

**Friend of Foe: The Development of Human-Alien Relationships  
Based on Ecological Awareness in Andy Weir's *Project Hail Mary***

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**Abstract**

This paper discusses human perceptions of nature and nonhuman species as demonstrated in Weir's sci-fi novel *Project Hail Mary* (2021) through the development of interspecific relationships between humans and aliens. By doing so, theoretical ideas such as ecocriticism and affect theory are applied. The essay questions the roles of two alien beings in the science fiction as a cause of humans' different emotions and reactions when aliens appear and how those responses unfold humans' attitudes to other species and the natural environment. The investigation reveals that humans interact with the emergence of aliens differently depending on the collective emotion towards two aliens although they both are unknown beings. Arguably, it reveals human indifference towards the natural environment when they fear one of the alien beings and attempt to annihilate that alien to save humanity in spite of the substantially destructive impact on the whole ecosystem. At the same time, the protagonist's encounter and amicable relationship with another alien suggests that, instead of causing destruction, the promising way to live with other species and to solve any issues is to learn to live with it.

**Keywords:** science fiction, alien, coexistence, ecocriticism

In general, science fiction revolves around the advancement in science and technology and its consequences for a particular society or human beings (Sterling, 2021). Nonetheless, this is only part of it like peeling a single layer from an onion. Considered carefully, science fiction mostly and consistently questions ecological aspects and demands that humans speculate on their future (Arnold et al., 1999). It visualizes the images of reality in a different way and cautions the readers to reconsider the land for people on Earth, human relationships with nonhumans and "political-ethical-aesthetic responsibility for possible (or probable) shapes of the future" (Gajewska, 2021). Page (2014) also adds that science fiction relates to the drawbacks of humankind's destructiveness and the eradication of living beings. With its relation to humans and the environment, it shines a light on the possibility of this research paper because it uses a science fiction novel as a primary text to examine its effect on human beings.

In 2021, Andy Weir debuted his third science fiction named *Project Hail Mary*. This novel is about Ryland Grace, a sole astronaut, who survives after being put in coma while traveling in space on the spaceship named Hail Mary, that has been assigned to find the solution to the planet after the sun has grown dimmer since its energy is being consumed by the mysterious alien life or “Astrophage” (Weir, 2021, p. 52) which is so named by Ryland after its action of consuming energy from a star. While he tries to regain consciousness and memory of the purpose of his mission, he accidentally meets another spaceship. He realizes that he has met another extraterrestrial being. After an attempt at communication with the newcomer has been managed, Ryland is certain that this alien—despite the physical differences between himself and this being—is not his enemy but rather his friend whose planet—Eridani—has similarly experienced a deadly situation. Ryland and his alien friend, Rocky, are undoubtedly in the same boat as they have to find a solution to save their people and planets. As the two different kinds of alien encounter and cause surprise to humankind in this novel, this phenomenon suggests that the extraterrestrial lives are not solely viewed as a threat to the world, they also strongly remind humans that they should re-examine their actions towards ecology and find a way of co-existing with others whether they are humans of different race or nonhumans, to make the world a better place.

Building upon human confrontations with aliens and the interspecific relationships between humans and aliens, this research paper aims 1) To investigate the roles of aliens in this work of science fiction; 2) To examine how human beings perceive and respond to other living species especially when those species are extraterrestrial and unknown to them; and 3) To discover whether the concept of human-nonhuman cohabitation is implicitly conveyed in the novel.

### **Theoretical Frameworks**

In this research paper, there are two theoretical frameworks employed to examine the selected primary text. To begin with, affect theory is firstly utilized in this paper. Affect theory, according to the APA Dictionary of Psychology (n.d.), is “the idea that feelings and emotions are the primary motives for human behavior, with people desiring to maximize their positive feelings and minimize their negative ones.” Simply speaking, it is an approach to investigate how feeling or emotion functions in an individual. In this paper, some works from Sara Ahmed (2004; 2014) such as “Affective Economies” and *The Cultural Politics of Emotion* are applied to examine people’s emotion towards certain situations and how people in showing emotion respond to that circumstance. From several types of emotion, this paper mostly focuses on the feeling of fear and how people react when they are overwhelmed with fear. In Ley’s terms (2010), she mentions Silvan Tomkins’ perception of fear. That is, when people fear something, this does not mean that those people believe that there is a harmful object or believe that it can

pose harm to them; it is because human history has crafted a narrative and belief in that object. Therefore, the emotion of fear is not constructed from their belief but fear emerges when people are triggered by the narrative behind that object. In “The Biology of Fear,” Adolphs (2013) agrees that fear is provoked by stimuli that humans have socially learned. He continues to explain that the response towards fear is not an action to control fear in the human mind but to abolish a sense of fear from them (Weir, 2021, p. 9).

Not only is affect theory employed but ecocriticism is also included to gain a better understanding of human perceptions of the natural environment. Generally, ecocriticism—also known as environment and literature studies or environmental criticism—is, in accordance with Glotfelty (1996), “the study of the relationship between literature and the physical environment” which “takes an earth-centered approach to literary studies” (xvii) It does not only investigate literary text but also other forms of media e.g. film or music. Also, it is an interdisciplinary study since it includes other fields of study such as history, religion, anthropology, geography and many more (Buell et. al, 2011). Ecocritical criticism seeks for an explanation to understand environmental issues inflicted on the planet namely deforestation, natural resource depletion etc. This approach also examines how humans in a particular society deal with and respond to the environment (Mambrol, 2016). From her viewpoint, Iovino (2018) affirms that ecocritical theory is a motive for contemplating “‘culture’ not as part from ‘nature,’.” This concept allows people “to see nature and culture, world and text, as mutually permeable” (p. 112). Thus, this study applies certain concepts of ecocriticism namely ecohorror and ecological grief to understand human perception and the relationship with nature and other nonhuman species. To Tidwell (2018), ecohorror is actually a subgenre which is concerned with human beings’ fear and stress resulting from nature, creatures or their counterattack on humanity. It is used to raise an ecological awareness, to present an environmental crisis or even to break the dividing line between human and nonhuman. For ecological grief, this ecological term, according to Clark (2020), means an emotion happening in those who value the natural environment and face ecological destruction. In their article, Hanna Comtesse and her research colleagues (2021) divide the types of environmental loss that function in provoking a sorrowful feeling. First, it refers to the disappearance, destruction or extinction of living creatures, landscapes and environmental systems. Second, the ecological loss is a disruptive idea constructed on environmental aspects and insights. The third factor concerns the anticipation of future loss which relates to species, the environment and livelihood. From these, the scope of this research paper is on the first type of loss for the reason that it circles around ecological devastation.

### **The Different Developments of Human-Alien Relationships**

In order thoroughly to understand the developments of the interspecific relationship between humans and aliens, the first meeting scenes are mentioned to explain as follows. As the existences of two kinds of extraterrestrial beings are acknowledged, human reactions towards them are different. When human beings are aware of Astrophage, the alien microorganism, and its negative impact on Earth, they become fearful and perceive Astrophage as a threat. In this case, the affect theory can be employed to clarify this situation. In her “Affective Economies,” Ahmed (2004) proposes the idea that emotion functions like “a form of capital” that “affect does not reside positively in the sign or commodity, but is produced only as an effect of its circulation.” She continues: “emotions circulate and are distributed across a social as a psychic field” (p. 120). When emotions rotate in the society, it further creates a stickiness to a sign resulting in establishing a collective body in the society. The rotation of emotion and the stickiness happens when the alien microbe “Astrophage” is discovered. As Astrophage appears, “the sun is 0.01 percent less bright than it should be” (Weir, 2021, p. 24). Once the sunlight diminishes “a full percent over the next nine years. . . [t]hat [will] mean an ice age” followed by “crop failures, mass starvation. . .” (Weir, 2021, p. 25).

At this point, fear is evoked in a small circle since most people are not aware of it yet. However, the circulation of fear becomes intense when Dr. Browne is broadcasting on TV:

“What the fuck?!” came a voice in the background. . . “Oh my God!” said Browne. . . “Are those particles...moving?”. . . “Is there a consistent direction of travel?” he asked. “Something that could be explained by an external force? Magnetic, maybe? Static electricity?” The room fell silent. “Anyone?” said Browne. . . . (Weir, 2021, pp. 31-32)

Since those mysterious particles are moving and their movement cannot be identified by any external factor, this unknown gradually plants a sense of fear in Dr. Browne. Reinforced by Massumi (2005)’s words that television functions in “providing a perceptual focal point for the spontaneous mass coordination of affect” in critical time (p. 33), the majority of the audience watching this TV broadcast, in this case, certainly becomes shocked and fearful in unison since encountering an extraterrestrial being is new and it is hard to visualize what that species can do. Besides, without response from the other side of the call, the silent moment happening during the broadcast potentially fuels the emotion of fear to circulate among the audience since they, and even scientists, have no idea what humanity is confronting. At this moment, fear expands its area and creates the collective body of fear in the society since individuals are inevitably frightened by the news. With the unknown and uncertainty posed by

Astrophage, it is irrefutable that people are fearful of this alien in one way or another. And as Astrophage drives the world to the jeopardized position, the existence of Astrophage is labelled with a sense of fear and threat leading humans to find a solution to save their only home. As Adolphs (2013) explains, any reaction towards fear is to cease the fearful feeling in individuals; the later attempt to find a way to deal with Astrophage in this case works similarly.

Apart from approaching Astrophage with the lens of affect, the scare, anxiety, as well as insecurity imposed by this alien life can link to what Tidwell (2018) calls “Ecohorror.” With the definition addressed previously, ecohorror concerns fear and anxiety engulfing humans when they confront nature and is used to promote environmental awareness as well as other aspects related to ecology. Treating Astrophage as a part of nature, this creature can also be metaphorically seen as functioning to call human attention to be aware and prepared for any crisis which may happen in this disruptive world. Even though the confrontation with an extraterrestrial being is purely fictional in this novel and rarely happens in reality as evidence of the existence of alien life is not unfolded, Astrophage, to some extent, can be seen as a reminder to humankind that the global crisis like global warming causing a wide range of impact can also possibly happen.

Unlike Astrophage that is viewed as a hostile being, the extraterrestrial creature from Eridani, named Rocky, is perceived differently by Ryland Grace, the protagonist. Undoubtedly, at their first meeting, Ryland is afraid of Rocky in the same way as humankind fears Astrophage after firstly acknowledging its existence. Fearful as he should instinctively be, Ryland’s initial thought towards that alien life form is negative as he imagines: “they’ll board my ship and lay eggs in my brain” (Weir, 2021, p. 128) or they are “[p]robably counting [his] limbs, noting [his] size, figuring out what part they should eat first, . . .” (Weir, 2021, p. 132). As fear is triggered by the collective knowledge in the body (Adolphs, 2013), Ryland’s pessimistic attitude towards this approaching alien life unsurprisingly is from what he has known about alien beings. Identical to Astrophage, the depictions of fictional alien beings are mostly malignant (Siegel, 2017). This is unquestionably why Ryland is afraid of the approaching alien since the collective perception towards aliens has been unpleasant.

Nonetheless, after a few communications, Ryland perceives that this alien knows about Astrophage and is affected by it as well. Knowing this, he considers this alien being to be his friend as he says, “The enemy of my enemy is my friend. If Astrophage is your enemy, I’m your friend” (Weir, 2021, p. 151). In this scenario, they are opposing Astrophage due to the fact that it puts their planets in danger. Viewed from Ahmed (2014)’s idea, the presence of Astrophage is stuck with a sense of fear because fear will appear when there are narratives created by those who are afraid of the presence of that body. As elaborated earlier, Astrophage is mostly bounded by negative perceptions since

its existence harmfully affects humankind. Hence, Astrophage inevitably becomes the villain in human stories. Unlike Astrophage, the narrative of Rocky does not appear in a negative way as Ryland is not afraid of him because he does not do any harm to Ryland as Astrophage does to humankind. Moreover, there are no other people who can express their opinion towards Rocky as Ryland is the only one to firstly confront Rocky. Without fear and others' dominant narratives, Ryland does not consider Rocky as a threat but rather as his friend. This can be confirmed by the fact that Ryland always refers to Rocky as "Buddy" (Weir, 2021, pp. 179, 213, 314, 345, 427, 456, 463, 466).

With two different alien forms introduced, this juxtaposition reveals to us that humans tend to give a role to other species on account of their characteristics. If those species bring danger to humans, human beings will label that life form as an enemy. On the contrary, if those species turn to be harmless and friendly, humans will try to be familiar with them in the way Ryland is with Rocky. This idea echoes back to the human view towards nonhuman species on Earth. Humans often perceive that other species are fierce and harmful so they have them killed no matter whether or not those creatures attempt harm. Questions may arise as to whether those living beings *really* are dangerous or if it is just the human way of perceiving other creatures. Are those species the villains or are the humans who try to abolish them culpable? These questions will be answered in the part that investigates humans' response to Astrophage.

### **Human Ecological Domination and Its Consequences on the Ecosystem**

As the perspectives towards the extraterrestrial beings are different, the responses to those beings and the outcomes also yield contrastively. For Astrophage, people actively try to find a way to eradicate it as it puts them and their only home in danger. Viewed from her investigation of the arrival of the Martians in *The War of the Worlds*, Alt (2014) proposes that alien beings—provoking insecurity to humankind—trigger "a sense of dethronement" leading human beings to realize that they are not superior any longer but are under other beings' control. Functioning similarly to the Martians, Astrophage makes human beings think that they are about to be dethroned and their fates are in Astrophage's hand. This is why human beings eagerly seek an end to this problem no matter how much it costs. This strong intention can be seen through Stratt's statement when she declares that she does not care about anything even though it is immoral. Her focus is solely on "saving humanity" (Weir, 2021, p. 235).

While the solution is being managed, the process also unveils human beings' insensitive attitude towards the environment. The novel reveals that humans try to exploit Astrophage by gaining advantage from it. At the beginning, the response towards Astrophage seems to be positive as Ryland and the other scientists are assigned to study that alien being. But when Ryland gradually gains

knowledge of it, other people initiate the attempt of using Astrophage as fuel for a spaceship and send this ship to find a solution in Tau Ceti, the star which “remains unaffected” (Weir, 2021, p. 96) by Astrophage. Even though the research on Astrophage is for educational purposes since this is the first time in human history of discovering alien beings, humans do not stop at only obtaining knowledge from it but start to utilize it. Considering Astrophage as a part of nature in general, this indicates the way humans learn about Astrophage and obviously gain benefit from the alien microorganism in an effort to govern and exploit nature for the human’s will. Having already acknowledged that Astrophage poses threat to humankind for it substantially lowers the global temperature, humans remain selfish by reason of using Astrophage for their interest.

In spite of the fact that the confrontation with alien being is unsurprisingly new to humankind, the endeavor to abuse ecology is not but rather has been rooted since ancient times. For instance, it can be traced back to Aristotle’s teaching which says that humans are a superior living creature. Their position is at the highest point of the ecosystem. Despite humans, other creatures serve humans hierarchically: inanimate beings to plants, plants to animals and animals to humans respectively (Plumwood, 1993/2003). This anthropocentric thought was even obvious during the rise of the Industrial Revolution. Human life with the aid of technology becomes much more convenient. With the emergence of new technology, human perception towards nature is respectively changed since scientific advancement grants them power. Instead of being dependent on nature as previously, they dominate nature and “[put] [it] a cage” (Fromm, 1996, pp. 31, 34-35). In other words, humans become separate from nature when it is utilized to be “something in a test tube or beaker” (Magee, 2012). Together with her perception towards science, Heise (2006) proposes that science paves the way to ecological destruction since it objectifies nature to be used in analysis and to be manipulated. With scientific advancement, the scientific practices undoubtedly develop into exploitative actions of nature and are even able to “bolster the exploitation of human and nonhuman nature through [their] methodological assumption” (Feder, 2010). In this case, it appears that humans try to use their expertise and technology to dominate and put Astrophage in a cage for their interest.

Besides the effort to dominate Astrophage, the novel indirectly presents human perception towards other species. While searching for an expert to join the Hail Mary project, Stratt and Ryland come to visit Dr. Robert Redell, imprisoned in New Zealand, for his expertise in “solar thermal power plant” (Weir, 2021, p. 217). Before the visit happens, a body search needs to be administered to ensure security in the prison. Bold as Stratt always is, she refuses to give her gun to the guard. This unsurprisingly causes annoyance to the officer and he says: “We don’t let weapons anywhere near those *animals* in there” (Weir, 2021, p. 214) [emphasis added]. Although that sentence does not

relate to the alien life, the use of the word “animal,” that seems to be trivial, apparently unveils human’s thought towards other species. The guard labeling the prisoners with “animal,” can suggest that the guard perceives those prisoners as fierce and unreliable as animals. Pondering on this situation, referring to the prisoners as nonhuman creatures also indicates that the guard deems himself superior to those prisoners. With the guard’s thought of the prisoners clarified, it does not only reveal to the readers that the prisoners are seen to have certain characteristics of animals, but it reflects that humans position themselves higher than other species. With this belief, it leads humans to treat other species differently and disrespectfully or to have a prejudicial or biased thought towards those beings (Singer, 1975/2015). Because the guard thinks very lowly of prisoners, he disrespects and presumably treats them with no sympathy. Put this way, if the prison is compared to the world and the prisoners are compared to animals, it paves the way to the idea that Ryland and Stratt’s prison visit scene is a resemblance of the actual world where humans have a picture of themselves as being more civilized and intelligent than other living creatures.

Another trace of human perception is mirrored through a scientific experiment on animals. To be able to travel to Tau Ceti—the planet which is “[e]leven point nine” light-years away from Earth (Weir, 2021, p. 96), Stratt comes up with the idea of putting astronauts in a coma because she is afraid of homicide on the ship when the crews are in a packed and confined space for several months (Weir, 2021, p. 108). During the observation of the coma experiment, Ryland notices lots of bays which carry an unconscious monkey. Each monkey is connected with various kinds of experimental apparatus. Admittedly, Ryland is fully aware of the necessity for animal testing, however, he feels uncomfortable when his eyes are on those experimental animals (Weir, 2021, p. 255). Examining this scene obviously depicts Ryland’s empathy towards other species being put in the scientific apparatus while Stratt is much less perturbed. The juxtaposition between Ryland’s empathy and Stratt’s insensitivity clearly reflects the humans’ attitude towards other species. Even at the present time, humans have objectified animals as a research instrument for educational purposes. Similar to *Astrophage*’s scenario, the way animal testing is conducted is an attempt to dominate nature in order to serve and fulfill humans’ benefits. Additionally, it explicitly presents the dividing line between humans and other species. Humans are, indeed, anthropocentric for they do not care or empathize with other species. They do not care how much pain physically and mentally is inflicted on those monkeys. They only care for the experimental outcome and their own lives. Undeniably, the evidence to support this claim barely appears in the story. This underlines the fact that other living creatures remain unfocused in the novel despite the fact that animals similarly and inevitably undergo the *Astrophage* crisis as well. At a certain level, the



exemplary scenes that are mentioned allow us to see a glimpse of human's undesirable and uncaring perception towards other living species.

As the effort to govern Astrophage and the negative perspective towards other species is clarified, they undoubtedly emphasize human's insensitive demeanor towards ecology that is embodied in various scientific experiments. To make the spaceship successful, human beings manage to conduct several experiments which result in negative impacts on natural environment. To test Astrophage's energy for the spaceship engine, the research team is on the carrier floating in the ocean which is far from cities to prevent the destructive impact of a small tsunami caused by the explosion. Despite the occurrence of a tsunami, those people are uncaring towards the oceanic environment as Dimitri, one of the research members, says: "But three hundred kilometers away from land, *so it okay*" (Weir, 2021, p. 163) [emphasis added]. Admittedly, it sounds acceptable for humanity. It is, in fact, horrible for the ocean since the marine species are severely affected by the experimental explosion. Although they survive, the marine animals are physically affected which results in an inability to find a food source or to find other members (Gammon, 2021).

To breed Astrophage for engine fuel, Dr. Robert Redell, an engineer, comes up with the idea of covering the Sahara Desert with black panels to absorb heat and enrich Astrophage for its reproduction. Irrefutably, "... it [will] destroy the ecology of Africa and probably Europe" (Weir, 2021, p. 220) due to the fact that a tremendous amount of heat accumulates in this area. The character does not really care about its consequences because it is "[n]ot as much as the coming ice age will" (Weir, 2021, p. 220). Comparing Astrophage to general living creatures, the way scientists breed Astrophage is to reproduce that species to maintain and keep balance in the ecology. This reproduction process is, instead, conducted only for human purposes. Humans do not reproduce Astrophage for ecological balance in the way they do to other animals. To elaborate, specialists play a role in rescuing endangered species and aiding their reproduction process to prevent those species from extinction. In contrast, the mass production of Astrophage is only a piece of the jigsaw to help humans find a solution to save their planet and themselves.

The undesirable experiment continues as the team plans to create a greenhouse effect by exploding some parts of the icebergs in Antarctica for a great deal of methane to float into the air and fill the atmosphere. The release of methane functions like a piece of cloth and provides warmth to the Earth and humans for a couple years after the sun gradually gets dimmer by the Astrophage. Unsurprisingly the explosion harmfully affects the marine creatures as explained above, but the irony of this scene conveys how unperturbed to other species humans can be. Theoretically, the greenhouse effect plants plenty of troubles in the ecosystem. For example, it heats the global temperature which alters the weather pattern throughout the globe. The period of seasons becomes

unstable and the climate becomes more severe. Natural disasters happen more frequently due to the changed weather (Denchak, 2019). This megaproject to keep warmth for the Earth can be considered geoengineering. Regarding Emmet and Nye (2017), it is an intervention aimed to massively modify the natural systems to counteract climate change problems. Despite its benefit to the Earth, climate engineering remains debatable whether it is worth doing. Although the attempt to alter climate pattern is preferable to hearing the different voices from different experts and draws the broad concerns about several group of people and other living creatures (Emmet & Nye, 2017), the characters in the novel overlook this point. They have the project done without thinking of others deliberately. Humans are obviously saved by this project; however, the fact that none of any concerns for nonhuman species is mentioned indirectly reveals to us the exclusionary care of humans towards others

As clarified, the novel depicts this harm contrastively. This phenomenon becomes legitimate because a nice sheet of fabric of greenhouse gasses can extend time for humans (Weir, 2021, p. 235) while waiting for the Hail Mary mission to work on a solution. With the explanation provided formerly, this methane blanket will decelerate the global temperature change followed by numerous outcomes since this gas can retain heat in this world. Although the scientists are fully aware of the negative results caused by the greenhouse effect, they are uncaringly still on their track to achieve their goal of saving humanity. Moreover, the perception towards the gases has changed as Dr. Leclerc admits, “And now, methane is our friend. Methane is our *best* friend” (Weir, 2021, p. 243). This scene is absurd because people have been widely taught that the greenhouse effect brings more harm than good, but it turns to be “. . . our *best* friend” eventually (Weir, 2021, p. 243). This ironic depiction of the greenhouse effect can draw the readers’ attention at a certain level because this unnatural incident is known for its negative outcomes towards the ecosystem but this novel makes use of it. The characters are willing to optimize methane although they completely acknowledge its drawbacks. It seems to be desirable since the experiment acquires some time for humanity; however, its impact on ecology is far beyond imagination. This mirrors real societies in the way that people are aware that they are a part of global devastation but their lifestyles remain unchanged. Besides, the readers possibly reconsider human action in producing greenhouse gases these days. Explicitly, this satirical scene strengthens how anthropocentric humans are and can be also seen as a sarcastic comment on anthropocentrism, especially cornucopian. With the cornucopian idea believing that either the ecological issues do not exist or can be solved by an advanced technology (Arney, 2014; Boslaugh, 2016), the ironic view of the greenhouse effect in this novel enables humans to see the old remnants from anthropogenic activities, to be aware of how much they produce harmful gases to the world and

cautions humans about manmade activities for those are the root of the environmental problems.

Regardless of the good intentions for humanity and the planet, the experiments are successively done without inclusively thinking about other species. Even though Dr. François Leclerc, “a world-renowned climatologist. . .” (Weir, 2021, p. 232), warns Stratt about an “extinction of many species, complete upheaval of biomes all over the world, major changes in weather patterns—” (Weir, 2021, p. 233), Stratt does not care about them. She only pays attention to humans and the effects of climate change on humans (Weir, 2021, p. 233). While the scientific experiments are conducted, it also poses ecological grief for Dr. Leclerc. Having been defined formerly, this idea refers to an emotion emerging in people who have a close bond with nature (Clark, 2020). The sample of losses that provokes this grief includes environmental degradation or disappearance (Comtesse et al., 2021). Being a climatologist himself it is certain that Dr. Leclerc values and cares for the natural surroundings since he cautions Stratt about the environmental drawbacks that experiments can establish. His misery towards environmental degradation can be explicitly seen when he talks with Ryland:

“I wish to God this wasn’t on my shoulders.” He fiddled with this tablet. “You know, Dr. Grace, I have spent my entire life as an unapologetic hippie. From my childhood in Lyon to my university days in Paris. I am a tree-hugging antiwar throwback to a bygone era of protest politics. . . .” “I became a climatologist to help save the world. To stop the nightmarish environmental catastrophe we were sinking ourselves into. And now... this. It’s necessary, but horrible. As a scientist yourself, I’m sure you understand.” (Weir, 2021, p. 241)

When the time for launching the missile comes, Dr. Leclerc’s sorrow continues as he says, “So here I am. Environmental activist. Climatologist. Antiwar crusader. . . And I’m ordering a nuclear strike on Antarctica” (Weir, 2021, p. 242). Dissimilar to Dr. Leclerc, other characters are unlikely to feel the same way but instead comfort him as “Stratt put[s] her hand on his shoulder” and says, “You did what you had to do” (Weir, 2021, p. 244). This consolation highlights the fact that humans are not perturbed by concern for their natural surroundings. Their actions are only managed for them and nothing else.

Even though human beings act heroically to save the planet, it cannot deny that the speck of selfishness is obviously mirrored in those actions. It appears that they feel entitled to do any actions for their own safety despite knowing the fact that their indifferent actions are actually the causal factor of ecological damage. To use Love (1996)’s terms, humans already acknowledge the environmental degradation happening across the globe, however, they think about other issues instead of confronting the fact. Identical to David Ehrenfeld’s

perception (as cited in Love, 1996), humans “love [themselves] best of all” and pay attention to self-interest rather than the public one. With this opinion, it emphasizes the claim that although humans know the negative outcomes for ecology, the plan to seek for ending the Astrophage crisis continues. Humans only care for themselves no matter what happens to the natural environment. Emphatically, this novel does not only reveal humans’ unperturbed trait towards ecology and other living creatures, but the story also appears to display how anthropocentric value is likely to position “the human sphere as beyond or outside the sphere of ‘nature’” (Plumwood as cited in Bauer et al., 2021).

By reading this part carefully, the readers may reconsider the present situation where people tend to utilize natural resources without thinking about their outcomes for the ecosystem. The question may arise whether it is righteous and worthwhile enough to exploit the environment for their own interest for the damages probably lead to irreversible consequences for the planet. Is there any alternative way to find a middle point without posing an impact on the environment? Either the readers reexamine their actions or not, the minor characters in this novel are, at least, set as an example for the readers to realize that humans are self-centered. Their focus is only on humanity and nothing else like a horse wearing blinkers.

### **Harmonious Cohabitation as an Alternative Solution**

Once the amicable relationship between Ryland and Rocky is depicted, this fictional situation leads the readers to notice that human beings should be open-minded and treat others considerately since those beings, despite the human body, are living being like humans. As explained earlier this confrontation with aliens is rare but becoming real and it is worth pondering it because it may be a hidden message that waits to be unfolded. In Bühler (2019)’s terms, creatures or species included in the story can perform various roles: food source, sinister or amicable creature or even a metaphorical figure. He further elaborates that alien beings can be seen in raising the idea about human’s relationship with nonhumans. In this novel, their friendship goes well since Ryland tries to gain more understanding about his alien friend. He eagerly desires to learn Rocky’s language or “Eridianese” (Weir, 2021, p. 195) as well as about Rocky’s planet. Ryland also feels empathetic to Rocky because he loses his crewmates without knowing the cause of their death. As explained, firstly afraid of Rocky, Ryland does not allow his fear to govern himself. Instead of allowing fear to engulf him, he opens his mind and is willing to learn about the others. In other words, it is as if he downplays himself because he does not express himself as a superior creature to Eridanian. He embraces their cultures and tries to blend himself into that environment. Unlike other characters, there is no evidence of his desire to harm Rocky in the way other characters have done to experimental animals and the environment. Furthermore, it can be considered

that he does not deem himself superior to other species as he treats Rocky equally as though he were a human. Based on Ryland's amicable deed towards the alien, it mirrors back to humans' relationship with nonhuman species in a way that humans can actually live with those species if we are willing to learn to do so. Those beings are just like us and they have feelings and conscience.

From Rocky's viewpoint, he treats Ryland kindly in spite of his human form. As seen in the text, Ryland often thinks that Rocky is "very considerate" (Weir, 2021, pp. 127, 152, 187) when Rocky tries to afford convenience in an attempt to communicate with him as much as possible. When an unwelcome accident happens, Rocky unhesitatingly exposes himself to Ryland's area where the atmosphere is lethal to him to help Ryland without thinking of his own life (Weir, 2021, p. 325). In addition, if Rocky is treated as other species, his approach to Ryland with good intentions reflects that animals' approach to humans does not always attempt to scare or hurt humans. Identical to Ryland's first negative thought towards Rocky, it is because of humans' rooted perception towards other species that they are always dangerous and untrustworthy. Other species may not perceive us to be their enemies but we ourselves consider them our enemies.

With this humility, empathy, consideration and selflessness reflected through their friendship, Ryland's amicable reciprocation with Rocky as though that alien were a human posits that human beings should treat other species in the way they do other people. Moreover, alien in another general definition from the dictionary is associated with differences in terms of race, country or group (Cambridge University Press, n.d.). By this means, Ryland and Rocky's friendship can be further interpreted in the way that people should treat other people who have different races and cultures fairly.

On the other hand, if humans refuse to adopt those suggested traits, the fate of humanity can be as Stratt fears. In their conversation, Stratt tells Ryland about what she has learnt from history (Weir, 2021, p. 429). As mentioned earlier she is totally aware of the environmental effects, what she has done for the Hail Mary project so far it only a prevention of what will possibly happen in the future. She is afraid that wars will be normal since the majority of people revolve around food production. Undeniably, when the ecology fails due to Astrophage, the crops also fail like dominoes. Therefore, Stratt agrees to sacrifice everything for the Hail Mary project in spite of the extremely low opportunity for success. Otherwise, the whole society will collapse (Weir, 2021, pp. 430-431) as she explains:

“Because once the desperate, starving countries start invading each other for food, the food production will go down. Ever heard of the Tai Ping rebellion? It was a civil war in China. . . *twenty million* people died from the resulting famine. The war disrupted agriculture, see? . . .” (Weir, 2021, p. 430)

She continues: “War, famine, pestilence and death. Astrophage is literally the apocalypse” (Weir, 2021, p. 431). If human beings possess the desirable values mentioned in the previous paragraph, it can sustain the whole society on this planet. If “all nations of the world work together to share resources and ration food” (Weir, 2021, p. 430) like Dr. Leclerc suggests, the world may not come to its final chapter. It indicates that if humans are not selfish in the way they are, Stratt may not have to sacrifice all environmental resources to prevent the bad event from a worse one. To put it simply, ecology will have not been destroyed to save humanity from the Astrophage’s event when human beings change their attitudes. Therefore, people should be empathetic, selfless, as well as thoughtful like Ryland and Rocky so as to maintain humanity and this world.

Apart from embracing the desirable attitudes elaborated, Ryland’s decision to spend the rest of his life on Rocky’s planet manifests that humans should be adaptable and able to find a way to coexist with other species peacefully. At the end of this novel, Ryland lives happily in Eridani environment as the Eridanians warmly welcome and accommodate him as much as they can. He likewise becomes a science teacher contributing his accumulated knowledge to Eridanian students. Actually, the story does not turn into the way that Ryland finally lives in Eridani since this is a suicide mission. Luckily, Ryland receives an amount of Astrophage from Rocky which makes this journey to Earth become possible. However, Ryland, on his way home, discovers that Rocky is about to experience a tragic accident on his way home. Ryland uncovers that Taumoeba, the predator of Astrophage which is the solution to end Astrophage crisis, can penetrate through the material that Rocky’s ship was made of. If Taumoeba reaches the fuel tanks full of Astrophage, Rocky’s ship will be unable to function. This leads Ryland to finalize his decision to rescue Rocky from danger even though he cannot return to Earth. Considering carefully, the readers may find this ending either surprising or disappointing since Ryland lets his only chance to return home float away; however, the ending appears to embed a meaningful message.

The way Ryland lives in Eridani at the end of the novel raises the idea of coexistence to the readers. Despite destroying any natural environment to serve their interest, human beings should adapt themselves to live with others harmoniously in the way Ryland does in Eridani. Similar to what Dr. Leclerc says in the story, humans are a part of ecosystem. Either plants they consume, animals they feed upon or the air they use to live is a part of the same fabric (Weir, 2021, p. 233), humans must be aware that they are a piece of gear driving

the ecosystem. They should be observant and try to learn and live with other living creatures since those species feasibly provide humans with some insight as in the way Ryland gains knowledge from Rocky. He learns how strong and precious the relationship can be. He learns how selfless someone can be. For instance, Rocky contributes his engineering expertise to helping Ryland to make experimental apparatus. He selflessly saves Ryland's life even though he has to put his life in danger (Weir, 2021). These exemplary situations happen despite the fact that their physical appearance and species are different. Besides, Ryland's ability to reside in Eridani postulates that anywhere can be home if individuals can adapt themselves to fit in with their surroundings and learn from the others. Home cannot be home if the residents cannot adapt themselves and find a way to live with other members. Since humans are a part of ecosystem, if humans insist calling Earth their home, it is preferable to change their habit and perception towards their surroundings and other species to eventually live with them in peace. Therefore, humans should retreat and be attentive to their surroundings rather than themselves for they may learn something they have never known before.

## **Conclusion**

In summary, the alien beings surprisingly emerging do not only stir fear in the human mind but also potentially serve as a reminder to notify humans that to positively change the world, it is preferable to review their destructive doings towards ecosystem and to seek a harmonious way to cohabit with other species since humans are not separate from nature. What humans should do is protect and amend it. Destroying, exploiting, dominating or other destructive forms should not happen even though it comes with the reason to save the world and humanity. Humans are just a tiny piece of gear driving the massive machine called Earth. Even though humans wholeheartedly realize the unpleasant outcomes resulting from the exploitation and manipulation of nature, they have to cease doing so on an account of the fact that the environmental degradation cannot be reversed. Although what they have done to ecology aims to save humanity, it remains unreasonable and is no use if humans destroy and exploit everything for this reason. Without roots, a tree cannot rise. Without firm ground, a building cannot stand. Without an ecosystem, humans cannot live.

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