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AGENCY OF THE BODIES: MATERIALITY IN RUTH OZEKI'S ALL OVER CREATION

Barış AĞIR*

Abstract

Ruth Ozeki is a prominent Japanese - American contemporary novelist who addresses patriarchy, race, and the environment in her works. Ozeki's second novel *All Over Creation* focuses on the encounters between human and non-human nature. She presents an issue of great concern, namely genetically modified food, alongside issues pertaining to reproduction, racial discrimination, and capitalist agribusiness. This paper analyzes *All Over Creation* using material feminist theory which advocates that both human and non-human bodies are not passive and empty; rather, they are beings with their own needs, claims, and actions. By discussing similar encounters between human and non-human nature in terms of reproduction, the paper analyzes the loss of body agency of both potatoes and women under the control of anthropocentrism and patriarchy. By drawing an analogy between potatoes and women, Ozeki expresses her criticism of the deep-seated anthropocentrism and patriarchy and appeals to the emancipation of both potatoes' and women's bodies.

Key Words: *Body, Potatoes, Women, Genetical Modification, Reproduction, Materiality.*

BEDENLERİN EYLEYİCİLİĞİ: RUTH OZEKİ'NİN ALL OVER CREATION ROMANINDA MADDESELLİK

Özet

Japon kökenli Amerikalı yazar Ruth Ozeki, ataerkillik, ırk ve çevre gibi sorunlara odaklanan eserleriyle bilinmektedir. Ozeki'nin ikinci romanı *All Over Creation* insan ve insan olmayan doğa arasındaki karşılaşmalara odaklanmaktadır. Ozeki bu eserinde genetiği değiştirilmiş gıdaların yanı sıra, üreme, ırksal ayrımcılık ve kapitalist endüstriyel tarım ile ilgili endişelerini dile getirmektedir. Bu makale *All Over Creation* romanını insan ve insan olmayan bedenlerin pasif ve boş olmadığını; bedenlerin kendi ihtiyaçları, istemleri ve eyleyiciliği olduğunu savunan maddeci feminist teoriyi kullanarak incelemektedir. İnsan ve insan olmayan doğalar arasındaki benzer karşılaşmaları üreme açısından tartışan bu makale, antroposentrizm ve ataerkillik kontrolü altındaki patateslerin ve kadın bedenlerinin kaybolan eyleyiciliğini incelemektedir. Ozeki, patatesler ve kadınlar arasında benzetme yaparak, kökleşmiş antroposentrizm ve ataerkilliğe yönelik eleştirilerini ifade etmekte ve patateslerin ve kadın bedenlerinin özgürleşmesini dillendirmektedir.

Anahtar Kelimeler: *Beden, Patatesler, Kadınlar, Genetik Değişiklik, Üretim, Maddesellik*

*Assist. Prof. Dr., Department of English Language and Literature, Osmaniye Korkut Ata University, OSMANIYE.
e-mail: barisagir@hotmail.com (<https://orcid.org/0000-0002-7132-5844>)

1. INTRODUCTION

In their book *Material Feminisms* (2008) Stacy Alaimo and Susan Hekman state that with the development of postmodernism and poststructuralism, feminists have “*focused on the role of language in the constitution of social reality, demonstrating that discursive practices constitute the social position of women*” (1). The result of the too much power granted to language “*that allegedly dematerialized the world into linguistic and social constructions*” (Törnberg, 2013: 4) was the overemphasis on language and mind, while reality, matter, and the material world are neglected. Material feminism first breaks this deadlock by emphasizing the significance of the material component. Instead of considering material as passive and immutable, material feminists advocate the idea of taking matter seriously and rethinking “*materiality, the very ‘stuff’ of bodies and natures*” (Alaimo and Hekman, 2008: 6). Alaimo and Hekman assert that “*we need a way to talk about the materiality of the body as itself an active, sometimes recalcitrant, force*” (4).

Material feminists began to take a material turn with the aim of bringing “*the material, specifically the materiality of the human body and the natural world, into the forefront of feminist theory and practice*” (Alaimo and Hekman, 2008: 1). As one of the forerunners of material feminism, Karen Barad points out that “[*matter*] is not little bits of nature, or a blank slate, surface, or site passively awaiting signification, nor is it an uncontested ground for scientific, feminist, or Marxist theories. Matter is not a support, location, reference, or source of sustainability for discourse. Matter is not immutable or passive.” (2018: 139). By these words, Barad explains the materiality by bringing up the notion of “*performativity*” “*as an active participant in the world’s becoming, in its ongoing ‘intra-activity’*” (Alaimo, 2008: 248). Based on Barad’s views, Stacy Alaimo developed her own theory. In her books *Material Feminisms* (2008) and *Bodily Natures: Science, Environment and the Material Self* (2010), she puts forward the concepts of agential bodies, trans-corporeality, and toxic bodies and offers very specific explanations that focuses on the materiality of human bodies and the more-than-human world and explores “*the interconnections, interchanges, and transits between human bodies and non-human natures*” (2).

By agential bodies, Stacy Alaimo asserts that neither human nor non-human bodies are passive and empty, rather that they are both beings with their own needs, claims, and actions, as, “*agency is not aligned with human intentionality or subjectivity*” (Barad, 2007: 177). It is one’s body’s own force in intra-activity out of the human’s spiritual control. Alaimo believes that “*there is obviously a sense in which all embodied beings experience corporeal agencies, be they positive, negative, or neutral*” (2008: 250). Trans-corporeality, as Alaimo puts it, is “*the time-space where human corporeality, in all its material fleshiness, is inseparable from ‘nature’ or ‘environment’*” (238), emphasizing the interconnection between human and non-human nature. For Alaimo, the human body can never be seen as a final or finished product, or as being of a higher level than other non-human beings, but rather that it remains open and constantly interchanges with its environment. Therefore, human beings should put themselves and other material bodies in the same position in the world. Just as Alaimo quotes from Moria Gatens, “*the human body is radically open to its surroundings and can be composed, recomposed and decomposed by other bodies*” (2008: 255). Only through the constant interchanges between human and the non-human nature can the world function well.

Owing to the trans-corporeality of bodies, Alaimo brings up the concept of toxic bodies as “*the space-time of trans-corporeality is a place of both pleasure and danger—the pleasure of desire, surprise, interconnection, and lively emergence as well as the dangers of pain, toxicity, disability, and death*” (259-260). Tracing the traffic of the toxin, Alaimo asserts that “*certainly, all bodies, human and otherwise, are, to greater or lesser degrees, toxic at this point in history*” (260). However, toxic bodies, as a particular example of trans-corporeal space, keep reminding us of human health and social justice, for “*the traffic in toxins may, in fact, render it nearly impossible for humans to imagine that their own health and welfare is disconnected from that of the rest of the planet*” (260). The interconnection among all beings makes it impossible for human beings to escape, especially when it comes to disasters.

Material feminism is different from traditional feminism, which focuses on the social construction of gender. It is not the same as eco-feminism, which highlights the particular and significant connections between women and nature and relates the oppressions of all subordinate groups to the oppressions of nature by discussing

the degraded images and similar encounters of women and nature. Material feminism centers women in its discussion, however, it also stresses the importance of the materiality of the body—human and non-human alike—while emphasizing the interconnections, interactions, and interchanges between human and non-human nature and the realization of true equality among all beings on earth. Therefore, with the study of gender relations as its starting point, material feminism aims at redefining the relationship between the human and the non-human world to realize harmony between human and nature and harmony with the entire universe.

In the long history of western culture dominated by anthropocentrism and patriarchy, the body has been degraded as passive and immutable material. Human beings are separated from animals and are considered as the center of the universe for their embodiment of reason, intellect, and creativity, by which humans believe that they are superior to other species and are endowed with the power to rule the non-human world. As a result, humans' excessive concern with spiritual power makes it inevitable for the body to be neglected. They abandon their biological bodies and classify them with the non-human world, both of which are seen as passive and inert matters waiting to be conquered and exploited.

With materiality of the world as its central concern, material feminism provides a new angle to illustrate the relationship between human and non-human nature. Neither like traditional feminism that highlights the social construction of gender, nor the same as eco-feminism that connects women with nature, material feminism emphasizes on the significance of the materiality of the world and of the human body and the natural world, while affirming that the body is basic matter and is neither passive nor empty, but rather agentic. According to Alaimo, "there is obviously a sense in which all embodied beings experience corporeal agencies, be they positive, negative, or neutral" (2008: 250). Material feminism subverts the binary opposition between mind and matter, brings great challenge to the deep-rooted anthropocentrism and patriarchy, and helps build a world of interconnection. Therefore, degrading the body and considering it as material are equal to depriving the agency of the body and constitute the starting point of human control over nature and men's control over women. To emancipate the inferior from oppression, we should first emancipate the body—human and non-human alike—from the control of the mind and to overturn the fixed notion that the body is passive, inert, and empty. Only this way can we subvert the deep-rooted anthropocentrism and patriarchy and build a world of real harmony.

In this respect, this paper analyzes Japanese-American writer Ruth Ozeki's novel *All Over Creation* through the lens of material feminist theory. The paper draws out an assessment of the similar encounters between human and non-human nature in terms of reproduction, and examines the loss of body agency of both potatoes and women under the control of anthropocentrism and patriarchy. The novel parallels the encounters of human and non-human nature, specifically women and potatoes, under patriarchy and anthropocentrism, respectively. Balsmeier states that "with the potato as protagonist, next to potato farmer Lloyd Fuller and his family, the novel offers many analogies between human and nonhuman identities" (2019: 102). In the novel, the bodies of the potatoes and women are degraded and manipulated by men as passive matters to serve their interests and desires, especially in terms of sexuality and reproduction. The potato, which should have been a plant with good reproductive capacity, has been deprived of the right of free pollination to cater to the needs of agribusiness. The female characters—Yumi Fuller and Cassie Quinn—suffer as men control their sexuality and reproduction for various reasons. By connecting potatoes and women from the angle of reproduction, Ozeki expresses her wish to emancipate both the bodies of plants and women and delivers her criticism of anthropocentrism and patriarchy.

2. MATERIALITY OF FEMALE BODIES

In *All Over Creation*, bodies of female characters suffer from patriarchy, which is shown in women's sexuality and reproduction. Yumi Fuller and Cassie Quinn are two female characters in the novel. Living in male dominated Idaho, they either become the target of men's sexual abuse or lose their freedom to decide over their own reproduction. Both of them have fathers who strongly desire control, and both suffer reproductive problems because of the interference of men and the hard conditions of life. Therefore, they lose their agency over their own bodies and become victims of men's oppression.

In the novel, Yumi Fuller, as the only child of an American father and a Japanese mother, is born to be different. She has Asian features and lives in a pure white community in Idaho. She considers herself as "a random seedling,

a volunteer, an accidental fruit" (Ozeki, 2004: 4) in a vast field of genetically identical potatoes. She is a weed that "will most likely be uprooted" (4) and an exotic species that makes her the target of sexual abuse at the hands of a white man. Yumi's affair with her middle school history teacher Elliot Rhodes becomes the turning point in her life. At fourteen years, Yumi is seduced by Elliot Rhodes, becomes pregnant and has an abortion, and finally runs away to California without returning until 25 years later. Elliot is "a hippie, a commie, an anarchist, a freak" (21). He is an opponent of the Vietnam War and an admirer of Asian culture. Attracted by his intentional allure and his counter cultural words on the origin of Thanksgiving, Yumi falls in love with him and believes that Elliot loves her in the same way. However, when they have sex, he "was not holding at all" (27), sitting there with his arm at his sides. When he is asked whether he loves her or not, Elliot's farfetched answer is "Of course, I love you, too, Yummy... It's just that there are so many different levels of love, you know..." (27). Yumi is just one of Elliot's different lovers. She is his prey to fulfill his fascination for Asian culture. A bi-racial woman, Yumi has long black hair, black eyes, and a Japanese name that no American in Idaho could pronounce correctly, resorted to "Yummy" instead. Being together with Yumi, Elliot sang a Grace Slick's song "Made for each other, made in Japan" after having sex with her (26). For Elliot, Yumi is "made" in Japan rather than in America, though she has nothing to do with Japan, except that her mother is Japanese. All details demonstrate that Elliot has stereotyped Yumi as an Asian woman, an identity that provides white men with a permissible excuse to consume her as a racial other. Stein states that "Elliot's song justifies his statutory rape, through stereotypically racist fantasies about her as an Asian female 'made' or designed for his consumption" (2010: 186). Informed of Yumi's pregnancy, Elliot takes her to an illegal clinic for an abortion without any hesitation and casts her away right after the abortion to escape responsibility, leaving her alone in the cold winter. According to Stein, "Elliot's relationship with Yumi reflects the way that racist patriarchy assumes white male control of the sexuality/ reproductivity of women of color" (187).

Elliot's control of Yumi's sexuality is stressed when he reappears in Idaho 25 years later. After Yumi's abortion and departure, Elliot also gives up his teaching and disappears in Liberty Fall. No one gets his messages until he shows up at the headquarters of Cynaco. He is appointed as a representative of the company to promote NuLife potato seed, "a transgenic food crop" (Rouyan, 2015, 143), and to keep an eye on anti-genetical modification activities in Idaho. To achieve his goals, he intentionally seduces Yumi again to get information on the Seeds who take actions to resist genetically modified food. He hires a detective to keep an eye on the Seeds, and he himself gets in touch with Yumi, has sex with her, and gets a line on the Seeds who settle around the Fullers' family. Elliot is a selfish villain who makes use of everything to achieve his goals without caring about responsibility and causing suffering. In Lloyd's words, he is "the Terminator." Just like the "Terminator technology" used in NuLife potato seeds, he terminates the life of Yumi's first baby and the intimate relationship between Yumi and her parents.

In white dominated Idaho, Yumi is totally deprived of her sexual freedom. Whenever she has sex with Elliot, she becomes the victim of Elliot's desires, serving as an embodiment of Asian culture or as a source of information, but never as a woman of independent subjectivity. Elliot's behavior "illustrates the way that agribusiness interests sacrifice women's sexuality in order to gain capitalist profit" (187). If Elliot's first seduction 25 years ago can be seen as a case of racist and patriarchal consumption of colored women, his seduction 25 years later can be considered as a capitalist consumption of women's sexuality to gain more profits. Ultimately, Yumi's experiences in Idaho are caused by men's oppression of women's bodies, specifically the ignorance of material feminism's views on the agency of the body. Deprived of the agency of their bodies, women are treated as passive objects waiting to be exploited. Therefore, men can be the masters and can manipulate women according to their will to realize their aims. For Elliot Rhodes, Yumi is such a woman without body agency and becomes the target of his oppression.

Besides depriving women of their sexual freedom, men's control over women is also manifested in the manipulation of reproduction. According to Stein, "the current mode of chemical-based and biotechnologically modified agribusiness itself impinges upon women's reproductivity; these farming methods threaten the sexed parts of women's bodies, causing increased illness, sterility and mortality" (2010: 180). Women's reproduction is manipulated stealthily for money making. Women sacrifice their reproductive freedom in the course of human adaption to the changing world, while men always reap the profits. In *All Over Creation*, female characters have no free choice to decide their reproduction because of men's control and the hard conditions of life under agribusiness. Yumi is Elliot's target for sexual abuse and gets pregnant soon. He does not want the baby, and he

makes her undergo an abortion without asking her opinion. Yumi wants to give birth to the baby. Before she goes into the operating room, she even wishes that Elliot would stop the surgery and let her keep the baby: *“At the last minute you turn and give them a silly little wave. They wave back, and the way Elliot looks at you, the way he hesitates, then leans forward as though to stand, makes you think for a moment that he’s going to put a stop to all this, and your heart gives a leap, but he doesn’t”* (Ozeki, 2004: 198). When the woman who is going to do the abortion asks Yumi to tell that this is her own choice and that she does not want the baby, Yumi hesitates and then whispers, *“I don’t want this baby?”* (199)—a question that discloses her real intention. Yumi wants the baby although she is just 14 years old. But Elliot does not. So, she has no choice but to tell the woman, *“I really, really, really want this abortion”* (199).

In the novel, fathers are also authoritative and do not tolerate any disobedience by their daughters. Yumi recalls that her father, like all potato farmers, is a man with a strong desire for control. The monoculture of potatoes with the help of chemicals and technology makes farmers believe that they could completely control the propagation process. In the same way, farmers like Lloyd believe that their offspring would be like their potatoes, growing up according to their requirements and entirely under their control. Lloyd loves his daughter. She is the apple of his eye. However, when Yumi has a different opinion on Elliot Rhodes, he reacts in the following manner:

Lloyd drew in his breath like he’d been sucker-punched. Put down his fork and napkin and pushed to his feet. His eyes were as cold and bright as the sun on the snow in winter. It was as if he could see into the corners of your mind, know thoughts before you had a chance to think them, track the rebel contents of your heart. As a child you were secure in his omniscience, knowing that everything occurring on this earth did so with his blessing, according to his will. Now you looked away. (22)

In the eyes of young Yumi, Lloyd is like an omniscient God, which means that one is under his blessing, but at the same time, one can never defy his authority. Otherwise, one would be like Cassie, who was whipped by her father. So, when her father Lloyd discovers her abortion, he is so angry and condemns her behavior with his “right to life” theory:

What gives you the right?...What gives you the authority to take an innocent life? ...That’s not a law, that’s a license to commit murder... It’s a sin against God, Yumi! Don’t you see? ... God creates life... Only He can choose to end it (202)

In Lloyd’s view, it is God who decides life and death, while Yumi, the one who breeds, has no right to make any decisions. In a word, when Yumi wants the baby, Elliot does not give her permission. When Yumi aborts the baby, Lloyd condemns her violation of God’s authority to give and take life. Being a woman who naturally breeds and gives birth to life, Yumi’s free choice on reproduction is entirely controlled by men. Having no way out, Yumi leaves town and heads for California, a state of racial diversity and free reproduction.

If Yumi’s departure can be seen as her resistance to men’s interference with her reproductive freedom, Cassie Quinn is a passive victim of agribusiness. As the novel shows, Cassie suffers infertility and struggles to have children for many years. She is not naturally infertile:

“Could be anything,” she said, rocking the baby gently back and forth. “At first, we thought nitrates in the groundwater, so we got the well tested and got filters and everything, but it didn’t help. Then we thought it might be one of the other inputs—stuff we used around the farm. For a while Will even thought it might be some kind of chemical exposure from overseas or something. ..And it could be any of these things, or none of them, or maybe even some combination. It’s just impossible to know for sure. And even if we could prove it was something we were using, what could we do? (77)

Though the Quinns doubt the chemical inputs used on their farm, they cannot stop using them, because *“banks don’t lend money to farmers who don’t use inputs”* (77). Forced by circumstances, they have no choice but to sacrifice Cassie’s reproductivity, though Will tries to grow genetically modified seeds that were marked as the healthier option. Besides, Cassie also suffers from breast cancer and her breasts are removed. Trapped in desperation, Cassie believes that she has been deprived of her reproductive years: *“...the whole middle section*

part of her life—the part where she was supposed to grow to adulthood, bear children, be a young mother, and watch her children grow—had simply been elided. Slurred over. She felt, at once, far too old and impossibly young, and there was a great gap in the middle, like a section of her torso had gone missing” (335).

From Cassie’s narration, we can see that there is nothing but pain and helplessness when she is faced with the reality of potato farmers. Agribusiness obliges potato farmers to use chemicals at the cost of threatening their health, which directly influences women’s sexual organs and their capacity to bear children. The greed of humans, specifically the greed of men, hides behind agribusiness. Putting Yumi’s experiences and Cassie’s struggles together, we find that women’s reproduction is completely controlled by men to serve their own interests. Therefore, they lose their agency over their bodies and become victims of patriarchy.

3. MATERIALITY OF GENETICALLY MODIFIED POTATOES

In *All Over Creation*, Ruth Ozeki “directs her attention to the cross-species relationship between humans and plants” (Rouyan, 2015: 144). In the novel, the Russet Burbank potatoes, a kind of potato which takes “its name from amateur botanist Luther Burbank” (Lang, 2001, 45), take a leading position for their monocultural plantation and NuLife potato seed which has been genetically modified. Potato farmers consider the Russet Burbank potatoes as a symbol of thriving life and the sign of advanced technology, both of which bring endless profits. However, the truth is that the profits are gained at the cost of the potato’s natural reproductive capacities. The so-called thriving life and NuLife potato seeds are just excuses for the manipulation of nature. Treating them as passive materials and transforming them artificially, human beings deprive the potato of its agency, victimizing them in specific and nature in general.

At the very beginning of the novel, Ozeki depicts a vast field of topsoil for potato farming in Liberty Falls, Idaho, which provides the best conditions for planting the Russet Burbank Potato. Being a traditional potato farmer and a beneficiary of the potato boom in the 1970s, Lloyd Fuller loves potatoes and is proud of being a monoculturalist. For Lloyd, large-scale potato farming is a sign of thriving life on account of its capacity for the creation of endless offspring. When he introduces potatoes to his daughter Yumi, pointing at the vast tumbling mountain of tubers, he is rather excited and says, “Look, Yumi! They’re alive. Living and Breathing” (Ozeki, 2004: 112). He likes reading the book of Luther Burbank—the man who discovered the potato seed and who was called the Father of the Modern Potato—*The Harvest of the Years*, in which Burbank offered an account of the way he selected superior specimens and finally cloned the Burbank potato. Lloyd enjoys explaining “how cloning worked and how every potato was capable of creating endless offspring out of chunks of its living flesh,” (112) which made his daughter as proud as him. Yumi says, “I can see why he was excited. In a very real sense a potato plant is immortal—the Russet Burbanks that Lloyd, and all of Idaho, grew were literally chips off the old block of Luther’s original” (112).

While talking about how they propagated potatoes, Lloyd cannot help but use the word “clone” to his daughter. In Lloyd’s opinion, cloning is the perfect approach to potato farming, because “it’s quick, simple, and reliable” (57). In the 1970s when the fast-food, French Fries flourished in the country, the market required a large quantity of potatoes of the same type, specifically the big, nice-looking ones that tasted good. To cater to the market, farmers choose to propagate potatoes by cloning. The novel depicts the fact that they clone: “First, you cut up a potato into small pieces, each containing an eye, and you plant these. The eye grows into identical replicas of the parent, bearing their bundles of tubers, some of which you eat or sell, others you cut up to clone again. It’s pretty foolproof” (57). In contrast, sexual propagation by planting potato seeds would lead to unexpected varieties: “The reason you clone rather than plant from seed is because potatoes, like human children, are wildly heterozygous... It simply means that if you try to propagate a domesticated potato using seed, sexually, chances are it will not grow true to type. Instead it will regress, displaying a haphazard variety of characteristics” (57). As opposed to the sexual reproduction of potatoes by sowing seeds, cloning guaranteed homogeneity and the capacity to produce a uniform type of potatoes entirely by replicating the perfect potato over and over again. Thus, the potato became what Lloyd believes in—thriving life. However, Lloyd fails to understand the negative aspects of his so-called “thriving life.” Cloned potatoes require large amounts of chemical fertilizers, pesticides,

and weed killers to ensure high yields and profits. Besides, chemical inputs also guarantee that the potatoes will produce golden fries. Otherwise, they are likely to be turned down by potato buyers.

Aside from the increasing economic income, clone potato farming results in the contamination of land and water and high rates of infertility and cancer among potato farmers, such as the Quinn family that has been plagued by cancer and infertility for years. The wide application of cloning is also likely to reduce biodiversity. Cloning aims to regenerate plants efficiently. It may be a great contribution to the development of science and technology, but ecologically, cloning can be considered as a means to keep plants from free sexual reproduction, thus affecting biodiversity. Sexual reproduction forms the basis of the continuation of life, which allows heredity, gene mutation, and natural selection and guarantees the sustainable development of the entire ecosystem. Even the highly-cloned Russet Burbank Potato was generated through the sexual reproduction of a rare potato seed ball and continued to bear the ability to regenerate though the offspring varied from one another. However, it is these various offspring that retain and promote the diversity and prosperity of nature. In contrast, cloning skips the basis of the creation of life because of the intervention of human beings. At its very base, it is a manifestation of human desire to control nature. From the perspective of material feminism, cloned potatoes in *All Over Creation* are deprived of their body agency. The cloned potatoes change in terms of how they regenerate, are treated as passive material, and are deprived of the right to free pollination, all in order to fulfill human beings' interests. In this sense, Lloyd's thriving life is not thriving at all, but rather, a repression of life.

Potatoes continue to be victimized when *All Over Creation* involves biotechnology and genetically modified organisms in the discussion. According to Balsmeier, "*the form of biotechnology presented here is the genetic modification of food plants carried out by agribusiness Corporation Cynaco*" (2019: 102) Influenced by Michael Pollan's article "Playing God in the Garden" in *The New York Times*, in which Pollan pointed out genetically modified potatoes and took a skeptical attitude toward them, Ozeki chooses the potato as her crop of choice and successfully weaves the genetically modified potato into a story on friendship, family affection, and the slow process of social change. As mentioned before, potatoes are monoculturally planted in Idaho through cloning year after year. However, it involves large quantities of chemical inputs and has also threatened the life and health of farmers. Cassie Quinn and her mother suffer from breast cancer and she is unable to have children, a consequence that was very likely to have ensued from the chemicals absorbed from water and air, as her husband Will put it. Hence, the Quinns decide to plant a new type of potato seed called NuLife, invented by a transnational corporation Cynaco. The potato is marked as reducing chemical inputs and as capable of protecting farmers' health. In advertisements, Cynaco shows the NuLife seed as a cute cartoon potato baby in a diaper with their motto, which reads: "*We handle 'em like babies*" (Ozeki, 2004: 96), implying the purity and the health of the newly invented potato seed. Taking Monsanto and their product NewLeaf in reality as the prototypes for Cynaco and NuLife in the novel, Ozeki brings genetically modified organisms into the view of the public. As we learn from Agostino and Ashton, Monsanto's advertisements on NewLeaf are as follows:

Imagine a world which preserves nature, the air, the rivers. When we can produce more with fewer pesticides, without destroying the forest. Imagine a world with more food, with more nutritious food and people with better health. Can you imagine? Ah, but you never imagined that Genetically Modified Organisms (GMOs) could help us do this? Have you ever thought of a better world? You should think like we do. A Monsanto initiative with the support of the Associação Brasileira de Nutrologia. (2006: 146)

According to Lliane Loots, there are two types of transgenic plants: one that is genetically modified to be a kind of herbicide—which means that no other plants except the transgenic crop can live, and one that is transformed by receiving genes from a bacteria in the soil that can produce toxic insecticides (2007: 84). Once the insects eat the plant, they will die. NewLeaf in reality and NuLife in the novel belong to the second type. The potato's natural enemy, Colorado Potato Beetles eat the leaf and die. Thus, the quantity of chemicals used can be reduced.

Although corporations claim that the new seeds are safe and efficient, genetically modified potato seeds do bear hidden dangers that farmers and consumers hardly know about. The results of the poison test of the genetically modified potato have never made been available to the public. In the novel, the Seeds of Resistance, "*part of a larger environmentally-friendly activist campaign*" (Parrinello, 2019: 53), are strongly against genetically

modified food. One of their reasons is that they doubt the safety of genetically modified food. On their website, the Seeds claim,

Convenient? Yes. Safe? We don't know. Despite studies suggesting possible hazards to both human health and ecological safety, the NuLife has never been poison-tested by the EPA. But poison testing *is* being carried out at our dinner tables every day. Our government and the Biotech Industry are conducting a massive experiment on unsuspecting, uninformed human subjects—and You. And me. *We Are their Guinea Pigs!* (Ozeki, 2004: 184)

According to the statistics, genetically modified potato seeds, NewLeaf invented by Monsanto were registered as a pesticide rather than as a new species by American Environmental Protection Agency (EPA) in 1999. The EPA says: *"Keep out of lakes, ponds or streams. Do not contaminate water by cleaning of equipment and disposal of wastes"* (3). The genetically modified potato seeds are artificially sterilized. With *"terminator technology"* (266) as Lloyd calls it, the reproductive capacity of the potato seeds is destroyed. In doing so, farmers cannot save seeds from their plants, but can purchase new seeds every year. Thus, the transnational corporation can maximize its profits. Geek, the leader of the Seeds, explains the principle of NuLife to Lloyd, saying,

It's like a death gene, sir. A self-destruct mechanism. They splice it into the DNA of a plant and trigger it. The plant kills its own embryo (...). To protect the corporation's intellectual property rights over the plant. To keep farmers from saving and replanting seeds. To force them to buy new seed every year (266).

Faced with these problems, the Seeds act all over the country to fight genetically modified food. Lloyd expresses his critique in his seed advertisements from the perspective of religion, and says:

In the past forty years, scientists have made repaid advances in this field of genetics. They have made many discoveries about DNA, and they have learned how to splice genes from one of God's creatures to another. They are now able to create novel life forms that have never before existed on God's earth. Scientists now appear to understand the innermost workings of Life, Itself. But do they? Is this something mankind can ever know? (105)

For Lloyd, life is sacred and only God can be the creator of life. Human beings are so self-righteous that they consider themselves as creators of life. However, the truth is, *"we are not gods. Scientists do not understand Life, Itself, and when they meddle in its Creation, they trespass on God's domain. Beware of the ungodly chimera they manufacture in their laboratories!"* (105). Unfortunately, people like the Seeds and Lloyd are only in the minority. Forced by the money-oriented market, corporations would like to give great impetus to genetically modified potato seeds, and the farmers are willing to plant genetically modified potato seeds for the sake of their health and income.

From the perspectives of sexuality and reproduction, Stacy Alaimo pinpoints that the offspring reproduced by genetic engineering *"are assembled via a conscious process of selection; there is little space for chance, random mutation, or the agency of material forces. Sex itself becomes a rather cerebral affair, as the various heterosexual pairs experience their pleasure not through touching each other, but through the mediation"* (2010: 148). In this sense, genetically modified potatoes have been deprived of their own agency, which obviously indicates that all embodied beings experience and are interfered with by human intentionality and rationality. In the novel, potatoes are planted entirely under human control to serve their own purpose. It is a presentation of human beings' control over nature. Nature, plants, and all other living beings are treated as passive and inert materials that are destined to be exploited and to be the servants of human beings. Therefore, potatoes in the novel become the victims of human tyranny over nature.

4. CONCLUSION

In *All Over Creation*, Ruth Ozeki stresses on the interconnection between human and the non-human nature and accomplishes her critique on modern society's ignorance and arrogance around the interconnected relationship. In the novel, she interweaves the interconnection with the issues of reproduction, race, and agribusiness, and presents a world of interconnection and launches her critique on the ideologies and behaviors in modern society

that ignore and destroy the interconnected relationship among all beings. To begin with, the novel reveals that both women's bodies and potatoes are treated as passive and inert materials by men, especially in terms of sexuality and reproduction. Bodies of female characters suffer from patriarchy's abuse of women's sexuality and reproduction. Yumi Fuller and Cassie Quinn are two female characters who become the target of men's sexual abuse or lose their freedom to decide over their own reproduction. Both of them have fathers who strongly desire control, and both suffer reproductive problems because of the interference of men and the hard conditions of life. Therefore, they lose their agency over their own bodies and become victims of men's oppression. Similar to the female bodies under the fate of anthropocentrism, genetically modified the Russet Burbank potatoes and NuLife potato seeds, which bring endless profits, are seen as symbols of thriving life and the sign of advanced technology by potato farmers. However, the truth is that the profits are gained at the cost of the potato's natural reproductive capacities. The so-called thriving life and NuLife potato seeds are just excuses for the manipulation of nature. Treating them as passive materials and transforming them artificially, human beings deprive the potato of its agency, victimizing them in specific and nature in general.

In conclusion, Ozeki criticizes the deeds of humans and calls for the emancipation of the bodies of both potatoes and women. From the perspective of material feminism, both human and non-human bodies are not passive and empty but have agency that is not aligned with human intentionality. However, in *All Over Creation*, potatoes are knowingly deprived of the right of sexual regeneration and are genetically modified in accordance with human will. Similarly, women are either considered an embodiment of Asian culture or a source of information and have no right to decide whether they can give birth to babies because of the control exercised by men. In sum, both potatoes and women are treated as passive matter, bereft of their agency over their bodies.

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