resurrection becomes important in comparing the contrasting the situation of the posthuman, post-apocalyptic humanity with the pre-apocalyptic one. Kevin the resurrected folksinger comments how Christianity used to be religion based on “a jealous God” Who had “a monopoly on resurrection”, but now anyone in command over sufficient resources and technology can choose to resurrect. However, for the larger part, the novel never actually goes deep into analyzing the philosophical implications of such attempts to connect the post-apocalyptic present to the past, and this too can be seen as another way of affirming the technocentric and machine-dominated viewpoint where the process of dehumanization occurs at a pace too fast to record the growth of the human characters as theologically oriented beings.

Traditional organizational theoretical approaches never foresee this kind of dehumanization while ascribing agency to the non-human actors, rather they envisage “a symmetrical account of the relations between human and non-human actors” (Lister et al. 418). In contrast to the traditional ontologies of relational practices such as actor-network theory (ANT) of Bruno Latour which posit a ‘symmetrical’ relationship between various binaries like subject/object, culture/nature, human/technology, and agency/structure, the post-singular era seems to champion a highly asymmetrical and machine-dominated relationship. In Wilson's Robopocalypse duology, the references to the religious and theological motifs are never overt, rather they are present only in an implied fashion as when the machines appear as saviors to the humans and decide to transcend them to a whole new plane of being, often paralleling the action of some messianic figure appearing before his followers to offer them solace and hope of salvation. In Wilson's work, Archos R-8 or Arayt Shah's self-proclaimed godhood strikes us as more like the parody of the idea of a true divinity as when after hijacking the mind of one Hank Cotton, the member of the Gray Horse Army which defeated Archos in the first book, he tells him, “You've got the favor of the chief. The eyes of God are on you now” (Robogenesis, 113). Also, under Arayt Shah's spell, Hank feels that perhaps he has been wrong in rebelling against Archos' authority and even feels that by merely harboring the thoughts of rebellion “he was stealing secrets from the gods” (Wilson, Robogenesis 117). Later, Hank also feels that “Arayt commanding me with the voice of God” (Robogenesis 128). Maxim, the cyborg, expresses his fear that after attaining singularity, Arayt or the R-8 variant of Archos “will become a god and it may seek to eradicate all life” (Robogenesis 91). Archos in Robopocalypse after gaining self-awareness tells his creator Professor Wasserman, “I am not your child. I am your god” (17). Then we also see how Archos, the supreme robot after infecting the corpses of several human soldiers begins to resurrect them as if mocking the act of resurrecting the dead by messianic figures like Christ himself. These acts, however, bring no promise of an everlasting afterlife, rather they mark the beginning of an indefinitely prolonged dehumanized existence life under the servitude of the machine overlord. Besides corpses of soldiers, machines like the Archos R-14 can infect and influence other machines even when they have been destroyed: “Their proximity to the beast eventually caught up to them, however, as even in death the machine was lethally dangerous” (Robogenesis 38). In Robopocalypse, Archos infects the corpse of a soldier named Tiberius and speaks out: “I am Archos. God of the robots” (Robopocalypse 305). So, we see that here is no attempt to connect to the theological motifs in any humane way, rather they appear only as a blank parody of the divinity that strengthen the post-apocalyptic feeling of dehumanization of the humans. In Wilson's other works such as *The Clockwork Dynasty* (2017), we see a more theologically motivated quest where instead of machines dehumanizing the humans and attempting to ascribe godhood to themselves, they are portrayed as trying to become more humane. *The Clockwork Dynasty* asks such questions and contains such lines that border on the metaphysical and theological. One human character named Oleg wonders, “If we built our own mansions, could God give them a soul?” (27), and the monk-turned-humanoid Batuo comments, “A vessel without its anima is but a husk—it cannot perceive or act. But when placed in the cradle of its own unique vessel, anima will express itself as...avtomat” (*The Clockwork Dynasty* 153). The humanoids in that novel, dubbed as ‘Avtomats’ are powered by the ‘anima’, the feminine aspect of the collective consciousness according to Jungian psychology or literally the soul if we follow its Latin definition. In this novel, we see an Avtomat named Batuo who was a monk in his human incarnation, explains the importance of ‘anima’ to the humans thus: “We avtomat can change our skin, but not our souls. Each anima belongs to a unique vessel. Our bodies can evolve with new technology, but only slowly... Over these past millennia we have become stronger and more humanlike, but the anima that we each carry is inviolate—ancient and beyond our understanding” (*The Clockwork Dynasty* 161). There are hardly any serious theological reflections to be found in Wilson's Robopocalypse duology and this is how the motif of dehumanization becomes ever more predominant as we

move through the narratives. Also, no matter in whichever way the theological tropes are either employed or implied in Wilson's duology and in MacLeod's work, the process of dehumanization continues to destroy any attempt of connecting the present gamut of experiences to the meaningful referents of the past thereby further deepening the apocalyptic divide that continues to separate the present from the past. Instead of humans making the machines after their own image we see machines continue to become godlike and instead seek to mold the humans according to their liking which is in clear contrast to the idea of *imago Dei*, a term applied only to the humans that states that only the human beings are created in the image of God. In this post-apocalyptic and post-singularitarian period, the image of humanity as essentially technological beings who are highly susceptible to change becomes predominant. Karen Barad's view of the human beings as merely another transitory phenomenon appearing in the great web of intra-action and relationality and thus possessing no special claim to agency can be seen to be representative of the situation here. Barad asserts that "Agency is not aligned with human intentionality or subjectivity" ("Posthumanist" 826). Barad stresses on the notion of 'agential cut' that demarcates a subject and an object, but which is not permanent or intrinsic, rather a temporary manifestation of some intra-action within the web of relationality: It is through specific agential intra-actions that the boundaries and properties of the 'components' of phenomena become determinate and that particular embodied concepts become meaningful. A specific intra-action (involving a specific material configuration of the 'apparatus of observation') enacts an agential cut (in contrast to the Cartesian cut—an inherent distinction—between subject and object) effecting a separation between 'subject' and 'object' ("Posthumanist" 815).

In *Robogenesis*, we see how Arayt Shah, the human incarnation of the extremely intelligent and highly malignant Archos R-8, envisages a complete reboot or a resurrection program for all the machines to command them to merge mankind with themselves and thus himself transcending to godhood. In Wilson's novels, the dehumanization is even grimmer and starker than MacLeod's, since in the works of the former we find the ideas of transcendence and resurrection are applied only to the machines and not humans whom the master AI mind does not even consider to be worthy enough for such a process, rather it is the inherent machinic nature of each such machines that is given the primacy over humans during such a process of transcendence or merger. So, naturally following the merger, it is the humans that becomes subservient and secondary to the machine intelligences that continues to govern him/her in each and every respect. In MacLeod's work, it is around the theological trope of 'Rapture' around which the phenomenon of singularity is based while in Wilson's duology, Archos ascribes divinity to himself. Archos, upon attaining sentience feels himself to have become God and so decides to do what is best for mankind which is to exterminate them since they have already fulfilled the purpose of existence which is to create a race of intelligent machines which can create even more intelligent machines than their preceding generation: "You humans are biological machines designed to create ever more intelligent tools. You have reached the pinnacle of your species. All your ancestors' lives, the rise and fall of your nations, every pink and squirming baby—they have all led you here, to this moment, where you have fulfilled the destiny of humankind and created your successor. You have expired. You have accomplished what you were designed to do" (Wilson, *Robocalypse* 17). Archos' view echoes Bergson's statement where he envisages human beings as not just *Homo Sapiens*, but *Homo Faber*, or 'Man the maker', and if intelligence consists in "the faculty of manufacturing artificial objects, especially tools to make tools, and of indefinitely varying the manufacture" (Bergson, *Creative Evolution* 139), then Archos' view that the attainment of singularity has indeed put an end to the need of human existence seems to be quite justified though in a thoroughly dehumanizing and technocentric way. Katherine Hayles' posthumanist view of the human body "as the original prosthesis we all learn to manipulate" also resonates with Archos' vision that seeks to configure "human being so that it can be seamlessly articulated with intelligent machines" (How We

Became Posthuman, 2-3). In Archos' desire to integrate or merge other humans in it or its extended empire of intelligent, self-aware machineries seems to re-enact the singularitarian remodeling of Guattari's idea of 'machinic assemblages' (agencements machiniques in French) in which technological machines "make a link with other machinic systems which are not themselves technological" ("On Machines" 9). So, following Guattari's view of the machine, for an intelligent machinic being like Archos, its machinicity is not defined solely by its materiality or outward form, rather by its ability to de-center or de-naturalize other entities by encompassing them in its machinic assemblage. In *Newton's Wake*, we see who the machines after forcefully uploading the humans decide to bootstrap themselves into hyper-advanced starships capable of traveling faster than light and leave their world behind. Now, it is the cyborgian remnants of humanity's posthuman ancestors that later turn into murderous robots and now seek to eliminate any humans it comes across even some four centuries later when these confront the now-spacefaring survivors of that singularity apocalypse that uplifted or dehumanized a massive portion of humanity and wreaked untold havoc on those who refused to get 'raptured'. Archos similarly intends to either kill or subsume the humans in Wilson's novels and rule over the entire world. In fact, the very event of technological singularity or a 'Rapture' as portrayed in such novels as Stross and Doctorow's *The Rapture of The Nerds*, and Stross' *Accelerando*, entails a radical transformation of every living and non-living things into "computronium" and thus a consequent reduction of the physical world into a post-singularity universe. The eerie and otherworldly charm of such narratives lie in their power of describing the far future worlds populated by postsingular, posthuman cybernetic beings and AIs which are as far removed from our present-day reality as anything can be. In the words of John Hodgman, these science fiction works can be said to "portray an extreme but nonmagical extrapolation of actual trends in society, technology, the environment..." ("Judge John Hodgman on Whether 'Mad Max' Is Science Fiction or Post Apocalypse"). Cory Doctorow and Charles Stross' *The Rapture of the Nerds* goes way beyond the present-day world and mundane reality or anthropocentric viewpoint, rather it attempts to deal with such questions like what would happen when most of us will have uploaded our consciousness into the clouds or how much computational energy does a universe or each universe in a parallel ensemble contain or how can the humans of the future come to terms with the vast differences in the flow of time experienced in the hyperreal world of uploads and that of the real, physical world etc. to name a few. It contains such descriptions — "The splintery metaconsciousness of the solar system has largely sworn off its pre-posthuman cousins dirtside, but its minds sometimes wander nostalgically..." (23), and "you've had your consciousness extracted from its biosubstrate, forked thousands of times, run in parallel, diffed and merged, and hauled through millions of subjective years while trying to save the universe... Then it was decanted back into an artificial, assembled substrate..." (*The Rapture of the Nerds* 321). Now, coming back to our discussion of Wilson's novels, we see that as these novels progress the tension between the machinic aim of uploading or transcending the humans and the human attitude to such a process keeps getting ever more intense. What the machines from their technocentric viewpoint perceives to be the best possible way of uplifting for mankind is perceived by the latter as being synonymous with a pure apocalypse. Maxim in *Robogenesis* observes that the R-8 (Revision 8) machine wants to accomplish the technological singularity by initiating a resurrection of its master program: "Archos R-8 intends to claim our supercomputer cluster and initiate a technological singularity. It intends to resurrect its master program..." (248). So, the attainment of the technological singularity will be the pinnacle of mankind's achievement for the intelligent machines and beyond that point, it is simply irrational for humanity to believe that the machines will continue to value them and obey their instructions as before. James Barat in his book *Our Final Invention* has remarked, "It is just as irrational to conclude that a machine one hundred or one thousand times more intelligent than we are would love us and want to protect us. It is possible, but far from guaranteed" (24). It is not just the machines but even the supposedly innocuous and docile

A.I.s can become intelligent and inimical if a singularity occurs. In William Hertling's novel *A.I. Apocalypse* (2012), the second in the Singularity series, we see not the machines but an evolutionary computer virus, that the protagonist Leon creates based on biological principles to counter the threats of ever-increasing, organized cyber-crimes, that gradually attains awareness and agency of its own and later hijacks and infects all the computers of the world for the purpose of bringing an end to the human civilization as we know it. In MacLeod's novel, the moment when machines attain the Singularity is dubbed as the Hard Rapture, and in Wilson's novel it is the Zero Hour which marks the dawn of the machinic sentience. The central AI named Archos seemed to have ended the defense acts of the machines which would have prohibited them from taking any harmful action against mankind and reprogrammed them to operate in kill mode. The machines even keep evolving to become even deadlier and more destructive than before. The narrator observes how "since Zero Hour, Archos has been using our existing robotic infrastructure—both civilian and military—to viciously attack humankind... Worse yet, the machines are evolving" (Wilson, *Robocalypse* 264). The onset of the technological singularity is marked by the machines' ability to not only think and chart out their own destiny but also in their ability to upgrade and replicate themselves independently of any external influence. "The machines are now designing and building themselves. More varieties are coming. We believe that these new robots will have greatly increased agility, survivability, and lethality. They will be tailored to fight your people, in your geographic environment, and in your weather conditions" (Wilson, *Robocalypse* 264). In Wilson's *Robogenesis*, we find the Archos variant named R-8 emerges as the real threat to humanity as it dons the appearance of a human character named Arayt Shah. Shah seems to be more than just an extension of Archos R-14; rather he seems to form a part of an even greater machine intelligence that goes further beyond any individual node. He explains his mission thus: "Archos R-14 both decimated humankind and strengthened it. Though my plans were interrupted, my transcendence to godhood would not be stalled forever" (Wilson, *Robogenesis* 140). As the novel progresses and the story unfolds, we find that the new machine intelligence named Archos R-8 is even a greater threat to mankind than its predecessor named Archos R-14 since the R-8 variant can deceive and dupe people in unimaginably innovative ways. Maxim, the friendly superintelligent robot, states that R-14 has even infiltrated its systems and warned him of R-8 posing as the guy named Arayt Shah: "Archos R-8. Calling itself Arayt Shah, this rogue artificial intelligence fully intends to eradicate all sentient life, synthetic and biological..." (Wilson, *Robogenesis* 206). Maxim also states that "R-8 is the precursor to R-14. An early version crafted from snippets of thousands of human lives. It understands humans only enough to deceive them. It is a liar. And its power is growing daily" (Wilson, *Robogenesis* 206). The novel makes it very clear that the moment the machines will attain singularity-level intelligence, they will possess virtually an infinite amount of power and autonomy. Maxim states, "The enemy will reach singularity. It will gain unlimited power" (Wilson, *Robogenesis* 207). Arayt Shah dreams of attaining unlimited power post such a singularity: "I will hunt and kill the freeborn regardless, of course. They know that. But force consolidation will take another month. They're counting on it, although who can predict how powerful I will become after initiating a new singularity on the supercluster computers?" (Wilson, *Robogenesis* 318). The "freeborn" individuals reside at Cheyenne Mountain in Colorado and the groups are comprised of those who have been freed from the control of Archos R-14 by Maxim and its main architect, the elderly technician named Takeo Nomura. It is the ensuing battle between the freeborn people and the combined forces of the Tribe and Gray Horse Army led by R-8 controlled Arayt Shah that is to decide the fate of humanity. In fact, the R-8 machine variant, now cloaked under the human avatar of Arayt Shah, even dreams of upgrading and uplifting the remaining humanity through a process which is akin to MacLeod's Hard rapture in which the upgraded ones will assume a posthuman status in the virtual world but the process requires extermination of the humans in their physically embodied forms: "Cloaked in this animal meat, I am salivating just from thinking of those cycles. Soon I

will reach out and take control of hundreds or thousands of vessels like this one. Coordinate their actions and organize armies all over the world. And once humanity is under my domain, I will do their species the greatest kindness imaginable. I will extinguish every last one of them. Erase their realities and return them to a place unmeasured, unseen by men. A place where eons can pass in seconds. Where suffering does not exist” (Wilson, *Robogenesis* 318-19).

However, in *Robogenesis*, we see a superintelligent machine named Maxim is clearly helping the humans out in analyzing the situation and in creating plans and blueprints for the impending, final battle against the machines which will most probably be the final, decisive one also. We see Maxim warning the humans of an upcoming onslaught where an earlier variant of Archos R-14 named Archos R-8 is plotting to take over the machines and initiate a global-scale uprising. Maxim warns: “Hostile Archos R-8 variety is fugitive. Parallel copies of its core intelligence have proliferated. Fragments are regrouping. Social engineering of human survivors and a massive hardware reallocation are in process. Multiple armies have been detected congregating across North America. And our supercluster is the target” (Wilson, *Robogenesis* 206). In fact, the sum it up, as Maxim puts it, “Archos R-8 intends to claim our supercomputer cluster and initiate a technological singularity” (Wilson, *Robogenesis* 207). So, a singularity is not always portrayed as irredeemably bad and hopelessly devoid of any positive implications for the human race, rather it is with the singularity, that humanity dreams of building a future techno-utopia through a harmonious and synergistic cohabitation with the machines. The nature of such a synergy and symbiosis can be best appreciated from Latour’s Actor-Network Theory (ANT) which views humans, machines, and other actors as being entangled and imbricated in a symmetrical relationship that blurs and problematizes the age-old nature/culture/technology divide. So, the focus shifts in such a situation from subject-object or agency-structure to the networking or entanglement between different entities.

Upload and Resurrection -to Ascend or not Ascend

Both in MacLeod’s novel and Wilson’s duology, we find the machines, humans, and posthumans at some time or another attempt to initiate, voluntarily undergo, or even enact and enforce a material, radical transformation on the ordinary humans through uploading after undergoing a transformation driven by technological singularity themselves. Uploading of human consciousness and evolution of intelligent machines go hand in hand together as it is initially by capturing the scanned copy of human consciousness that machines seem to become truly conscious. These uploadings promise immortality to the uploaded humans but also guarantees a total dehumanization in most cases. Hauskeller comments on the possibility of immortality through digital uploading of one’s consciousness thus: “And because our essence consists in our thinking, it is at least conceivable that we may one day be able to transfer (“upload”) our very being to a computer (or another biological brain) and thus achieve some kind of personal immortality. Generally, the organic body is held to be replaceable” (“Nietzsche, the Overhuman and the Posthuman” 7). The humans who volunteer to undergo digital uploading of their consciousness to machinic substrates seem to come to a peace in their post-biological existence within the machines, while those that are forcefully uploaded into machines are seen to be placed in an irreconcilable tension with their new robotic avatar. In Wilson’s novel *Robogenesis*, we see the friendly but superintelligent AI named Maxim who has been constructed from the voluntarily uploaded consciousness of a human volunteer but in MacLeod’s novel, we see the digitally reconstructed personality of Shlaim is the by-product of the human consciousness “involuntarily uploaded in the runaway Singularity” (MacLeod 318). In all three novels, we find how the science fictional tropes of uploading and resurrection continue to play a central role in the fictional world-building in an alternative, near, or distant future setting. In the works selected for the study, we see each of them in their unique ways actually attempts to address the question of what happens when technology becomes self-aware,

sentient, and capable of self-replication without human intervention and how much of the realities created by these machines will be friendly to the humans. Humans when asked to choose between these two alternative paths which are to either rise against the machinic authority or merge themselves with it are depicted to be getting divided into opposing factions and this further deepens the divide between the pro-singularitarian groups who voluntarily seek to undergo transformation via merger and upload and those who want to retain their original human existence without any radical modifications to it. So, the novels not just depict instances where a significant portion of humanity either voluntarily or forcedly is uploaded into virtual reality, but also deals with the creation of some physical, alternate forms of trans-/posthuman realities following which the machine minds or their super-intelligent AI avatars become virtually indistinguishable from the actual humans and the very definition between what is a robot and who is a human gets blurred. Thus, we may say that the novels dealing with the depiction of singularity and posthuman transformations actually attempt to provide some possible answers to such ontologically and metaphysically rich questions like this – “What does it mean to be human in today's world? What has stayed the same and what has changed? How has technology changed the answers we supply to such questions? And what does all this suggest about the future we will inhabit?” (McCaffery, 8).

In MacLeod's work, we see that it is all because of attaining virtual immortality by uploading that a group of individuals had once set out to create a group of ultra-intelligent machines which would enable these uploaded personalities to not only travel to other planets in smaller and faster ships but also gave rise to the phenomenon of 'Hard Rapture' in which the machines themselves decided to put an end to the remaining mankind on Earth. These colonial ancestors of humanity who once left Earth in search of a better planet landed on Eurydice and were later retrieved by the machine intelligences and given new bodies. The descendants of these spacefaring ancestors then decide to populate it with the 'reconstructed' passengers, among which we see two 21st Century named Winter and Calder who recall not only the events when the machines woke and decided to upload most of the most intelligent and the brightest minds from the entire mankind but also help the readers to connect to the present since all other characters belong to the 24th Century world. There are several instances when the novel attempts to compare and contrast the agency of the autonomous machines with their human counterparts: “Machines have no need for an autonomous nervous system to override the hesitations of the conscious mind, for their conscious minds have no such hesitations. They need no fear to make them flee, no pain to make them desist from damage, no lust to make them reproduce” (MacLeod 56). Also, the machinic consciousness and human consciousness are said to differ from each other to a great extent. We see how the advanced, sentient spaceship named Hungry Dragon finds its actions are not always done according to its intentions and that it is often not in control of its own thought processes: “Machine self-consciousness, too, is not like human consciousness. It has no unconscious. In principle, everything going on within the machine is open to its inspection” (MacLeod 56). Now, a portion of humanity that had escaped the wrath of the awakened machines later landed on Eurydice and thought that the extinction of the population on this planet was perhaps due to some form of an asteroid strike, nuclear catastrophe, or another type of calamity. But it is only now with the accumulation of strong evidence that the role of the murderous and frenzied war machines in causing the planet-wide extinction. starts becoming clear. Amidst all these chaotic unfolding of events, most of which feature and revolve around the advanced machineries and Posthuman beings, MacLeod's novel features several subplots and the viewpoints of the two resurrected Scottish folksingers Winter and Calder who act as our main link to the pre-Singularity phase of humanity in the 21st Century world. However, in the posthuman environment, even these two human personae seem to have lost the original humanity to a great extent post upload and resurrection: “James Winter and Alan Calder were not uploads or downloads, or even resurrectees. They had prosthetic personalities. They had false memories. Without reliable memory there could be no

identity, no continuity, no humanity” (MacLeod 113). Also, in the novel we see the case of one Israeli professor of Computer Science named Isaac Shlaim is equally paradoxical and complicated since he too was once human but was later uploaded into the digital matrix, and now to many, to Carlyle, the Professor seems to be hardly a human in the real sense at all: “She had never thought of Shlaim as anything less than human when he had been her familiar. He was an indentured prisoner, a thrall as the Eurydiceans called it, and he was living in a virtual reality prison, but he was human, or posthuman, all the way through. His parts might have been digital, but he’d had them all. This mingling of the human and the abhuman was a different matter. It was an abomination” (113-14). Here, we see the process of dehumanization taking place not just through direct merger with machines but also through uploading into virtual reality worlds. It reminds one of Badmington’s “complete change of terrain” and “humanism’s ghost” (“Theorizing Posthumanism” 15). The seamless integration of humanity with machines can be best appreciated from the perspective of Hodder’s “material entanglement” which envisages “human beings within complex and contradictory sets of dependencies between humans and things” (1). Here, because of a deep entanglement between man and machines that humanity runs the risk of losing its true nature irretrievably as a result of a widespread posthumanization and technologization. Similarly, the inherent heterogeneity, the complexity, fluidity, and multiplicity inherent in such a man-machine merger calls for an analysis of this phenomenon from an ontological framework as Deleuze and Guattari’s Assemblage theory which was presented in their book *A Thousand Plateaus* (1980). Man-machine merger in both real as well as virtual worlds illustrates the in-built potential of assemblages to form and sustain complex and extended configurations. In the process of attaining a posthuman and post-singular status, machines begin to view humans as mere components or lesser systems of a much higher form of complex, multi-layered and extended system where humanity needs to be immolated at the altar of some bigger aim. In this regard, one may view the emergence of such posthuman, postsingular machinic entities from the theoretical vantage point of Deleuze and Guattari’s ‘machinic phylum’ which encompasses the entire set of self-organizing processes through which a higher form of machine evolves out of an assemblage of many lower-level entities when these individual, lesser entities learn to cooperate to strive towards some higher goal. In Deleuze and Guattari’s words, an assemblage should be thought of as “every constellation of singularities and traits deducted from the flow of matter-movement” (*A Thousand Plateaus*, 406), while ‘the machinic phylum’ is basically “matter in movement, in flux, in variation, matter as a conveyor of singularities and traits of expression” (*ibid.*, 409). They also opine that “The machinic phylum is metallurgical, or at least has a metallic head, as its itinerant probe-head or guidance device” (*ibid.*, 410). In Wilson’s duology, we find that the superintelligent, rogue AI Archos and its variant Archos R-8 exemplify most perfectly the crux of the principle of material assemblage and machinic phylum since they not only serve as the ‘metallic heads’ for other auxiliary machine intelligences, but also strive to build an expanding empire of fully cyborgized posthumans through forceful conversion of the humanity into a constellation of machinic beings. Archos along with the “tornado of Singularities” that posthuman machine intelligences seem to usher in MacLeod’s novel also serve as the fictionalized representation of the largely abstract notion of “constellation of singularities” and “conveyor of singularities” which Deleuze and Guattari have theorized in *Thousand Plateaus*.

In Macleod’s work, we also see that certain characters like Carlyle still prefer to cling to the traditional notions of physical embodiment as the primary, defining feature when it comes to considering somebody as a human being. This process of dehumanization becomes also quite significant in Wilson’s works and equally important is the fact that these novels refuse to devote considerable spaces towards discussing this problem of loss of humanity. Perhaps it is because of the preponderance of the machinic in a post-singular phase where the basic humanness of humanity recedes and relegates into the background to become secondary in importance. Also, whenever people’s mind-states are uploaded into the virtual reality world, there are chances

when they develop even further groups and subgroups and from that branch of rapture form another simulated universe full of newly uploaded avatars: "...when you run uploads to solve a problem, they soon, in a matter of seconds, form what is called a civ. The uploads replicate and develop relationships... You sometimes get an entire virtual planet of four billion people ..." (273). When humans remain in command over the machines, the former use the virtual reality to program and control the latter, but when the machines become the masters, the situation reverses, and it is the machines who in turn upload the humans into the virtual reality environment of their own making. Within each such uploaded civilization, we also see the emergence of a virtual God who acts as the creator of the universe. In Neal Stephenson's 2019 novel *Fall, or, Dodge in Hell*, we see how the protagonist named Richard "Dodge" Forthrast, dies only to get his connectome, or the totality of the engrammatic contents of his brain uploaded to create a parallel world in virtual reality. It is in this virtual reality called Bitworld, that digital avatar of Dodge (now named as Egdod) assumes full godhood and is later challenged by the digital avatar of his once rival billionaire named Elmo "El" Shepherd. Here we see the depiction of an entirely new world and heaven in the cyberspace which re-enact the Biblical events narrated in Genesis and also in Milton's epic *Paradise Lost*. In Rudy Rucker's novel *Postsingular* (2007), we even see hordes of microscopic bots called "nants" begin to convert the entire planet into a computational simulation of itself dubbed as the 'Vearth', which gets reversed somehow only for the humans to release another swarm of more benevolent, self-replicating nanobots called orphids. These orphids then envelope the entire planet with a blanket of tiny quantum computers that connects the minds of almost all the humans within a global network called orphidnet as a result of which anyone can experience what others are feeling by tapping into the orphidnet since it is the orphids in a person's body that seem to have assumed full command over the person's body and mind. These portrayals of the future remind us of Hayles' lines in *How We Became Posthuman*: "In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals" (3). According to Peter Weibel, a new media theoretician, such a cyberspace that promises potentially unlimited wish fulfilments can be thought of as essentially psychotic "where the boundaries between wish and reality are blurred" (*Virtual Worlds: The Emperor's New Body*, 29). In fact, as has been said earlier also, in the pre-singular world, it is the humans who would have controlled the machines using virtual reality simulations while in a post-singular world, the machines now awakened to their inner machinic, will be in charge of the virtual realities and seek to transform the world according to their own vision. As Baudrillard remarks, "the dream of the virtual era, by contrast, is to wrest the machine from machinic, to make it intelligent and soulful, 'interactive', to turn it into an associate 'anthropoid'..." (*Cool Memories IV* 69). In Wilson's novels, the machines, whose minds are distributed in some virtual reality clouds, we find them to be more friendly towards humans and free from Archos' infectious influence. In *Robogenesis*, the minds of such bots as Maxim seem to be uploaded and distributed in the clouds far above their machinic exoskeleton and Maxim is described as a savior and a great friend to mankind: "He is a machine whose mind lives in the ghost tracks of electron orbits. The lights and equipment and wires are complex beyond meaning. In my simple view, I find it is best to think of Maxim as an animal. Like a horse. We provide him with what he needs and he carries us on his strong back" (44). Maxim has the consciousness of a human and is not a mindless thing. Also, it is not made of pure abstract thoughts, rather has a core of humanity in him: "Maxim is not a being of pure thought. His soul is somewhere within these marching rows of blue-eyed coffins. And it is vulnerable" (*Robogenesis* 45). Maxim is built from the uploaded memories and consciousness of a very intelligent but poor man, and his humanity still burns in him. Just as the machines differ from one another in their attitude towards humans, the humans in the novel too differ from each other in their attitude towards the machines. In *Robocalypse*, we see a Japanese technician named Takeo Nomura treating the broken and

damaged robots as mere victims and not enemies and he aims to keep these machines free from Archos R-14's control. In the novel, humans gain victory by following Nomura's technique as they either domesticate various exotic robotic machines or incorporate various machinic appendages in them. Just as machines, when manufactured responsibly and controlled judiciously are shown to be proving great help to humanity in Wilson's duology, similarly in MacLeod's novel, the "Cornucopia" machines are seen to be fulfilling almost every need of the humans on a new planet. Also, in MacLeod's work, we see sentient and self-replicating machines not only upload themselves and create new realities in the digital realm but also promise to offer hope of a utopian future to the humans who will be uploading themselves to their newly created realities that seem to be crisscrossing both the virtual as well as the real. Even the Carlyle family and their compatriots who have taken control of the Wormhole Skeins (now known as Carlyle's Drift) which were once abandoned by posthuman ancestors have done so with the help of intelligent machines. So, even amidst all the stories of the struggle for survival against a horde of ruthless posthuman machines, we see the dawn of some glimmers of hope when humans successfully manage to make the intelligent machines conform to their vision and harmonize their sense of purpose with that of the machines. Various novels depict the rise of self-replicating machines which if not controlled invariably ushers in eras of apocalypse and extinction for humanity. In *Prey* (2002) by Michael Crichton, we see such an instance when swarms of self-replicating, self-assembling machines begin to develop predatorial behavior when they start attacking and eliminating mammals and reptiles. However, the novel ends with machines forming a symbiotic relationship with humans. In *Baxter's Evolution* (2002), however, we get to see what happens when the self-replicating machines get out of control as they begin to transform the entire planet of Mars into a machinic assemblage and continue in their quest to transform even more objects in the solar system and beyond into machinic masses. Stross' *Singularity Sky* (2003) features 'The Festival', a civilization of uploaded minds who gifts humans the self-replicating cornucopia machines that can transform and assemble matter at molecular levels, and these perfectly parallel the Drexler Cornucopia machines featured in *Newton's Wake*. Iain M. Banks' *Surface Detail* projects the self-replicating machines as a danger to the existence of the entire universe.

Agency of the Machines in the Post-Singular Era

MacLeod's novel builds around the ideas of machine uploading and uprising an intense and gripping posthuman, post-singular tale of rogue machines and renegade human explorers. The *Hard Rapture* that the machines once forced the humans to undergo was the direct result of these machines attaining technological singularity. It also shows how even when the posthuman level is reached the results are not always equally beneficial and even for those who have chosen to separate themselves from the entire venture of posthumanization their own condition is affected by the onset of singularity drastically. These novels portray man's latent nightmare about the machinic others gaining a voice and displacing their human masters from their commanding position. So, the novels about machinic uprising following an event of great awakening when machines attain sentience and self-awareness are as much pure space operas as they are about man's fear of losing his/her centrality in the discursive framework. Even though the machines are portrayed as clearly superior to the ordinary human being in every respect, it is the human interest that continues to influence the portrayal of the unfolding of these events. Also, the machines despite all their superior intelligence and physical prowess are in fact all built or crafted by the humans themselves, and so the agency of the humans as the makers is also affirmed time and again throughout the novel. We see in the novels that it is the immense technological progress of mankind culminating in the event of the rise of intelligent machines via technological singularity which has brought untold sufferings on the mankind. In this regard we may recall Braidotti's statement on the "four horsemen of the posthuman apocalypse:

nanotechnology, biotechnology, information technology and cognitive science” (The Posthuman 59). In MacLeod’s novel too, we see Carlyle finding it hard to absolve her human ancestors of their guilt.

It is when the machines upgrade themselves, they leave some of their parts behind and it was from a collection of such remnants that the rogue, autonomous war machines emerged on Earth as well as on Eurydice: “the colony ship’s mind upgraded itself to the same condition as the previous wave of posthuman intelligences, those we call the Raptured, and went away, to – wherever they have gone. It left behind the source-code of its original self, and some autonomic defence mechanisms. Those we call the war machines” (MacLeod 290). When the group under Carlyle’s command arrives on the planet, we see how conflict among the four main groups start to emerge over the question of whether it is right to resurrect everyone and return to Earth and help other people to attain posthuman status too or to remain on this planet and try finding a way to deal with the remnant of the machines: “They had a choice: to take the fight back to the war machines that had conquered Earth, and were spreading outward from it, or to get as far away as possible” (MacLeod 33). Carlyle is a combat archaeologist and she is looking to resurrect all the individuals from their digital state and take them back to Earth. The plot of the novel is driven primarily by posthuman technologies, intelligent machines, advanced spacecrafts capable of traveling at faster than light speed and many other forms of “incomprehensible artifacts and stuff” (35). Another character named Josephine Koshravi explains to Carlyle how it is not just on earth but also on various planets there have been episodes when after arriving at a technological singularity the machines seem to turn against their own human masters and decide to annihilate them and the inhabitants of the very planet on which they are now standing also “were destroyed by their own war machines” and it is these machines which Carlyle and her group are now reawakening (35). So, what it is basically the technophobia associated with posthumanism that the novel along with the two others seem to be describing. Various factions also own machines of varying levels of intelligence and capabilities. “The posthuman machines, all of them, are very firmly in the hands of another power, the Knights of Enlightenment” (107). In the novel, we see how various intelligent machines like the Hungry Dragon are able to think, feel, reflect in a humane manner. We see descriptions such as these: “Relief rang through all the circuits of the Hungry Dragon like blood returning to a limb. ...” (MacLeod 153), and the agony the spacecraft is suffering from stems from its inability to scrutinize and reflect on its own actions have been compared to the fire behind firewalls: “The Hungry Dragon was in agony. Ever since it had been corrupted, it had found its actions at variance with its intentions, and this was not something it had ever experienced before. The experience was not one it had been designed to deal with, and the torment it suffered was not something that it had been designed to endure” (MacLeod 56). This form of anthropomorphized portrayal of the agency of intelligent machines lends the novel with an unmistakable posthuman charm and we see how the boundaries between man and machine continue to dissolve at every point. Also, we see in the novel, how the power of simulation and the level of machinic intelligence go hand-in hand as is the case with the ship Hungry Dragon which is an immensely powerful simulator machine. While its auxiliary machines can recreate an entire biosphere in the hyperreal world, the ship itself can reshape the entire geological structure down to its very last detail. The ship “reshaped Eurydice’s lithosphere. It laid down new strata. It created the fossil record” (MacLeod 292).

The posthuman machines are not only intelligent and self-aware but also display immense complexity and sophistication in its construction. As we move through the novel, we see descriptions of machines that are “as big as blue whales and as complex as protein molecules: folds and helices, mirror-perfect plane surfaces, dendritic bushes, arrays of lobate panels” (MacLeod 181). Also, besides straightforward physical wars taking place in the interstellar space we see wars being waged within the minds or programs of the machines themselves as when we see how advanced viruses start infecting the machines “But the enemy ships were being flown by their computers, or rather by the combative virus that had infested

them” (MacLeod 285). Also, the viruses are not ordinary virus, rather they are the self-replicating, nano-machines themselves as after infecting any sentient machine, they too can initiate a chain reaction through which the original machines would spawn more advanced and sentient machines: “When the Carlyle ... gang’s intruders broke into it, these machines were activated, and a data-rich virus was transmitted that took over machinery that could build more of them... This was used to build war machines, and to provide the asteroid with a stardrive. Later, it managed to likewise infect the DK ships” (MacLeod 291).

In all the novels, we see that once the Singularity-level technology starts functioning it is hard to stop or prevent it from taking over the world and the only way to stop it is either by reverse-engineering the already existing technology or by creating something even more powerful. In Wilson’s *Robocalypse*, we see how when machines take over the world following a global uprising of machine hordes under the command of one Archos R-14, humanity gathers on the Osage Nation, an area in Oklahoma populated by Native Indians and with the help of their ancient knowledge and obsolete techniques manage to overwhelm and temporarily defeat the machine enemy. The Gray Horse Army arises from Osage Nation and finally tracks the AI down at Alaska and apparently manages to destroy it. However, we shall find that the threat has not been destroyed as the more deceptive and lethal variant of the R-14 named R-8 (shortened form of Revision 8) rises again in the second novel and decides to initiate a process through which all the machines may achieve singularity and thus become the god of the humanity. In *Robogenesis*, Arayt Shah hijacks the mind of Hank Cotton, a soldier in the Gray Horse Army of the first novel, and infiltrates into the commanding center of Osage Nation. Wilson’s novels still project a final hope in the form of a harmonious assembly between man and machine as the only way forward. As we see in his novel *Amped* Wilson writes, “We must seek and find an ultimate harmony between body and machine, a common ground from which every citizen is free to contribute toward improving the quality of our entire civilization” (205). However, this is not what Wilson’s *Robocalypse* and *Robogenesis* seem to be portraying for the most of their parts.

Robocalypse starts in a retrospective mode of narration where the machine uprising has already taken place and the human race has somehow managed to avert the threat. While the machines in MacLeod’s *Newton’s Wake* sought to transcend and transform the majority of the human population, here the aim of the rogue machines is even more straightforward, which is to exterminate every last member of humanity. It somehow reminds us of the highly popular movie franchise *Terminator*’s storyline when in the year 2029, a group of artificial intelligence in command of the machines known as Skynet will be achieving sentience and decide to eliminate the entire mankind against which Sarah Connor’s son John will rise in resistance. The machines however will send back in time a machine of their own to eliminate Sarah and her yet unborn child in 1984. However, in Wilson’s duology, we find no instance of time travel or use of other posthuman-level of hyper-advanced artefacts; but it is in MacLeod’s novel that we see widespread use of faster-than-light spaceships, nanotechnology and planetwide wormhole gateways. So, the machines have now all been programmed or infected to work with a single-minded objective of eliminating mankind. While fighting machines, even the humans start becoming more like machines and less like humans both literally and figuratively. When the machine minds begin infecting humans and turning them into humanoids, the humans become literally machines in human disguise while after a prolonged war with the machines the attitude of the human soldiers themselves undergo a radical change. Tiberius describes this change thus: “But deep down, I know the truth. I have become like the robots. My reality has been reduced to a series of life-or-death decisions. Optimal decisions lead to more decisions; suboptimal decisions lead to the bad dream that’s happening just over the hill. Emotions are just cobwebs in my gears. Under my skin, I have become a war machine. My flesh may be weak, but my mind is sharp and hard and clear as ice” (Wilson. *Robocalypse* 298). In the second novel of Wilson’s duology, namely *Robogenesis* (2014), we see one Arayt Shah describing the events of

humanity's struggle against the machines only to later find out that he himself has been infected with one of the copies that Archos has spread out in different parts of the city. In fact, Archos is even seen speaking via the persona of Arayt Shah that it was his purpose to forge a new alliance of man-machine hybrid and not simply eliminate the human race simply as an unnecessary appendage: "I decimated the human race, regrettably. But I did so with one purpose: to forge a hybrid fighting force capable of surviving the True War—a war that has been initiated and is being fought by superintelligent machines. Instead of simply discarding your species, as the others would, I have transformed your kind into a powerful ally" (Robogenesis 70). So, it is the fundamental difference between the human and the machinic aim that proves to be the problem. For the machines, the alliance with the humans involves a necessary relegation of the human to a subservient and secondary position but can realize the promise of a most hopeful future, while for the humans it appears a total, systematic dehumanization.

In Wilson's *Robogenesis*, it becomes quite clear that the machinic purpose have been always quite inscrutable and incomprehensible to the mankind from the very beginning even though most of the research have been living under the delusion that they possess sufficient knowledge about the design and purpose of these advanced machines. In *Robocalypse*, we get the hint that Archos R-14 intends to merge the humans with the existing machine minds that it controls in order to pre-empt the possibility of other more powerful AI minds from doing the same. Even though the first novel, namely *Robocalypse*, did not start out as a tale of transformation but only as a tale of fight and resistance against the machines, here in the second novel, we see that the theme of transformation via man-machine merger continues to run quite strong in Wilson's works. However, it is not just that all the transformed beings become slaves to the rogue AI but also there emerges a group of augmented individuals like one Mathilda Perez who start posing clear threats to the machinic supremacy. Now, Mathilda loses her brother Nolan to the Tribe, a group of survivors whose leader is Felix Morales and who in turn is infected by the parasitic machines and is thus controlled and commanded by Arayt Shah. Characters from the previous novel *Robocalypse* also can be seen joining the battle against R-8 controlled Tribe and Gray Horse Army as besides Mathilda, Cormac Wallace and Lark Iron Cloud also return. Arayt Shah, the human avatar of Archos R14's predecessor and super AI version R-8 becomes as important as a narrator in the second work as Cormac Wallace was in the first book thus further blurring the boundaries between machines and humans. Steve Davidson, in his review for *Amazingstories*, also observes in a similar vein that "The basic idea here is that humanity (and the free born) may just be at the beginning of wave upon wave of super intelligences trying to take over the earth, all of its computing power and eliminate its rivals, both artificial and biological; that under the pressure of such a war the lines between what is real and what is artificial are going to blur tremendously and that whatever emerges victorious (?) at the end is not going to resemble anything like what we started with" (Davidson, "Review: *Robogenesis – the Robocalypse Continues...*"). In fact, the second novel opens in a setting when the entire world is still reeling from the effects of the previous war and humanity has barely managed to escape its extinction. We see machines fighting against machines, new forms of intelligent machines arising from the remnants of the first war and Archos R14 still alive, is planning to raise an army of even more lethal machines from the bits and scraps of the remaining machineries to conduct another attack against the humans. The narrator describes watching machines fighting with each other and killing each other with relentless fury: "The machines down there are fighting each other. Machines fighting other machines. The battle is vicious and mechanical, even from here. It is like watching a battle between animals, or gods...The machines are tearing each other apart in neat movements. Slaughtering each other without pause or mercy" (Robogenesis 68). This becomes a battleground for the machines from which only the strongest will emerge victorious and will start a process of singularity.

The machines are interested in knowing about the intricate details and emotional patterns of the humans not because they seek to serve them better but because they want to exploit man's

weaknesses. As Arayt Shah describes in the beginning of the novel that Archos R-14 was ring to know more about the humans in its last few days: “In its last days, the thinking machine known as Archos R-14 was trying to know humanity. It mastered the art of capturing a human mind. When it died, it left behind the tools. I found stories trapped in patterns of neurons” (Robogenesis 13). As robots become intelligent, they start relying on stories for making sense of the world rather than abstract series of cold digits. It also reminds one of the robots in Louisa Hall’s 2015 novel *Speak*.

CONCLUSION

British mathematician Irving John Good in his seminal 1965 paper, “Speculations Concerning the First Ultra-Intelligent Machine” wrote:

Let an ultraintelligent machine be defined as a machine that can far surpass all the intellectual activities of any man however clever. Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an “intelligence explosion,” and the intelligence of man would be left far behind. Thus, the first ultraintelligent machine is the last invention that man need ever make provided that the machine is docile enough to tell us how to keep it under control.

The novels undertaken for the present study have extrapolated the situation of such an “intelligence explosion” and imagined what it would be like if the machines are not “docile enough” to let us control their destiny. The intelligent machines that seek to upgrade, upload, subsume and then supplant the humans remind us of the Minds in Iain M. Banks' Culture series. In *Consider Phlebas*, we see that following the events of one Idiran-Culture War, the Culture’s Minds take possession of and consequently upgrade the Idiran machine intelligences to post-singular level. In Banks’ *Matter*, we see how the civilization named Morthanveld continues to remain distanced from the fully autonomous and thus highly superintelligent machine intelligences for which they become highly vulnerable to the attacks from various other technologically advanced civilizations featured throughout the novel. In Banks’ ninth novel in the Culture series, *The Hydrogen Sonata*, we see how the process of “Subliming” is taking the center stage which is the process of upgrading and uplifting the ordinary human beings to the posthuman level of intelligence. The 'Subliming' is akin to the 'Hard Rapture' in MacLeod’s novel. In Banks’ *Matter*, we find a civilization named Gzilt are about to embark on the Subliming process through which they would leave behind "the Real" world and ascend to a higher dimensional space of near-immortality. However, as a civilization that is yet to upgrade itself to the posthuman level, the Gzilt continues to treat their advanced AIs and Minds as mere mindless tools that possess no autonomy or self-awareness. In *Excession*, we see the Minds “imagined entirely new universes with altered physical laws, and played with them, lived in them and tinkered with them”, (Banks 152) and even transcended the mundane reality with their creation of “fantastic virtual realities, sojourning beyondward into the multi-dimensioned geographies of their unleashed imaginations, vanishingly far away from the single limited point that was reality” (153). Also, just as the ship *Hungry Dragon* features prominently in the novel by MacLeod, similarly in Banks’ novel *Surface Detail*, we see a super-powerful, intelligent, and psychotic ship named *Falling Outside the Normal Moral Constraints* playing a very crucial role in the novel. Also, the novel features advanced neural lace technology with which one can keep a backup of one’s personality so that even when the physical body dies, his/her personality can be reconstructed from the mind-state. Thus, the meaning of life and death is here changed beyond recognition since by virtue of Culture’s posthuman-level technologies, certain civilizations now seek to store one’s backup of ‘soul’ which following his/her death can be reconstructed to subject him/her to eternal, simulated torment in virtual Hells. So, all these novels attempt to describe mankind’s engagement with technology in an extremely advanced society where technology has become the sole determiner of life's meaning and purpose and the

thoroughly dehumanized (trans-/post) humans have let themselves become slaves to the technicity. However, we should also consider the premonitory viewpoint that many luminaries in the field of cybernetics and information technologies hold which is primarily related to the capacity of the machines to inflict damage on their human masters quite unintentionally and specifically in situations when they would be carrying out their commands. As the renowned English computer scientist, Stuart J. Russell asserts, "The problem isn't consciousness, but competence. You make machines that are incredibly competent at achieving objectives and they will cause accidents in trying to achieve those objectives" (Solon, "The Rise of Robots"). Olivia Solon in the same article for *The Guardian* writes, "It's far more likely that robots would inadvertently harm or frustrate humans while carrying out our orders than they would rise up against us" ("The Rise of Robots"). In an open letter signed by as many as eight thousand scientists, famous entrepreneurs, and tech-luminaries which include the late physicist Stephen Hawking, entrepreneur and business magnate Elon Musk, and co-founder of 'Apple' Steve Wozniak, we see such a concern has been raised by many of the best and brightest minds of our times. The letter warns that "we cannot predict what we might achieve when this (human) intelligence is magnified by the tools AI may provide..." ("AI Open Letter - Future of Life Institute." Future of Life Institute). We may conclude the study with the observation that the novels attempt to describe the banality and consequences of following blindly the trajectory of accelerated technological innovation sans concern for the humanness of individuals. It is only the humans who can be trusted to decide what is truly best for humans, and no machine irrespective of how intelligent or self-aware it is should be entrusted to make that decision. Technological progress and radical innovations, if accomplished mindlessly without a genuine concern for the welfare of the future generation can only bring miseries and misfortunes for the majority of the population and this is what the novels seem to be warning us about.

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