

ILLUSION OF AUTONOMY: CYBORG INTERACTIONS AND AI'S ULTERIOR MECHANISMS IN ANNALEE NEWITZ'S *AUTONOMOUS*

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ABSTRACT

This research paper explores the themes of Bio-tech, Bio-med and autonomy key in Annalee Newitz's *Autonomous*. The ground theory that supports the research objectives is excerpted from Donna Haraway's *A Cyborg Manifesto* (2016). Both the texts together provide an explicit image of cyborg world, blurred identities and the question of autonomy. This research further extends to comment on man's role in a machine dominated world, his role as an engineer, a generator, a creator and then as a subordinate of his own creation. Man's faculties, as perceived by today's human beings, seem to be lacking in tact and skill in front of the result of a project he himself initiated. Starting from the mundane everyday experiences that are affected by technology to an unbearable extent, the paper seeks to find the reasons and ulterior mechanisms behind the chaotic surface of problematic cyborg interactions. The conclusion on the aforementioned questions is drawn by following the narrative in the novel as well as the theory book so this article provides a deeper understanding of both texts as well as the practical life experiences happening around us all the time.

KEY WORDS: bio-tech, bio-med, autonomous, cyborg, gender, technology, mechanisms, pharmacology, machine

Introduction

This research project is an effort to explore the concept of autonomy as presented by the author of *Autonomous*. In her debut sci-fi novel, Newitz poses some really astonishing propositions regarding human robot relationship in the near future. The story is set in 2144, which is but a century away, and the plot includes many undercurrents from the present scientific research. This aspect makes one consider the social dynamics; advantages and repercussions of the advancement we currently strive to attain.

This study also investigates the nature of cyborg interactions; the relationship between humanoid robots and robotic men and among various communities in order to have a better understanding of blurred identity. Moreover, *Autonomous* presents the corporate world using AI and computational technology for attaining its ulterior motives. Humanity and its wellbeing are no more of the pharmaceutical concerns in a business setting. Jack Chen and Paladin are representatives of two different groups, the latter is indentured and strives to shift to autonomy which remains a mystery after all. This paper focuses on the idea of autonomy, keeping in account the significance of cyborg interactions and also detecting AI's hidden mechanisms working for the corporate setup at its back.

Annalee Newitz is primarily a science and technology research scholar and journalist. She

has run a number of science projects like io9 successfully. The novel, under consideration is her first work of fiction so it holds a good deal of a scientists' imaginary endeavour in the near future world. This research is designed to proceed by following Harraway's theory of cyborg in a post -gender world as presented in *A Cyborg Manifesto*. The complexities of identity seen in relation to the question of autonomy raising the human concerns above the barriers of gender, race and ethnicity opens new avenues of discoveries for the students of science fiction. Overall, it stimulates the mind to rethink the intersection of technology and identity, in a world of co-existence in more fluid ways.

Research Objectives

1. To study the relation of pharmaceutical advancement and it's unchecked providence in an automated global system in Newitz's *Autonomous*
2. To extensively examine the nature of cyborg interactions that how impactful they are in a postmodern world as portrayed in the selected novel
3. To investigate the term "autonomy" in relation to human and robots studying their depiction in *Autonomous* by Newitz

Significance

Commencing plainly with the introduction of a pharmaceutical pirate Jack Chen, Newitz's *Autonomous* then branches into various dimensions of human-robotic experiences. She highlights psychological complexities of the protagonist who is not sure about the validity of an act she is religiously practicing. Then the indentured robot Paladin along with following it's owner's commands ,has started to programme itself in a different manner to be autonomous. Meanwhile ,the reader observes a mingling of the technology and humanity portrayed through a number of characters. By the closing of this research, the reader will be

able to notice a bunch of concepts regarding humanoid robots and human neurological complexities that are not yet explored and run between the lines of the text.

Besides this, the descriptions and the narrative of the novel is also highly influenced by scientific diction pertaining to neuroscience, information technology and mechanical world. Human experiences are expressed in words that come from a world of machines and technology. This research raises concerns about man's perception and experience of the AI e.g., the idea that Artificial Intelligence claims to be the Augmentative Intelligence while it's omnipresence in human life is becoming necessary like oxygen. It has bad effects on primary human thought process and intellect patterns .That way, we come across the Abated Intelligence .It has make man dependent over it while itself ,it is not independent. It appears to be a vicious circle of interdependence, mingled identities and intertwined objectives.

Research Questions

1. How the politics of economics affects the bio-med advancement and its availability for the layman ? An analytical justification of protagonist's actions in Newitz's *Autonomous*.
2. How the cyborg communication is being popularized as a gesture of robotic inclusivity in human lives as accounted in Newitz's *Autonomous* ?
3. How autonomous are human beings and the robots in Newitz's technology driven world as she portrays in her debut novel?

Literature Review

Since the publishing of Newitz's *Autonomous*, a good quantity of literature is produced in its critical appreciation. Research scholars from various fields of education have tried to explore multiple aspects of the text and the plot itself.

Muhammad Raffi Adani scrutinizes the text of *Autonomous* on Marxist grounds saying that it shows a type of dominance that is acquired by intellect and cyber power. His proposal of this idea further includes in itself the three types of control i.e., ideology, state and dominance through power. He also accentuates the impact of this control which results in slavery.

Yagmur sees *Autonomous* through the lens of Post humanism and gender concerns. She compares it with McEvan's *Machines Like Me* to present a comparative study of various gender roles that robots play in a post human world. Although unlike McEvan Newitz does not really define the gender of Paladin yet as the story succeeds in plot, the reader comes to know that Paladin has a feminine mind and a masculine body. By identifying this and other points of relative interest Demir instructs her argument that robots are also working in the shadow of an anthropocentric understanding about binary genders.(2023)

Bay has analyzed Newitz's work from a different perspective that is of Posthumanism. He discusses the future societies as presented by Newitz in *Terraformers* and *Autonomous* which are multi-species organization and all of them consciously contribute for an urbanized, sustainable living place. He explores the use of technology and AI for production purposes and inclusive nature of a posturban human society.(2024)

Yeminici chose *Autonomous* as a text that shares the idea of vulnerability and precarity with two other science-fiction novels i.e., Bacigalupi's *The Windup Girl* and Doctorow's *Walkaway*. This research sees the novel as a posthumanist text containing undercurrents of the study of post-disaster societies, critical dystopias and modern species' precarities. The overall idea proposed is that of a dystopian society that is posthumanist and due to the vulnerabilities of mankind and robots, creates a precarious state of affairs.(2023)

In his review of *Autonomous*, Harrison touches upon almost all the possible thought threads of the novel. He aptly pin-points the technical limitations, linguistic inefficiency and conceptual instabilities. Besides that, he picks almost all the important themes in the story to comment upon. Such as starting with a Marxist view of Have and Have nots as far as the availability of certain drugs is concerned. He further continues the commentary on the compromise of basic freedom that man faces in the near future setting of the novel. He says that in the endeavour of giving rights of freedom to robots, man has entrapped himself in the law of indenturing which is neatly weaved in the plot of *Autonomous*.

Donna Haraway looks at the amalgamated realities of homo-robotic relationship in the light of socialist feminism. She further deems them as optical illusions. One can never be sure about these personal profiles. She calls it optical as well as ironic, so is the uncertainty of the vision of man in a mechanical universe around him. She adds that world is not a comprehensible thing, it is ambiguous, natural and crafted. She calls cyborg a fiction that is prevalent in our social structure and that it promises fruitful bondage of man and robots.(1991)

Sneft in her notes on reading Haraway claims that Haraway was particularly influenced by the French writers Monique Wittig and Luce Irigaray, who exhorted women to reject masculinist histories and instead urged them to write the truth about themselves through autobiographies. She further adds that Haraway has defined Cyborg in four ways

i.e., cybernetic organism, a hybrid of machine and organism, a creature of lived social reality and a creature of fiction. (2001)

Stoddard chose to study *Autonomous* as a social satire. He says that Newitz has successfully build a narrative that highlights the plights of copyright politics and that how many is striving to secure ownership in an online setup. Contents are easily available and copyright laws are of no help if put in a simple way. He also commends the way Newitz has portrayed the character of Jack Chen, who is but an entrepreneur in pharmaceutical industry. When she comes to know that her customers suffered due to the consumption of a drug that she supplied, she sets to bring things back on track. In this pursuit, she gets entangled in complex corporate politics. The corporate world is also an object of satire in his study as it is presented as a negative market that is meant to heal the suffering humanity but does the vice versa.

Pyles takes *Autonomous* quite critically in his review of the book. He raises questions on a number of loopholes of the plot. He claims that the storyline has shaky turns. Some characters are portrayed in an absurd manner such as the relationship of Paladin (a robot) and its human companion. Though it is a sci-fi and the writer is an acknowledged scientific journalist yet the information shared through text is highly imaginative and mixes up more than three domains of science that are otherwise quite different in their practical functioning. In short it can be said that Newitz has used the advantage of the genre to the fullest. (2020)

Research Gap

Newitz's *Autonomous* has intrigued the critics and research scholars to explore it with so many different approaches applying a number of variant methodologies yet Cyborg

interactions in the text are not fully studied. We find hints in works of some of the research scholars but this dimension of the novel, provides the possibility of a deeper study. This research claims to study Newitz's allusions to mingled identity along with a commentary on the use of AI in a setting where its importance has surpassed the formerly defined extents. Computational and bio-Technology has penetrated to the core of human existence. This research tries to answer the questions if identity, illusions and disillusionment of modern man, and AI's hidden algorithm which has been somehow put in shade due to the prevalent theme of bio-tech in *Autonomous* by Annalee Newitz.

Research Methodology

This research is intended to be done qualitatively. The method that will be followed is primarily the textual analysis; a study of the nature of dialogues between the selected characters and the critical investigation of narrative, and descriptions of the use of technology by human, humanoid robots and machines. It may include allusion from current technological trends and references from the documented effects of AI as provided by the most recent researches. To substantially validate the subject of cyborg interactions and identity concerns not only the conversations between robots and human characters in the novel will be scrutinized but our own dialogues with AI through the latest chat tools will be included in order to discern the complexities of the matter.

Limitations and Delimitations

This study of *Autonomous* by Annalee Newitz focuses on some aspects of the novel

and not all if its dimensions. Text possesses so many other important themes but this research is limited to the questions of dual identity, personal ownership and disillusionment. It covers the impact of AI on human behaviours too. But it does not delve deep into the details vested in the description of the structure and mechanisms of robots and environmental details in the future world in 2144. The world that is around the characters with all its fast paced technological apparatus is not a subject of study in this particular research. Moreover, only limited references from the medical and pharmaceutical advancement are supposed to be analyzed in relation with the title of the research.

Besides this, as far as the methodology is concerned, this research might have the hues of influence on the personal findings of the researcher in the today's practical world. As an interest and exploration of pharma trends has become the basis for this endeavour in academic research so the study is delimited to a point where it may include empathetic notes for the victims, but not affecting the credibility of the research and the resources considered during the whole process.

Data Analysis

This research is primarily a qualitative type of research guided by the aforementioned research objectives and questions so the analysis, coding and interpretations of the textual data are presented as follows along with the theoretical implication of Harraway's idea of Cyborg in

a post-gender world. Annalee Newitz does not teem the story with so many characters except where it is necessary or the agency of characters is inevitable. Her choice of characters is quite precise and measured. The profession, the demeanor, the language, the gestures, all the aspects of a person or even a machine are attended to in detail. Such are the characteristics of the major characters, Judith aka Jack Chen and Paladin. The description of their anatomy and physical frame helps the reader discern in the very first read that both these are two variant beings yet they have some chords connected. There is a connection between these generation Alpha human beings and the latest generation robots. It's the time in year 2144 in near future that successfully and acceptably accommodates these characters.

Bio-Med

The story starts from a news from Calgary where a home-workaholic girl has grabbed the attention of mainstream media, security agencies and the pharma giants. The girl is from an affluent family. Her parents always provided her with every kind of authentic performance enhancing and "well-being" drugs so that she might turn out to be a brilliant citizen and exceptional individual in the society. Now when they haven't compromised on the standards of drugs or supplements, the condition of their daughter becomes highly alarming. So much so that her neurological patterns do not allow any new command except that of striking the keyboard keys for her programming assignment. She has forgotten to eat or drink or if it can be said breathe even as she is being fed by a tube and supplied oxygen to breathe properly.

This account of the wrong use of biotechnology resonates so well with the cyborg realities of the twenty-first century that Harraway's opinion appears quite validated as she says, "A cyborg is a matter of fiction and lived experience that changes what counts as woman's experience in late-twentieth century. This is a struggle over life and death, but the boundary between science fiction and social reality is optical illusion." (Harraway, 2016. Pg.6). Later she

even lifts the restriction of gender from the Cyborg, “The Cyborg is a creature in the post-gender world; it has no truck with bisexuality, pre-oedipal symbiosis, unalienated labour, or other seductions to organic wholeness through a final appropriation of all the powers of the parts into a higher unity.” This lifting of the label makes research far more effective and applicable for the modern day science-fiction works. The research in hand, though contains female protagonist yet it doesn’t at a single moment show a gesture or comment based on gender. Rather it talks about the sublime feelings of satisfaction acquired through bio-tech and info-tech which are much more than the former human experiences. Newitz asserts, “Completion reward was so intense that it made you writhe right in your plush desk chair, clutching the foam desktop, breathing hard for a minute or so, but it was not like an orgasm, not really. Maybe it can best described as physical sensation perfected.”(pg.3)

In a pharma centric world, where minor human physical break downs are not treated naturally rather magically, a reaction of a performance enhancing drugs is not a new thing. Especially, among the patients of neurological disorders, epilepsy, cyber palsy, autism, ADHD, ASD SD and development delays in infant and young children, such reaction are a norm. The only difference is these reactions are treated on perpetual basis. Doctors, sometimes already warn about such incidents before writing the prescriptions. But the problem arises when in spite of taking all the precautionary measures, patients or the person using the particular supplements is affected to such a great extent that it becomes hazardous for his life. It happens the same with the girl in Calgary, who had no idea that what pill of economic politics had she swallowed down her throat. While describing special effects of the drug, Newitz accounts, “Under Zacuity’s influence, you got the feelings you were supposed to have after a job well done. There were no regrets, no fears that maybe you weren’t making the world a better place by fabricating another networked blob of atoms.” These effects were not limited to the mental peace or satisfaction, it also created certain sort of sensation in body as “it was more blindingly good than anything your nerve endings might read as inputs from the object – world.” (pg.3, Ch.1)

Now the question arises that whom should the parents of that affected girl turn to? The company that provides that drug namely Zacuity released it on experimental basis and Zaxy (the company) claims to be legitimate and certified so they are never ready to take the blame on them. Ultimately, the mainstream media plays its role and leads the investigation to the “Black-Market Pharma”.(Pg.2) So, all fingers are then pointed to an unknown person, an unknown organization, working anonymously to deprive people of the well-being supplements and to make their life pathetic by replicating such disastrous drugs. But this aspect of the story is not holistic. It has its loopholes. It has blind spots that this research tries to cover. The question to ponder over is not the work and network of black-market pharma in the whole world. There are, first of all, types of it. There are people who have zero concern for the humans and they sell cloned and duplicated drugs to earn money only. Some take part in this unholy race to keep their name shining as the pioneer of latest and advanced medicine. They do not contribute an ounce to the real pharmacology, but pretend to, by pushing the same drugs with new names and labels in the market. There are some companies, which try to work honestly yet professionally and what they do is provide authentic formulated medicine on the highest possible prices. The prices which are not accessible for a common man.

This is injustice exemplified that the people who do not have assets to spend on some diseases or disorders which are quite “expensive” in the real sense of the word, why they ever fall a victim to those. But as man can’t fight against nature. It cannot mould or turn its ways.

Nature works the way it works. Man then tries to make his own small room in the larger mechanism of the atoms. Jack Chen also tried to do the same. Her ancestors ascend from a Chinese town and she never had an interest in becoming a drug pirate or wandering on the surfaces of Arctic and Pacific without really knowing that which problems and enemies is she going to face next. She had that peasant demeanor though she is dealing with highly advanced technology in pharmacology as well as robotics. Her Sub-marine designed and maintained by her, works as her abode, work place, vehicle and what not. She, instead of, this job and life, had an urge to be grounded to Nature, or to be more precise, to do something for humanity. To provide for the deprived. To make things available for those who die because they can't afford it. These things couldn't be well apprehended by a person from a different background such as business or pharmacy. They would have considered the business point of view too. But Jack had to deliver these drugs to the diseased and affected people on the lowest possible cost so that their life may become less miserable. Newitz alludes to her peasant origin in this excerpt, "Jack Chen unstuck the goggles from her face and squeezed the deactivated lenses into the front pocket of her coveralls. She'd been working in the sun's glare for so long that pale rings circled her dark brown eyes. It was a farmer's tan... No matter how far from home, some things did not change."

The concept of accommodating dual identities, being a peasant and a tech-expert. Being from a humble background and attaining a place in the most advanced fields of bio-technology and that in Free Trade Zone, further paves way for the hybrid characteristics of the characters as well as organizations. She herself has been using the Age Reviving drugs, in order to keep her looks the same as before. She examines herself while standing in front of the mirror in her sub-marine while contemplating on the Calgary girl's case and the effectiveness of the drugs that

Zaxy produces or she replicates. The narrator comments, "Her body was roughly the same shape it had been for two decades. Her cropped black hair showed only a few threads of white. One of Jack's top seller was a molecule-for-molecule reproduction of the longevity drug Vive, and she always quality tested her own work." And here the head of the knotting thread lies as she realizes that "she had always quality tested it__ until Zacuity." One justification that she has for not rigorously following the usual process of duplicating the drugs is that it was a fun-time drug and one of her major concerns i.e., antivirals, gene therapies and drugs that saved lives. Also she didn't observe any unusual change in its molecular structure so she didn't bother to test it first before pushing in the market. Despite being a fun-time drug, such kind of drugs helped her a lot in getting her larger aims." She needed the quick cash from the Zacuity sales so she could keep handing out freebies of the other drugs to people who desperately needed them."(pg.4) She needed to provide medicine to people affected by a plague wafting across the Pacific Ocean." There was no time to waste. People with no credits would be dying soon, and the pharma companies didn't give a shit." This later part of the sentences, the indifferent attitude of pharma companies towards ever worsening health conditions all over the world is a reason that compels people like Chen to jump into this dirty business. From "science to ethics", she had scrutinized herself in every possible way. And now, for helping mankind, she stood on the verge of her own confinement or whatever the International Trade Organizations demand for. It is even more exciting to know that Jack was not alone, she was also connected to a faction of people in Iqualit who were working for the same cause.

Bio-Tech

Jack doesn't go unnoticed in technology oriented world. The authorities successfully trace and attack her at her submarine. An officer Elias with his assistant robot Paladin tries to trace her and during this mission, a strange bond develops between them. Paladin becomes highly affiliated with him and the emotional attachment blurs the boundaries of human and machine. The way he (Paladin) thinks like a woman but his body is designed in a manly structure shows his feelings and expresses his relation with Elias is astonishing. Paladin feels pain, agony, distress like human beings. Since the very beginning of his narrative, the way he feels pains on getting shot during a training campaign is alarming. The author gives an account of the incident in these words "It was the first true agony of his life. He felt the wound explode across his whole torso, followed by a prickling sear of unraveled molecular bonds along the burned fringes of his stump" (pg.14). He didn't have a heart as the essence of all feelings and emotions neither did he have a brain to logically apprehend the situation and react accordingly. Yet he had the characteristic of a brain and heart programmed in his memory system. He was a machine with a "single biological part, nested deep inside the place where humans might carry a fetus" (pg.14). He was a huge robot with wings like shoulders and arms which made him enormous to look at. He looked like a "humanoid bird" (pg.17). Elias's treatment of Paladin could also be a reason to make him more aware of the feelings and that how should he respond to human beings when they expect him to reciprocate the emotions during communication. As a partner, Elias always raised a brow to him for opinion and confirmation. This is the general view of modern man towards robots or AI. When they find something entangling, or a bit difficult to choose between, they turn to computer and information technology at once. In recent years the use of artificial intelligence in everyday life has excessively increased rather it has become a part and parcel of modern man's life. Every person uses it the way he finds convenient but nobody can claim to be completely autonomous in his work or performance. Technology is younger than the humanity yet it has taken the lead, a project of man is now leading him in an unnoticed manner. Taking help from AI in almost all the matters, puts human resources at a risk, and due to the blunders systems sometimes make, the credibility of these sources and media comes in question. As in response to Paladin's comment on Jack's position as a drug pirate or anti-patent terrorist, Fang (member of investigating team) tauntingly returned in these words: "words of wisdom from the newbie, who has never seen terrorism in his life" (pg.19).

On the other hand, while struggling against all odds and trying to secure some place in pharma industry for the sake of downtrodden ill people, Jack experiences a different level of intimacy with the indentured robot Threedee, she, at a point, is so overwhelmed that she notices him sleeping calmly in the lab, and makes herself believe that it had all the characteristics of a man, she reflects "this was not just a bio-bot, it was plain bio, A human" (pg.22). Not only this exchange of heartfelt emotions makes one think about the boundaries of human and machine rather the way robots control certain situations is notable. The presence of human around them looks just like a parody, a necessity of the occasion without any logical grounding for their being there. Newitz has portrayed the robots as complete and compact beings who always have an advantage over man and that is their iron body and senseless self. Yet they calculate the gestures and gesticulations so well that never miss on the emotional message that human beings try to convey. They feel happy, they feel sad, they act wisely, they respond wittily, they fight bravely, they strive rigorously and feel proud of themselves.

One reason why Paladin ,specifically intelligent is his urge to know things. He is always chasing the facts and information. When a question triggers him, it becomes a mission for him to know all the details. As he feels like a woman and thinks like a machine while his looks are like that of a man, it becomes a vexing question for him to know that if other robots are also the same way, or if it is normal to think and feel and appear the way he does. He starts his quest of the truth and information, and in the process, his abilities come to the surface in a more polished way. He perfectly comes to the definition of postmodern self or cyborg as proposed in *A Cyborg Manifesto* by Harraway, she says,"the cyborg is a kind of disassembled and reassembles, postmodern collective and personal self.... communication technologies and biotechnologies are the crucial tools re-crafting our bodies"(pg.33). It also perfectly explains the concept of simulacra in postmodern worlds that is "Microelectronics is the technical basis of simulacra_ that is, of copies without originals"(pg.36). Paladin, as a self, or as an individual is not aware of the asset of his being, his emotions, his identity. When Elias asks him about it that whose mind it was that was transplanted into his system , he showed complete ignorance of the matter, telling that he didn't know the source, his feelings were explicit yet the fountain from which these rose was the user of his-known. The narrator says at a point while commenting on the same aspect of the booting experiments,"These feelings came from a programme that ran in a part of his mind that he couldn't understand. He constantly strives to find his true identity, he clearly challenges the intelligent world out there that brought about his creation. The postmodern cyborg writing is all about that as Harraway(2016) says,"Cyborg writing is about the power to survive, not on the basis of original innocence, but on the basis of seizing the tools to mark the world that marked them as others"(pg.55). Even these boundaries of gender and identity become secondary, the survival and autonomy emerge as the principal discourse in human-machine synergy. Biological systems have seized to be organic anymore. Man's survival has become totally dependent upon biotechnology and informatics, life without technology appears to be below the standards of life. Harraway asserts time and again "Biological organisms have become biotic systems, communication devices like others. There is no fundamental ontological separation in our formal knowledge of machine and organism, of technical and organic (2016, pg.60).

This blurring of boundaries revolves around the triangular equation of C^3-1 that is "command-control-communication-intelligence; this is the very thing that has brought humans and machines to this intimate a relation that boundaries are no more bothered about by human beings or by the operated entities. Paladin is portrayed in the best of its elements as he uses its abilities and faculties in an experienced and well trained manner. He decides certain things, specific behaviors in response or reaction to Elias' actions. He, while carrying Elias on his back during a task, decides no to show his feelings about the rider whilst he gets an access to his patterns of emotions and feelings through the sensory data he receives by touch. He decides to not disclose this fact to Elias so that he may get an unrestricted access to his feelings and get to know about his view of Paladin. Its more of a kind of mind-reading and if robots gets this ability to such an exact and specialized level, they surpass human senses and they therefore stand a step ahead the mortal beings. They can easily be fool and deceive men, there communication with men does not beg words as Newitz has mentioned, "the bot decided to continue his human social communication test by not communicating"(pg 61). Not only human-robot communication but also the robotic communications among themselves show their ultra-mechanical features as they are shown to be capable of showing understanding by measuring silence and pauses without uttering a word. While talking to a bug, when Paladin disagrees and remains silent in order to not offend it, the bug realizes

it at once , Newitz gives an account of this articulate communication level in these words, "perhaps her silence made bug realize something her communications wouldn't have" (pg.184). So, this level of communication among the bots and human beings and robots is something quite advanced and fictional. We cannot say that it is impossible as we , in twenty-first century, witness and experience a number of interactions through different software and applications such as chat GPT, and other AI tools which make it look quite realistic.

Moreover, emotional and verbal communication portrayed by Newitz is not limited to a level of understanding only rather the bots get quite intimate with humans. Their sexual desires for humans and human's longing to connect to these machines through a medium that is specific and normal between humans only, makes it even more complex. Eliaz is shown constantly driven towards Paladin, Jack and Threzed have an intimate relationship, Jack being unable to prevent herself from getting physically involved with the bot. Fang , a robot , sagely explains this experience to Paladin , keeping the due distance of narrative and ideology from the human narrative. He is of the opinion that Eliaz tries to anthropomorphize Paladin .explaining the term he says, "Anthropomorphizing is something different. It is when a human behaves as if you have human physiology, with the same chemical and emotional signaling mechanisms. It can lead to misunderstandings in a best-case scenario and death in the worst" (pg.102).

Paladin tries to decode this emotional turmoil on his own which makes the boundaries of human and robot even more faded, Eliaz ,on knowing that his brain was transplanted or installed from a female soldier who was indentured to Federation and died during an expedition, he started seeing a possibility of his relation with Eliaz. Eliaz who earlier had been turning down Paladin's proposals ,saying he was not a "faggot" (pg.77), now started dotting on him. Newitz beautifully encapsulates the idea of gender as a human construct through a robotic voice in the narrative, explaining that these were men who labeled paladin as male or used the pronoun "he" for him based on their observation and judgment of how it looked. As Paladin had a giant carapace, which appeared manly, so he was called a he without taking into consideration the fact that he had the brain of a woman. This very thing is explicitly mentioned and accentuated by Donna Haraway in her *Cyborg Manifesto* (2016) that, gender is a human construct and that Robots or the machine or Cyborg is a post-gender identity. So, humans need to think of a post-gender way in order to understand and deal with them. If they keep on clinging to their old ways of thinking about genders, robots would become a labyrinth for them, where they will be lost forever without finding a way out of confusion and chaos. Newitz has rendered great details to the description of "Bio-tech Park" (pg.104), which is a symbolic representation of the modern world. On fictional level, it is a park in Oriental region of the world, having Muslim ethnicity around, with direct references to Mecca and performance of prayers, somewhere in Casablanca. The people in the park are shown to be coming from all types of professions, religions, cultures and engineering and non-engineering background. Everybody a stranger to the other, all working for common causes without exposing their estrangement or individuality to the other. Bots being everywhere, but not being recognizable for a common man. Even Paladin fails to detect electronic signals that they operate with. Symbolically, this is the twenty-first century representation of the inclusion AI in modern man's life in a very mid, unnoticed manner. Human beings are unable to mark even the use of algorithms and hidden mechanisms at some places. To sum up the argument, it can be said that Newitz has explicitly describes and narrated the involvement of technology in human life and she has provided a glimpse of the future which may hold humans and robots as closer as the characters aforementioned, blurring all the boundaries if

self and gender even ,leaving the considerations of nation, religion ,ethnicity, culture far behind.

Autonomy :An Illusion

Having explored the topics of bio-med and Bio-tech in Annalee Newitz's autonomous, this paper now turns to the question of Autonomy; Man's freedom in a technology led world and the free will of robots in performing their tasks. The faculties of thinking, taking decisions and getting emotionally affected make it quite difficult for a reader to choose between the two things, I.e., the freedom of man and the autonomy of robots. Though both these values are interconnected and dependent upon each other yet the question remains that which one is principal and which is the dependent one in both of these. Here is a study of text pertaining this specific area of research which might help in arriving at an acceptable conclusion for the readers. Haraway(2016) defines the term autonomous in these words;"To be one is to be autonomous, to be powerful, to be God; but to be one is to be an illusion and so to be involved in a dialectic of apocalypse with the other(pg.58). This definition aptly represents the dilemma of indentured robots and their struggle to get autonomy along with the human beings who are no more indentured yet not free really. *Autonomous* bears the theme of autonomy, freedom and indenture-hood apart from those of pharmacy and bio technology. Paladin at one hand strives to figure out the nature of is relationship with Elias and on the other hand struggles to get his autonomy key. Same is the case with Threezed, who is also a robot and is shown in an intimate relationship with Jack Chen. Jack removes his indenture chip and offers to buy him a franchise in order to work as a free member of the society and get his own independent economic position just like other humans and free robots around. The law of indenture, as described in the concerned novel, sets a robot free after twenty years of its formation and activation. The founder of the bot, according to the law, utilizes himself with the services of a bot for twenty years as a pay for life that he has given to that robot. After first twenty years, he is bound to set the robot free of his ownership. In this time, the bot learns to move around and deal in the world. The cases Paladin and Threezed show that the law would have been made keeping in view the consideration to autonomy given by the robots. It has become a major concern for them to think, move, act, decide and react the way they think is accurate. They are shown to be at a position where they lead the world, where human beings ask them for guidance, where their abilities surpass those of human beings. Man who has always enjoyed the crown among creatures for his thinking and reasoning faculties now stand bound handed in front of the technology. There is no doubt that man is the programmer of this software , a parallel universe for mankind, yet the impression that tech has imprinted on human mind with the passage of time is alarming for the autonomy of the man. Making a long story short, robots' quest for autonomy brings them in front of the man in a dialectic of control, power and survival.

The indenture law is applied to robots as well human beings but the injustice for humans in that law was that the robots would restart themselves and start a new life on acquiring autonomy but what about the submissive and sometimes traumatic experiences for the children of men and women , Newitz raises this concern in these words;"Humans might earn their way out, but there was no autonomy key that could undo a childhood like that"(pg.23). The period of indenture in order to be eligible to get autonomy key is twenty years , while most of the robots usually break down before completing this period of time, yet Paladin had an urge to survive and experience autonomy like humans, like the lucky human beings out there."He wanted to survive ___that urge was a part of his programming. It was what defined him as human-equivalent and therefore

deserving autonomy”(pg.27).The urge-turned-necessity was so strong for Paladin and his shared expedition with Elias that later on , they get a “simulation key”(pg.162) for the robot so that he may move as a free robot and may not be traceable. In a chapter titled NO.3 ROAD, Newitz hints at the drawbacks of getting autonomous for a robot, Lee, Paladin’s botadmin who installs the autonomy key tells him that she had never before had an opportunity to install a real or simulation autonomy key because none of the bots in federation ever completed that age of indenture, She also tells him that the key may cause memory removal which would make it difficult for him to continue his mission as he would not be able to retrieve large chunks of information. Here comes the question that is this autonomy, really a freedom, where a robot has to give all his memory and experiences of a whole score of years. If a thing comes with conditions and terms that what type of freedom it endows to the receiver. It is interesting to notice though that once Paladin gets his autonomy key, the pronoun used for him is changed to she. Earlier he has been programmed by the admins and given a masculine orientation keeping in view his physical orientation. But now , he is programming his features himself and has happily acknowledged, the mind that he received from a female donor so the narrator changes the pronoun to she from now on .Another feature that Paladin especially showcases is his urge to know more and more about things, about human and about robots like him.”Paladin experiences a new sensation, she has come to associate with her autonomy key. It was what humans would call curiosity”(pg.179). his curiosity leads him to learn more about the autonomy key, at a twenty-first century preserved mall, he goes to explore the evolution of the key where he finds three segments represented by History, Industry and Autonomy, making him understand that it is industry that always precedes autonomy(pg.183). While Paladin was in this phase of exploring and enjoying his autonomy key, he came across another robot Aktin, who had really critical views about the whole concept and which , to a great extent, disillusioned Paladin too. He was of the view that, ‘I don’t even believe in consciousness. When I’ve got my autonomy, I’ll still be programmed, and I’ll still need a job researching brain interfaces”(pg.194).At another point in the text , the other robot Threedee also makes fun of the autonomy key as he experiences a jobless tough life even after getting autonomous, he says to the bot-admin Med that he makes people autonomous to make them more miserable but it includes the acknowledgement of the fact that unless people or robots experience a thing , they keep on fantasizing it, same is the case with the autonomy, it is just an illusion, nothing else.

Autonomy appears to be more of a human construct, this is man who created, designed and programmed the robots and tries to instill in it , his own feelings and emotions and faculties. Man has been depending on myths for all these centuries except a few of them who broke away from the traditions and thought and practiced in a skeptic method. Here, in the novel, Newitz reinforces this idea through the character of Elias, he says to Paladin;I can’t stand the idea of a woman that I love not autonomous”(pg.245). He has his own suppositions regarding the autonomy key as if it would erase each and every bit of memory or previous data and as if robots cease to feel at all once they embark on the new journey of autonomy, while Paladin had better understanding of programming and the function of a key only. He says that the gain of autonomy does not bring really a havoc that the whole world would change.He still feels the same for Elias and deliberately decides to not disclose his true feelings and the functioning(for a matter of truth), perhaps he thought it a futile effort to make humans understand what they are not willing to do or accept.

These small traits, the curiosity, the urge to keep secrets, the longing to the partner , these are the qualities that man has intentionally developed in bots in order to turn them into friends and

pals and justify their place as the only go to persons in difficult times. Haraway(2016) says that “the machine is not an *it* to be animated, worshiped and dominated. The machine is us, our process, an aspect of our embodiment. We can be responsible for machines; we are responsible for boundaries, we are they”. So, it can be said that being autonomous for humans and robots is not really freedom, it's just an illusion.

Conclusion

This paper presents a study of Newitz's *Autonomous*, decoding three major themes of the text namely, Bio med, Bio tech and Autonomy. It presents the interlinked vicious circle of

economics and pharmacy for the poor and downtrodden, also highlighting the points which mix the humans and robots. They, the humans and robots, directly get affected by each other's feelings and emotions. The boundaries, as shown in the novel, making men behave like machines and machines like men. The debate on cyborg interactions and the illusions of freedom and autonomy provide a deeper understanding of man's place in modern world. It also highlights the blurred boundaries between two main components of modern society. This research tries to make clearer the cyborg image in Haraway's proposed vision that is, “A cyborg body is not innocent; it was not born in a garden; it does not seek unitary identity and so generate antagonistic dualism without end (or until the world ends); it takes irony for granted.” (2016, pg.65). To cap it all, it can be said that machine skill and automotive systems are not a sin, they have become the embodiment, postmodern world needs to utilize itself with their presence sagely.

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