Introduction

Human-machine relationship has been the issue of academic discussion since the time machine became an inseparable aspect of human life. This study examines how, in the form of humanoid robots, machines are endowed with qualities that are traditionally considered human qualities. This concept of humanoid robot is unique in terms of technical artifacts and human relationship to technology. The traditional idea of humanism that regards all other nonhumans as subordinate to humans cannot function in this case. The theoretical parameters like natural and artificial, mind and body, self-developing and externally designed are used to see whether the boundary between human and machines is blurred or not. This study exposes that the writer artistically blurs the boundaries between humans and nonhumans by presenting highly advanced humanoid robots with a complex Nexus-6 operating system that functions as both subject and object, user and used. Then, it moves to show the need of the present time, that is the companion relationship between man and machines. Such change gives new ways of dealing with modern problems caused by the technological advancement. Following qualitative research design and using critical analytical method for textual analysis, this study examines the dynamics of human-nonhuman relationship and blurred boundaries with the light of posthumanism. It uses the theoretical insights of Rosi Braidotti and Donna Harraway in the act of critical analysis of the textual data.

Keywords: android, artificial, blurring boundary, natural, posthumanism

Abstracts

This paper explores the issue of blurred boundaries between human and nonhuman (machines) in a technologically advanced world of Philip K. Dick’s novel, Do androids dream of electric sheep? employing theoretical perspective of posthumanism. It critically examines how machines, in the form of humanoid robots, are endowed with qualities that are traditionally considered human qualities. This concept of humanoid robot is unique in terms of technical artifacts and human relationship to technology. The traditional idea of humanism that regards all other nonhumans as subordinate to humans cannot function in this case. The theoretical parameters like natural and artificial, mind and body, self-developing and externally designed are used to see whether the boundary between human and machines is blurred or not. This study exposes that the writer artistically blurs the boundaries between humans and nonhumans by presenting highly advanced humanoid robots with a complex Nexus-6 operating system that functions as both subject and object, user and used. Then, it moves to show the need of the present time, that is the companion relationship between man and machines. Such change gives new ways of dealing with modern problems caused by the technological advancement. Following qualitative research design and using critical analytical method for textual analysis, this study examines the dynamics of human-nonhuman relationship and blurred boundaries with the light of posthumanism. It uses the theoretical insights of Rosi Braidotti and Donna Harraway in the act of critical analysis of the textual data.

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“registers its protest against the dehumanizing effect of bureaucracies and technology” (P. 422). He finds both bureaucracy and technology having a dehumanizing effect on humanity. His assertion is that androids and other technological innovations have just devoid human beings from humanity. They have mechanized human beings. Sims (2009) does not agree with him in his blaming technology for the devastating effects. He registers his claim that technology can be used as means to reclaim the essence of humanism in post-apocalyptic earth devastated by war. He points out, “The novel instead protests against the dehumanizing effect of individualism and demonstrates how technology can be used to reclaim the essence of humanity” (p. 86). He takes technology as a means to overcome the devastating effect of war. For him, gradually improving androids are the only possible companions for those who have been left on the earth.

Associating the novel with the issue of managing trauma, absence, and loss in an era of simulation Vinci (2014) highlights the way Rick hides his trauma of killing the androids taking it as anthropocentric responsibility. His affiliation with the duty of protecting survivors killing androids functions to avert his trauma. He feels relief in his anthropocentric duty (p. 89). Exploring the failure of empathy to secure Rick’s war tormented human world Galvin (1997) shows how human subjectivity is always under the attack by advanced technology. He claims just preference of human subjectivity is sure to fail to protect humanity. Therefore, Galvin shows the novel as a plea for harmony between man and machine. He states, “Ineffect, the narrative repudiates the idea of a confined human community and envisions a community of posthuman, in which human and machine commiserate and co-materialized, vital shaping one another’s existence” (p. 414). Galvin is a true posthumanist in his interpretation of the novel. He focuses on the envisioned ideal society where there will be perfect harmony between man and machine, life and technology.

Analyzing the novel from the Lacanian perspective Moghadam and Porugiv (2018) point out, “how the technological advances in the narrative of the novel create, shape, and sustain the reality for controlling the mass as well as for commercial purposes, and how different characters perceive this reality in the course of the story” (p. 11). It highlights technological advancement and its impact. Kucukalic (2009) sees the reality of the novel “as a system of messages, the uninterrupted communication between humans and a variety of mechanical devices such as empathy box, Penfield mood organ, and TV announcement” (p. 73-74). His focus point is the smooth communication of man and machine.

The ideas of the critics mentioned above are important to shed light to my issue in the novel and create my position. I agree with Jordon Greenblatt regarding his concept of reverting traditional hierarchy. The difference is his concern with emotion and rationality but my concern is machine and human. He subverts the hierarchy between emotion and rationality and my aim is to subvert the hierarchy between human and machine. In the debate between Namara and Sims, I oppose Namara’s dehumanizing effect of technology and support Sims in his depiction of the positive impact of technology in the post-apocalyptic world. Namara blames technological advancement for the defects of the modern world. He has forgotten the positive sides. Sims’ focus on the positive aspect of technology in the war-tormented society is positive. However, he has not gone to the aspect of man’s assimilation with technology. My point of departure is my focus to that aspect of technological advancement, which has installed almost all human qualities in machines like androids leading to blurring the supposed distinctions. Vinci and Galvan have their concern with the emotional aspect. First is talking about trauma in the era of technology and second talking about failure of empathy to create strong human identity. I support their point as they show the decreasing emotional aspect of human beings. This is applicable in my case to show the decreasing emotional aspect of man leading him/her near to machines. My departure is my emphasis on the aspects of technological advancements that have eliminated the man machine distinctions by installing the qualities like self-regulating, group instinct, emotional response etc. to machines. Moghadam and Porugiv stress the role of technology in narrative whereas Kucukalic’s focus is the smooth communication of man and machine. Both relate the novel with the benefit of technology. My point is to see how new technologies have blurred the previously set boundaries between man and machine.

To the best of my knowledge, I have found hardly any serious academic research has been conducted on this novel stressing the aspect of blurring boundaries between human and machine. Thus this research tries to fill this gap.

**Materials and Methods**

This research work follows the qualitative research design accessing data from both primary and secondary sources. Selected primary text *Do androids dream of electric sheep?* by Philip K. Dick is primary data under scrutiny. Including this text, other books, academic journals and different internet sources have been used to support the claim. Critical, analytical and interpretative methods are used for analyzing textual data using critical insight of posthumanism, especially focusing on the ideas of Rosi Braidotti and Donna Haraway.
Theoretical Framework

As an attempt to address the problems brought by Humanism’s defect of universalizing particular qualities is the beginning point of posthumanism. Emphasizing this point, Braidotti (2013) argues, “Humanism’s restricted notion of what counts as the human is one of the keys to understand how we get toposthuman turn at all” (p. 16). Anthrocentrism that became the core of Humanism proved greatly problematic. Whether it is the case of marginalized people, animals, plants or machines, they attempt to create otherness. This creation of otherness is challenged gradually. The attempt is to challenge human subjectivity and focus on objectivity. Many philosophers like Nietzsche, Foucault and Fukuyama supported this challenge. These critical thoughts dismantled western metaphysics of anthropocentrism.

The advancement of technology with artificial intelligence, robotics, nanotechnology and cloning together crumble traditional humanism and show the essentiality of new philosophy defining human beings and their relation with machines or technology. In such a context, posthumanism “works instead toward elaborating alternative ways of conceptualizing the human subject” (Braidotti, p. 37). As humanists neglect subjectivity of marginalized people, animals and plants, they also show negligence toward the autonomy of machines. Increasing self-dependency of machines troubles them. “More specifically they neglected the current state of autonomy reached by the machine” (Braidotti, p. 43). Posthumanism becomes the philosophy beyond anthropocentrism giving equal place and value to living beings as well as non-living machines. This idea leads to the expansion of the notion of life toward the non-human or Zoe. The move to radical posthumanism “transposes hybridity, nomadism, diaspora, and creolization process into means of re-grounding claims to subjectivity connection and communication among subject of the human and non-human kind” (Braidotti, p. 50). The posthumanism movement defies the humanist notion of purity, established originality and emphasizes hybridity, nomadism and diaspora. It aims at total re-grounding human subjectivity by making the connection of human and non-human. Answering the question of uncertainty after the end of classical humanism, Braidotti argues, “The end of classical humanism is not a crisis but entails positive consequence” (p. 51). We should be hopeful of the positive consequences it might bring to our world. It leads to the equal existence of living and non-living beings or machines.

Another posthumanist Harraway (2004) does not use the term posthumanism but shows her strong concern with this philosophy. She gives equal position to nonhuman entities or machine calling ‘companion species’ and names the hybrid of human and machine as cyborg. Harraway states cyborg as creature simultaneously animal and machine, natural and crafted will be the future of humanity. She predicts the possibility of total breakthrough of the boundaries between humans and nonhumans in coming days not only between humans and animals but also between humans and machines. She writes, “Late twentieth-century machines have made through ambiguous the differences between natural and artificial, mind and body, self-developing and externally designed and many other distinctions that used to apply organism and machine” (p. 11). She clarifies that the traditional distinctions are no more applicable for drawing the lines between man and machine.

Based on Harraway’s arguments we can distinguish the qualities that are traditionally associated with humans and machines. Being natural, having a mind and self-developing are the qualities that belong to humans and artificiality, having a body and being externally designed are the qualities that belong to machines. However, at present, these qualities are mixed with each other. Machines control human beings and they are independent with self-regulating systems. The aforementioned parameters and critical insights are used as tool to analyze the primary text in this study.

Results and Discussion

This study explores and scrutinizes how Do androids dream of electric sheep? problematizes the relationship between humans and nonhumans in the technologically advanced world where most activities of humans are controlled or enhanced by technologies. The anthropocentric relationship has been threatened and lines separating human and machine have been blurred here. Previously accepted differentiating qualities like natural and artificial, mind and body and self-developing and externally designed; are not clear in the world projected by the novelist. It is the reality that human intelligence created artificial intelligence. However, it has gone so far that sometimes the creator is posed a challenge. The concept of humanoid robot is unique with its complex intelligence that demands total change in the older line of humans- machines relation and moves for redefinition. The position of the androids in the novel with the Nexus-6 operating system is highly advanced and poses a break in the traditional narrow concept of machine.

Androids Exhibiting Humanitarian Qualities

Machines are bodies that are designed by a certain genius mind. However, technology has moved so ahead that traditional mind body association with man and machine has become invalid. Modern machines are not limited to just the body but with complex phenomena of mind performing different
complex activities. The androids, which are very important in the novel, have very complex mechanisms of mind. They are not just externally manipulated but are internally guided. They have the Nexus-6 operating system, which has extreme options and potentialities.

The Nexus-6 did have two trillion constituents plus a choice within a range of ten million possible combinations of cerebral activities. In 45 of a second an android equipped with such brain structure could assume any one of fourteen basic reaction postures (Dick, 1968, p.11).

This complex mental structure of the androids has surpassed different limitations we have posed on machines or technology.

Technological advancement has moved to self-control. Advanced machines are no more dependent on humans for their activities. Sometimes their moves greatly surprise the creator with unexpected manipulation of the assigned features and strange performance. Sims argues, “Technology is now under its own control” (p. 69). He sees the autonomy of technology that challenges the traditional concept of human control. The complex artificial intelligence like that of Nexus-6 has crumbled the traditional concept of preferring natural over artificial in the case of intelligence. The androids of the novel are very smart to perform even difficult and creative tasks like singing.

“Androids I would argue works at inverting this evaluation or at least at deconstructing it by eroding the boundaries between the real and artificial between humanity and technology” (Sims, p. 69). This deconstruction of traditional boundaries leads to the redefinition of the relationship. Now anthropocentrism does not function, there is a need of companion relationship.

Logicality, argumentative capacity and creativity are natural human qualities. We never think that they can be associated with machines of artificiality. However, the technologically advanced world that is depicted in the novel has surpassed them. The android LubaLuft shows her great potentiality in singing. Her excellent quality impresses bounty hunter Rick who rates it as the best. “On the stage LubaLuft sang, and he (Rick) found himself surprised at the ability of her voice, it rated with that of the best even that of notable in his collection of historic tapes” (Dick, p. 39). She exceeds established singers. Her cleverness and logicality come out in her encounter with Rick for taking the Voigt Kampff test. She appears as a perfect rhetorician who speaks considering the arguments of opponent. “It is exactly this deceptive potentiality that allows androids to challenge humans to redefine their own idea of technology and themselves” (Sims, p. 72).

Her blame to Rick as a murderer living in disguised form and her proposal of taking his test reveal her smartness, “Maybe there was once a human who looked like you, and somewhere along the line you killed him and took his place. And your superior don’t know” she smiled as if inviting him to agree” (Dick, pp. 40-41). Her ability to raise counter questions from the point posed by the opponent is self-developed quality. Her insistence of taking his test is not only logical but also ethical. Regarding such ability of modern technology Braidotti writes, “All of them share a crucial feature: they have made it technologically feasible to bypass human decision making at both operational and moral level” (p. 44). Rachael Rosan, another android, possesses many other strange qualities that are difficult to believe as qualities of a machine. She even offers her help to a bounty hunter for identifying androids.

Machines are not expected to desire for long life, never show their group consciousness, jealousy and revenge. These are the qualities of natural beings. Machines serve the maker until he/she desires. It is just a subordinate of human beings. We believe that machines “generally lack abilities to know others and/or empathize with or understand the feelings of others” (Greenblatt, p. 42). Feeling and understanding others are normally assigned to humans or living beings. However, the androids of this novel are exceptions. They kill their owner for freedom and use all their skills to live longer. The android Polokov wounds the bounty hunter Dave and dares to attack Rick. LubaLuft expresses her utter pain and suffering at the time of retiring. “She began to scream, she lay crouched against the wall of the elevator, screaming” (Dick, p. 53). Her cry reflects a new quality of machine similar to human emotion. Rachael Rosan makes her full effort to protect other androids. She wants Rick to return home, leaving his effort to retire them. She shows her fellow feelings for the escaped androids. Her readiness for sexual activities is her sacrifice for the group. She appeals him to return, “You won’t be able to retire any more androids; it won’t be just one, it’ll be the Battys and Stratton too. So go home to your goat. And get some rest” (Dick, p. 83). Rick is not convinced by her words and goes to retire the remaining androids. That makes Rachael angry. She kills Rick’s goat in jealousy and revenge for his action. The qualities like fellow feeling, desire for life, jealousy and revenge that appear in android are no more limited to humanity. These advanced machines have shown them weakening the lines separating man and machine.

Questioning Humanitarian Qualities in Human Beings

The beginning of the novel is a beautiful example of the technological dependency of humans that questions the traditional concept of self-regulating and externally designed system. Both the characters Rick Deckard and Iran depend upon ‘mood organ’ to determine their mood, which is the most natural quality
of human beings. The great surprise is the effect of mood organ that leads to argument, relaxation, depression and so many other human qualities. Iran argues with Dick that if she sets greater venom of the mood organ their arguments will be more forceful. “If you dial!”, Iran said, eyes open and watching, “for greater venom, then I’ll dial the maximum and you’ll see a fight that makes every argument we have had up to now seem like nothing” (Dick, p. 1). What then is the quality of self-regulating? Where has the naturalness gone? It is more illusory than real. Now nothing is natural but automated. Dependency of humans to machines for strong argument shows the reversal of the idea of self-regulating and externally designed. Even in the human relationship, naturalness has gone and what dominates is artificiality and externally designed enhanced by modern technology. Regarding this aspect, Harraway argues that modern machines have surpassed such traditionally set boundaries. The distinction between natural and artificial, and self-regulating and externally designed systems are merged (p. 11). Human beings lack human qualities. They resemble with traditional concept of machines lacking emotions and feelings.

The novel highlights the quality called empathy, a natural human quality, as key to distinguish humans and androids. The android Garland affirms that empathy is something that people have but not the androids. “It would seem, we lack a specific talent you human possess. I believe it is called empathy” (Dick, p. 50). The VoigtKempf test is designed based on the empathetic response that humans show to animals and androids lack. Our objection regarding this issue concerns Isidor, who is highly humanitarian but disregarded by human beings. He is assigned as second grade lacking sufficient IQ. What does it indicate? If empathy is the crucial factor, why is he discriminated against? His reaction to the spider is sufficient to indicate that he has better empathy. However, the discrimination he faces in the human world mocks the attachment human beings show to animals. Vinci (2014) critically examines this situation of the novel and writes, “Animals, then, are scapegoats for human actions and a human lack of empathy” (p. 101). Animals are bought and sold; cared and rared not for animals but to show that human beings have the quality of empathy. But our critical observation proves the opposite. Isidor’s pathetic situation as a special one is indicated by TV “They inform him in a countless procession of ways that he is a special wasn’t counted. Had no use” (Dick, p. 7). This clarifies that human beings can feel excluded from the human community even in the presence of other humans. In such a situation, we can assume that their attachment to animals is not pure but showy. Repeatedly Rick shows his empathy toward the androids. Either it is the case of Lubaluft or Rachael Rosan; he is emotionally attached to them. He accepts, “Most androids I’ve known have more vitality and desire to live than my wife” (Dick, p. 37). This indicates the liveliness of androids more than humans do. Rachael expresses her love to Rick openly. What does it indicate? It is the reversal of order. Empathy is no longer limited to humans in an older form.

Mercer’s presence shows the necessity of empathy in the human world to differentiate machine and man. However, its presence is very abstract and does not give much meaning. Mercer is in crisis and declares, “How can I save you, the old man said, ‘If I can’t save myself?’” (Dick, p. 52) Mercer’s crisis indicates the crisis of empathy, the most distinguishing feature of human beings. Even in the instance of the empathy box, technology is the means through which reality comes to presence. More than others, this event gives the message that in technologically influenced present world, for the execution of empathy also we need the support of machine and technology. Nothing is limited to just human world. In the novel, “However the spiritual movement necessary to configure the human relation to technology is realized by technical artifact” (Sims, p. 80). My observation about the significance of the empathy box is sharing. In a world, which is dehumanized by individualism and selfishness, sharing is the cure for the frustration people feel. This sharing becomes possible on a broader level only with the support of technology. Therefore, technology is the essential aspect of the present world.

**Transformation from Anthropocentrism to Companion Relation**

Rick Deckard’s transformation is very important in the novel. In the beginning, we find him very confident in his job of bounty hunting. He shows his anger to androids and calls them ‘killers’. However, the more he encounters the androids, his confidence is shaken. He begins to disregard his own job. He becomes positive to them. His word ‘killer’ changes into ‘best singer’ and finds androids livelier than his own wife. His decision to leave the job after completing this mission is symbolic of his acceptance of the world with artificial machines. He regrets after killing Lubaluft. “They can use androids, much better if andys do it. I can’t anymore; I have had enough. She was a wonderful singer. The planet could have used her. This is insane” (Dick, p. 54). Polokov is a scavenger and Lubaluft is an excellent singer. What is the significance of retiring them? It is better if they are let to live longer harmonizing with humans. As Harraway argues, “We have moved to the society in which; people are not afraid of their joint kinship with animal and machine” (qtd. in Vinci, pp. 93-94). This quotation depicts the truth of the fictional world. Different changes have buffeted modern society and created a situation where kinship between animal and machines is possible. This
transformation of both character and the society paves path for new world.

The passion of Rick toward real animals changes into the acceptance of artificial one at the end of the novel. He accepts, “The electric things have their lives, too. Poultry as those lives are” (Dick, p. 100). This change in his inclination indicates the acceptance of the posthuman world with gradual acceptance of changing parameters of man and machine. It is the movement to the broader human community. “The narrative repudiates the idea of confined human community and envisions a community of the posthuman in which human and machine commiserate and materialize vitally shaping one another’s existence” (Galvin, p. 414). Galvin’s ideas represent the reality of new world. Our critical examination of Dick’s fictional world exposes sufficient data that proves that the writer condemns the anthropocentric world and promotes the posthuman world with companion relationship between human and machines. The novel envisions and appeals for a broader harmonious community of human and machine. In that,new community where the relationship between man and machine will be companion relationship not hierarchical.

**Conclusion**

Our discussion in the preceding section takes us to the conclusion that the presence of the androids with almost all human qualities in the novel has led to the blurring of the boundaries between humans and nonhuman machines. The advancement in science and technology has moved to the direction where traditional definition of humans and machines needs redefinition bypassing human subjectivity. The dependency of humans on technology for determining their mood, the most natural human quality, has challenged the concept of self-regulation. The androids like LubaLuft, Rachael Rosan, Pris, and Batys are extremely natural and possess the natural qualities of love of life, struggle for survival, protection of groups, jealousy, revenge as well as complex mental operating systems. They are not just artificial and externally designed but more natural with internal functioning mechanisms. They have considerably merged the differences of natural and artificial, mind and body, and self-developing and externally designed.

The conclusion of the novel indicates the movement to the new posthuman vision of subjectivity or ethics. Rick’s acceptance of the valid life of others, characterizes his acceptance of a changed world. His act of abandoning his desire for real and accepting the life of the electric animal (toad) is the acceptance of the posthuman world violating humanism’s central unifying concept of self. He moves to create another vision of the self. Then he enters the final stage of accepting his posthuman identity.

**Declarations**

**Ethics Approval and Consent to Participate**

I declare that this research/review was conducted ethically.

**References**


