

**The theme of Survival In Phyllis Gotlieb's *Birthstones* (2007): An Eco-Feminist Analysis**

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**التكهنات حول البقاء: دراسة المرأة و البيئة لرواية الخيال العلمي أحجار ميلاد (2007)**

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**قسم اللغة الانكليزية كلية الامام الكاظم ع**

**Abstract:**

The study investigates the theme of survival in Phyllis Gotlieb's *Birthstones* (2007), a science fiction addressing issues such as environment, community, and ecological catastrophes. It argues that survival is imagined in the face of environmental apocalypse by the Canadian woman science fiction Phyllis Gotlieb. Survival is examined from the perspective of women and non-human nature, who have traditionally been the object of scientific experimentations. *Birthstones* deals with survival of the planet Shar and its community in which both women and the environment are oppressed and degraded. Survival of the planet is threatened by the breakdown of the environment and the family. The novel presents the disintegration of society in general and the family in particular when moms are absent. Due to environmental catastrophes, the women of the Shar planet are deformed, and consequently they are treated as non-human creatures and considered by the government only as womb capsules. They are taken away from their families for scientific experimentations as soon as they deliver their babies. Similarly, the Shar planet is polluted and the land is used for mining only and is exploited by other aliens. The government exploit both women and the land. Instead of protecting the environment from pollution, the leaders wear the masks to protect themselves only, leaving the planet suffer from infertility and birth abnormalities. The study is a call for keeping the environment healthy by stopping polluting it and by taking care of the mothers by keeping them in their houses to raise their children and



**Article history**

**Received: 11/9/2023**

**Accepted: 18/10/2023**

**Published: 31/12/2023**

**تواريخ البحث**

**تاريخ الاستلام: 11/9/2023**

**تاريخ القبول: 18/10/2023**

**تاريخ النشر: 31/12/2023**

**الكلمات المفتاحية:** الخيال العلمي, المرأة و البيئة, الامومة, البقاء, حماية البيئة

**Keywords:** science fiction, eco-feminism, motherhood, survival, environmentalism

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DOI:

<https://doi.org/10.61710/151dx804>

take care of their families. Only in this way survival of the society and the planet is achieved.

#### المستخلص :

تبحث هذه الدراسة في الموضوع الكندي المركزي المتمثل في البقاء على قيد الحياة في رواية أحجار الميلاد (2007) للكاتبة فيليس جوتليب ، وهي خيال علمي تتناول قضايا البيئة والمجتمع والكوارث البيئية. كان الخيال العلمي في منتصف القرن يدور حول أهوال التداعيات النووية، ومع ذلك، يرى هذا البحث أن البقاء على قيد الحياة تم تخيله في مواجهة نهاية العالم البيئية من قبل كاتبة الخيال العلمي النسوي الكندية فيليس جوتليب، ويتم بحث البقاء من منظور المرأة والطبيعة غير البشرية، الذين تقليدياً كانا موضوعاً للتجارب العلمية. تتعامل رواية أحجار الميلاد مع بقاء كوكب الشار ومجتمعه الذي تتعرض فيه النساء والبيئة للاضطهاد والتدهور الأمر الذي يؤدي تهديد الكوكب بانهيار البيئة والأسرة. تعرض الرواية تفكك المجتمع بشكل عام والأسرة بشكل خاص عند غياب الأمهات. بسبب الكوارث البيئية، تتشوه نساء كوكب شار، وبالتالي يتم معاملتهن على أنهن كائنات غير بشرية، وتعتبرهن الحكومة مجرد كبسولات رحم. يتم أخذهن بعيداً عن عائلتهن لإجراء تجارب علمية بمجرد ولادة أطفالهن. وبالمثل، فإن كوكب شار ملوث وتستخدم الأرض للتعدين فقط ويتم استغلالها من قبل كائنات فضائية أخرى. تستغل الحكومة النساء والأرض على سواء. وبدلاً من حماية البيئة من التلوث، يرتدي القادة الأقنعة لحماية أنفسهم فقط، تاركين الكوكب يعاني من العقم والتشوهات الخلقية. وتأتي الدراسة دعوة للحفاظ على صحة البيئة من خلال حمايتها و التوقف عن تلويثها ورعاية الأمهات من خلال إبقائهن في منازلهن لتربية أطفالهن. بهذه الطريقة فقط يتم تحقيق بقاء المجتمع والكوكب.

#### The Genre of Science Fiction and Environmentalism

It is possible to observe a widespread infusion of environmental concerns in science fiction as a whole after World War II. Despite the fact that the modern Western environmental movement has a long history, it was at this particular historical point that the effects of nuclear weapons and human consumption patterns first became apparent. Human social values and their effects on the environment of the planet are issues addressed by science fiction, utopian, and dystopian literature.

Environmental science fiction gained momentum in the 1960s and continued developing science fiction today. Therefore, it became a dominant genre in this post-war period. The American author Harry Harrison, for instance, wrote about the overpopulation and resource scarcity-theme in his novel *Make Room! Make Room!* in 1966, and the English author of science fiction James Graham "J. G." Ballard published *The Drowned World and The Burning World* in 1962 and 1964, respectively. The popularity of environmental themes persisted throughout the 1970s, as seen by the release of *Ecotopia: The Notebooks and*

*Reports of William Weston* (1975) by Ernest Callenbach and the award-winning film adaptation of Richard Harrison's novel *Soylent Green* (1973), starring Charlton Heston. Though science fiction has been inspired by the concerns about nuclear war or space exploration, current concerns about genuine climate change and environmental disaster inevitably become significant as well. According to Otto (2012: 164) and Murphy (2001:270), science fiction and environmental nonfiction share literary techniques in addition to thematic issues. (Otto.2012, p.164) describes how the techniques of cognitive alienation are common to environmental texts, using *Silent Spring* (1962) by Rachel Carson as an illustration. Extrapolation is a technique used by both. In fact, the current extrapolating practices and their effects on the environment is standard practice in environmental studies.

Finally, environmental literature and science fiction rely on a sense of amazement at the beauty of nature, whether that be a transcendent personal encounter with nature or the wonder generated by spectacular landscapes and strange animals from another world (Otto. 2001, p. 265).

### **Women and Nature**

Like the environment, Women have historically been things to be possessed or subjugated in traditional science fiction. Many early works of science fiction, for instance, adhere to colonial exploration pattern by focusing on masculine explorers who struggle to survive in hostile environments or among hostile locals. Nature was always portrayed as feminine and required exploration, mapping, or dissection in order to be understood. Unlike men, who are linked with civilization, women are viewed as related to nature (Ortner. 1972, p. 12). Moreover, the persistent historical connections between women and the natural world have long been a source of contention for feminism (Alaimo. 2000, p.2).

In particular, eco-feminists contend that patriarchal civilizations perceive women as the land and nature as women, and that this construction and conflation contribute to the degradation of both. According to ecofeminism, there are significant correlations between how one treats the underclass, women, and people of color and how one handles the nonhuman natural environment (Warren. 1997, p. xi). Eco-feminist oppose the oppressive hierarchies such as that prioritize males over women and humans over nature because these hierarchies are inextricably linked. What distinguishes ecofeminism is the notion that naturism (i.e., the wrongful exploitation of nature) and nonhuman nature are feminist problems (Plumwood. 1993, p. 4). Thus, eco-feminists focus on the relationships and interdependence between species as well as those between different types of dominance. It can be easily seen how land and people supremacy have always been in tandem with one other, particularly in the case of colonialism. As a result, while some eco-feminists make a case for conceptual connections between women and nature, others emphasize the

tangible ramifications of their dominance, while others discuss the varied effects of the environment on other racial and ethnic groups. For instance, some materialist eco-feminists have contended that women are especially concerned with the environment because of the gendered effects of its exploitation and devastation. They show how calamities brought on by drought, forest destruction, eroding soil, and other environmental degradation have dangerous effect on the lives of children, women, and old people. (Vakoch. 2023, p. 65).

It's important to note that certain eco-feminists have promoted inherent links over socio-cultural ones. Within ecofeminism, this distinction has been proved to be significant. Similarly, Victoria Davion, an eco-feminist scholar, makes the following argument against women having a naturally privileged viewpoint or unique relationship to nature:

“ If this special understanding is the result of oppression, we should expect it to be skewed. Even if it is not skewed, we must ask whether there are other ways to get it. This is a crucial question because if there is no other way to get it, we risk saying that women’s oppression is necessary to create the opportunity to gain knowledge needed to solve the ecological crisis—clearly an untenable feminist position. Once again, such crucial questions concerning sex and gender are left vague, and, problematically, women’s roles under patriarchy are glorified. (Davion.1994, p. 23).

Davion, thus, contends that essentialist eco-feminists, who celebrate what they perceive to be an inherent relationship to nature, essentialize gender distinctions in a way that is incompatible with feminist theory.

Actually, most eco-feminist philosophers are concerned with dismantling the systems of dominance considering a strategy that gives women more weight than males to be incompatible with ecofeminism because it would reintroduce hierarchical thinking. Hence, ecofeminism tries to suggest different lifestyles which are based on an ethic of care and glorified actions towards women and nature. (Alonso. 2018, p.216). Susan Buckingham argues :

“[E]ssentialism is often used as a tool to mobilize a group around a perceived characteristic that sets it apart, and, certainly, cultural ecofeminism (prioritizing essentialist arguments) did so. Its strength was to demonstrate the possibility of a way of thinking and being which reversed the normal hierarchy in which men stood at the peak; however, little academic environmental thinking is currently framed in this way. ”. (Buckingham. 2007, p. 147).

The eco-feminist analysis in this study focuses on connections between non-human nature and women, as well as the linkage between abuse against nature and violence against women.

Both movements of feminism and ecology have grown inextricably linked for many reasons which involve multidisciplinary responses to domination hierarchies of leadership that is a tenet of eco-feminist. Eco-feminists believe that both women and nature must be liberated equally. (Gaard.2002, p75). Women worry more about the environment since they are responsible for the majority of the work involved in raising the next generation. Mothering exposes women to the damaging consequences of pollution on children, such as asthma in children, in addition to the environmental effects on their own reproductive health, and their capacity to pregnancy and having children with no birth defects.

Despite the fact that concerns about the atomic bomb have diminished, worries about the dangers of toxicity and radiation persist due to environmental disasters and nuclear mishaps, such as the Fukushima nuclear power plant catastrophe that was caused by a 2011 earthquake and tsunami. In addition, the steadily rising pollution of the environment and nutrition has less dramatic effects on women, children, and reproductive health. Hence, female science fiction writers frequently express environmental concerns in an era of increased worldwide pollution that began in the 1980s.

### **Why Survival in Canadian Literature**

In her *Thematic Guide to Canadian Literature* (2004), Margaret Atwood presented a variety of dead animal stories and animal stories, stating that:

" Hanging on, staying alive ...The central symbol for Canada—and this is based on numerous instances of its occurrence in both English and French Canadian literature—is undoubtedly Survival, la Survivance. [...] it is a multi-faceted and adaptable idea. For early explorers and settlers, it meant bare survival in the face of “hostile” elements and/or natives: carving out a place and a way of keeping alive. But the word can also suggest survival of a crisis or disaster, like a hurricane or a wreck, and many Canadian poems have this kind of survival as a theme; what you might call “grim” survival as opposed to “bare” survival. For French Canada after the English took over it became cultural survival, hanging on as a people, retaining a religion and a language under an alien government. And in English Canada now while the Americans are taking over it is acquiring a similar meaning .” (Atwood. 2004, p. 32)

Atwood's analysis functions as a component of the project of survival she defines. She further contends that one's own national literature is essential for both emotional and cultural survival on both a personal and cultural level:

“What a lost person needs is a map of the territory, with his own position marked on it so he can see where he is in relation to everything else. Literature is not only a mirror; it is also a map, a geography of the mind. Our literature is one such map, if we can learn to read it as our literature, as the product of who

we are and where we have been. We need such a map desperately, we need to know about here, because here is where we live. For the members of a country or a culture, shared knowledge of their place, their here, is not a luxury but a necessity. Without that knowledge we will not survive ” (Atwood. 2004, p. 18-19).

In fact, the question how long will we survive appears frequently in Canadian science fiction that includes dystopian, apocalyptic, and post-apocalyptic fiction (Ketterer. 1972, p. 147).

In Canadian, literature nature is effectively one of the many national themes that Atwood focuses in her literary guide. Since the 1980s, when Atwood's first science fiction book, *The Handmaid's Tale* (1985) , was published to critical acclaim abroad and William Gibson publish *Neuromancer* (1984), Canadian science fiction has attracted attention from around the world at a time when feminist and environmental forces were intensifying and influencing this literary type (Mohr. 2005, p. 31). Besides, the Canadian writing witnesses a phenomenal growth of SF during the past several decades which is considered as one of the most interesting trends in Canadian fiction (Iverson. 2002, p. xxvii). Thus, some of the most intriguing achievements in the science fiction genre come from Canadian writings. Since nature has been argued to be essential to Canadian literature by Ketterer, Atwood, and others, applying eco-feminist analysis to Canadian science fiction is particularly intriguing. Canadian science fiction has a lot to offer modern science fiction, which frequently includes an environmental focus, or a concern in protecting the environment rather than destroying it. Science fiction, a future-focused genre, has emerged as a significant forum for the expression of environmental concerns.

Henceforth, as far as survival is concerned, this paper will focus on the survival of society and the planet rather than on the survival of the individual against the elements.

### ***Birthstones (2007)***

Phyllis Gotlieb (1924-2009) is a Canadian science fiction writer and a poet. She criticizes the limitation of women to their reproductive tasks by reducing the Shar women to their most fundamental and biological functions. Mother Halls is the place where these women spend the rest of their lives after they are fertilized and deliver their babies as well as nurse infants placed at their breasts. Due to horrible birth defects, the leaders' plan is to manipulate women scientifically and treat them like animals rather than stopping capitalism's degradation of the environment. Instead of separating women from animals, Gotlieb's approach demonstrates how those characters, who resemble animals, need more ethical consideration and sympathy than doctors who minimize them. The novel imagines a future society where moms are absent in more ways than one. The Shar and GalFed governments, like Gilead's, ignore the main causes of

environmental problems in favor of using science and redistribution to regulate women's reproductive systems. Infertility and persistent birth abnormalities are portrayed in Phyllis Gotlieb's *Birthstones* as hazards to survival that are associated with the breakdown of the family. On the planet Shar, women have had their fertility rates decreased owing to recurrent mutations making them solely useful as "womb capsules" (Gotlieb, 2007, p. 2). Pollution, affecting the Planet Shar and its inhabitants, is being made worse by the operations of corporations orbiting other planets that mine the mineral-rich planet. Unfortunately, the orbiting corporations and these aliens are essential to the Shar people to provide them with the food they can't grow natively due to their polluted and smog-filled environment as well as the money they need to buy their necessary materials. The extent of foreign commercial neocolonial dominance is so profound that it was once said that the Planet Shar is "owned" by the aliens in orbit who use it for their own purposes (Gotlieb, p.14). In the novel, the environmental degradation is shown in a more graphic manner which includes miners and foreign visitors to Shar who are compelled to take vaccines and put on masks as a way to protect themselves from the pollution of the planet. These characters are all involved in the ongoing destruction of Shar. The horrific birth deformities that females experience on Planet Shar are the most glaring example of how the ecosystem has been destroyed. Women on Shar were born without deaf or limbless but their wombs and breasts are still active since a time known as "The Change", serving only a fundamental duty in the survival of the Shar race. These women or "Unwomen," as some have called them, are kept out of families and society altogether, living together in groups called Mother Halls so as to be cared for by shifts of men who perform the public duty, which is akin to national conscription. The mutations that afflict the sisters have no effect on male babies. Similarly, female newborns also have the same birth abnormalities as their mothers and they also live in Mother Halls. Thus, only men raise their sons in Shar society; no women nor their influence are present. Some of these men are kind, and they form strong family ties with their sons like Ohr and his son Aesh and Kohav who adores his little son Shemesh who is kidnapped by rioters at the hospital where he is born. Aesh is likewise prepared to put his job and life in danger. Due to the fact that the only mothers and daughters the men are aware of are anonymous, limbless, and caregivers in the public Mother Halls, it is clear to discern that some caring still occurs despite the fact that family units, in any recognized form, do not exist anymore. While the ladies are fertile, another group of males is recruited to wash and feed them undertaking such responsibilities with no hesitation. The care of women is more about maintaining their fundamental requirements than an act of care. However, Gotlieb demonstrates that mothering can be passed on from the biological moms to men. In the novel, Ohr is a good example of a man

being friendly and caring in an area where women are “ *often left unclean and unfed until they died* ” (Gotlieb, p. 115). Additionally, he performs a heinous act when he secretly keeps a (Un) woman and spends money to provide food and shelter for her. Besides, He tends after the elderly guy who also takes care of the Unwoman. Ohr, a revered past leader of Shar, is against the practices which view women exclusively as community costs or expenses:

“I found her again last year when she was being sent to the inland halls to die,” he explains to his son; “Should we not be allowed to love even one of these? It is forbidden to do that, waste food and care on them. I am committing a crime ” (Gotlieb, p. 142). Though the Shar’s genetic problem is caused by pollution, the government and the interplanetary Galactic Federation (GalFed) focus on the bodies of women as a solution instead. “ We will bring you true mothers for your children, help you beget whole ones of your own, and make your world clean ” (Gotlieb, p. 13). This quotation is the promise of the GalFed to the Emperor of the Shar, Aesh Seven Shar which implies that they will supply women and aid in cleaning up the planet. Real mothers, therefore, must be borrowed from somewhere else. Hence, the GalFed intend to recruit women from the Meshar, a descent from the Shar. Originally belonging to the Shar race, the Meshar were compelled to flee their home planet as refugees because they suffered persecution by the majority of society for having non-mutant children after " The Change. " These people were evacuated by the GalFed to their own inhabitable yet unpleasant planet in order to stop their massacre on Shar. Now that the intergalactic organization is seeking for mothers to rescue the Shar owing to the mutation affecting the Shar and their debt to the GalFed. The GalFed expects the Meshar to repay them with fertile women to act as "First Mother" (Gotlieb, p.25) by being suffused with altered sperm of Shar at the time the novel unfolds. As a result, the difficulties facing the families caused by the deterioration of the environment on Planet Shar affect families on Meshar as well. Ruah is the main mother character in *Birthstones*, a Meshar lady who is abducted from her home to become one of “ First Mother “ Ruah is taken from her own children since she must bear offspring for the Shar in the future. Ruah tries to survive after the research facility in which she is being held and destroyed on the intervening planet Fthel IV, but she is once more taken prisoner, this time by a strong, wealthy man whose name is Vanbrennan. Because of her ability to procreate, Vanbrennan also desires Ruah as he harbors irrational hopes of having children of his own with a Meshar woman. It is stated that the recently caught Ruah is meant to take the place of the Meshar woman who was originally Vanbrennan's love interest but lately passed away after being " grabbed " (Gotlieb, p. 86) and imprisoned against her will. GalFed and the main characters of the novel treat this man like a pervert and with revulsion. Ruah's body is a national/Planet Shar resource available to the public use.



However, neither Ruah nor other men like Vanbrennan are able to declare ownership of it. Ruah misses her family after being pulled from her home to become a “First Mother, ” but she believes the community will take care of her kids: “there were others of her clan who would care for the children” (Gotlieb, p. 35). The male-dominated society on Planet Shar institutionalizes the care of children and women, and even the biological fathers reject their own daughters or their children moms. This community caring for others' children contrasts with that of Planet Shar. Other than the rotational feeding and cleaning responsibilities carried out by different Shar men, there are no personal interactions or care provided. Finally, the Shar women are probably neglected as they age or “ *helped along* ” by their guardians (Gotlieb, p. 71). When compared to other human-like figures, such as the mining workers circling Shar, the wicked kidnapper, Vanbrennan, and a number of GalFed ruthless experts, animal-like characters created by Gotlieb, Shar and Meshar are typically more ethically intelligent. In fact, some of the animal-like characters' acts of compassion are contrasted with the GalFed's “ *civilized* ” scientific method and its frequently heartless researchers who objectify in particular women, mammals, and specifically non-human women like the Meshar. The comparison between how scientists treat the Meshar women and how other animals are treated is dramatic and highlights the objectification and exploitation of both. Natalya, a mother and female scientist, makes this observation: “She said slowly, ‘No one of them chose to come here.’ Like any lab animals” (Gotlieb, p. 34). Particularly, Ruah is handled like an animal both within the lab and outside. She is referred to as “dog face” (Gotlieb, p. 79) and “lady-dog ” (Gotlieb, p. 119), and is mistaken for a dog or wolf by the aliens on Fthel IV. The use of these animal analogies illustrates that the individuals are linguistically conditioned to embrace patriarchal attitudes regarding women's role. (Rodrguez, 2009:96). Ruah, an alien on the planet Fthel IV, “ *looks like a dog* ” (Gotlieb, p. 55). She is mistreated and jabbed with a stick even by the male teenagers who approach her, one of which is Natalya's son who is a scientist. We can tell from the boys' actions that this belief regarding women, animals and aliens—Ruah stands in for all three—is one that has been learned throughout one's life. Women are already considered non-humans, like Shar and Meshar; therefore, there are obvious parallels between how they are treated and how other animals are treated. It is common to use a heritage of animalizing women to defend the oppression of patriarchal societies, especially when it comes to women of color, poor women, and mothers. In *Birthstone*, Ruah is animalized to justify her captivity, the exploitation of her body as a test object, and to make the issue of her permission unimportant in the context of the scientific laboratory. As a result, the text criticizes how science and patriarchal society treat both women and animals. Ruah sheds a silent tear, “They will all

think you are some beast and run to close you in walls like the others ,” (Gotlieb, p. 56). Besides, when the guys tried to rape and eat her, she screams, invoking Shakespeare and Huxley to highlight the barbarism of the supposedly civilized people, “Some world this is with people like you in it! ” (Gotlieb, p. 56).

What eco-feminists assert more widely which can be seen in *Birthstones* is that women's and other animals' oppression is interrelated. (Adams. 2010, p. 16). Meanwhile, this method of questioning the connection to nature says nothing about the hierarchies themselves, which abuse and exploit it without giving it any ethical thought. It is possible for eco-feminists to picture a society in which comparison and equitation humans with animals and the natural world does not humiliate or objectify. So, Gotlieb conflates the boundaries between humans and animals in her novel. (Grace. 2005, p. 25). *Birthstones* shows the Shar with different animal-like characteristics, such as tails, and many non-Shar aliens refer to them as beasts and savages. However, the text does not depict a favorable picture of the aliens who voice such sentiments: these are the colonists who are destroying another planet's ecosystem and abusing its inhabitants' labor. On the other hand, the finest examples of compassion and empathy in some of the animal-like Shar can be noticed. Therefore, one of Phyllis Gotlieb's contributions to ecofeminism is to challenge the differences between humans and other creatures as well as the hierarchies they entail. Instead of striving to separate the Shar people from natural environment, Gotlieb opposes the hierarchy implied by the boundaries between human, animal and alien. For instance, a miner claims that the Shar, “ .....them there's just animals that ought to be in cages. They'll tear you apart if you look at them” (Gotlieb, p. 206). Though the miners have a more human-like appearance, they are portrayed as rude, exploitative, harsh, and dishonest whereas many of the Shar characters are seen as having higher moral standards. Gotlieb refuses the idea of utilizing other animals or to return to separating her characters from nature and animals as a part of her approach to women's and environmental exploitation. She rejects presumptions that the animalism of her characters ought to be connected to irrationality, violence, or a lack of civility and instead she celebrates the animalism of her characters. The Meshar women are required to give up their personal independence and family lives in order to engage in the scientific endeavor of the GalFed for the sake of a higher good. Here, as in many other dystopian and utopian settings, the problem is when the "greater good" is placed above individual liberty. In order to serve the regimes, some women must relinquish their legal entitlements to their bodies and their maternal relationships. Besides, their reproductive abilities are viewed as collective property. The Meshar are held captive in the GalFed's institutions as their bodies are coopted and used against them for survival and scientific

research. Given the scientific nature of these interventions, Gotlieb connects technology, including reproductive technologies, to the hierarchical maltreatment of females shown in the book. It is notable that women in scientific institutions are degraded and considered as samples for research and not as collaborators. Natalya, the only female expert involved in the research, is a mom herself and the only one who finds the way the women are being treated to be offensive. She observes how the ladies in their labs are objectified. Being a mother of a son, she feels that she is betraying the Meshar women by working for GalFed and coming up with a scientific solution for the issue on the planet Shar. Men are required to contribute the modified sperm that the researchers are working to create. Women on Meshar are encouraged to offer their services and make emotional and physical sacrifices in ways that the men cannot. The Meshar, who are kidnapped so as to assist the Shar in the creation of new women, are confined to their biological functions, much as the Shar women are described as " *cradles* " (Gotlieb. p. 33) and " *womb-bearers*" (Gotlieb. P. 14) having just one function to perform. Concerning the reproductive technology, Tracy Marafiotte states that the female body is "a battleground upon which cultural skirmishes are waged in relation to woman, maternity, nature, technology, and, fundamentally, choice" ( Gotlieb. P.183). In *Birthstones*, many believe that scientists must interfere with Shar reproduction. Feminists contend that in the field of medicine, a formerly female-dominated field of knowledge, is increasingly adopted by male-dominated organizations that deal with women just like patients instead of being colleagues and all too often overlook and undermine knowledge of birth and pregnancy that are based on women (Marafiotte. 2010, p. 183). Since childbirth is becoming more mediated, males or " *heroic experts* ", instead of women themselves, are in control of women's bodies, namely their reproductive systems. Natalya is a compassionate scholar who compares between how other people mistreat women and creatures to her own connection with both. She is an illustration of the ambitious women who aspire for studying science. (Donawerth. 1997, p. 5). Natalya's dissatisfaction with the scientific culture suggests that a feminine utopian study must not just involve women as researchers but also offer them the freedom to change the norms and practices in the laboratory itself. The novel is an attack on the hierarchical methods of reproduction, portraying them as including forced insemination and kidnapping. The Meshar ladies are taken away from their native planet participate in a research experiments that would help the Planet Shar's only male society. The reader is given a straightforward introduction to the project which takes the absence of women's agency and permission as part of it as the following:

"Great civilizations would use their sciences and learn new skills to rectify the DNA of the Shar males, and Meshar women would be called to serve as the

First Mothers of the future. No one expected them to serve willingly”.(Gotlieb. P25).

According to this quotation, the scientists in charge are "great" and "civilized," but the "service" renders the Meshar women's permission unnecessary and null. Eco-feminist Lin Nelson asserts that women are frequently treated as object for study or used as biological indicators and important source of gathering data in stead of being contributors in reproduction process. (Nelson. 1990, p. 180). *Birthstones* treats some of Meshar women chosen to become “First Mothers” as research subjects rather than project collaborators, and definitely not as potential knowledge-bearing individuals. A pregnant Meshar lady is objectified even outside the labs as researchers keep an eye on her and turn her unborn children into “fetal tissue” to be studied (Gotlieb. P. 195). The Meshar woman Levona, who is a hospital employee for GalFied, has a child with a Shar guy, a matter thrills the scientists’ curiosity to explore whether Meshar and Shar union might offer a solution to the aberrant Shar births. It is discovered that one of the twins Levona is expecting has the Shar mutations but the other is a healthy fetus. The news that Levona is expecting about the Shar mutation upsets Natalya because She considers the stress mom would go through if gave birth to a child with such a genetic disorder. However, Mukherjee, a different GalFed researcher, is thrilled that the twins will have one abnormal, explaining, “If it works out it’s one more for the population and one for the research” (Gotlieb. P. 194).

While scientists like Mukherjee are dissatisfied with the miscarriage of the deformed twin because “less fetal tissue” to examine (Gotlieb. P. 195). Natalya, once again, is relieved about this miscarriage saying it is “for Levona’s sake” (Gotlieb. P. 195). In this way she shows her consideration for women moving away from the domination of the masculine and scientific concern with specimens and samples. Actually, the demands of patriarchal science seem to need a rejection of empathy and compassion as well as the sacrifice of individual mother bodies to more extreme scientific and patriarchal regimes, which have a significant negative impact on her. There are many reasons why it is important to protect nature and refrain from using it as a resource to serve our own interests. The most self-serving and practical of these reasons is that the healthy environment is essential to the existence of all species. In this novel, the women are regarded as the bearers of future Shar inhabitants and are disposed away once they have served their function, like the elderly moms in Shar inside civilizations that devour resources and trash what is left behind. These women are viewed as natural resources, and their exploitation is accepted within the context of technology, religion, or environment. However, because these women are treated as resources rather than as agents, they are not themselves given moral consideration. When they are no longer

required as wombs, the Shar's barely sentient moms are put outside the city to suffer from negligence. As a result, how the environment is treated affects not just the physical well-being of the humans and other creatures that live there, but also their social well-being since its people, especially women, are treated in the same way as objects to be consumed, used, and disposed of. . On Shar, scarcity is a significant concern, and people are unable to grow their own food. Therefore, resources are distributed in a clear patriarchal manner and the distribution of food is associated with patriarchal views of women's value which is painfully apparent when the females are sterile. So, while Aesh, the protagonist and the Shar's leader, feels somewhat ashamed and depressed about being infertile, it does not prevent him from taking advantage of resources or from achieving success in social and political spheres. This makes it quite evident that women are constrained by their ability for reproduction whereas the importance of men transcends their biological potential, even in countries where the principal aims are population growth and the eradication of birth abnormalities.

The GalFed pledges to clean up the world and bring back " true " moms. Rather than solving environmental issues, the GalFed's actions, however, are solely directed towards taking control of procreation and mastering the manipulation of of Shar males' sperm and the reluctant Meshar women's bodies. The aliens that harvest the planet's resources are mostly worried with their continuous operations even though the world is on the verge of going to war. Despite the GalFed's assurances, no action is done to alleviate the industrial pollution on Planet Shar; rather, the mining operations seems to take precedence above all other considerations. "the aliens were unwilling to interrupt the mining of precious metals, gems and liquid fuels with the election of a new Emperor" (Gotlieb. P. 69).

Thus, it is clear that mining and pollution are continuing uninterrupted. Instead of trying to cure moms and children on Shar naturally by stopping pollution and striving to clean the environment, a lab experiment is being conducted on refractory mom bodies from another planet and women are being asked to sacrifice their bodies for research and the survival of the species. In fact, if the environment gets worse, more reproductive treatments could be needed since there is a greater focus on fertility issues rather than the environmental issues that contribute to them. Through reproductive technologies, the influence of scientists is increased, but the environmental pollution is still permitted. This delays the problem of transitioning our interactions with one another and the planet. (Diamond. 1990, p. 210). In the case of Planet Shar, the "heroic experts" in the shape of GalFed scientists are requested to solve the issue by changing Shar sperm and utilizing Meshar women. However, these scientists choose to disregard the ongoing issues of a hazardous planet. Though the solution has the

support of the scientific community, eco-feminists cannot accept that forcing women into parenthood and reducing them to wombs is the answer. Nonetheless, Gotlieb finds solace in two astonishing revelations that occur outside the control and observation of the GalFed experts: Levona's normal embryo and the discovery of healthy women giving birth in isolated and unexplored but similarly dirty Western Declivity on Shar. Finally, the efforts to concentrate on a scientific solution at the price of some First Mothers' bodies are ultimately undone by bloodshed and politics when terrorists attack the labs. Hence, survival is possible in Levona's consensual interspecies interaction rather than studying and exploiting health and fertility or interpolating maternal bodies into scientific researchers as things separated from their environment. In *Birthstones*, scientists attempt to solve the birth abnormalities that harm women but neglect treating the horrible pollution that is to blame for them.

### Conclusion

Because it conjures up imagined future, especially horrific one, themes of survival go well with science fiction. It also encourages thinking about the non-human world because the genre is rife with imaginary entities like aliens and talking animals. Moreover, as the connection between human and nonhuman existence has been more apparent in the last few decades, problems of survival in literature generally and science fiction specifically have shifted from being personal to being social. In other words, environmental and feminist issues eventually relate to a more holistic conception of survival that includes societies trying to survive in the world, or another planet, rather than one man struggling against nature.

In *Birthstones*, survival lies in protecting the environment of the planet Shar from pollution and toxicity rather than wearing masks only. The government neglects the damage done to the planets and ecosystems because of pollution, radiation, and toxic terrain which threat birthstones and the ability of the species to reproduce as well as the future of the species. Once again, survival is achieved by allowing the deformed mothers to live with their families and letting them raise their children and do their maternal duties rather than keeping them away in special labs for experiments. The novel focuses on reproduction which seems to be the interest of eco-feminism. Besides, it expresses about how the family particularly children might be affected by the environment. Women's bodies and paternal roles are compared to non-human animals or the natural world because they are viewed as resources for the nation (or galaxy). By using women's bodies and reproductive abilities as disputed resources for survival, The story depicts patriarchal intrusions into the cataclysmic threat of human or Shar (Gotlieb's extraterrestrial species) extinction while neglecting the greater

link between those bodies and the environment , as well as between human (Shar and aliens) behavior and the planets they live on.

In this environment, the social facet of motherhood has been eliminated and reduced to its basic duties. Consequently, these societies are dystopias because they lack mothering, or what eco-feminists would refer to as " ethics of care." As far as ecofeminism is concerned, the society of the Shar is dominated by loss of care that results from the dissolution of families and mothering traditions. Therefore, in the future culture, the population survives but the family perishes. Even if the population survives, patriarchal institutions, nevertheless, undermine the family and society, posing a threat to their ability to survive in the future. Thus, the novel celebrates the family bonds as a source of social survival by taking care of mothers and keeping them at home to raise their children and doing their duties as it is supposed to be.

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