folklor/edebiyat - folklore&literature, 2023; 29(4)-116. Sayı/Issue -Güz/Fall

DOI: 10.22559/folklor.2469

Araştırma makalesi/Research article

Toxic Consciousness in Ian McEwan's Solar

lan McEwan'ın Solar Adlı Romanında Toksik Bilinç

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Abstract

Ian McEwan's *Solar* (2010) which portrays the story of Michael Beard revolves around Beard's attempt to actualise his artificial photosynthesis project, which is designed to reduce the impact of global warming. This project, which he plagiarised from a young colleague, is developed to produce solar energy that mimics photosynthesis to decrease the effects of anthropogenic climate change. Yet, Beard, a middle-aged physics professor, believes that environmental problems are exaggerated and, as a result, he rejects the existence of climate change. Rather than taking interest in the eco-friendly aspect of solar energy, he is attracted to the economic profit and academic prestige that he will gain from the solar project. Although McEwan has received much criticism regarding the idea that *Solar* is not a provocative environmentalist novel as it is not nature-oriented, this article claims that McEwan provides an alternative stance to raise awareness to environmental problems. Beard's ethics about environmental problems and his false appearance as an environmentalist with a world-saving project initiate a critical conflict that

Geliş tarihi (Received): 12-03-2023 Kabul tarihi (Accepted): 20-10-2023

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draws attention to the toxic landscape in the novel. Thus, this study discusses that Beard's actions, thoughts, and objectives reveal the hypocritical discourse of climate change which, as a result, generate a "toxic consciousness" in *Solar*. "Toxic consciousness" raised by Beard's anti-heroic qualities foreground the toxic identifications of both nature and culture. In this sense, this study opens a new line of enquiry by arguing that, to develop awareness towards humanity's waste, *Solar* demonstrates toxic landscapes and, therefore, represents "toxic consciousness" by means of Beard's anthropocentric stance.

Keywords: Ian McEwan, Solar, toxic consciousness, climate change, eco-fiction

Öz

Michael Beard'ın öyküsünü anlatan Ian Mc Ewan'ın Solar (2010) adlı romanı, Beard'ın küresel ısınmanın etkilerini azaltmak için tasarlanmış olan yapay fotosentez projesini gerçeklestirme çabasını anlatır. Genç bir is arkadasından intihal yaparak Beard'ın kendisininmiş gibi gösterdiği bu proje, insan kaynaklı iklim değişikliğinin etkilerini azaltmak için fotosentezi taklit eden güneş enerjisi üretmek için tasarlanmıştır. Nitekim, orta yaslı bir fizik profesörü olan Beard, çevresel sorunların abartıldığına inanmaktadır ve bu yüzden, iklim değişikliğinin varlığını inkâr etmektedir. Güneş enerjisinin çevre dostu niteliğine önem vermek yerine, Beard, bu güneş enerjisi projesinden elde edeceği maddi kazancı ve akademik prestiji göz önünde bulundurur. McEwan, Solar'ın doğa merkezli olmayışı ve bireyi düşünmeye sevk eden çevreci bir roman yazmadığı konusunda bircok elestiri almasına rağmen, bu calısma, McEwan'ın Solar eserinde cevresel sorunlara yönelik alternatif bir bakış açısı sunarak bir farkındalık yarattığını öne sürmektedir. Beard'ın çevresel sorunlara dair etiği ve dünyayı kurtarma projesiyle çizdiği sahte çevreci izlenimi, eserdeki toksik çevreye dikkat çeken bir çelişkiye neden olur. Bu yüzden, bu çalışma, Solar adlı romanda, Beard'ın davranışları, düşünceleri ve amaçlarının iklim değişikliğinin ikiyüzlü söylemini ortaya çıkardığını ve eserde bir "toksik bilinç" ürettiğini tartışmaktadır. Beard'ın antikahraman özelliklerinin oluşturduğu "toksik bilinç", hem doğanın hem de kültürün toksik tanımlamalarını öne çıkarır. Diğer bir deyişle, McEwan, antipatik ve antiçevreci bir başkahraman yaratarak sadece doğanın değil aynı zamanda doğa ve kültür ilişkisinin toksik özelliğine dikkat çeker. Bu bağlamda, bu çalışma, Solar'ın toksik çevreleri gösterdiğini ve bu nedenle, Beard'ın insan merkezli bakış açısı aracılığıyla romanın "toksik bilinci" yansıttığını inceleyerek insanlığın neden olduğu atık ve israfa karşı farkındalık geliştirmek amacı taşıdığını tartışmaktadır.

Anahtar sözcükler: Ian McEwan, Solar, toksik bilinç, iklim değişikliği, eko-kurgu

Introduction

Solar (2010) by Ian McEwan (1948-) is an environment-oriented work which extensively portrays climate change. Solar narrates the story of a middle-aged physicist and Nobel Laureate Michael Beard who designs to produce a source of power that is not

dependent on fossil fuels. Ironically, Beard is described as a self-centred and dislikeable man, a womaniser, a plagiariser, and has much pride in the novel. Within the context of his self-absorbed character, Beard does give more importance to his physical needs than saving the ecosystem. Portraying the events from Beard's point of view, McEwan's fiction enhances the clash between his character and his official mission to prevent climate change. This study argues that the contrast between Beard's character and the toxic environment demonstrates "toxic consciousness" with the aim of developing awareness towards humanity's waste. Cynthia Deitering articulates that a culture which is defined by waste is what forms "toxic consciousness" and states that "a new 'toxic consciousness' in fiction reflects a fundamental shift in historical consciousness [...] we came to perceive, perhaps inchoately, our own complicity in postindustrial ecosystems, both personal and national, which are predicated on pollution and waste" (1996: 197). Hence, this study discusses that through the representation of an anti-environmentalist protagonist, Michael Beard, Ian McEwan's *Solar* epitomises "toxic consciousness" and problematises the ecocritical stance of the novel.

Although McEwan's novel is categorised as eco-fiction and deals with the issue of climate change, it has received conflicting criticism questioning its environmentalist stance. In "Solar: Apocalypse Not", Greg Garrard draws attention to the disappointment caused after Solar's publication since the reading public expected a ground-breaking and thoughtchanging work about climate change, yet the novel does not suffice to satisfy public needs with its representation of a self-seeking character and his pragmatist attitudes. In "The Unbearable Lightness of Green: Air Travel, Climate Change and Literature", Garrard highlights that McEwan's work as a comic allegory limits the narrative from penetrating emotions generated by climate change (2013: 180, 184). In "Solar: Apocalypse Not", Garrard considers Solar as "a comic allegory on the destructive consequences of selfishness" rather than an inspirational and provocative environmentalist novel. Furthermore, Jason Cowley remarks that what is missing from the novel is the presence of perspectives other than Beard as the story is demonstrated through Beard's stance only (as cited in Garrard, 2013: 124). While Greg Garrard claims that Solar's genre constrains the possible intended effect of climate-change awareness, Richard Kerridge acknowledges the novel as a significant work in eco-fiction and asserts that it is, in fact, comic allegory which generates the novel's potential solution to environmental problems (2010: 156). Kerridge notes that Solar represents the thought that a different point of view may save the earth, and not the overpowering grand narrative of the tragedy of global warming (2010: 156). Like Kerridge, Astrid Bracke underlines the novel as eco-fiction as she suggests that the lack of nature-oriented sections in Solar provides a ground for a transformation from a traditional and strongly thematic ecocritical perspective to a more critical one that includes a large scope of cultural statements (2010: 766-767). In regard to McEwan's stance on climate change, in an interview with McEwan, Mick Brown conveys that "McEwan describes himself as a warner", a person who feels that the date on climate change is highly alarming (Brown, 2010). Consequently, the fact that Solar is not a nature-oriented novel does not imply that it does not aim to create awareness about pollution and climate change. In this sense, I believe that McEwan attempts to warn the

reader about climate change by creating an alternative stance through the perspective of an anti-environmentalist protagonist.

As this study discusses toxic consciousness in *Solar*, it is essential to explain the meaning of the term which is described and analysed by Cynthia Deitering in "The Postnatural Novel: Toxic Consciousness in the Fiction of the 1980s". Cynthia Deitering's notion of "toxic consciousness" can be defined in its widest sense as the consciousness generated by waste and toxicity on earth. Deitering explains her fundamental point of discussion as follows: "My premise is that during the 1980s we began to perceive ourselves as inhabitants of a culture defined by its waste, and that a number of American novels written during this period reflect this ontological transformation" (1996: 197). She analyses Don DeLillo's *White Noise* and John Updike's *Rabbit at Rest* with reference to the changing perception of the earth in the 1980s. Deitering clarifies that "[f]iction of the 1980s, in its sustained and various representations of pollution, offers insight into a culture's shifting relation to nature and to the environment" (1996: 196). Culture's changing relation to nature is understood as the shift from a culture that is defined by production to a culture which is identified by waste. She adds that the toxic landscape in the novels of discussion is a metaphor of pollution and represents how one's perspective of the natural world transforms (1996: 196).

Deitering uses the term "toxic consciousness" to denominate the transformation of humanity's perspective of nature by following Martin Heidegger's idea of the "standing reserve". In "The Question Concerning Technology" (1954), Heidegger suggests that nature is perceived as a "standing reserve". He explicates "standing reserve" by stating that

a tract of land was revealed and represented as a coal mining district, a mineral deposit; or a river was regarded and represented as a supplier of water power; or an airplane standing on the runway was viewed as a machine poised to insure the possibility of transportation. (as cited in Deitering, 1996: 198)

Within this context, it is recognised that Heidegger's notion of the essence of technology has transformed from the idea of the "standing reserve" into the view that nature and material objects have been consumed:

Thus, what we call the Real is now represented not as the standing-reserve but as the already-used-up. The tract of land is now represented as a possible site of contaminated waste, left over from coal mining operations. The river is now represented as a possible waste receptacle for the by-products of a nuclear plant. The airplane is now represented as flaming debris. In other words, what is revealed now is the waste of the empire. (Deitering, 1996: 199)

Therefore, Deitering offers the idea that the change in our perception of the environment can be considered as the second stage of Heidegger's discussion (1996: 198). Nature, perceived as a spiritual healer in the nineteenth century and as an economic resource in the twentieth century, is not perceived as home anymore to certain characters in eco-fiction; thus, "[n]ature is no longer a central presence in the world of the novel, no longer the 'lifesustaining air'" (Deitering, 1996: 201). In short, according to Deitering, the shift from a production-centred culture to a waste-centred one has changed the perception represented

in literature since nature does not have any essential existence in literary works anymore, and therefore, it becomes the metaphor for pollution. I believe that Deitering's "toxic consciousness" continues to define the contemporary world of the twenty-first century as a result of the link between the growing waste of consumer societies and the criticism of this waste by environmentalists.

While Deitering discusses the notion of "toxic consciousness" in relation to American literature of the 1980s, especially to Don DeLillo's White Noise (1985) and John Updike's Rabbit at Rest (1990), I suggest that the term holds a vital position in the analysis of Ian McEwan's Solar (2010). Deitering explains that Rabbit at Rest, for instance, "provides a useful example of a narrative point of view which instinctively perceives the 'already-usedup", and she also argues that the novel refers to "toxic consciousness" as the protagonist observes the decay in the landscape (1996: 199-200). Updike's tetralogy of the *Rabbit* series is the allegory of a self-centred American white middle-class man, Harry Rabbit Angstrom, and represents the decay of certain concepts in each decade in American history since the 1960s. Especially the last two novels of the series, Rabbit is Rich (1981) and Rabbit at Rest (1990) delineate the decline of the American economy and nation. Likewise, *Solar* is a comic allegory of the corruption of certain ideas like the grand narrative of climate change which is revealed by the "Rabbit-like" selfish protagonist Michael Beard. In the epigraph of Solar, the connection between Ian McEwan's work and the novels of the 1980s which present the changing relationship between nature and culture can be linked. Critically, the epigraph is cited from John Updike's Rabbit is Rich (1981): "It gives him pleasure, makes Rabbit feel rich, to contemplate the world's wasting, to know the earth is mortal too" (McEwan, 2011: 1). This quotation demonstrates the decay of nature and Updike's selfish protagonist who underlines the changed perspective of a consumed nature and culture. Like Harry Rabbit Angstrom, Michael Beard in Solar is a self-centred, economically comfortable and dislikeable man with miscellaneous personal problems. Ian McEwan reveals that "[h]aving decided to heap Michael Beard with a fair number of faults, Updike was on my mind as someone who shows you how it can be done" (Wagner, 2010). Though Solar is published in 2010 and is set between the years 2000 and 2009, it is implied that Michael Beard's character is highly affected by the 1970s which is the period of the height of his career as a Nobel Prize winner. As the story is narrated from Beard's point of view, the reader and the story are confined in the perspective of a man who is the "outsider" in a world of the changed human-culture relationship after the 1980s. In this context, this paper argues that, like the novels of the 1980s, Solar generates "toxic consciousness" by identifying nature and culture through waste with the integration of Beard's perspective which indicates the shift in the culture-nature relationship.

Toxic consciousness in Solar

The shift in the nature-culture relationship after the 1980s is embodied through the conflict between the anti-hero Michael Beard and his antagonist Tom Aldous. It can be suggested that, whereas Beard as a middle-aged man epitomises the generation before the

1980s, Aldous -a young post-doc in 2000s- represents the generation after the 1980s. To begin with Beard's character, his perspective of the natural environment is in accordance with Greg Garrard's description of the "cornucopian" due to Beard's "calculating" character. Garrard remarks that the cornucopian attitude includes the idea that the progress of humanity has increased as a result of economic and technological improvements (2004: 17). They declare that environmental problems are exaggerated or imaginary, and that the earth's sources are enough for the continuation of human welfare (Garrard, 2004: 16). Similarly, Beard "was unimpressed by some of the wild commentary that suggested the world was in 'peril', that humankind was drifting towards calamity" (McEwan, 2011: 21). He thinks that environmental crisis is dramatised and just a fantasy since, for Beard the "end of the world was never pitched in the present, where it could be seen for the fantasy it was, but just around the corner, and when it did not happen, a new issue, a new date would soon emerge" (McEwan, 2011: 21). Although Beard rejects climate change throughout the narrative, he accepts it in the end of the novel which absurdly strengthens his cornucopian characteristic. To clarify, when Toby, Beard's business partner, feels irritated as "no one's going to buy a fancy [solar] panel" from them as a result of the new studies which claim that the planet is cooling instead of heating, Beard tries to persuade Toby that they will definitely sell their solar panels as the planet's condition is a "catastrophe" (McEwan, 2011: 298). Ironically, he acknowledges that global warming is a real issue when the welfare of his artificial photosynthesis project, and thus, his aim to earn money by selling panels depend on it:

Here's the good news. [...] There's a meltdown under the Greenland ice sheet that no one really wants to talk about. Amateur yachtsmen have been sailing the North-West Passage. Two years ago we lost forty per cent of the Arctic summer ice. (McEwan, 2011: 298)

Even though Beard believes that climate change is a fantasy throughout the novel, he tries to convince Toby that global warming is a real crisis when capital is the point of question. In this respect, Beard's selfish and capital-centred character that is correlated with his cornucopian perspective intensifies his anthropocentric worldview. Within the context of anthropocentricism, the idea that human interest is perceived superior to the interest of other forms (Buell, 2005: 134), Beard believes that his own economic profit is superior to the future of the environment. Due to his anthropocentric and cornucopian perspective, Beard maintains the idea that there is nothing wrong with consuming natural sources and other life forms, which positions him into the mindset of the period before the 1980s when the nature-culture relationship was defined by production.

Moreover, although Beard's solar project is designed to decrease the impact of global warming, Beard "greenwashes" the project and himself with the aim of gaining more economic profit. Clive Hamilton writes that "[g]reenwash has been defined as a strategy in which corporations 'put more money, time and energy into slick PR campaigns aimed at promoting their eco-friendly images, than they do to actually protecting the environment" (2010: 82). Beard and his business partner, Toby, advertise as if solar-produced electricity would be beneficial for the whole town; however, they are aware of the fact that their project

which is designed to produce solar energy in Lordsburg "would not really be supplying electricity to Lordsburg at all. They would be selling kilowatt hours to a local utility company" (McEwan, 2011: 332). Thus, rather than caring for the eco-friendly aspect of solar energy, they concentrate on its economic profit. In the progress of the novel, Beard metaphorically "greenwashes" himself when he is on the verge of accepting a job proposal that requires research and work in carbon-free nuclear energy. He contemplates that "nuclear was the only way out, the lesser of two evils" and asks himself: "wasn't radiation just another name for sunlight" (McEwan, 2011: 380, 381). In this fashion, Beard observes nature and the outer world as sources that can and should be used and consumed since he perceives everything around himself as a source of capital as he expresses that "[s]unlight, water and money make electricity makes more money!" (McEwan, 2011: 294). In Beard's point of view, the two sources of nature are used in order to make huge amounts of money. In this context, Beard recognises natural sources as a "standing reserve", as in Heidegger's view, which once again represents the idea that he signifies the nature-human relationship before the 1980s when nature was seen as a source for production.

On the other hand, Tom Aldous, the young post-doc, who works at the Centre where Beard is the head, stands for the stereotype of a generation that was born in a world in which everything is defined by waste. While Beard is a consumer and a cornucopian, Aldous is an environmentalist. Environmentalists are "people who are concerned about environmental issues such as global warming and pollution, but who wish to maintain or improve their standard of living as conventionally defined, and who would not welcome radical social change" (Garrard, 2004: 18). They are concerned about pollution or the scarcity of resources and seek help from certain organisations rather than taking radical actions (Garrard, 2004: 19). Thus, rather than the radical view of deep ecology², which rejects technological solutions as they are another form of human dominance, environmentalism aims at decreasing environmental problems by employing technological products or organisations. Within this framework, Aldous can be considered as an environmentalist since he tries to save the world by suggesting that producing solar energy which mimics photosynthesis is a way to decrease the effects of anthropogenic climate change. Aldous's motivation and his hard-working character at the Centre clashes with Beard's passive and lazy personality and outmoded ideas: "Clearly, [the young post-docs] knew of [Beard's] work, but in meetings they referred to it in passing, parenthetically, in a dismissive mumble, as though it had long been superseded" (McEwan, 2011: 27). Beard begrudgingly thinks that "[s]ome of the physics which [the young postdocs took for granted was unfamiliar to him. When he looked it up at home, he was irritated by the length and complexity of the calculations" (McEwan, 2011: 28). As Beard is out of new ideas; after Aldous's death, he plagiarises Aldous's project which is designed to use solar power in order to create artificial photosynthesis which may prevent the collapse of the planet. Aldous's project may have saved the world, if it was not abolished due to the lawsuit against Beard's plagiarism. This suggests that Beard's plagiarism becomes the embodiment of a toxic landscape, which is not only a natural landscape but also a cultural one containing the interaction between nature and culture.

Correspondingly, the contrast between Aldous's and Beard's ethics about climate change reveals that culture – academia, ethics and environmentalism – is defined by waste in the contemporary world. Beard's academic life is identified by the active hard work he has carried out before the 1980s; however, in his middle age, his professional life is identified by waste such as plagiarism, unqualified work and outdated ideas. Significantly, Beard's character is identified not only by waste because of his plagiarism of Aldous's project but also by his metaphorical decay as he steals the whole environmental discourse Aldous uses. In a speech, for instance, Beard utters that "[a]n alien landing on our planet and noticing how it was bathed in radiant energy would be amazed to learn that we believe ourselves to have an energy problem" (McEwan, 2011: 212). His speech exactly mirrors Aldous's speech narrated in the beginning of the novel: "If an alien arrived on earth and saw all the sunlight, he'd be amazed to hear that we think we've got an energy problem" (McEwan, 2011: 36). Beard's plagiarism demonstrates that "Solar is an indication of the absurdity of the discussion on global warming in contemporary international gatherings: a futile discourse that gives birth to sort of metanarrative not immune to incredulity" (Habibi and Karbalaei, 2015: 92). The hypocritical discourse of global warming revealed by Beard generates the toxic consciousness in Solar. Deitering states that

[a] number of characters in [the novels of the 1980s that reveal "toxic consciousness"] express the peculiar displacement of a generation poised on the precipice of an epistemic rupture-between knowing the earth as 'the landforms, flora and fauna which are the home in which life is set' and knowing the earth as toxic riskscape. (1996: 200)

In this sense, Beard knows that "a molecule of carbon dioxide absorbed energy in the infrared range, and that humankind was putting these molecules into the atmosphere in significant quantities. But he himself had other things to think about" (McEwan, 2011: 20). Alternatively stated, he is aware of the toxic natural landscape; nonetheless, his ideas which are formed before the 1980s reinforce his consumerist character. As a result, Beard becomes an outcast and a displaced subject in the world of environmentalists like Tom Aldous.

Apart from Beard's hypocritical discourse, his physical needs and his corporeal representation also reveal toxic consciousness in a wasting world. His appetite, for instance, is foregrounded throughout the novel as Beard eats more than he needs, and consumes mostly unhealthy food and drinks such as crisps and alcohol. His appetite is in a conflict with the situations in which he undertakes the mission to "save" the earth. To illustrate, when Beard is paid to talk at an energy conference and to convince investors that oil, gas, coal and forestry are old customs to produce energy, and that those kinds of energy destroy the investors in the long run, ironically, all he can think about is eating the salmon that is served. He eats the salmon before his talk and feels

an oily nausea at something monstrous and rotten from the sea, stranded on the tidal mud flats of a stagnant estuary, decaying gaseously in his gut and welling up, contaminating his breath, his words and, suddenly, his thoughts. 'The planet,' he said, surprising himself, 'is sick.' (McEwan, 2011: 204)

The word "sick" that Beard uses to describe the condition of the earth does not represent his own thoughts but is generated by the nausea he is experiencing at the moment of his speech. Critically, the salmon "contaminates" his body and thoughts; in other words, the salmon signifies the consumed and exploited nature embodied by his corporeal reaction. His nausea during his speech manifests that excessive consumption and climate change are strongly connected since both are the result of wasteful consumption. Clive Hamilton notes that "consumption has become a barrier to tackling climate change" and writes that "[t]he idea that in affluent countries much of our consumption behaviour is driven by an urge for 'self-completion' rather than any real material need is reinforced by the evidence on wasteful consumption" (2010: 75). Beard's overeating symbolises humanity's excessive consumption and greed leading to pollution and global warming. Beard stands for a large mass of people since "[h]is failure to restrain or change his appetites for the sake of long-term wellbeing – his own and humanity's - represents the collective failing of wealthy consumers to change their behaviour in response to the threat of global warming" (Kerridge, 2010: 155). The link between his desire to consume both food and natural sources demonstrate his disinterest in the future of the ecosystem: "greenery in general – gardening, country rambles, protest movements, photosynthesis, salads – was not his taste" (McEwan, 2011: 121). Rather than focusing on global warming and environmental crisis, the narrative is overpowered by Beard's appetite and bodily needs. Consequently, it can be stated that Beard's consuming body and his unnecessary physical needs occupy the text both physically and metaphorically by pushing nature and threats of global warming aside. Therefore, Solar conveys the idea that nature does not have any central presence anymore and that the earth is conquered by waste.

In addition to his appetite, Beard's other physical problems expose that his decaying body and contaminated nature are the markers of waste. This can be illustrated by his experiences during the expedition to the Arctic³. During the expedition, he eagerly desires for coffee and decides to drink it when he and the team should be at their place of accommodation before the snowstorm arrives (McEwan, 2011: 73). After drinking coffee, he wears the heavy suit which is designed to protect him from the cold. The moment Beard joins the team on his snowmobile, he has the urge to go to the bathroom, but nobody is allowed to stop as the snowstorm is approaching. Despite the freezing cold, he stops and decides to urinate during the snowmobile ride although the guide warns that they should not stop because of the cold. He cannot resist his physical needs and "when his business was done he discovered that his penis had attached itself to the zip of his snowmobile suit" (McEwan, 2011: 81). As a result, he begins to panic and thinks that he will be impotent for the rest of his life. As aforementioned, Beard is a womaniser who had five wives and was disloyal to all since "[s]ome of the blood supply that should have been in Beard's brain was still in his penis" (McEwan, 2011: 45-46). This implies that he is mostly guided by his sexual needs, in other words, by his ability to reproduce. The instance in which he realises the possibility of impotency when his penis is frozen, he decides to help people in need and "visit the poor" (McEwan, 2011: 82). The link between his wish to do good deeds and his fear of impotency caused by his excessive consumption of coffee conveys the close connection between humanity's selfish actions and

excessive physical consumption. Although he recovers afterwards and continues to be self-centred, the text reflects that his potential lack of (re)production and consumption may lead to a less selfish and more empathetic life.

Besides Beard's fear of impotency that reveals his selfish nature, his desire for comfort during his research at the North Pole also pins down his wasted and wasting body. As he feels cold on the snowmobile, he wishes to travel in a heated car since "[e]veryone [in the North Pole team] but Beard was worried about global warming and was merry, and he was uniquely morose" (McEwan, 2011: 79, 93). Although Beard's wish seems like a luxury as opposed to the "nature-friendly" snowmobiles the team rides on, the snowmobiles are also far from the concept of an eco-friendly vehicle. The team's journey on the snowmobiles is an impressive illustration of a toxic landscape which is described as follows, "[t]he endless snow was orange in the morning sunlight, their track ahead led straight towards a low mountain range many miles off, and hovering over it, or behind it, was a long tube of black cloud" (McEwan, 2011: 79). Within the context of the fatal catastrophes humanity has caused, Ian McEwan explains his own experience during his trip to Spitsbergen⁴, the same place Beard travels to. McEwan expresses the chaos of the dressing room of the expedition team by articulating that "[t]here's something comic about idealism, and our capacity for rational thinking and gathering data and evidence on the one hand, and on the other these little worms of self-interest, laziness and innate chaos" (Brown, 2010). In the same way, the team in the novel that intends to raise consciousness about global warming causes a mess and chaos at the poles. Thus, although Beard's character is highlighted as an anthropocentric character, the actions of the whole team whose aim is to "save" the planet ironically reveal humanity's carbon footprint left on the most isolated places on Earth.

In the novel, the diseases Beard struggles with and his physical complications reinforce the idea that his body is an identification of waste. Beard has osteoarthritis, high blood pressure, cholesterol, high chance of diabetes and he has also melanoma whose treatment he postpones continuously (McEwan, 2011: 329). In this sense, in addition to his academic and ethical corruptions, Beard's body becomes the embodiment of corruption and waste. Deitering, who elaborates on *Rabbit at Rest* to clarify her idea of "toxic consciousness," argues that in *Rabbit at Rest*,

the body itself is obsessively perceived and represented as a vessel of contamination, an organism in the accelerated process of wasting away. For example, when Rabbit regards the face of his long-time friend and lover, Thelma Harrison, who is now dying of lupus, his gaze is set on the disease in her countenance. (1996: 200)

Likewise, Beard's body is a repetitive image in the narrative, and is represented as a "vessel of contamination" due to his numerous health problems which are mainly the result of excessive consumption and ignorance. Additionally, Beard is described as an invalid whereas Aldous is represented as his caretaker after their discussions and disagreement about the state of the planet. Aldous "accompanied him [Beard] up the path, again in psychiatric-nurse style" and he "was guiding Beard towards the door, as one might a mental patient in need of a bath" (McEwan, 2011: 47, 50). This suggests that Beard and his ideas about pollution and climate change are obsolete and about to perish just like his body. As Beard perceives

the world from an anthropocentric view and from the period when nature was related to production, he ignores his health problems since he does not notice the decay of both the outer world and his own body. On the other hand, Aldous, who belongs to the generation after the 1980s, is able to recognise Beard's wasted body as Aldous sees him as an invalid. In this sense, Beard's diseased and decaying body becomes the symbol of waste and pollution which marks "toxic consciousness".

Throughout the novel, the concept of place is highlighted and problematised in order to underline the idea that nature does not have any central presence anymore. Although Beard's mission is to save the planet through artificial photosynthesis, he does not spend any time in nature but only in human-shaped places. Beard's experiences in Solar are mostly set in human-constructed places such as his home, his work, the airport or the plane. Interestingly, the only occasion when Beard spends time in nature is his eight-day expedition at the Arctic. The place he is staying at during his expedition at the Arctic is a critical demonstration of the hypocrisy of his mission, which highlights the notion of "non-place". Marc Augé suggests that "[i]f a place can be defined as relational, historical and concerned with identity, then a space which cannot be defined as relational, or historical, or concerned with identity will be a non-place" (1997: 77-78). Augé uses the term "non-place" to present the difference between places⁵ that are identified through history or other connections and places that are constructed by human beings in isolation from cultural or relational concepts. He underlines that "non-places are the real measure of our time" as for the countless number of airports, railways, parks, hotel chains, malls and so on (Augé 1997: 79). Thus, a "non-place" "is neutrally engineered space such as an airport or a hotel, designed to provide security for the displaced without the thick platial identity connoted by place" (as cited in Buell, 2005: 145). Within this context, it can be discussed that Beard is staying at a "non-place" in the Arctic that contradicts with the target of the expedition which is to research nature and global warming in order to raise environmental awareness. While the Centre is highly proud of Beard since they believe that he will live in terrible circumstances at the North Pole in order to explore recent reasons of climate change, Beard knows that he will be provided a comfortable and even a luxurious stay. He will stay in a heated vessel, an Italian chef will be there to cook and there will be weapons to shoot the predatory polar bears (McEwan, 2011: 62-63). He states that the only difficulty would be the smallness of his room, limited internet and a wine list that only consists of North African wine (McEwan, 2011: 63). Even though the expedition is the only time when he is in sole nature, he is provided a "non-place" that makes him feel at home. The vessel he stays in is a human-made place that is detached from cultural, relational or historical connections. Beard and the whole team which consists of people with different professions and from different nations feel at home due to the comfortable accommodation opportunity. As Augé discloses, "non-places" do not present a sense of place; however, anyone can feel at home in these non-places, which is the main paradox included in the term (1997: 106). Accordingly, these "non-places" that are established beyond history offer the idea of being a part of a global home, due to globalisation. In this sense, the whole team feels at home in an isolated place at the North Pole, which critically indicates that certain places in nature are stripped of their identity and transformed into global "homes". On the other hand, a "non-place" embodies certain detachment from the environment which isolates humans from the outer world. In this sense, Buell states that Augé is aware of the indifferent narcissism of people "living only indoors, immersed only in passing time and not out in the weather ... indifferent to the climate, except during their vacations when they rediscover the world in a clumsy, arcadian way [and] naively pollute what they don't know" (Buell, 2005: 70). Thus, the vessel that provides an ideal temperature and protection from outer and natural dangers causes a detachment from nature and the climate. As a result, Beard, who is already indifferent to climate change, remains indifferent. Other team members who actually care about climate change unlike Beard represent the concealed hypocrisy of the expedition since

while the guilty discharge of carbon dioxide from twenty return flights and snowmobile rides and sixty hot meals a day served in polar conditions would be offset by planting three thousand trees in Venezuela as soon as a site could be identified and local officials bribed. (McEwan, 2011: 63)

Though the team's aim is to save the planet, it can be recognised that their actions only toxify the natural landscape. Concisely, the necessity of a "non-place" at the Arctic highlights that nature has no longer any essential existence in the world of humans and their survival even though the actions are set in nature itself.

The landscape from a bird's-eye view that Beard observes from the airplane demonstrates the interwoven aspect of a toxic landscape and human impact on nature which are defined by waste. When the plane is flying above London, Beard expresses,

Here was a commonplace sight that would have astounded Newton or Dickens. He was gazing east, through a great rim of ginger grime—it could have been detached from an unwashed bathtub and suspended in the air. He was looking past the City, down the bulging, widening Thames, past oil and gas storage tanks towards the brown flatlands of Kent and Essex and the scene of his childhood, and the outsized hospital where his mother died [...]. (McEwan, 2011: 148)

Clearly, human effect on nature such as the "unwashed bathtub" and storage tanks mix with the natural environment. These toxic products are intermingled with Beard's personal life which is also in a state of decay. In the light of the quote above, it can be argued that Beard combines the description of his childhood and the death of his mother with the destroyed natural environment of London. Also, the collapse of his private life continuously interrupts his portrayal of the deteriorated landscape of London. To exemplify, Beard sees "the microscopic airport, and around it, the arterial feeds, and traffic pulsing down them like corpuscles, M4, M25, M40, the charmless designations of a hard-headed age" (McEwan, 2011: 148-149) and "[t]he giant concrete wounds dressed with steel, these catheters of ceaseless traffic filing to and from the horizon" (McEwan, 2011: 149). These descriptions are paralleled with the accounts of his "first marriage a synaesthesia of misguided love", "[h]is Prize, that had half blessed, half ruined his life", and "[a]mong those millions of roofs, four had sheltered his second, third, fourth and fifth marriages" (McEwan, 2011: 148, 149). He accepts the collapse of his own life as "[t]hese alliances had defined his life, and

they were all, no point denying it, calamities" (McEwan, 2011: 149). The calamities of his personal life highlight habitat destruction since his personal details and the decay of nature are amalgamated and interwoven. Just as Deitering's analysis of *Rabbit at Rest* in which "in Rabbit's view 'everything is falling apart, airplanes, bridges" (1996: 199), in *Solar*, Beard observes the waste in nature, culture and human life which are already falling apart.

The description of London's view from Beard's perspective implies that even Beard adopts a "toxic consciousness" in certain situations which reflects the historical change in the definition of nature. In other words, although Beard has always been a toxic character regarding nature, he describes London's view in terms of habitat destruction which marks his awareness about toxicity on earth. That is, instead of avoiding the presence of environmental problems as he always does, he becomes conscious of these problems during his flight to London. When the plane begins to descend, Beard thinks that "how could we ever begin to restrain ourselves? We appeared, at this height, like a spreading lichen, a ravaging bloom of algae, a mould enveloping a soft fruit - we were such a wild success. Up there with the spores!" (McEwan, 2011: 152-153). Evidently, he compares the existence and actions of humans to the organisms that invade their environment such as algae and mould. With reference to Deitering's statements that "[n]ature is no longer a central presence in the world of the novel, no longer the 'life sustaining air'" (1996: 201), it can be suggested that, in Beard's description, nature is vanishing as a result of human beings who consume both themselves and nature. It is significant to highlight the fact that not only nature itself but also the concept of nature is disappearing. In this fashion, referring to the threats of global warming and environmental crisis, Bill McKibben contends that "[a]n idea, a relationship, can go extinct, just like an animal or a plant. The idea in this case is 'nature,' the separate and wild province" (2003: 48). The end of the idea of nature, and its state of decline can be deduced from Beard's explanation and portrayal of the transformation of London's medieval landscape into a modern world city. He emphasises the state of London's nature before the industrial revolution by visualising that "[t]he fields and hedgerows, once tended by medieval peasants or eighteenth-century labourers, still visibly patterned the land in irregular quadrilaterals, and every brook, fence and pigsty, virtually every tree, was known and probably named" (McEwan, 2011: 152). He adds that "[o]ne day this brash and ancient kingdom might yield to the force of multiple cravings, to the dreamy temptations of a giant metropolis [...] burying all previous hedges and trees" (McEwan, 2011: 152). Notably, London's transformation from a pastoral landscape into an industrial city, and in the future into a huge metropolis, points out that nature is no longer regarded as home. In this sense, nature is only a nostalgic concept that has existed in the period before the industrial revolution. Even though the remains of nature such as the "hedges and trees" can be detected in the recent landscape, they will be destroyed in the future when world-cities dominate the world. This suggests that although nature is not entirely destroyed, it is still defined by waste and will be eradicated totally in the immediate future, unfortunately.

Conclusion

In conclusion, Solar reflects culture's altered relationship with nature and a "toxic consciousness" through the natural and cultural landscape of Beard's life, which becomes a metaphor for this change. In fact, Beard has a sense of exile in a world where everything is defined by waste. Rather than presenting a direct narration of the tragedy of climate change and environmental problems, McEwan's fiction foregrounds Beard's consuming body and, as a result, disregards nature, which indicates that nature does not have central presence in the world of economic profit and commodities. Habitat destruction is also evident since Beard experiences a sense of nostalgia when he only sees the remains of nature from the plane. Referring to Cheryll Glotfelty's view regarding the significance of "consciousness raising" about environmental problems in ecologically focused criticism (1996: xxiv), this study demonstrates that Solar, different from other eco-fictional works which are explicitly and conventionally nature-oriented, raises consciousness about environmental crisis by decentring nature and by portraying a transformed perception of earth. This decentring raises "toxic consciousness" and awareness about environmental problems. Therefore, Solar unfolds new areas for discussion in ecocriticism as it offers a new perspective to climate disruption rather than a traditional nature-oriented criticism. On this basis, the amalgamation of the consumption of both nature and culture exposes that both are wasted, and that human beings are the residents of a culture identified by contamination and consumption. McEwan's attitude towards nature and culture does not directly underline the risks and inferno caused by natural disasters in Solar, yet, he fictionalises a life-like and wasting world in which the presence of nature is absent like in today's world.

Notes

- 1 I would like to thank Ege University Scientific Research Projects Coordination Unit for supporting the research project (Project number: 18-EDB-004) which motivated this study.
- Deep ecology supports the shift from a human-centred world to a biocentric system. Greg Garrard states that "whereas 'shallow' approaches take an instrumental approach to nature, arguing for preservation of natural resources only for the sake of humans, deep ecology demands recognition of intrinsic value in nature. It identifies the dualistic separation of humans from nature promoted by Western philosophy and culture as the origin of environmental crisis, and demands a return to a monistic, primal identification of humans and the ecosphere" (2004: 21).
- 3 Beard receives an invitation to go the North Pole for six nights with twenty artists and scientists who are interested in climate change. His colleagues at the Centre assume that he will go to the North Pole to "see global warming for himself" for eight weeks (McEwan, 2011: 63, 66). The Centre is very proud of him as they think that Beard will live in terrible circumstances in order to explore the condition of the planet due to the climate crisis
- 4 Ian McEwan joined an expedition to Spitsbergen that lasted for six days in 2005. The expedition team consisted of artists, scientists and journalists whose objective was to change the way human beings think about climate change (McEwan, 2005).
- In order to understand "non-place" the distinction and relationship between place and space should be disclosed. Lawrence Buell clarifies the difference between place and space: "Place entails spatial location, entails a spatial container of some sort. But space as against place connotes geometrical or topographical abstraction" (2005: 63). Thus, "place is succinctly definable as space that is bounded and marked as humanly meaningful through

personal attachment, social relations, and physiographic distinctiveness" (Buell, 2005: 145). Buell states that the world history, for instance, represents a transformation from space to place as throughout history human beings have associated certain meanings to specific spaces (2005: 63). To exemplify, "[i]n colonization of the hinterlands of the US, Australia, and elsewhere, the concept of terra nullius – the land as "empty" or pure spacewas historically used as a pretext for conquest and denial of aboriginal land rights" (Buell, 2005: 147).

Research and Publication Ethics Statement: This is a research article, containing original data, and it has not been previously published or submitted to any other outlet for publication. The author followed ethical principles and rules during the research process. In the study, informed consent was obtained from the volunteer participants and the privacy of the participants was protected.

Araştırma ve yayın etiği beyanı: Bu makale tamamıyla özgün bir araştırma olarak planlanmış, yürütülmüş ve sonuçları ile raporlaştırıldıktan sonra ilgili dergiye gönderilmiştir. Araştırma herhangi bir sempozyum, kongre vb. sunulmamış ya da başka bir dergiye değerlendirilmek üzere gönderilmemiştir.

Contribution rates of authors to the article: The first author in this article contributed to the 100% level of preparation of the study, data collection, and interpretation of the results and writing of the article.

Yazarların makaleye katkı oranları: Bu makaledeki birinci yazar % 100 düzeyinde çalışmanın hazırlanması, veri toplanması, sonuçların yorumlanması ve makalenin yazılması aşamalarına katkı sağlamıştır.

Ethics committee approval: The present study does not require any ethics committee approval.

Etik komite onayı: Çalışmada etik kurul iznine gerek yoktur.

Financial support: The study received no financial support from any institution or project.

Finansal destek: Çalışmada finansal destek alınmamıştır.

Conflict of Interest: The author declares no conflict of interest.

Çıkar çatışması: Çalışmada potansiyel çıkar çatışması bulunmamaktadır.

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