

# **The World Will Never Be the Same: Scrutinizing Posthumanism in Ramez Naam's *Apex***

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## **Abstract**

This paper examines posthumanism theory by examining the relation between technology and literature by drawing on the works of Francis Fukuyama, Katherine Hayles, Cary Wolfe and Ramez Naam. The study is structured into two main parts. The first part is a theoretical one. It introduces the theoretical background of posthumanism. It explores its history and development through the perspectives of various critics and writers, highlighting the contributions of posthuman thinkers that have advanced the dominance of digital literature. The second part focuses on the effects and implications of technology, including its potential future consequences. This section also offers a comprehensive analysis of Ramez Naam's *Apex*, which, through the lens of posthumanism, explores two contrasting and somewhat opposing visions of posthumanity, illustrating how future technological advancements are depicted in the novel.

**Key words:** *Apex*, literature, posthumanism, Ramez Naam, technology

As technology continues to develop and pervade human life at an ever-increasing rate, the relationship between people and technology has become an increasingly essential topic for nowadays research. Sophisticated technology does not only affect the material world in which people live but also the way people think about their own identities and the surrounding world. As Charlie Gere argues in *Digital Culture*, “One of the results of this accelerating rate of growth is that it is increasingly hard, if not possible, for us to fully grasp what is going on” (8). That rapid change across the world affects the environment. It plays a role in transforming humans themselves in a queer manner. Consequently, the so-called union between humans and technology has led to a concern about the world in which people live both physically and spiritually.

The union between humans and technology leads to a great worry about the world. Early literary examples of artificial humanoid and intelligent systems show in broad perspectives the kinds of thematic concerns that cyborgs, androids, and intelligent networks like supercomputers bring up for the present notion of the posthuman, understood as a condition in which the human and the machine are blending to a greater extent.

This study, therefore, is divided into two essential parts. The first part examines the historical background of posthumanism theory and its typology, while the second part sheds light on human severe apprehension of facing the technological developments and its consequences in the future. Moreover, it provides a full analysis of Ramez Naam's *Apex*.

The term “posthumanism” includes the prefix “post-,” (meaning “after”) and “humanism” (including the root “human” plus the suffix “-ism”). Efterpi Misti and

Giovanni Batista Vico point out, “The term owes its origin to the Latin *humanitas*, used by Cicero and other classical authors to signify the kind of values one would get from the *studia humanitatis*, the education concerned with human culture, specifically, language, literature, history and moral philosophy” (199). The definition of “humanism” has undergone modifications in line with different rational movements. At its core, posthumanism seeks to redefine and reformulate the position of humans in the age of technology, making it an important subject matter.

In order to discuss the historical background of posthumanism, it is first necessary to define the term “Humanism.” At a basic level, humanism refers to an intellectual movement that was initiated by Petrarch, Machiavelli and Thomas More, among others, and has focused on the study of classical authors. It is a philosophy that argues against the idea of the divine or supernatural, placing humans at the center instead. For Pramod K. Nayar, “Humanism is the study of this individual subject and the composite features we now recognize as the human. It treats the human subject as the center of the world, which is influenced by the human’s thoughts and actions” (5). In this way, the agency of human beings is the essence of humanism. Human beings have the right to create their own lives. They do not believe in the power of God nor in any external power. In the Western way of thinking, the humanist idea has long directed human’s understanding of their nature and place in the world.

Equally important, posthumanism is contrasting with humanism. It has many interpretations and concepts. Posthumanism has recently provoked much interest, as well as controversy, among scholars and literary critics – the heated

debate that has contributed to the creation of a new world. Therefore, it seems complicated to get a specific definition of the term shared by all various approaches that used it, as posthumanist critics attempt to provide different groups of phenomena, some in progress and others only predicated or imagined. Posthumanism has attracted many thinkers, writers, philosophers and critics such as Neil Badmington, Rosi Braidotti, Donna Haraway, Katherine Hayles, Cary Wolfe, Karen Barad, Francesca Ferrando and Ramez Naam, with each approaching the concept from his/her point of view. Even agreeing on a precise definition of posthumanism sounds problematic. Although critics and theorists agree that posthumanism means *after humanism*, each writer deals with this notion from different perspectives.

Donna Haraway's account of posthumanism can be taken as one of the most meticulous texts written in 1985. She starts her book by displaying the causes behind the existence of recent terms: cyborg and hybrid. She argues that the collapse of the three boundaries between humans, animals and machines leads to a blurred vision of what is natural and artificial. Besides, she presents a philosophical study of cyborg. In this way, Haraway clarifies her vision about the relation between AI and nature and the ambiguous relations between them. She notes, "Late twentieth-century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines. Our machines are disturbingly lively, and we ourselves frighteningly inert" (11). Haraway depicts two expected results from having cyborg identity. The first is that machines can conquer and oppress the body. The second relates to the acceptance of contradictory identities.

In 1995, Robert Pepperell discusses posthumanism as a cycle after humanism, marked by what is called “deep transformation.” He claims that people are coming up to the “electrification of existence.” For him, posthumanism has gained a wider reach and been used in a number of various senses. He says:

[P]osthuman is employed to describe a number of things at once. First, it is used to mark the end of that period of social development known as humanism, and so in this sense it means ‘after humanism’. Second, it refers to the fact that our traditional view of what constitutes a human being is now undergoing a profound transformation...Third, the term refers to the general convergence of biology and technology to the point where they are increasingly becoming indistinguishable. (iv)

Pepperell shows how the human condition has been changed over time and has been affected by social construction. The whole matter can be encapsulated in what he describes as “the high technological era” (161). He contends that there are different types of technologies – technologies which people know in their daily lives.

Another outstanding contribution to this field is N. Katherine Hayles. She fathoms the nightmares of the technophile community as doing little to change the idol of technology in society, or as unmasking its role as a helper to social and ecological troubles. Moreover, Hayles uses the term “informatics” to relate computers to the social system when she argues:

In this account, emergence replaces teleology; reflexive epistemology replaces objectivism; distributed cognition replaces autonomous will; embodiment replaces a body seen as a support system for the mind, and a dynamic partnership

between humans and intelligent machines replaces the liberal humanist subject's manifest destiny to dominant and control nature. (288)

Hayles illustrates that posthumanism leads to the end of humanity. The human is inevitably situated within the emergent processes through which consciousness, the machine and environment are constituted.

Unlike the above critics, Pramod Nayar has an interestingly encouraging vision about posthumanism. He explains that the difference between "humanism" and "transhumanism" is limited to exceeding the limitations of the human, while posthumanism is not just about enhancement of capabilities. It is not just a question that people will be born with advanced IQs and thus will be able to do more with their intelligence than anyone else in history. The central idea is the connection between humans, technology, other different life forms and non-living matter. Nayar, therefore, challenges the notion of human superiority and suggests that "posthumanism" is not as far-fetched from the "humanism" movement as previously thought.

Conversely, Francis Fukuyama alerts people to the negative side of future advances in biotechnology and genetic engineering, which help in human modification. He highlights the rise and inevitability of science in human life. He also shows that posthumanism has been formed as a coherent concept during the dawn of the 21<sup>st</sup> century. In *Our Posthuman Future*, Fukuyama argues that the control of biotechnology is a crucial political tool as "countries must regulate the development and use of technology politically, setting up institutions that will discriminate between those technological advances that promote human flourishing, and those that pose a threat to human dignity and well-being" (182).

Moreover, Fukuyama rejects the idea of a biotech world because he evaluates the value of being human rather than being posthuman. In addition, he explains how “posthumanism” has been situated in political science and bioethics. Thus, there is a discrepancy between Pepperell’s, Nayar’s and Fukuyama’s conception of posthumanism.

Karen Barad points out that posthumanism is opposed to the idea of traditional humans. Posthumanism, in her criticism, is a prolongation of removing the human completely from the acceptance of objectivity. She argues, “Posthumanism doesn’t presume the separateness of any-‘thing,’ let alone the alleged spatial, ontological, and epistemological distinction that sets humans apart. The posthumanist subject eschews binaries such as human/nature, and nature/culture. It also resists the concept of an exceptional and essential self” (136). Barad explains her posthuman objectivity as a “thoroughgoing critical naturalism, an approach that understands humans as part of nature and practices of knowing as natural processes of engagement with and as a part of the world” (288). This means that she sees science and philosophy as intertwined and interdependent, with science informing philosophy and philosophy shaping scientific understanding. Barad’s posthuman objectivity aims to move beyond traditional human-centered perspectives and recognize the interconnectedness of all things, including humans and nonhumans, as part of the natural world.

Likewise, Neil Badmington sheds light on the same idea through what is known as “critical posthumanism.” He considers it a deliberate intellectual discussion on the concept of post-anthropocentrism. The term “critical posthumanism” encompasses, and also aids in the mapping of, a common critique

of humanism's anthropocentrism. According to Badmington, critical posthumanism is a form of posthumanism that takes a more critical stance towards the increasing entanglement of human beings with technology and the natural environment. It seeks to problematize the notion that human beings are separate from, and superior to, other entities in the world, and aims to challenge the ways in which technology and capitalism have contributed to the degradation of the planet and human lives.

Once humanism and posthumanism have been identified, it becomes vital to make a clear distinction between the terms "posthuman" and "posthumanism," as they are occasionally used interchangeably but should be considered as separate concepts, similar to how "human" and "humanism" are distinct terms.

"Posthuman" refers to a technologically-mediated human whose life has been altered by techno-science in some way, whether chemically, surgically or mechanically. In other words, posthuman refers to the state of being a human who is modified by technology. In contrast, "posthumanism" is a critical definition that tries to deprive the humanist subject of his/her status. Cary Wolfe notes, "Posthumanism in my sense isn't posthuman at all – in the sense of being 'after' our embodiment has been transcended – but is only posthumanist, in the sense that it opposes the fantasies of disembodiment and autonomy, inherited from humanism itself" (xv). While, Ferrando claims that the terms "posthuman" and "posthumanism" originated in postmodernist literature. According to postmodern theory, this indicates that both words have certain historical roots and hierarchies. The terms "posthuman" and "posthumanism" are similar; both refer to a hierarchy of non-fixed human identities but have different connotations



depending on the tradition. Advanced robotic technology, nanotechnologies and bioethics are only a few of the subjects covered by the posthuman theory.

Hence, posthuman is a concept that emerged in the fields of science fiction, futurology, contemporary art and philosophy. It means that a person or entity exists in a state beyond being human. As a result, “posthumanity” is defined as being more than a human and it is a form of hybridization with other beings. One of the philosophical ideas is that posthumanism is a modern ideology that encapsulates a futuristic approach to improve human life. Posthuman can be widely accepted in all areas of human endeavor such as arts, science, health and technology.

Posthumanism deals with the notions of the existence of the human and posthuman in a chaotic and pre-apocalyptic world. Posthumanism does not advocate for human enhancement, but puts its theory into practice. Through the progress and dominance of science and technology at the end of the 20<sup>th</sup> century, a posthuman world was born, but has gone unrecognized and unheard in critics’ writings. A few intellectuals address the crisis of the rising posthumanist society, although posthumanism has not been incorporated as an exclusive element of their work.

The growing social awareness of these technological advancements has led to a recognition of the potential benefits and risks associated with them. People have started to question what it means to be human and whether the limitations of the human body and mind can be overcome through technology. The modern political landscape also plays an important role in the transition to posthumanism. In a globalized world, the threat of terrorism and the need for security have led to

increased investments in advanced technologies. At the same time, economic globalization has led to a greater demand for efficiency and productivity – two areas where technology can play a significant role. These political and social factors have contributed to a growing focus on safety and security and have created an environment where the integration of technology with the human body and mind is seen as a way to enhance these priorities. Thus, the transition from human to posthuman is the result of a complex interplay of social and political factors.

The present study focuses on Ramez Naam as a posthuman critic and novelist. Naam, the subject of the present study, was born in Cairo, Egypt.

Naam introduces new posthuman ideas and drastic visions about the future. He depicts in some detail a sci-fi type of scenario where getting a neural implant becomes a decisive activity of the time, importantly like getting a smartphone in 2009. He also focuses on the science of human augmentation, as well as the ethics, social consequences and policy disputes of human enhancement. He also discusses what people should or should not do with this hi-tech. Additionally, Naam explains other ideas such as the use of nano-drugs, brain hacking and the misuse of technology.

The Nexus drug has significant consequences that extend beyond its impact on humans. It can affect the political and social areas inside countries. It can lead to conflicts and instability inside and among them. Politically, the drug outbreak becomes uncontrollable and the government finds it challenging to regulate drug production and distribution. This can lead to a surge in crime rates and corruption among government officials, leading to a collapse of law and order. The social

effects of the Nexus drug are also significant. The use of the drug may lead to addiction, mental health issues and social isolation. This can cause a breakdown of social structures, making it harder for individuals to function as a cohesive society. In addition, the drug outbreak leads to the transformation of humanity. It transforms humans into posthumans and transhumans. There is a significant shift in power dynamics and social hierarchies. Consequently, people in *Apex* seek to take advantages of these changes, either by exploiting the new powers or by seeking revenge against those who have made wrong to them.

This study discusses the severe effects of the spread of the drug and its role around the world. In addition, it stresses the political and social chaos in 2040. The chapter is divided into two parts. The first part investigates four main ideas. First, how life has changed in the posthuman era. Second, what are the various reactions towards using Nexus? Third, how people utilize the drug for their own personal benefits and reprisal. Last, how Nexus becomes a dreadful motive for causing human instability.

The title of the novel stresses the climax of Nexus outbreak. *Apex* is the third and final novel of the *Nexus* trilogy. It covers the widespread social impacts of Nexus, spanning the US, China, India and many other countries. According to *Meriam-Webster*, “apex” is the “the uppermost, highest or culminating point” (Apex). In this regard, Naam investigates the profound transformations that occur in the world following the use of nano-drug technology. He starts *Apex* by discussing how the human brain is transformed from being totally biological into a digital one. This transformation affects humanity, human relationships and

social hierarchy. The first line in *Apex* grabs the attention of the reader to the new shape of the digital era and how the human era ends:

In a cavernous data center, a thousand meters beneath the bedrock of Shanghai, lights blink on row after row of meter-high liquid helium pressure vessels. Finger-thick optical fibers route between the metallic grey eggs. Within each one, quantum cores hum in their vacuum chambers, colder than the cold of interstellar space. Entangled qubits are transformed. Information is intermeshed and intertwined in precise patterns. The patterns simulate proteins, ion Channels, neurochemical receptors, neuro-transmitter molecules, axon and dendrites, ratcheting up in levels of abstraction hat to whole. Neurons, hundreds of billions of them, and hundreds of trillions of synapses connecting them to each other. It is a vast network, a simulated brain. Once flesh, now digital. Once human in structure, now very much posthuman. (9)

Naams explores modes and consequences of change. He highlights the influence of the change on the human nature, as well as social and political attitudes. Despite his optimistic outlook on technology, he addresses the negative impacts of using it. He depicts societies' response to this disruptive technology. Undoubtedly, *Apex* tackles the view of global protests against the use of Nexus and other development of human. As a result, chaos and riot have erupted in the world. The novelist says, "A kilometer above, on the campus of Jiao Tong University, all is chaos. Thousands of students rage on the university square, penned in by armed. Clouds of tear gas liner like fog. Screams can be heard. Discarded sign proclaims: 'down with Coup!' 'democracy Now!' let A Billion flowers Bloom" (9)!

Naam shows different reactions of people towards their new age and political system. He portrays people as they protest everywhere in order to

achieve their goals. Protesters demand authorities to end the riot. The whole scene of rage and political chaos becomes clear when “[a]soldier steps forward through the press of bodies. His boot stamps a muddy print onto a hand-drawn flower on a sign waved hours earlier... A student is standing atop a lobotomized robotic tank topples backwards, blood and brain erupting from his suddenly burst skull” (9). Moreover, a lit Molov is spread everywhere around the students, spreading the riot around the world. A protester in Washington, D.C., “infused with Nexus, bridged a cross the global net, proxied through ports forced opened. In national five walls, feels the flames in Shanghai” (10). She screams for democracy. Other protesters scream with her. Not only the protesters in Shanghai but also “hundreds of thousands, millions, a mob, linked, connected, spanning DC, Shanghai, Beijing, Detroit, Les Angles, Cairo, New York, Moscow, Rio, and more” (9).

On the one hand, there are many protesters who seize squares and parks. They attack government buildings and “they throw themselves against police and soldiers, bolstered and impassioned by cries and emotions of their comrades around the world around the world, beams directly into their minds” (10). On the other hand, the world leaders set in their places watch this unfamiliar global outburst of rage against authority without any reaction. Each one has a different vision of using Nexus to control people in a way or another.

In this regard, Naam highlights different reactions of humans towards using the drug. He depicts three aims of high-tech Nexus users: (1) people who embrace the technology and use it safely and positively; (2) people who use it for personal benefits and revenge; (3) people who use it to make political anarchy and

riot. Nevertheless, people's reactions towards technology and science differ from person to person. They fall into two divisions. The first includes the supporters of using Nexus. They are divided into two groups: these who use Nexus for the enhancement of humans and those use it for personal benefits. The second division includes the opponents of the general use of Nexus. This is represented in Nexus children's families who are divided into two classes: the upper class that refuses to link the minds of their children with those of lower-class children. The lower class refuse to trust this kind of technology.

The first group includes the supporters of using Nexus who want it for the enhancement of humans' capabilities. Others want Nexus for enhanced performance in education, economy and political security. India is the best example of using these enhancements. It has a target to boost itself in many fields and wants to get rid of poverty and ignorance by using the drug. The government makes a deal with Kade, the builder of Nexus, to help them with Nexus, letting him stay in their country by giving him the right to asylum.

In fact, improving education is one of the significant goals of India. The country finds it is a great chance to get Nexus 5, which plays a vital role in enhancing the academic performance. This idea becomes clearer during a conversation between Sam and her old friend Aarthi about the drug. Aarthi says, "Nexus 5 plus some modifications our programmers have made – we're experimenting with different ways to use it in education" (180). Sam asks her "How's it working out" (180)? Aarthi has explained that the use of Nexus is very successful with fast learning and improved retention rates among groups of children. They work together and instinctively learn from each other in ways that

exceed the barriers of language. Aarathi highlights the importance of safety concerns, although they seem to be less of a worry. However, there are social and political considerations regarding the implications of integrating technology in education. This poses a complex issue due to different opinions about the impact and accessibility issues. Sam asks Aarathi if she wants to put rich and poor children together. Aarathi argues:

It's even harder than you might imagine. The caste system is still alive and well. Upper caste parents don't relish the idea that their children might ever link minds with the lower castes." She sighed. "And lower caste families – who have the most to gain-are among the most superstitious and suspicious of this sort of technology." Aarathi shook her head. "There've been backlashes." (181)

Aarathi explains that division six of Nexus is being restarted with a new set of rules. Instead of completely halting advanced technology, the focus will be on guiding its use in a safer way. This involves preventing potential abuse and threats while allowing legitimate and cautious applications. The team also aims to prevent any negative reactions towards technology and keep people, as well the students, safe. Sam has redirected her attention to those who benefit from this initiative: the teacher and her four motivated students, who have completely focused on their learning. Sam expresses the desire to involve the teacher in the early stages of the program.

In another scene, India recognizes well that these children are the main target of achieving the progress of the country. Nexus can help them become fast-learners and enhance their brainpower, thus leading to overall human progress and development. Rakesh Aggarwal, a special secretary in the Ministry of External

Affairs, tells Kade that “India is a signatory to Copenhagen Accords, which expressly ban certain forms of human enhancement” (60). Kade points out that he knows that Aggarwal has a secret program experimenting as a tool to help in education. Kade assures Aggarwal that he is already on his way out of Copenhagen: “Nexus finally gives you an enhancement tech that’s worth breaking the treaty for, one that’s easy enough to deploy, and brings you large enough economic gains, that the benefits to India outweigh the costs of pissing off the US and Europe and China. You’ve done the math. And now it’s just a matter of time” (60). According to Lakshmi Dabir, Aggarwal’s assistant, Nexus is the best technology helping them achieve their goals. “We want to uplift our people,” she claims, “We want to use this technology for the greatest push in human development the world has ever seen” (84). For India, Nexus can do what they exactly want in the process of enhancing humans. They want to make a significant change in human mental capacity and power.

As for research, India codes materials for analyzing communication and learning processes. It uses Nexus to build a flexible system to see the “right way when a lesson wasn’t getting through or wasn’t going to be retained diagnose why, or just repeat it” (193). In addition, they have a book library that contains mental lessons that are “curated first-hand memories that kids could absorb, live through. And for coders themselves, they were beefing up. The developer tools. Better environments” (193). Moreover, the South Asian country also has a better environment, digital whiteboards and a shared coding area.

Consequently, a new generation emerges with enhanced abilities and mental powers that enable them to perform better than before. For instance,



Jamie, a child with autism, recovers significantly better after taking Nexus. Earl Miller's son, Jamie, who previously has struggled with communication and social interaction, experiences a profound transformation and becomes capable of speaking, listening, making eye contact and even embracing others. Miller expresses his gratitude to Kade for the positive impact of the drug on his child: "That stuff you made. The Nexus. It changed him. He and his daddy took it. He got so much better... Lookin' you in the eye, listenin', talkin', huggin'" (53). This shows how Nexus has a fast influence on human behavior. It also helps handle mental health problems.

Regarding human security, India calls for ensuring civil liberties. They seek to help people gain their freedom and prevent the government from overusing control on humans and posthumans. The country tries to safeguard human and non-human rights. The Indian Ambassador to the UN Navya Kapoor makes this announcement:

India introduces a motion to the United Nations General Assembly that recognizes all thinking, feeling beings of human origin or human descent as persons, and explicitly grants everyone the full protection of all international laws and human rights accords, and classifies laws and crimes which unfairly target individuals based on their genetic, neurobiological, or other differences, as the discrimination and hate crimes that they are. (196-197)

Out of fear, they have oppressed those who are different. Their anxiety is stemmed from deception and the killing of innocents. Only after knowing the reality, Navya Kapoor claims, "look into your hearts. Understand that our daughters and our sons will be better than we are. Do not hate them for it. Love them for it, and vote for this measure which grants them the rights and freedoms

they deserve every bit as much as you do yours” (197)! On the contrary, there are other people who use Nexus for personal gains and revenge, such as Su-Yong Shu, Bo Jintao, Breece, and Chen Pang. Su-Yong aims to use Nexus to eliminate any obstacles to the enhancement of the human mind. Her ultimate goal is to create a posthuman future. The narrator comments on this:

Where she has cleared away the obstacles to enhancing the human mind, where she has ended the incessant war and stupidity, where she has replaced mere capitalism with a new economics born of quantum game theory, where she has ended poverty, where she has broken the iron laws of death and biology and scarcity that have ruled humanity for so long, where she has unleashed an intelligence explosion like nothing since the dawn of homo sapiens. (202)

Nevertheless, Su-Yong’s dream turns into a weird nightmare. She has a strong desire to take revenge on her husband for mistreating and torturing her in order to steal her fame and money. Moreover, he has betrayed her by letting her die. In this context, she asks him, “How could you betray me? How could you let me die? Torture me, just for fame, for money” (203)? Su-Yong uses Nexus as a tool to enslave those who have wronged her. She has enslaved people for getting what she wants from them. Chan Pang is the first person to be tortured. Here, the narrator says:

She could have resculpted Chen. She could have eased his pain. She could have emotionally rewired him at a deeper level, making him truly loyal to her, ending the cognitive dissonance. She preferred it this way. A program of her creation, running inside her husband’s brain, controlling him. But leaving him trapped within it, to suffer. She relished horror rising within Chen as she prepared to use him to enslave Xu Liang. (213)

She has enslaved her husband through a program that she created inside his head to achieve her goal: changing his behavior and terrorizing him. The second person is also enslaved by Su-Yongis Xu Liang. She begins to search for the security details around the quantum cluster in Xu Liang's mind. She also plans to control and enslave people at a party which includes scientists and physicists through using her husband Chen and Xu to inject them with Nexus. Let us take a look at this description: "The Avatar took stock of what she had and trawled their memories for useful tidbits. Then she started the process of rewiring circuits in their minds, neutrally reconditioning them, making them hers. Scientists and technicians were complex, delicate minds. These would require sophisticated rational-emotional resculpting to switch their loyalties" (230).

Su-Yong seeks to improve her mental state by searching through her memories to figure out when she enslaved marine soldier Yingjie, who has posed a mortal threat to her. In the process, she erases the memories of her husband and enslaves Colonel Wang to gain control over the air base. Su-Yong aims to free a few of her children and liberate the Confucian Fist. She leads her team to the Computer Science building to obtain the Diamondoid Cube, which she believes can aid her plan to turn the world into a posthuman society under her control. However, the Cube turns out to be a fake one. Su-Yong remains undeterred. She extracts every possible detail of information from Liu Hua's mind. She also seeks revenge and personal gain which is evident in her desire to wage war against humanity.

Political riot and social unrest are also explored by Naam in *Apex*. He stresses the consequences of Nexus abuse that lead to political riot and anarchy

around the world during from 2040 to early 2041. During this time, Naam discusses the controversy between the supporters and opponents of using Nexus along with the incompatibility between humans and posthumans. This panorama leads to civil disturbance and world revolution. The narrator points out, “Kade sat alone in the darkened building, his mind flipping through news, images, and videos coming from the world. The disturbances glowed on the map of the world. More than a hundred cities in all” (304). These countries are Los Angeles, Kiev, Cairo, Athens, Moscow, Caracas, Mexico City, Lagos, Madrid, London, Sao Paolo, Nairobi, Jakarta, Mumbai and Baghdad. He gives the reasons behind these demonstrations.

They include:

Protests against Stockton in the US. Protests for women’s rights in the Arab world. Protests against the use of Nexus here in India. Riots over energy and food prices in Jakarta and Lagos and Karachi. Demonstrations over corruption in Athens. Pro-democracy marchers clashing with police day after day in Moscow. Sectarian and ethnic clashes in Baghdad. (304)

Riots erupt for different reasons. However, Naam argues that “the outbreak of global anger against authority was remarkable. Rage was contagious. Courage was contagious. Outrage was contagious. This happen before. It would happen again” (305). This means that people protest against the political system. Based on this, Kade starts to feed the protesters with Nexus to know “where were people sharing? What were people looking at what were they using Nexus to communicate and consume” (305)? While searching for these answers in people’s minds, Kade discovers that “two months ago sex had topped the list. After that had come athletic feasts and recreation, a host of first hand experiences of beautiful places and events, music, humor, and even some actual transfer of knowledge

from mind to mind” (305). However, Kade discovers that it is a more rapid switch in people’s way of thinking than he has expected. He has pulled up visualizations and has seen outrage. The narrator describes this situation:

Now... Now it was rage, or outrage, that dominated. Scenes from protests, from clashes with police and the military, of witnessed brutality, even sometimes of brutality done to authority figures, topped the list. Sex had been pushed to number two. Do I have the causality wrong? He wondered. This doesn’t prove that someone’s using Nexus to create chaos. But then he thought again of the chemreactor hack, released just in time to fuel high quantities of Nexus to the protests in the US. He thought of Breece, and the Nexus-based chaos he’d wreaked on the National Mall. (305)

As a result, Kade blames himself for building such paranoid tools, believing they are re-purposed for battle, for war and for integrating Shiva’s systems and not for achieving peace as he has imagined. He also finds that protests have surged. More than “a dozen university campuses. Four to five hundred students in the largest protests. Growth appears to be accelerating” (310). To find a solution to ongoing problems, the nominal president of China and secretary general of the party Boa Zhuang, the deputy security minister Ho and Bo Jintao meet. Bo Jintao suggests to end these protests before they increase and grow larger. Deputy Minister Ho should prepare his police forces to “strike, with firm strength, but minimum injuries” (311). Boa Zhuang has another approach to solving these political problems. He says to Bo Jintao, “China is changing and people want new things: transparency. Freedom” (313). He means that people need to be free in their choices and decisions, but Bo Jintao sees the real freedom for people includes “A bigger house in a better neighborhood. Real freedom is enough money to travel;

to eat what you want, when you want to buy the clothes you want. Freedom is better school for your child, the best on hospital when you are sick. And new more entertainment than you can watch or hear or play in a life time. That's what people actually want" (313).

Bo Jintao tries to convince the president with the idea of unreal or limited democracy, which means that people only care about materialistic life. They only need welfare and peace. Bo Jintao wants to ignore peoples' right to be part of the political system. Democracy is not just about material wellbeing, but it also involves the free expression of ideas and the active participation of citizens in the decision-making process. By limiting democracy to just the economic aspect, the government suppresses people's right to participate in shaping the policies that affect their lives. However, in real democracy people have the authority to deliberate and decide legislation systems and express their opinions freely. Yet, limited democracy can lead to corruption and abuse of power. Bo Jintao wants to drive real democracy out of people's minds.

Despite the enormous technological progress represented by the introduction of the Nexus drug that is the main cause of problems and disagreements between different countries, it helps to handle some difficulties, protests and revolutions by controlling the minds of protesters and changing their political views. However, Naam wants to emphasize a major danger: the control of posthumans over humans. This is represented by the character of scientist Su-Young Shu, who tries to destroy humans because of their actions towards her, but the monk, Somdet Phra Ananda, has tried to help her restore he sanity. Therefore, Kade wants to destroy her, but she tries to kill him. Kade coughs, with "pain

wrenching through his chest. He'd seen something. In the agent's mind. He had to warn Rangan" (584). Kade tries to reach out to Shankari's mind and activate the network access. Kade says to Shankari:

He'd destroyed the monster in Ling's mind. There was nothing to exploit what was about to happen in DC. But even so, the chaos it would cause... Then Su-Yong's mind came alive in the space below Shanghai, and smashed down on him in her utter madness. Su-Yong! he managed to send. She kept coming, kept coming, kept forcing herself onto him. And he was completely powerless to resist. (548)

Kade tries to overcome her attack but fails. He has struggled under the crashing wave of her mind. In another scene, "In Shanghai, thousands of analog radios blared the message. Soldiers, their minds hijacked, switched channels, turned down volume, or simply ignored it" (551). Kade finds it difficult to cope with the overwhelming force of Su-Yong Shu's thoughts. He feels like a tiny particle of sand being relentlessly tossed around against the sharp rocks by the unyielding waves of her mind that has seemed to stretch out endlessly like a vast ocean.

Afterwards, Ouyang tells General Quan Hyan that he should warn the nation and the soldiers to try to prevent protests because strikes and demonstrations can cause harm to them. Here is the warning:

ATTENTION ALL OFFICERS AND SOLDIERS OF DACHANG AIR BASE AND ALL CONFUCIAN FIST COMMANDO UNITS. THIS IS A MESSAGE FROM GENERAL OUYANG FAN, MINISTER OF STATE DEFENSE, ACTING CHAIRMAN OF THE STATE MILITARY COMMISSION. A STRATEGIC THERMONUCLEAR STRIKE HAS BEEN ORDERED FOR SHANGHAI. TENS OF MILLIONS WILL DIE. YOU WILL DIE. YOU CAN PREVENT THIS STRIKE. DESTROY THE QUANTUM CLUSTER BELOW JIAO TONG, OR ISOLATE IT COMPLETELY FROM THE NET. USE ANY AND ALL

MEANS AT YOUR DISPOSAL. YOU HAVE FIFTEEN MINUTES. THIS MESSAGE WILL REPEAT ON ALL CHANNELS. ATTENTION ALL OFFICERS AND.... (550)

In his inaugural speech, President Stockton is narcotized by the Nexus drug, controlling his behaviors and thoughts. He realizes his previous bad actions against people and apologizes for those who are harmed.

In another scenario, during the inauguration of President John Stockton, many electronic sensors flash with digital inputs of heat and smoke. The president gives speech to his nation, telling them that “[a ]nation divided is a weakened nation. In America, we’ve been divided. Our trust has been undermined, divided us” (537). He also notes that some people want to attack the nation, and “it’s been undermined by those who want to divide us and conquer us. That attack has been successful. And if we remain as divided as we are now. We cannot stand” (538). It means that they face the danger of tech abuse. At this point, an incident happens at the Capitol and the fire is broken out and there is “massive network event in china” (539)! The NSA notes, “We have something off-the-scales going on. Origin Shanghai. Network requests saturating all the pipes in and out. Exabyte bombardment of our systems. NAES firewall is crumbling” (539). The president and secretary Stevens believe that it is a Chinese or PLF attack. Conversely, General Ouyang Fan, minister of national defence, declares, “We’re being fought off by airpower from Dachang, in addition to the clones” (543). Afterwards, around twenty-five children and a hundred monks have gathered here, becoming a hub and a nucleus of energy. There are also about thirty-six more monasteries spread around the globe, each containing two thousand individuals meditating and connected at lightning-fast speeds, functioning as one, perceiving the same inputs



and creating a web of consciousness almost encircling the planet, facilitated by the movements of photons and electrons. Furthermore, the group has glimpsed at approximately a million more minds waiting for them to connect with the potential to pull in around ten million more. Technological advancements have rapidly aided in their efforts with bits of technology hurtling around the planet to assist their progress.

At the end of the novel, Naam imposes many questions around the ethics of using technology. He explores different goals behind the use of digital and nano technology. He shows that some countries refuse to use technology illegally while others want to abuse technology. On the one hand, the former uses technology for enhancement and alteration purposes. They ban using bio, neuro and nano weapons as well. On the other hand, the latter exploits advanced technology to achieve their personal benefits such as controlling humans and their lives. This scenario can lead to wars and violating human rights. The narrator notes, "A peace, a stability, formed of a base so broad, a base of not one brain, not one life, not one perspective, but thousands, complementing one another, embracing one another, encircling and intertwining with one another" (552). Technology is meant to make life better and easier.

## Conclusion

In conclusion, *Apex* is one of Naam's future means of portraying "Possible" depending on modern studies and researchers. The study has documented various effects of using the drug that have impacted human society. It was divided into two main parts. The initial section has discussed three ideas: human adjustments following the release of Nexus; the impact of Nexus on human identities leading to the creation of new categories that arise throughout the novel, including posthumans, clones, avatars and transhumans; and the consequent emergence of coercion technology. The research also has explored the positive impacts of Nexus in the medical, educational and behavioural areas through examining the characters of Bobby, Baby Aroon and others. However, it also discussed the obsession with control, as portrayed by characters such as Shiva, Breece and Bo Jintao. The last section has analysed the positive and negative aspects of using advanced technology in the future. Besides, the study depicts how the world will change, by focusing on the political dilemma that happened in different countries. Naam also reveals the ethical and unethical issues of using technology.

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## المستخلص

يناقش هذا البحث منظور «ما بعد الإنسانية» من خلال توضيح العلاقة بين التكنولوجيا والأدب اعتماداً على أعمال الكتاب فرانسيس فوكوياما وكاترين هايلز وكاري وولف ورامز نعام. ينقسم هذا البحث إلى جزئين أساسيين. الجزء الأول هو الجزء النظري. إنها الخلفية النظرية حول مصطلح " ما بعد الإنسانية" ويبدء هذا الجزء بإظهار الخلفية التاريخية وتوضيح مصطلح "ما بعد الإنسانية" وفقاً لنقاد وكتاب مختلفين وفقاً لدراساتهم الأدبية. بالإضافة إلى ذلك، يوضح هذا الجزء دور نقاد ومفكري "ما بعد الإنسان" من خلال توضيح دراساتهم الأساسية التي تؤدي إلى تفوق الأدب في عصر الرقمنة. الجزء الثاني يسلط الضوء على تأثيرات التكنولوجيا وخصائصها ونتائجها في المستقبل. علاوة على ذلك، يقدم هذا الجزء تحليلاً كاملاً لرواية "أبيكس" للكاتب رامز نعام. في ضوء ما بعد الإنسانية، تتعامل أبيكس مع شكلين مختلفين -ومتضادين إلى حد ما -لما "بعد الإنسانية لإظهار كيف تتعكس التكنولوجيا المستقبلية في الرواية.

**الكلمات المفتاحية:** ما بعد الإنسانية، التكنولوجيا، الأدب، رامز نعام، أبيكس