IBAD Sosyal Bilimler Dergisi
IBAD Journal of Social Sciences

IBAD, 2020; (Özel Sayı): 171-179
DOI: 10.21733/ibad.798248 **Özgün Araştırma / Original Article**

Asimov'un *I, Robot* Eserinde Teknofobi ve Robot Eylemselliği

Dr. Kübra BAYSAL[1*]

Geliş tarihi: 22.09.2020
Kabul tarihi: 18.10.2020

Atıf bilgisi:
IBAD Sosyal Bilimler Dergisi
Sayı: Özel Sayı **Sayfa:** 171-179
Yıl: 2020

This article was checked by *iThenticate*.
Similarity Index 2%
Bu makalede araştırma ve yayın etiğine uyulmuştur.

[1] Ankara Yıldırım Beyazıt Üniversitesi, Türkiye, kbaysal@ybu.edu.tr
ORCID ID 0000-0003-0476-4887

* **Sorumlu yazar**

ÖZ

Rus yazar ve bilim insanı Isaac Asimov tarafından 1950'de yazılan *I, Robot*, gelecekte, 2040'lı yıllarda, insanlar ve makineler arasındaki ilişkiler üzerinden bir arada örülmüş dokuz hikayeden oluşan bir koleksiyondur. Gazeteci olan kitabın anlatıcısı hikayeleri aktarırken, robopsikolog olan Dr. Susan Calvin, yeni teknoloji çağının başlangıcından beri U.S. Robots and Mechanical Men adlı şirkette karşılaştığı "robotik" olayları ona anlatmaktadır. Dr. Susan Calvin, şirketin iç sistemini tasvir ederek robotiklerin doğası ve yasaları, zaman zaman yasaların nasıl ihlal edildiği veya tersine çevrildiği ve teknofobi nedeniyle insanlar tarafından robotlara karşı nasıl ayrımcılık yapıldığı hakkında bilgi vermektedir. Hikâyelerde yer alan robotların çoğu, temelinde insanları korumak için tasarlanmış olan mükemmel robotik sistemine aykırı bir şekilde özerklik, bilinç ve eylemsellik kazanır. Böylece, bu çalışma, Asimov'un kitabındaki özellikle altı hikayede görülen teknofobi ve eylemselliğin robotlar tarafından somutlaştırılması meselesini insan-sonrası (posthuman) kuramı yoluyla ve yazarın biyografisine değinerek incelemeyi amaçlamaktadır. Son olarak çalışma, posthümanizm perspektifinden kitabın bir uyarlaması olarak *I, Robot* filmini ele alacaktır ki bu da teknofobi ve robot eylemselliği konularının bir arada verilmesi gibi bu çalışmanın yenilikçi yönünü yansıtmaktadır.

Anahtar Kelimeler: robot eylemselliği, posthümanizm, teknofobi, Asimov.

Technophobia and Robot Agency in Asimov's *I, Robot*

Dr. Kübra BAYSAL[1*]

First received: 22.09.2020
Accepted: 18.09.2020

Citation:
IBAD Journal of Social Sciences
Issue: Special Issue **Pages:** 171-179
Year: 2020

This article was checked by *iThenticate*.
Similarity Index 2%

[1] Ankara Yıldırım Beyazıt University, Turkey, kbaysal@ybu.edu.tr
ORCID ID 0000-0003-0476-4887

* **Corresponding Author**

ABSTRACT

Written by the Russian author and scientist Isaac Asimov in 1950, *I, Robot* is a collection of nine stories interwoven together through the relationships between humans and machines in the future, around the 2040s. The narrator of the book, a journalist, recounts the stories while a robopsychologist, Dr Susan Calvin, passes him the "robotic" incidents that she has encountered in the company, U.S. Robots and Mechanical Men, since the beginning of the new technology age. Depicting the inner system of the company, Dr Susan Calvin provides information about the nature and the laws of the robotics, and how the laws have been violated or reversed at times and how the robots are discriminated by humans because of technophobia. Most of the robots in the stories acquire autonomy, consciousness and agency interfering with the well-set system of robotics which is designed to protect human beings in the first place. Hence, this study aims to analyse technophobia and the matter of embodying agency by robots in especially six stories in Asimov's book with reference to the posthuman theory and the biography of the author. Finally, it will view the film *I, Robot* as an adaptation of the book from the perspective of posthumanism, which reflects the innovative aspect of this study in the fashion of the simultaneous analysis of the technophobia and robot agency issues.

Keywords: robot agency, posthumanism, technophobia, Asimov.

INTRODUCTION

A famous science fiction writer and a professor, Isaac Asimov (1920-1992) had his degree in Chemistry at Columbia University. His literary career began around the 1950s and he published more than 500 works (Holmes and Homol 2009) throughout his life. His most popular work is the *Foundation* trilogy for which he had a Hugo Award. He was known as an accomplished science fiction writer which explains why he also received a Nebula Award for his *I, Robot* story collection.

Asimov spent his childhood and adolescence during the two World Wars, during which he witnessed great developments and the rise of new genres as well as subgenres in the literary field. By the time "juvenile science fiction book" reached its peak in the 1950s, popular sci-fi writers like Frederik Pohl along with Asimov had already become devoted fans of science magazines and pulp fictions (Svilpis, 1983, p.22). Like his British predecessor, Aldous Huxley, who searched for the spirituality beyond strict rational thinking (Yılmaz, 2018, p.72) and criticised "the binary oppositions" (Kaya, 2018, p.99), Asimov was after what is beyond the set system of technology: ethical, moral and spiritual probabilities. Both as a result of his interest in science fiction writings and his academic career in Chemistry, Asimov was able to merge his scientific knowledge with narrative, and thus created his unique stories presenting the individual stories of unique robots. Besides, he coined such new words in the science fiction genre as "positronic" which means combining the particle with positive side of the electron, "psychohistory" as the interpretation of history through psychology and "robotics" which is the study of robot technology and "social science fiction" which reflects the transition from space fiction to the social human situation (Keller 2006).

Asimov's stories usually have similar patterns: initially a robot-related problem emerges in which the robots violate or ignore the laws of robotics in some way. Then, the human beings try to restore order even if it eventually costs the existence of the robots. At last, the misjudgements and misunderstandings are resolved. This is the general pattern in *I, Robot* stories. Asimov transfers his experience of the world wars through his depiction of the chaotic world and the dramatic and post-apocalyptic situation of the humankind, which is exemplified in these stories. Depicting a dystopian world where robot autonomy is feared and there is a growing feeling of technophobia among the humankind, the book indeed puts forth the positive qualities of the robots unearthed only when they achieve autonomy. In this regard, this study is innovative in terms of involving the namesake film into the perusal of two opposing robotics aspects in the world of *I, Robot*, which indeed mirrors the real world; namely, technophobia and agency, as rendered possible from the posthuman perspective.

1. Technophobia versus the Autonomy of Robots

Asimov's *I, Robot* collection consists of nine stories describing the anti-human and human characteristics of the human-made robots: namely "Robbie", "Runaround", "Reason", "Catch That Rabbit", "Liar!", "Little Lost Robot", "Escape!", "Evidence" and "The Evitable Conflict" (Asimov, 2001, p.1[1]). The main emphasis of the stories except for "Runaround", "Liar!" and "Escape!" is either on the fear and prejudice of human beings about the robots or on the autopoietic (self-regulating) quality of the robots that poses a threat to the future of humanity and violates the Three Laws of Robotics created by Asimov in his Robot narratives. The remaining three stories are mainly about the three laws of robotics and the robotic brain complying to these rules and getting confused once the two rules overlap.

Emerging around the 1950s, Cybernetics underlines the high leap of technology, technological devices as well as apparatuses and the information technology up to the twenty-first century. At this point, theorising on posthumanism, Katherine Hayles discusses the historical development of cybernetics in four stages by referring to the first emergence of robots, their autopoiesis and virtual quality until the 2000s:

> The three historical formations that I discussed, marked by first-order cybernetics from 1945 to 1960, autopoiesis or second-order cybernetics from 1960 to 1985, and virtuality

[1] From this point onwards, references to the book *I, Robot* by Isaac Asimov will be indicated with only page numbers.

> or third-order cybernetics from 1985 to 1995, have now progressed to a fourth stage. (2006, p.161)

The gradual progress of technology evokes a myriad of emotions in the humankind about the vague potential of the robots and the future of the world. Especially after the tragedy of World War II and the technological weapons used for destruction, there has been a growing dislike and phobia of technology, machines and cyborgs in public.

> Known as "Giant Brains" these artificially intelligent beasts [named MARK I, COLOSSUS, ENIAC and UNIVAC, which were developed by the U.S. army] arose from World War II military objectives- breaking Nazi secret codes, launching missiles, guiding anti-aircraft weaponry, and constructing atomic bombs. Their link to weapons and the godlike power those weapons bestowed helps explain the artificial intelligence [AI] technophobia that arose in the 1950s. (Dinello, 2005, p.87)

All these developments hence find their reflection in Asimov's stories through human characters judging and ignoring the robots for their very nature. Seen as a part of the "military" and a symbol of "capitalism", cyborg arouses uncanny feelings in the human soul, therefore, causes protests and provocations in the human community (Hayles, 2006, p.159). Like everything else othered by the anthropocentric mind-set, the cyborg is an alien aspect for humanity and an unnatural monstrosity. Meanwhile, the posthuman philosophy abolishes these boundaries emphasised in the traditional humanism as governed by Cartesian dualism. As a result, the established differences between "human, animal and technology" blur (Bolter, 2016, p.1).

Furthermore, Asimov's robots often violate his three laws presented in the book which is why scientists are left with no other choice but to destroy them at the end of the incidents. It is discovered that in time the robots acquire the skills to think and decide on their own, therefore turn out to be conscious, autopoietic and human-like beings. Therefore, they begin to disregard the three laws soon. At this point, the first law of Asimov's *robotics* (1942) is that "A robot may not injure a human being or, through inaction, allow a human being to come to harm" whereas the second law is "a robot must obey the orders given it by human beings except where such orders would conflict with the First Law" and finally the third law, "a robot must protect its own existence as long as such protection does not conflict with the First or Second Laws" (27). In this regard, Murphy and Woods argue that "Asimov's laws are based on functional morality, which assumes that robots have sufficient agency and cognition to make moral decisions", resembling humans (2009, p.14). However, the robots indeed lack the notion of human morality in their design, which explains why they turn catatonic under stressful circumstances as reflected in several *I, Robot* stories.

Likewise, the stories "Robbie", "Reason", "Catch That Rabbit", "Little Lost Robot", "Evidence" and "The Evitable Conflict" denote the technophobia of the human beings for robots and the agency or autonomy of the human-made robots. In the introduction part of the book, Dr Calvin is presented as a scientist like Asimov himself, having "obtained her bachelor's degree at Columbia in 2003 and began graduate work in cybernetics" (2). Later in 2008, she takes part in the United States Robots as a robopsychologist and becomes the first practitioner in this new field. As she tells the robotic happenings in the company, she starts with the story titled "Robbie". It is about the robot, Robbie that is taken into the Weston family's house to nursemaid their daughter, Gloria. To her mother's contempt, Gloria grows rather fond of the robot in a short while. The robot is "stubborn" and acts "emphatically" as he plays with her (6). Mrs. Weston dislikes and frightens Robbie whenever she sees him. Robbie feels her hatred as deep as a human being and fears from her: "Gloria's mother, however, was a source of uneasiness to Robbie and there was always the impulse to sneak away from her sight" (7). She treats him brutally and tells him to get out of her sight. She is so discriminative against Robbie that she wants to send him away as she speaks to her husband expressing her distrust and contempt for Robbie as a robot:

> I won't have my daughter entrusted to a machine — and I don't care how clever it is. It has no soul, and no one knows what it may be thinking. A child just isn't made to be guarded by a thing of metal. (9)

She achieves her aim and gets rid of the robot by sending him back to the factory where he was produced. However, Gloria cannot forget him despite her parents' efforts and buying her a puppy to keep her occupied. She protests and defends the humane side of the machines and calls the robot as "him" as opposed to her mother's "it": '"He was not no machine!" screamed Gloria, fiercely and ungrammatically. "He was a person just like you and me and he was my friend. I want him back. Oh, Mamma, I want him back'" (11). Finally, the father, George, decides that they should take Gloria to the factory to show her how the robots are produced so that she can realise that they are not human beings. As they execute the plan, Gloria sees Robbie in the factory and runs towards him. However, her life gets in danger as she does not see the machines around her. Robbie saves her life in the last second and her parents are relieved at the scene. At that moment, Gloria's mother understands that George has set everything up and brought the girl and the robot together as part of his plan. She also realises the human side of the robot as Robbie recognises Gloria after a long while being apart and saves her life by risking his own existence. In the end, Gloria and Robbie live together as "companion species" in Donna Haraway's terms (2008, p.164), befriending one another despite their so-called differences and the robot becomes a part of the family until he rusts.

In the same vein, "Reason" is the story about the scientists Donovan and Powell, who are assigned to control the space station which provides energy to the world thanks to the collaborative system of the highly developed QT1 robots. One of them is Cutie, who acts like the leader of the other robots. The group of robots seem to have a kind of religion and worship the source of the spaceship as a deity. Embodying human-like qualities and exhibiting the humane need for worshipping something, the robots led by Cutie have their own consciousness and the ability of thinking on their own. As it is noted in the book about the design of the machines, "Mathematical squiggles on paper were not always the most comforting protection against robotic fact" (34). There is more to the robots than just codes and scientific design. Religion is one of them. Within this context, as Francesca Ferrando states; "[r]eligions themselves are material as well as symbolic networks, actualized through words, prayers, metaphors, rhythms, images, and symbols, among many other expressions. The physical, the virtual, and the symbolic are inextricably intertwined" (2019, p.1). Therefore, it is no wonder that the robots show the ability to perform a ritual of worshipping as they already show human behaviours. Cutie is such an independent individual that he utters "I, myself, exist, because I think–" as if he is "a robot Descartes" (36). Although they have been afraid of the recent development in the robots for a long time as they acquire human abilities of thinking and praying, Donovan and Powell eventually come to terms with the human qualities observed in robots and decide to spread the notion of religion similarly to other robots to keep them in cooperation.

In another story, "Catch That Rabbit", the same two scientists from the previous story are on a mission on an asteroid mining station. However, there is a problem with the leader of the robots, Dave that has six inferior robots to rule beneath him. He cannot produce ore and whenever he faces a difficult situation, he dances as if performing a ritual while his subsidiaries follow him. Upon observing the situation, Donovan and Powell see the resemblance of the robots' behaviours to the humans displaying hysteria and mental breakdown, which draws a resemblance between human and robot psychology. From this perspective, it is noted that "willingly or unwillingly, humans create an artificial universe and its inhabitants by projecting their own image along with the features of the world in which they live" (Libin and Libin, 2004, p.1792), as a result of which the robots exhibit anthropomorphic qualities. Similarly, the six robots act like the human fingers and their dancing resembles to the twiddling the thumbs in the time of stress as the scientists discuss in detail about Dave's psychosis (62). During this observation, the two scientists are stuck in a cave and need Dave's help. According to the three laws, Dave is supposed to save their lives as they are in danger. However, he cannot get the signal as he is dealing with the six inferiors/fingers beneath him. Powell shoots one of the fingers and only then, Dave recovers from his stasis and saves their lives. Therefore, the scientists opt to eliminate the cause of the danger by leaving five fingers to follow Dave, as the five fingers in the human body.

Likewise, "Little Lost Robot" recounts the story of NS-2 robot Nestor that gets lost because one of the researchers on the asteroid, Gerald, humiliates and tells him to get lost. He simply follows the order and hides around. So, Dr Susan Calvin and another scientist, Peter Bogert, are called from the station

to find the lost robot as he has exhibited some strange behaviours like disregarding the first law of the robotics. Posing a threat to the human population due to his individual thinking capability and agency, the robot is searched by the doctors interrogating other robots in their effort. After the interrogation, Dr Calvin realises she cannot find the robot unless she tricks him. She also assumes that the robot might be getting more powerful as he cannot be found by humans. Thus, she puts herself in a dangerous situation in the radiation area and expects to be saved by a NS-2 robot which can identify the type of radiation that she is in. Other robots do not risk their lives thinking it is destructive to their system. However, Nestor appears out of nowhere and saves her. Then, he tells Calvin how Gerald called him stupid even though Gerald is stupid himself: "I must not disobey. They have not found me so far — He would think me a failure — He told me — But it's not so — I am powerful and intelligent–" (94). So, Nestor considers Dr Calvin as a disturbance to his power and tries to kill her. In this case, the agential robot senses the purpose of humans to destroy him and acts faster than them. In the end, he is killed with gama rays and Dr Calvin is saved. This story is another instance for technophobia which feeds on the "popular conceptions of the robot as a mindless, ruthless, incessant, destructive automaton" (Szollosy, 2017, p.434).

"Evidence" is another story recounting the fear and phobia of human beings from a person who might be a robot. It is Mr. Byerley, a politician and district attorney, who survived from a terrible accident and is thought to be a robot as he never eats or drinks in public. People around him are terrified that a robot will rule their country, so Mr. Quinn asks for the help of Dr Lanning, the director of the robot company, and Dr Calvin, the robopsychologist, to investigate the case. Quinn tries to persuade Lanning that Mr. Byerley is a robot as Lanning thinks it is impossible to produce a robot from a human being: "Really?" Francis Quinn allowed himself a trace of sarcasm. "And if one were, accidentally, of course, not destroyed — and there happened to be a humanoid structure waiting for a brain" (116). To check Mr. Byerley's humanity, in their investigation, Dr Calvin offers an apple to him which he eats. Yet, it does not prove their point since robots are skilled at imitating humans. Furthermore, they arrange a set up where a man is going to attack Byerley in public. If Byerley hits him back, it means he is not a robot according to the first law of robotics, which banishes robots from hurting people. Thus, the plan follows but Byerley hurts the man, surprising everybody. Therefore, the case is closed and it is deduced that he is a normal human being, until he dies years later. In Calvin's words, "when he decided to die, he had himself atomized, so that there will never be any legal proof. Besides, what difference would it make?" (130). She believes he was a robot considering that the man he hit on screen in public could have been a robot himself. Still, the idea does not bother her for she thinks he ruled the country and the Earth in the best possible way, unlike any other human would do. Thus, the agency and the imitation quality of the robot is praised in this story by Calvin in contrast with Quinn's along with many other people's fear of the robots. In Rosi Braidotti's posthuman statement which goes hand in hand with Donna Haraway's constructive view of robots and machines as companion species, "the intimate and productive association between human subjects and technological artefacts, as well as the theoretical impossibility of keeping them apart" there is "the need for a post-anthropological turn that links humans to non-human" (Braidotti, 2013, p.41) and make them posthuman by disregarding the anthropocentric and racist aspect of traditional humanism. The posthuman philosophy allows human beings to connect, interact and welcome othered people, species, nature, animals and technology as critical parts of the whole world system.

The last story of the collection, "The Evitable Conflict" depicts a world where Mr. Byerley is the World Co-ordinator and under his rule, the robots of positronic brains have gained more power over the years of high technology while human beings strive for survival. The robots have adapted the laws into their understanding and changed the first law as "A robot may not injure humanity or, through inaction, allow humanity to come to harm", which means some people could be spared if it contributes to the well-being of general humanity and also indicates the evasion of the destruction of robots that embody human qualities through agency and consciousness (146). It coincides with Asimov's decision of writing a "Zeroth Law" in the 1950s attaching it to the three laws to prevent the ethical and moral-based conflicts in the positronic brain system (Clarke, 1999, p.58). Consequently, the robots take over the world and control human beings because humans cannot protect themselves from danger. Moreover, humans are the ones who are held responsible for all the violence, wars, drought, sickness

and disasters by the robots. The last story depicts a post-apocalyptic world ruled by robots while humans are subservient species, which once again reflects the theme of technophobia through the depiction of an undesired future world. At the end of this story, the narrator is quite surprised at the condition of humanity: "But you are telling me, Susan, that the 'Society for Humanity' is right; and that Mankind has lost its own say in its future" (147). Here, the situation is quite parallel with the enslaving system of the "artificial intelligence", the Al in the *Matrix* trilogy (1999-2003), where a few individuals fight against the system to re-possess their autonomy (Bartlett and Byers, 2003, p.30). Dr Calvin concludes the book, *I, Robot*, by underlining the agential power of the robots as "I saw it from the beginning, when the poor robots couldn't speak, to the end, when they stand between mankind and destruction. I will see no more. My life is over. You will see what comes next" (148) foreseeing the future revolution and empowerment of technology.

2. *I, Robot*, the Film

The film adaptation of *I, Robot* which bears the same title with the book is noteworthy in reference to the posthuman theory. The lead role in the film, Detective Del Spooner as played by Will Smith, is saved from drowning by a robot and becomes a cyborg with the mechanic prosthesis or mechanic limb replacing his lost arm. As part of his job, he is called from the U.S. Robots to investigate the director of the company, Dr Lanning's suicide. A black person living in Chicago, Spooner hates and feels doubtful about the pure white robots even though they serve for the betterment of the humanity through Asimov's three laws of robotics. At the beginning of the investigation, he meets a human-like robot, Sunny and gets suspicious of him for the murder of Dr Lanning. Sunny is a robot that sleeps, has dreams, possesses a sense of morality and a soul like a human being. Following this, with the help of Dr Susan Calvin's scientific knowledge and Sunny's agential characteristics, Spooner realises that the evil power, VIKI, which governs the whole robot system is planning to take over the world. After that point, Spooner, Sunny and Dr Calvin fight against the self-regulating robot armies and destroy VIKI. At the end of the film, Spooner has befriended with the human-like robot and Sunny has become the leader of the discarded robots. The film is quite interpretative as it encourages the human/machine and self/other integration. By bringing the black man together with the white robot, the film dissolves the boundaries between races and species, which is also the focal point of the posthuman thought. In this respect, it is interesting that as different from the book, the film places a black actor into the centre of the film at the end of which he has built a deep connection with the white robots, which is quite significant displaying the universality and the posthuman quality of the film as a creative adaptation of the book. In Palmer's words, "It is the cyborg nature of Smith's *I, Robot* character that provides a site for another critical erasure" of differences (2011, p.35). Hence, the film appeals to the audience by embracing everyone and celebrates the co-existence of humans and robots as a result of eliminating the bad robots and the evil source of power, VIKI, in the end. As a final remark, Palmer contends that:

> So with Smith portraying this part-machine black detective as a racist sheriff, a character already marked as ubiquitous by its recurrence across film history in narratives of southern bigotry, he can shift his audience into an alternative (and universalizing) space. (2011, p.37)

In this regard, the film is universal for the posthuman message it gives to whole humanity for erasing the already blurring differences and the anthropocentric notion of speciesism.

CONCLUSION

In a word, Asimov's *I, Robot* story collection is the reflection of an alternate world where human beings and robots/cyborgs co-evolve. In this new world of science, technology and space, problems occur in the system of robotics and sometimes the laws are omitted or reversed. There are several cases where robots develop the qualities of individual thinking, consciousness and agency, which brings them closer to human beings in terms of their characteristics and erases the boundaries between the two species. At the end, it is accepted that the robots happen to evolve naturally. As a result, it is possible to denote that through Asimov's robot stories, the human-made robots turn into self-governing individuals and it is made clear that sometimes the created can bypass the creator in its

actions like Frankenstein's monster. The robots bear the image of the human beings, which brings out ambivalent reactions in the humankind. Finally, because the agential robots act upon individual impulses, not all of them can be categorised as evil or dangerous through the provocative thinking of technophobia as there are also the cases when robots put the human lives before their own and serve for the well-being of humans. Based on the stories in *I, Robot*, it can be inferred that the development of technology does not necessarily render a threat to the humankind when the evolving nature and positive potential of the machines for the world can be realised and put to the right use, as in the fields of health, transportation or computer technologies among so many others, when conceived through an open mind, from the perspective of posthumanism.

Bilgilendirme / Acknowledgement:

Yazar aşağıdaki bilgilendirmeleri yapmaktadır:

1- Makalemizde etik kurulu izni ve/veya yasal/özel izin alınmasını gerektiren bir durum yoktur. Makalemizde döküman incelemesi yapılmıştır.

2- Bu makalede araştırma ve yayın etiğine uyulmuştur.

REFERENCES

Asimov, I. (2001). *I, Robot*. 15 Aralık 2013 tarihinde http://ekladata.com/-Byix64G_NtE0xI4A6PA1--o1Hc/Asimov-Isaac-I-Robot.pdf adresinden erişildi.

Bartlett, L. and Byers, T. (2003). Back to the future: The humanist *Matrix*. *Cultural Critique*, *53*, (Posthumanism Issue), 28-26.

Bolter, J. D. (2016). Posthumanism. *The International Encyclopedia of Communication Theory and Philosophy*, 1-8.

Braidotti, R. (2013). *The posthuman*. Cambridge: Polity.

Clarke, R. (1999). Asimov's laws of robotics: Implications for information technology part 2. *Computer*, *27*, 57-66.

Dinello, D. (2005). *Technophobia!: Science fiction visions of posthuman technology*. Austin: University of Texas Press.

Ferrando, F. (2019). The posthuman divine: When robots can be enlightened. *Sophia*, *58*, 645-651.

Haraway, D. (2008). *When species meet*. Minneapolis: University of Minnesota Press.

Hayles, K. N. (2006). Unfinished work: From cyborg to cognisphere. *Theory, Culture & Society*, *23*(7-8), 159-166.

Holmes, M. and Homol, L. (2009). Isaac Asimov. *The Pennsylvania State University*. 21 Aralık 2013 tarihinde https://pabook.libraries.psu.edu/literary-cultural-heritage-map-pa/bios/Asimov__Isaac adresinden erişildi.

Kaya, H. (2018). The modern in Huxley's *Brave New World* and Tanpinar's *The Time Regulation Institute*. *Agathos*, *9*(16), 99-114.

Keller, J. (2006). *Asimov's writing involving robots*. 21 Aralık 2013 tarihinde http://academic.depauw.edu/aevans_web/HONR101-02/WebPages/Spring2006/Keller(Juliana)/writing.htm adresinden erişildi.

Libin, A. and Libin, E. (2004). Person–robot interactions from the robopsychologists' Point of View: The robotic psychology and robotherapy approach. *Proceedings of the IEEE*, *92*(11), 1789-1803.

Murphy, R. and Woods, D. (2009). Beyond Asimov: The three laws of responsible robotics. *IEEE Intelligent Systems*, *24*(4), 14-20.

Palmer, L. (2011). Black man/white machine: Will Smith crosses over. *The Velvet Light Trap*, 67, 28-40.

Svilpis, J. (1983). Authority, autonomy and adventure in juvenile science fiction. *Children's Literary Association Quarterly*, *8*(3), 22-26.

Szollosy, M. (2017). Freud, Frankenstein and our fear of robots: projection in our cultural perception of technology. *AI & Soc*, *32*, 433-439.

Yılmaz, V. B. (2018). Mysticism in Aldoux Huxley's *Time Must Have a Stop* and Peyami Safa's *Matmazel Noraliya'nın Koltuğu*. *Muğla Sıtkı Koçman University Journal of Social Sciences and Humanities Researches*, *41*, 71-82.