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***Science Fiction and Colonialism:  
a Study on the Relations between the Two  
Themes***

Relatore  
Lucio De Capitani  
Correlatore  
Prof. Shaul Bassi

Laureando  
Schiavon Paolo

N°matr. 975911 LLEAP

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## **Abstract**

This thesis will talk about the relationship between science fiction and colonialism. Starting from examples from our colonial past I will discuss the outcomes that those episodes have created nowadays in our society. Environmental problems will be crucial for the understanding of the future implications that science fiction predicts. In addition, to argue that science fiction and colonialism are correlated I've chosen three science fiction novels: *The War of the Worlds* by H. G Wells, *The Word for World is Forest* by Ursula K. Le Guin and *Farmer in the Sky* by Robert Heinlein. These are three examples of colonization that highlight in a quite exhaustive way the conception that people have about this phenomenon. Problems like terraformation will be central in each novel as a guiding line to the fact that science fiction is better equipped to discuss environmental problems than any kind of text.

## Introduction

When people talk about colonialism, a certain image immediately comes to mind: something foreign in a foreign land. Indeed, think of the people who had to accept a new master from a distant land: what must they have felt? What were their reactions to such a novelty? Human beings tend to be wary at first of any kind of novelty and try in every way not to be crushed and not to depend on it. This cannot be denied since the thing that all humans have in common is precisely their nature, which cannot be disregarded.

Personally, if I had to think of the first time I heard the word colony, the city of Carthage and the Phoenicians come to mind. I remember they were the first ones we talked about in elementary school from a colonial perspective: The Punic Wars and Hannibal's invasion of Italy. I also remember that to better remember what the meaning of colony was, I imagined the flattening of a land, a reclamation of a swamp. Although colonialism is not exclusively that, it came to my mind that a modification of the land was something that happens during a colonial invasion.

This modification of the land is itself a result of the phenomenon of colonization; since a land also includes the living beings inhabiting it, killing them or subjugating them is to be considered as a modification. To better explain this conception I will be taking, as an example, the case that struck me the most during the history of postcolonial culture's course: the episode of the Banda Islands. This is one of the most violent and untold episodes of the colonization process that is vital to understand the interconnection between living beings and the ecosystem in which they live. The history of the Banda Islands is the *leitmotif* that guide us throughout Amitav Ghosh's book *The Nutmeg's Curse*, a book that gave me the idea on the connection between science fiction, colonization and terraformation.

These three themes — science fiction, colonization and terraformation — are correlated when talking about invasions, because if we think of one we result in connecting the other two; as we will see during colonization processes new technologies are used to terraform the target land that to the invaders' eyes are usually

hostile and inhospitable lands. This point of view, as we will see, is very subjective, as no one can judge whether a land is dead or alive. These thoughts will bring us to talk about different conceptions on the vitality of a land, or in a science fictional grasp, a planet. The Gaia Hypothesis and the vitalist theory, which Ghosh also discusses, will be crucial as an ethical dimension when talking about colonialism.

The first chapter will be the one discussing about the things listed above: a theoretical chapter in which I will discuss about various episodes in which colonization often resulted in massacres and genocide of both the population inhabiting the land and the land itself; dramatic themes such as the pollution and the huge costs that these processes imply will be shown through examples from our present condition. To conclude the first chapter I will discuss about the possible outcomes that could be protagonist of a future closer than we think. This last point will be the starting point to focus on the larger part of the thesis: the discussion of three science fiction novels that are a clear example of connection between all the themes discussed in the first chapter within an imaginary setting.

The first of the three books is one that belongs to our collective imaginary: *The War of The Worlds*, by H.G.Wells, a science fiction novel that talks about the colonization of planet Earth by the Martians. While the most recent cinematic adaptation of this book is set in the U.S., Wells's story takes place in London at the end of the nineteenth century. The elements characteristics of this novel are the impotence against an enemy that seems invincible, but that at the same time doesn't know the planet it is targeting well enough. The process of colonization is present and in a very violent dimension, since Martian technology is so advanced even to our twenty-first century's eyes. Traces of the invaders are left on Earth in the form of plants that aliens need in order to make the atmosphere habitable for them. So we will understand why this example variously touches on colonization, science fiction and terraformation.

The second book has been argued to have been the inspiration of the film *Avatar* by James Cameron, since the vitalism and the interconnection with the habitat very much resembles the one the blue aliens from Cameron's movie had. The book is Ursula K. Le Guin's *The Word for World is Forest*, a novel in which colonization is perpetrated by humans towards a seemingly pacific alien species. Central in this novel will be the theme of enslavement of the colonized population and the fight for freedom against the oppressor. It will also deal with the search for resources on other planets, since in this fictional universe Earth is a dead planet, as it often happens in Science Fiction. This

search for resources can be seen in the deforestation of the target planet that before human invasion was uncontaminated. This novel will talk about colonialism from a political perspective, since laws and rights are not always respected when societies are lightyears far away from each other. I would define this novel as an accusation towards all the crimes committed in history during any invasion.

Finally, the last of the three novels is Robert Heinlein's *Farmer in the Sky*, which frames an episode of colonization as a new opportunity for living. The novel focuses a lot on human feelings and thoughts. All the romance is centered on taking the chance of going on a new planet leaving all you had behind and making a bet on yourself to see if you are strong enough to live in an inhospitable world; or at least this is what I felt when reading it. Here there isn't any belligerent civilization humans deal with, but Ganymede itself is the true opponent. We see all the difficulties that a human encounters when he tries to colonize what seems like a dead world: the atmosphere, the temperatures, other 'farmers'. I've said that this novel talks about human nature and we will see this as many give up on the idea of living on a new planet and they get back to Earth, others hang tight and try to adapt to adverse conditions with their intelligence and faculties. Relationships with guiding figures will be crucial for the formation of the protagonist, a boy full of hope that struggles in his attempt to make a house on Ganymede. I chose this book as it is what one could think of ideal colonization as no wars are started and the planet is presumed dead. We will see that this last conception is however problematic, as no one can classify a land or a planet dead, as it could be a resource to another one.

These are the themes that will be discussed in this thesis, and this is my attempt to demonstrate that, considering both our own past, present and future, colonization, science fiction and terraformation are three phenomena that cannot be separated.

# Chapter 1- A World to Conquer, From Historical Colonialism to Science Fiction

## 1.1 White supremacy, genocide, war and trade

### That's the Way It is

As a first step, we will be taking as an example one of the authors read during the history of postcolonial culture course: Amitav Ghosh. He, in his book *Nutmeg's Curse*, provides an enormous number of examples concerning colonial invasions and the effects they had on the land and those who populated or populated it. Thus, in this chapter, starting from the colonial past and modernity that Ghosh treats, I will describe the features of colonialism that will be turned into fantastic and narrative elements among the novels analyzed in next chapters.

Its tone is predominantly accusatory against the world's superpowers and he attempts to trace the most significant episodes of the past that most marked the continuity of the ecosystem in those particular areas.

The *Nutmeg's Curse* asserts that the modern world order, what I call the System, is built on four principles that guided the Dutch takeover of the Banda Islands in Indonesia in 1621: white supremacy, genocide, war and trade. (Kilian 2022 n.p)

The term "System" seems a little bit accusatory, due to the fact that a lot of societies nowadays use the same word to describe the governments that in their opinion must be replaced or destroyed. From now on I'll substitute the term "System" with the less strict expression "Modernity".

Ghosh's vision of Modernity takes, as its point of departure, the Dutch conquest of the Banda Islands, which is for him a model of colonial conquest. Jan Pieterszoon Coen, the governor general of the Dutch East Indies, wanted a monopoly over the nutmeg, mace and clove trade based in the Banda Islands. He got it in 1621 by

massacring most of the inhabitants, driving the survivors out of the islands, and replacing the Bandanese with slave labour.

Coen believed he had the right to take over other people's land because he had the power to do so. He also believed that "There is nothing in the world that gives one a better right than power" ( Ghosh 2021, 20).

Coen was part of a small European elite directly engaged in the conquest of the non-European world. That elite had a very new philosophy. To most people, their lands and environments were living things that sustained them, defined them and carried their own meaning: this current is called "vitalism" and it will be relevant as we are going to analyze it in science fiction books throughout the next chapters.

But to Coen and the other elite Europeans, the whole world animal, vegetable, mineral and human was a "vast, inert dump of resources, waiting to be seized and turned into European wealth through genocide (or slavery), trade and war" (Kilian 2022 n.p).

This formula arrived to this day, in fact, different European countries decided to adopt it. The American Hegemony, which is in many ways the heir of colonialism in the previous centuries, started from the post- World War II has continued until today.

But now this hegemony has been shaken "by the rise of new forces, such as China on the international scene and the rise of a new wave of populist politics within democracies" (Nye Jr 2019, 64). The Communist Party of China is running a hyper-capitalist system at the expense of its class and ethnic enemies, and challenging the US monopoly that seems to be falling apart.

But as the word says, Modernity can help a lot of people in dangerous wealth condition, by focusing on the more subtle diseases than the primary injuries:

When armies lost more soldiers to disease than to combat, medicine came to their rescue with drugs and vaccines. Civilians in the System also benefited, and scientific advances were claimed to show the System's superiority over the knowledge of Indigenous peoples (Kilian 2022 n.p)

We can see here how the System/Modernity has achieved something positive like health care; such discoveries were not reachable for indigenous people that had always had a more spiritual dimension when thinking about remedies and treatments. For some people of this kind good health resides in the balance; "All four elements of life, the physical, emotional, mental, and spiritual, are represented in the four directions of



the medicine wheel” (King, Smith and Gracey 2009, 76). This doesn’t imply a superiority of the Methods of modernity over those of Indigenous people; they are just different.

Other episodes of this superiority can be seen in places like North America or Australia where the colonizers terraformed the territories into an Europe-shaped land apt to farming and raising livestock. These devastations that followed from the colonial experiences resulted “from disruption (among much else) of the crucial bond with the land and the natural environment that is the key feature of indigeneity” (King, Smith and Gracey 2009, 77).

An excellent example is the near-extinction of the bison in the Great Plains; this is an episode that confirms that “the slaughter was initiated by a foreign-made innovation and fueled by a foreign demand for industrial leather. European demand and American policy failure are jointly responsible for the Slaughter on the Plains.” ( Taylor, Scott 2011 n.p.). In my opinion this is another distasteful method in order to subdue Indigenous people under government's control. All these ways of molding and affecting a new land are typical of the terraformation process, which is one of the main topics of this thesis.

Modernity by the 19th century depended on energy to survive: once discovered new forms of energy like fossil fuels, “that trend has been accompanied by an equally notable increase in energy consumption, which strongly correlates with socioeconomic development” (Wilkinson 2007, 1175). That increase gave birth to what we know today as the “carbon footprint”. In a period of time that gives credits to those who control most of the energy this was inevitable.

Almost as a throwaway line, Ghosh notes that military CO2 emissions are not included in discussions of climate change, even though such emissions are enormous. But no country is going to ground its air force, keep its navy in port and ask its army to walk to work.\_(Kilian 2022 n.p)

It seems ironic that the institutions with probably the biggest footprint in the entire world are not taken into consideration when counting the planetary CO2 emissions. “It is claimed that militarization is the most destructive human activity for the environment and armed forces are the most significant polluter of the world” (Gokmenoglu, Nigar, and Mafizur 2021, 986).

How is it possible that a well known reality such as the emissions of military vehicles are not considered responsible for global warming and the destruction of the environment? “It is claimed that the US military is the world's leading consumer of

petroleum” (Gokmenoglu, Nigar, and Mafizur 2021, 987) and this is because they have to sustain multiple features such as housing, meals, training and of course transports, which are considered the most efficient in the world.

Furthermore, military emissions have long-term effects on the land as “Military production areas are among the highly contaminated areas in the World” (Clark & Jorgenson, 2012), thanks to the chemical substances used in multiple activities.

To reconnect to what I’ve said before, the increase of energy consumption is interconnected with the experimentation of “more sophisticated-capital-intensive weapons that increase the demand for more fossil fuel consumption” (Jorgenson, 2012).

Given all this information we can state that “The Americans built their own empire out of hundreds of military bases, not colonies” (Kilian 2022 n.p). So it is the military power that claims the superiority of a nation among the others. In a way US campaigns around the world, even if not always favorable such as in the case of Afghanistan or Vietnam, resemble what Coen used to do in the Banda Islands; abusing the non-white locals, financing endless wars, trying to control trade. The little difference was on the income that in the case of the Dutch company “was amounting on occasion to more than 400 percent of the initial investment on a voyage” (Ghosh 2021, 48). Needless to say that Coen was quite motivated before any military action.

As a land is conquered it’s inevitable that the cultures of the invaders mix up with the cultures of the locals; The boundaries fall down and integration starts spreading:

Racial, gender and class boundaries began to come apart. Black soldiers were integrated into the U.S. army, and Black pupils were integrated into white schools. In Canada, Indigenous politicians learned more about the white system than white politicians learned from Indigenous peoples’ vitalist beliefs.(Kilian 2022 n.p)

This seems like a positive outcome after all we have said, in fact in an optic in which everything is interconnected and integrated might be a good solution to live on; I would focus on the part in which Indigenous politicians learned more about white system than the opposite. No matter whether the indigenous are integrated or not, it will always be the white rich male to rule. They didn’t give credit to vitalism and foreign traditions before, and now that they have the opportunity to learn, they only focus on their income. There are also countries that eventually adopted or surrendered to Modernity after a long colonial history; for example the emergent economy of China that ransacks the

planet in search for oil, iron ore has assimilated into his culture the Uyghurs population that for the first time in the 20th century “engaged in a host of social and technological transformations associated with modernity, transformations that included the adoption of printing, nationalism, communism, industrialization, compulsory education, Islamic reform, and secularism” (Hur 2021, 2). In the early 20th Century, the Uyghurs managed to declare themselves independent for a brief period of time but they were in fact under the complete control of China's new Communist government in 1949.

It is curious to think that just near the Banda Island another similar episode happened: Indonesia took over Papua, the western half of New Guinea, in 1969; They then fought a genocidal war in East Timor from 1975 to 1999, an occupation that cost “more than 120,000 lives, out of a population of 650,000” (Kiernan 2002, 163). Many other ex-colonies and republics adopted the role model of Modernity.

It comes to mind whether these episodes should have ever happened; All of these brutal methods took us in the world that we are living now, and it is up to us to make it a better place to live in or keep on Modernity's methods in the same way they have been adopted in the past. One day, perhaps, we will finally be able to reject “Jan Coen's toxic legacy and try to preserve enough vitality and meaning in our own small patch of earth to sustain us through a very hard future” (Kilian 2022, n.p).

### **Ghosh's Perspective**

In his book Ghosh makes clear the closed-mindedness of the institutions of seventeenth century, giving several examples of pusillanimity and hypocrisy on the part of the powerful to find excuses to succeed in exploiting colonized territories:

As many people could misunderstand, Ecological interventions were not just a collateral effect of European settlement in the Americas; they were made on purpose, in a specific way to result in a wasteland to be turned into a valley of plenty in the good concept of the European habitable land. Furthermore, the colonists took for granted the notion that the land was “savage,” “wild,” and vacant, because it was neither tilled nor divided into property.

The seventeenth-century Puritan leader John Winthrop, for instance, argued that Indians had no rights of ownership in the land “for they inclose no ground, neither have they cattle to maintain it, but remove their dwellings as they have occasion. (Ghosh 2021, 71)

It is curious how the colonizers saw nothing but an opportunity to improve according to their standards what was in front of them; for the invaders if a land was pristine, in spite of being lush, it was described as a wasteland and therefore had to be modified and improved. It is sad to think that even a philosopher like John Winthrop, who was supposed to speak for freedom, "the inequality of men, and, most important, the benevolent implications which he drew from that inequality" (Gray 1930, 681), thought that Indians had no right to their own lands just because they did not own private land. It is interesting to see how a pristine lush land untouched by man is always described by other men as "wasteland".

It was as if the land was a white canvas ready to be filled with everything the painter was about to draw or just scribble. It was common for those who wanted to exploit the New World to see "America as a primal world of nature, an unclaimed and timeless space occupied by plants and creatures (some of them human), but not organized by societies and economies; a world whose history was the one about to begin" (Pratt 1999, 429). We said the word "wasteland" before because by European standards, a natural beauty was nothing that would appeal to settlers if left there like that; it had to be "terraformed".

Of course in these situations we forget that for the natives that land was perfect as it was and had no need to be reclaimed, dug up and turned over by outsiders. The invaders in America asserted the land as their own by setting up plantations and self-proclaiming themselves as honest farmers and workers; they were very clever when they had to justify their interventions by blaming it on the ignorance of the Indians by saying that their hunting techniques were not classified as an "improvement" and they used Indian hunting practices to condemn them as "lazy savages" and to deny that they "had a rightful claim to the land they hunted" (Ghosh 2021, 72).

In George Stocking's "History of Victorian anthropology", when talking about colonial past in Australia, notwithstanding the horror generated by the contact between Europeans and Tasmanians, the anthropologists that were following those cultures and studying them, in a sense, justified the actions of the European invaders because they understood the Tasmanians as "living representatives of the early Stone Age" (Stocking 1987, 176).

The terraformation process is a protagonist in any episode of colonization as human intervention cannot avoid affecting the territory from the first step he takes on the land

to conquer; Ghosh tries to compare episodes of terraforming around the world with the one in the Banda Islands, which he says is the most representative, and I agree. Perhaps the fact that the invasion revolved around what for us today is an (albeit refined) simple condiment such as nutmeg makes this episode so special, or perhaps because of the characteristic shape of the nut that reminds us and the writer himself of a "Tiny Earth-shaped nut" (Ghosh 2021, 76). Simply put, the nutmeg should undergo what our planet undergoes.

Once conquest is achieved, the conquered object gives the impression of being supine and inert. Having succumbed to mastery, it holds no more mysteries; the challenge it once posed to the conqueror's imagination is exhausted.(Ghosh 2021, 83-84)

Notwithstanding what this passage claims, Coen didn't actually stop once the conquest was achieved. Once he had the right to own all the clove and nutmeg trees in the Banda Islands, Coen and his company decided to extirpate any other tree on the other islands in order to prevent the global market to gain access to the precious resources that should have been only a Dutch's exclusive.

His strategy could be considered very hateful since he basically had already obtained what he was looking for, but in fact it is worth considering it as a ruthless economic strategy. That could be it, but it's worth saying that Coen was not new to the Banda Islands and his actions could be bound to an episode that he experienced years before on his own skin:

He was here twelve years earlier, as a member of a Dutch force that came to negotiate a treaty with the Bandanese. During the negotiations a part of that force was ambushed on the shores of Banda Naira and forty- six Dutchmen, including the leading officer, were slaughtered by the Bandanese. Coen was among those who got away with his life, but his memories of this episode have shaped his view of the Dutch mission in the Banda Islands.(Ghosh 2021, 20-21)

If we read this evidence, it's easy to understand why Coen seemed obsessed with this particular archipelago. That moment signed him profoundly so he took that campaign quite personally in a way.

To reconnect to the passage above the last one, the word "exhausted" means that you have exploited something in the most complete way possible; you have squeezed the fruit until the last drop and you were sure you had done your job at best so you could go

on to conquer the next hotspot. This will be of crucial importance when talking about science fiction on a greater scale due to the fact that now we are talking about consuming entire planets.

## 1.2 Climate Migration and the Gaia hypothesis

### Why do They Move out?

In this section we are going to talk about two other important sides of the colonial past that we will encounter again when talking about science fiction.

Genocide: The 1946 UN convention on genocide, for example, defines it as “acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such”.

When thinking about that “in part”, It’s easy to wonder where that part is going to end during or after the massacre; We all know who the war refugees are, and often the superpowers tend to justify the immigrants by saying precisely that they are fleeing the war. In the case of the Banda Islands, survivors and other merchants managed to escape to the adjacent islands, saving their own lives and also those of the nutmeg trees.

But trying to think about migratory movements today, Ghosh shows that not all of them are caused by poverty and wars, but also by climate and environmental change, which is why he calls them “climate migration”. This doesn’t imply that all migrations nowadays are all caused by natural disasters but in fact there are multiple causes “depending on multifarious factors including the pace and severity of disasters, socio-economic conditions of the locality, availability of resources, capacity of the local populations and the extent of resilience to disasters” (Naser, Mostafa and Mahmud 2019, 176). Ghosh is indeed focusing on a reality that is often forgotten or not taken into consideration as other “more visible” realities.

He was able to prove this simply by noticing the migrants' somatic features in the news that were not typical of war-torn countries; only then he began a scrupulous research about that:

Digging into the official statistics from Italy the country that, along with Greece, is receiving the largest number of refugees, I discovered that I was right: many Bengalis, most of them young men, were indeed making these difficult and dangerous journeys. The statistics showed that in some months Bangladeshis were among the largest groups of refugees crossing the Mediterranean to seek shelter in Italy. Actually, Bangladeshis far outnumbered Iraqis, Afghans, or Somalis. This fact was new to me, because Bangladesh, while it may have its problems, can hardly be described as a “wartorn country.”(Ghosh 2021, 161)

Here we have the revelation that Ghosh was looking for; he himself is from those countries so the discrepancy came to him quite easily, but if we think about all the millions of people watching the news, in particular people from a rescuing country like in this case Italy, very few of them will be able to recognize all the various reasons why those people are forced to flee their countries. In fact in 2015 when Ghosh was looking for documentation, Bangladesh was growing economically speaking and this was the reason why there should have been another darker mystery behind the migration of people from a wealthy country.

Evidences that climate migration is real have been gathered also in other countries, for example In Southeast Asia, where increasingly unpredictable monsoon rainfall and drought have made farming more difficult, the World Bank points to more than eight million people who have moved toward the Middle East, Europe and North America (Lustgarten 2020, 2).

It's worth saying that, in order to have his doubts solved, Ghosh went himself to the refugee camps in Italy to talk face to face with the migrants.

I met a thirty- something Bengali refugee who had recently crossed the Mediterranean: Khokon.[...]Khokon remembered a time when the land had borne good harvests of rice, sustaining the whole family. But the environment had begun to change as he was growing up. There were sudden and catastrophic inundations, caused sometimes by heavy rains and sometimes by the release of huge volumes of water by dams upstream, in India. In 1998 Khokon's land was flooded for six months. The incidence of other weather- related disasters began to increase as well: there were prolonged dry spells, violent hailstorms, and unseasonal downpours. As the environmental disruptions accelerated, the political situation also began to deteriorate. Members of the ruling party seized some of Khokon's family's land, and the family was unable to get it back.(Ghosh 2021, 163-64)

This story is one of the most striking experiences I've ever heard. The fact that Khokon revealed this to Ghosh and that also other migrants were aware of the "climate migration" made me think: why is this so unheard of to us? Because we are always likely to simplify the problem to get rid of it as soon as possible; if we have the chance to blame warlords, pestilences and pandemics we usually take it. We blame the symptoms, the consequences of the principal cause, as Khokon himself said. I know that the political situation deteriorated, but it all started with the environmental disasters that ruined the right course of life in his country. But this isn't over, because Khokon,



and other migrants as well, don't agree with the thesis that claims that it is all environmental shifts' fault.

Many of them were also well informed about climate change but none of them believed that their journeys had been driven primarily by environmental disruptions. It is largely in affluent countries, then, and mainly among the more privileged, that climate change is perceived as a techno-economic concern oriented toward the future; for the poor of the world, in rich and poor countries as well, it is primarily a matter of justice, rooted in histories of race, class, and geopolitics. (Ghosh 2021, 163-64)

Maybe they are used to think that all their problems are to be attributed to human nature, which has always remained the same. Humans need to blame something or someone they can see and talk to and in this case, even if they know about the "climate migration crisis" they prefer to recognize the cause of their escape in the politics and administration rather than something not alive like a storm or the global warming itself. Many times in science fiction novels entire civilizations are victims of colonizing processes that often modify the habitat of those populations, who are forced to escape in other places to reestablish their primary conditions of life or just to survive the disaster.

### **The Gaia Hypothesis**

Another issue that Ghosh deals with and I am interested to discuss is the Gaia Hypothesis. Some people have wondered whether the planet and its resources were alive or just a bunch of rocks and organic matter conglomerated together in an Earth-like shape, to cite Ghosh. In popular culture Gaia is the rescuing mother of the Greek myth about the troubled family of the Olimpian Gods, the one who saved Zeus from being eaten alongside his brothers by Chronos allowing him to save them; in just a few words, the Goddess of Earth.

The first one who talked about the Gaia Hypothesis was James Lovelock, a scientist, who, with the help of William Golding ("The Lord of Flies" writer) gave birth to this term to identify the planet Earth as a living being. At that time saying something of this kind would represent a mere provocation for the scientific world, but Lovelock intended to do so:

Long ago the Greeks ... gave to the Earth the name Gaia or, for short, Ge. In those days science and theology were one and science, although less precise, had soul. As time passed this warm relationship faded and was replaced by the frigidity of schoolmen. The life sciences, no longer concerned with life, fell to classifying dead things and even to vivisection. . . . Now at least there are signs of a change. Science becomes holistic again and rediscovers soul, and theology, moved by ecumenical forces, begins to realize that Gaia is not to be subdivided for academic convenience and that Ge is much more than a prefix. (Lovelock, 2006, 22)

He went back to ancient times to underline that once theology and science coexisted in harmony. They weren't in fact black or white but they had different shades. To get back to Coen and colonialism, never, even in a thousand years would the Dutch company have thought that the ecosystem they were destroying was alive. Lovelock says that science possessed a soul; in that sense inanimate things too possessed a soul and science recognized it.

Sadly, throughout the years the border between meta-physical things and physical things grew stronger and the soul within everything was nonsense for scientists. The vitalism on the other hand survived, in those indigenous populations spread around the world like American Indians that used to worship mountains and lands and, even the population around Banda Islands like Maluku that for ages have adored the lots of volcanoes present on their different islands. It's worth mention that in the West these beliefs have turned into true movements; indeed, not only did the vitalist metaphysics survive in the West, but it enhanced itself as it turned into an always repressed yet always resurgent subterranean current, a counterculture:

without which the public elite culture cannot be fully understood and out of which any number of popular cultural movements have sprung, usually in direct or indirect opposition to the reigning public and elite orthodoxies. (Ghosh 2021, 45-46)

This love for the intrinsic life beneath the surface goes on today among those people that work connected to the Earth; they are religious people for the most and they usually believe in the Christian God. There is this idea of Puritanism that connects life on Earth to the life of the Earth that is very common even when we talk about science fiction. I've said before that now in science fiction there aren't just islands and trees to be conquered, but entire planets and one of the books I'm going to discuss follows the agricultural stream of thought when it comes the moment to establish on an uncharted planet our own family and house.

In this way we have in a sense to “speak of Earth as a ‘pagan planet’ precisely to highlight its vibrancy, its life and its value that stems from this” (Ruse 2013, 11).

All those beliefs that see the Earth as a living being is a return to the religious past in which pagan tribes used to worship nature elements like the moon, the sun, and the Earth itself. Nevertheless, is it true to think about the Gaia hypothesis as something real just because we have had a lot of indigenous cults that used to share the same beliefs?

To reconnect with the Banda Islands, there were different populations who adored the volcanoes of that archipelago: “Javanese people often share a deeply devout relationship with volcanoes” (Ghosh 2021, 33), notwithstanding the fact that a volcano from those places like for example Mount Merapi is considered one of the most dangerous among the volcanoes in the entire world. In their conceptions, quakes, tsunamis, and other catastrophes cannot be considered casual events, but they have to be predetermined by our planet. In addition Javanese culture use the oral tradition method to teach to next generations in a way to function as a “hazard mitigation tool, which makes them likely useful in helping to foster effective dialogues with a variety of target parties and interest groups around the volcano's slopes” (Troll, Valentin 2015, 137).

## 1.3 Terraformation and Science fiction

### **Through the Space and the Sea**

We have already introduced the concept of terraformation in the previous sections, by taking into consideration different historical episodes in which it has already happened; a thought, a desire, an opportunity to succeed brought thousands of adventurers in uncharted lands to satisfy their thirst for power. The attraction of the unknown and the diverseness is entrenched deep in human nature which cannot be stopped.

All this human intervention that started long ago has already taken us in a new era, the one of the “Anthropocene which in one of its earliest and most famous formulations denotes a “geological epoch [...] that is in part determined by human activity” (Mitchell and Robert 2021,114). If we think about that, just a little part of the planet has remained untainted. The grabbing hands have already grabbed all they could and reshaped that in the way they wanted.

It’s already a fact that colonialism, terraformation and Anthropocene are strictly connected as everything we have said could be summarized by saying that:

The colonial invasion that began centuries ago caused anthropogenic environmental changes that rapidly disrupted many Indigenous peoples, including deforestation, pollution, modification of hydrological cycles, and the amplification of soil-use and terraforming for particular types of farming, grazing, transportation, and residential, commercial and government infrastructure. (Whyte 2017, n.p.)

In this abstract from "Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene", there is everything: the cause, represented by colonialism, the medium, that is the process of terraformation, and the outcome resulting in the Anthropocene. The fact of discovering something new, the desire to take it under your wing and transform it in the shape you’ve pictured it in your mind seem to be something that a whimsical child wants. European countries are like those foolish children that in order to obtain what they want are ready to break everything to be listened to. When Europe wasn’t enough they were ready to take the rest of the world with any means possible. The exotic, the unconventional were those things people wanted and even now they are always looking for them.

It seems, at first glance, that science fiction doesn't have anything to do with this topic but when we think about it, where will humankind push itself when there will be nothing else to discover or, to cite the previous chapter, to exhaust? I've already said that the thirst for the unknown is implied in human nature and science fiction is the way in which people can wonder about the infinite possibilities the universe has to offer and it is for this reason that "the double-sided effect of the exotic - as a means to please different families' tastes and as a challenge to one's sense of the proper or the natural is very common in early science fiction" (Rieder 2008, 4).

In this section I will build up some parallelisms between historical colonialism and science fiction, with particular care to the concepts of terraformation, utopia and dystopia. In order to do so, examples will be mentioned from authors that will be treated further on throughout the next chapters.

It seems like history is going to repeat itself, not right now maybe, but in a not so far away future. If it is true that humankind will repeat the same mistakes in the future in a planetary or galactic scale, we are bound to perish as Wells himself said that "in a measurable time mankind has to constitute himself into one state and one brotherhood or it will be certainly swept down cataracts of disaster to an ultimate destruction" (Simkins 2016, 34). We have to be aware of the violent actions that identify humankind if we ever will land on a new planet inhabited by sentient lifeforms.

Colonizing a planet in a pacific way sounds a little bit utopic, in fact since luckily we are only talking about fantasy, for now at least, many could say that science fiction could be considered a glorification of the colonial past (in Wells' *War of the Worlds* he even asks the reader to compare the alien invasion with the one perpetrated by Britain in Tasmania during the Victorian Age) due to the fact that in order to be interesting it has to contain all those elements that characterize the genre: aliens, monsters, spaceships, time travels, planets, ultra-futuristic weapons and so on.

It is worth saying that this metaphoric time travel represents a crucial point in science fiction as almost in every case two opposite realities clash with each other in an anachronistic way. Just like in history the one who conquers must be self confident of his skills and his weapons. In Wells' *War of the Worlds* the Martians are the most advanced between the two opponents technologically speaking, while humans are forced to a feeble resistance.

This is even notable in our colonial past where the invaders were more advanced than the indigenous people in all cases we have seen. In a sense we could even say

that "absorption in overseas wilderness represented a form of time travel" (Rieder 2008, 6).

Colonists and invaders are attracted by untamed lands or lands perceived as "stuck in the past" in order for them to master their power among weak people; the idea of conquering an out-of-timeline land that didn't exist in their minds was quite a goal. In a way beyond being rulers and chiefs of a new place they believe themselves as "time lords". In this way you became ruler of the past since the culture of native people is usually replaced with the one of the invaders; ruler of the present, since you are the new master, and ruler of the future, as you are the one who decides what your new country is going to become. The past is made to be outclassed by the future, that's just the way it is.

On the other hand science fiction, even if it represents something that could happen in some years from now, is still, by most of its part, speculative and the author has his amount of freedom in inventing stories and giving a certain attitude to different characters. For example Rieder says that the invader doesn't have to be always violent towards the target objective and he identifies three ways in which the explorer can act when finding himself in a new land or situation: the *discoverer's fantasy*, the *missionary fantasy* and the *anthropologist's fantasy*.

The first can be called the discoverer's fantasy: The colonizer knows very well that there are people living in this land, but he acts as if it were empty before our arrival. (Rieder 2008, 31-33)

This is the one we always picture in our mind and the one which in my opinion identifies itself in the episodes discussed before. The primary objective is to claim the land's property and the invader is ready to use everything in his power in order to do so. Try to imagine a crew of people that for the first time steps foot on an island in which there are already inhabitants; the first contact would require at least a minimum interaction with the natives, but in this case the definition specifies "*act as if it were empty before our arrival*". A method we are not unfamiliar with, by now.

In this fantasy, the invader ignores the native people and acts just for one purpose: making money. There is no human relationship between the two parts except for the violence that all of us know very well. I imagine the land as a place suitable to build a house if it wasn't for a rat infestation. You solve the problem by killing the rats and then you may proceed with your dreams' house.

The missionary's fantasy consists in, as a matter of faith, that the goodness of this change is absolute and cannot be anything else even to those who may appear to suffer from the process. (Rieder 2008, 31-33)

I would have called this the *"hypocrite's fantasy"*, because I think it suits better in such a situation. The worst fact of colonizing a land that is not yours but has been under another population is lying to them. How can you decide whether what you are doing is benefitting the natives? Colonizers think that since the natives are underdeveloped, they can use their closed mindedness and backwardness to elevate and sanctify their cause. In this way they use this fact as an excuse to convince the natives of a bright future that will make their lives better.

Needless to say human nature seldom agrees with something imposed by an unexpected change. The oppressed have never asked for this change and surely, they never asked to be invaded, and yet, they are given those things they didn't need. Episodes of this fantasy could be the Christianization and Westernization of different cultures in America.

One thing we have to point out: teaching natives the culture of invaders can be counterproductive as in your attempt to gain their trust the natives that are learning your culture could become the same people you are trying to distance in your motherland or develop even the negative aspects of that culture. To cite the example from above "Christianized slaves not only became 'proud' but 'irascible', 'uppity' and 'saucy'" (Butler 1990, 133), not very collaborative devout as one "good christian" could ever expect.

Finally, there is the anthropologist's fantasy: Although the colonist knows that these people exist here and now, he also considers them to exist in that past, he thinks to be his own past. (Rieder 2008, 31-33)

Again, we find ourselves in this temporal dimension that defines the invader as the present-future destroying the past. We have to point out the fact that the anthropologist figure in the Victorian Age was very different from the one we know today; nineteenth century anthropology precisely imagined the indigenous cultures as a figure of regression, of basic evolutionary state, thus not equal to the modern man. The beauty of the anthropologist's job today stands in the interactions that he performs when he is

studying a new culture, often characterized by learning the language of the natives by living among them.

Unfortunately, in the case of colonization, the invader is not there to study the locals but for a personal income. He could study them in order to gain their trust but as this happens the colonists would be able to get both the land and the inhabitants without even engaging in any useless battle. Just like the progress that annihilates the past, this fantasy could be the worst of the three because you give hope to the people just to crush them when they don't expect.

### **The Birth of Terraformation**

One of the points on which science fiction and colonialism coincide is the fact that all we have defined as "terraformation process" can be found in literary form and for this reason, in science fiction too.

Jack Williamson gave birth to this term in his 1942's short story "Collision Orbit" (Williamson, 1942), but throughout the years it developed different meanings starting from the three shades of the same word terraforming, that are:

1. The first designates the human colonization of space where alien planets are shaped in the image of earth;
2. The second involves an alien colonization of space and the alteration of planets to resemble the aliens' homeworlds;
3. The third, the alteration of Earth's landscape (Pak 2016).

It's easy to get lost when talking about the third type: terraforming the Earth. How is it possible to transform something that is already shaped into the final result? It's possible if one thinks that it's possible to apply planetary engineering in a limited scale by dealing with the alteration of some global parameter, such as the greenhouse effect, atmospheric composition, or global environment. The primary definition tries to disentangle this problem by modifying a world's environment so that it can support earth life-forms, especially humans. If we put that in this way the use of the adjective "terraformed," "(of a world) having been modified to support life-forms alien to it," avenues for reframing orientations and perspectives towards the habitation of Earth are opened" (Pak 2016, 2).



These definitions describe the human being as if he wasn't born on the Earth millions of years ago, but rather, as an alien being to Earth. It's worth wondering whether we are alien to our planet, since the process of terraformation, like the name suggests, is only meant to be associated with outer worlds and planets. The term has been used even in movies: for example in *The Man of Steel* by Zack Snyder (2013) the aliens invading the Earth are calling the apocalyptic machine used to reshape the planet "Terraforming machine". Any reader of this thesis could argue whether it is right to call it "Terraforming machine" since they are on planet Earth.

There are multiple definitions of the word Terraformation, but the one I would adopt is the one that claims this process as "a process of planetary engineering by which the extant environment of a planet is manipulated so as to produce an Earth-like ecosystem" (Schwartz 2013, 1).

Despite all the speculations we can do, I would stick to the fact that most of the times in science fiction we are seeing the process of terraformation from the human perspective, so in this way terraforming enclose in itself all the processes apt to transform any habitat into something in which a human being can live. The relation with our planet cannot be ignored when looking at other worlds. One colonizer cannot simply destroy a habitat and rebuild it from the ground, but he has to be cautious in adapting it to the very human need.

One thing that can become a *leitmotif* of science fiction is the fact that something needs changing in order to achieve something. Just like in our colonial past, in order to claim the property of one territory the invader has to make it of his own property, by establishing something on its surface.

Sadly, if that land is already taken, like in the vast majority of the cases, violence seems to be a constant in both the colonial experience and science fiction; this violence is perpetrated by both sides but the most technologically advanced wins in almost any case. We could even say that without technology colonialism wouldn't even exist, not even to mention the two words "science fiction". The genocides that Indigenous people have spent and all the voyages and adventures that colonists have achieved wouldn't have been possible without technology. For this reason I would like to mention this passage from Rieder:

Colonial invasion is the evil reality of technological revolution. In relation to technology, as in other contexts, the history, ideology, and discourses of colonialism, highlight a double perspective that runs throughout the genre of science fiction: on

one hand, technology makes possible the exploration of the new and the astonishing encounter with the strange, but on the other, it reveals the post apocalyptic vision of a world gone disastrously wrong. (Rieder 2008, 31-33)

In reading this statement we perceive a strong interconnection between Colonialism and Science Fiction. As we have seen when you are heading towards the unknown of a new land or planet, you cannot be unprepared; the technology development in every field must be improved at the same time, just as the spaceships must sustain a long and difficult voyage in the emptiness of the universe so the weapons must be efficient in the same way in order for the colonizer to be ready to whatever or whoever he is going to encounter.

The result is a quite engaging theme that attracts readers of all ages, readers that must comprehend the importance of the episodes of the past that have brought to the creation of the genre of science fiction. Surely talking about strangeness of new worlds is exciting but we should read it by keeping in mind the economic, political and cultural prospects with which the traveler is going to deal with.

### **Science Fiction of all Kinds: An Agricultural Attitude**

Popular culture claims that the Science Fiction genre is to be cataloged as a recognized genre characterized by strict axioms and features that have to be present in every tale of Science fiction. Actually, it's not like that, as one science fiction writer is free to choose whatever elements he wants, realizing the fact that science fiction is not a genre but a compound of elements and genres:

Science fiction, or any other literary genre, is best understood as a group of objects that bear a 'family resemblance' to one another rather than sharing some set of essential, defining characteristics [...] science fiction is not one thing. Rather, it is any number of things: a future setting, a marvelous device, an ideal society, an alien creature, a twist in time, an interstellar journey, a satirical perspective, a particular approach to the matter of story, whatever we are looking for when we look for science fiction, here more overt, here more subtle - which are braided together in an endless variety of combinations. (Kincaid 2003, 409)

We can understand that there is not a proper guideline when talking about science fiction; as the traveler doesn't know what lies deep in space, so the reader cannot associate a specific element to the writings he is going to read. However, science fiction

“must contain some element known not to be true to the world-as-it-is” (Shippey 2016, 209).

If we start analyzing the science fiction typical of the decade between 1950s and 1960s there is a peculiar feature that identifies a genre of science fiction based on the trends of that time. The worlds described in the different tales resemble the possible futures that people of that time used to imagine. There is a dialogue through different texts, “one whose nature became increasingly sophisticated as it was deployed and re-deployed to explore social, technological, political and philosophical concerns“ (Pak 2016, 57).

One of the books (which will be discussed more extensively in the next chapter) typical of this period is Robert A. Heinlein’s *Farmer in the sky*, that connects terraformation to a typical American agricultural dimension, in which a man with his own land and farm can prosper with a family and have a satisfying life.

Just like the American colonial past we have been discussing, the first thing that comes to mind in order to claim a certain land, or in this case, planet as a private property, is making the terrain and soil fertile, to have something yours. The crops and the possibility to sustain yourself and your family makes you the rightful owner of that land.

That is the same story when we are talking about science fiction: the process of terraformation can also mean an agricultural process once the planet can sustain human life. Just like weapons and spaceships have to be extremely technologically advanced, so the agricultural devices have to be able to deal with any sort of terrain the space adventures will provide.

In addition we are brought to think that agricultural technologies are only to be associated with fruit and vegetables, but in a farm, even if in space, there are also livestock and other vital activities. In a futuristic concept, these activities are likely to be accomplished by robots and it is striking that even today there are mechanical supervisors that can simplify farming life.

Robots, of course, do not belong in “the future” anymore; for example, in Germany there are the so called *milking robots* which can scan the cow in order to reveal whether there is any problem and make the farmer aware of its vital parameters. The mechanical arm is responsible for the milking, which is extremely accurate, and the washing of the animal. It sounds as the work of the milkmaid is going to be completely eradicated, as, “in addition to the increased production, lower disease pressure,

reliability and labour saving benefits associated with the robot, the wives (who usually do the milking chores in Germany) of young farmers are particularly active in “motivating” their husbands to adopt this new technology” (Troskie 2012, 22).

It is worth saying that the intensive use of these new machines will be deleterious for human farmers as they see in these robots a solution to have a less hard-working life, and for this reason they are ready to invest a huge amount of money now, in order not to work harder in the future. As for the costs, we are used to see them especially in movies, such as gigantic machines that can delete entire ecosystems (Try to think about the bulldozers in 2009 James Cameron’s *Avatar*); in this way we are brought to think that “bigger is better”.

However, the cinematography industry doesn’t focus on the monetary investments that such big mechanical monsters have cost to the army or whatever the colonizers were. To reconnect to *Farmer in the Sky*, given that it is hard for a human being to begin a new life on a new planet, the costs of the land-molding devices shouldn’t be overwhelming to him. To face this problem, robotics are working for a more sustainable and “small sized” agriculture for the future by trying to create one day the “so-called ‘Antbots’ or ‘Ag Ants’ [...] a large number of small, inexpensive and dispensable robots performing a particular task than one cumbersome, heavy and fuel-guzzling machine” (Troskie 2012, 22).

Economics and mechanics have always given their best in making things more affordable and more efficient, precisely to save space, time and money that are essential in a future more and more close to us. These examples confirm that the science fiction typical of the Fifties is not so far away from us; we are not even sure to call that science fiction anymore.

### **Science Fiction of All Kinds: Dystopian or Utopian?**

We have already talked about the ways in which a colonizer can impose himself over a new inhabited land through the three kinds of fantasies; we have now to make a point over two different novels that will be analyzed more extensively in the second chapter: Ursula K. Le Guin’s *The Word for World is Forest* and H. G. Wells’ *The War of the Worlds*.

Both the texts deal with the theme of colonization, but this time the reality is another one. In these two science fiction novels many of humans lose their lives; in Le

Guin's novel they have to face the consequences of their choices, while in Wells' they become the victims, the invaded, the oppressed. In any case, these are the most common outcomes in science fiction, those we are used to the most.

They both deal with the process of terraformation but in some way the invaders cannot accomplish that without the "help" of the locals of the planet. Taking Wells's Martians, they came well prepared on Earth; superior intelligence and apocalyptic machines were the means through which they would have conquered the planet. However, if thinking about that, the most precious resource were the human beings; how could they have ever grown the red root (their terraforming plant) if there weren't any people on the planet's surface? Unfortunately, humans were seen as the fertilizer necessary for the terraformation of Earth.

It's as if this book represented the revenge of our planet for what colonizers had done in the past (and for what they will do in the future); human beings were becoming the fertilizer of a new shaped Earth after all the violence perpetrated throughout the years. Furthermore the book itself was published in 1898 during the Victorian Age, a very prosperous period for England but also a period of colonial expansion. Maybe for at least once, thanks to this novel, Wells wanted to imagine a powerful country in a despotic context, making it appear as one of those populations it has decimated in the past.

As long as their entire existence, humans lend themselves "to the fallacy of a complacent anthropocentrism" (Wells 1975, preface x) and I think that's just their nature as since when they have evolved they have always thought of themselves as the true owners of the Earth above all animals. However, the tables turn when the opponents are not from the Earth and we will see this clearly in *The War of the Worlds*.

In addition to this I have to point out this isn't his first work, but "over two hundred items published between 1887 and 1898, most of them pseudonymous or unsigned, can be attributed to him" (Wells 1975, 1). By these considerations, we could assume that his vision has changed throughout these years and the building of a new kind of science fiction is the result of multiple tests in a smaller size. What remained constant, is his experimental method that consists in "Not knowledge, but a critical and inquiring mental habit, is the aim of science teaching" (Wells 1975, 3).

He speaks about science teaching; so he wants to teach something with his writings: that one shouldn't stop scratching the surface of things, but instead, he should

ask himself the biggest question of them all, that is *Why?* It's curious that his intentions were didactic in a sort of way. In his *Experiment in Autobiography* (1934) he wrote:

World forces were at work tending to disperse the aristocratic estate system in Europe, to abolish small traders to make work in the retail trades less independent and satisfactory, to promote industrial co-ordination, increase productivity, necessitate new and better informed classes, evoke a new type of education and make it universal, break down political barriers everywhere and bring all men into one planetary community (Wells 1934)

He hoped to help other people with his books since books have saved him from a troubled future. He felt particularly the abolition of small traders since he worked “twice as draper, once as a pharmaceutical chemist” (Gunn 2002, 2). He has always believed in the progress for a better future but to clash against this thought came the dystopian authors (like Huxley and Orwell for example) that were characterized by a pessimistic view of the world and the future: “Conditions are getting worse, not better, these works said and rather than perfection the world may get destruction” (Gunn 2002, 17). We can see this in the years succeeding Wells’ works with the coming of two World Wars that, eventually, destroyed the positive outcome of an utopic future.

Nevertheless there have been different scholars that have assumed contrasting positions about whether Wells was an utopian or a dystopian. Some of them even affirm that he has been shifting between the two sides throughout his entire career and this because of three reasons:

First, it has been maintained that Well’s thinking and writing went in phases, and that he alternated between dystopianism and utopianism throughout his life. Second, it has been argued that Wells’s thinking and writing evolved over time from dystopianism to utopianism and remained there [...]. Third, it has been asserted that throughout his life Wells’s thinking and writing could be associated with both the principles of utopianism and dystopianism at the same time and even in the same works. In short Wells writings, like his life and character, are driven by contradictions. (Burns 2008, 21)

It seems like it is impossible to place H.G. Wells in a defined current of thought. We have already said with Kincaid that science fiction is a conglomerate of genres, not a rigid axiom. In this sense Wells deals with science fiction behaving in whatever his mood was in that specific period. Even today the social condition and politics, or, in a

word, trends, are always shifting. After all he was “A man far more complex than either his admirers or his detractors have usually recognized” (Burns 2008, 21).

*The War of the Worlds* is without any doubts born from a dystopian Wells. This discrepancy between his works has been witnessed by Jack Williamson himself who said that “the shift in Wells’s thought around the turn of the century is so great that by 1905 the author of a modern utopia seems almost a different man” (Burns 2008, 22).

It won’t be us those who will classify Wells in one of the two dimensions but we will simply consider this author’s works neither dystopian or utopian but instead, “novelistic through and through” (Huntington 1982, n.p).

As for Le Guin’s *The Word for World is Forest*, which was published way after the beginning of Twentieth century (1976), the interactions between humans and aliens are very present since the two civilizations commit violent acts one another; colonization is always present in both of the novels but the approach of the invaders is quite different. If we have to choose between the three Rieder’s fantasies, I would say that Le Guin’s is using the *anthropologist's fantasy* as the two civilizations manage to live together, even if one of the two sides (obviously the humans) enslaves the other, for a considerable amount of time.

Differently from Wells's subtle accusation towards the Victorian age, Le Guin doesn’t share her thoughts on her contemporary society but she lets the plot speak for her, in fact “most of her imaginary societies are models critical of our present societies” (Theall 1975, 256). The relationship with the aliens definitely reveals that a different approach is possible; these aliens speak with humans and they work for them. We are not talking about equal rights as humans think of themselves as superiors and on the other hand humans are seen by the aliens as colonizers, but the escalation is gradual before true violence.

We can enter the clothes of the aliens and guess what they think, a peculiarity that in *The War of the Worlds* is not present; we can perceive that the situation won’t be as peaceful as at the beginning of the novel. Another peculiar distinctive trait of Le Guin’s novels is that “the actual sensory experience and subjective response of strangers or outsiders plays a central role in validating the carefully chosen and believable details which compose the thorough accounts Le Guin gives us of her fictional worlds” (Theall 1975, 257). We will see this when we are going to talk about the oneiric dimension of the novel.

The problem comes when we have to identify this Le Guin's novel into the dystopic or the utopic sphere, we find ourselves into a dead end; in my opinion the line dividing the two opposites is not uniform but it has canals in it that allow multiple interconnections between the two dimensions. Generally speaking, all of us when thinking about the future we picture in our mind a tomorrow full of hope and wealth; in this sense a science fiction writer would see every possibility as a utopic future. In fact the first science fiction "qualifies as "utopian" in the broad sense by reason of its fictional con-structions of a future social order. But historically considered, it has also been "utopian" in the stricter and more limited meaning of the word, according to which the future society envisioned must in some way(s) be better than the one in which the utopist actually lives" (Baggesen 1987, 34-35).

Unfortunately, this grasp of the futuristic positiveness wouldn't last. This vision fell apart as through the years the focus shifted "from the 'hard' sciences and technology towards the 'soft' sciences, and especially towards anthropology and sociology" (Baggesen 1987, 35) and we may understand why. Realizing that science fiction wasn't made up exclusively of big spaceships, flying machines and advanced technology was a hard pill to swallow; these features were nevertheless the result of ambitious and selfish thoughts we have never given the importance they deserve, and that have always been established in human nature.

With the coming of anthropology and sociology people started to care about the historical backgrounds of populations and began to see technological evolution as an impoverishment of the cultural values that transferring themselves into a science fictional contest revealed the dystopian side of the utopic future that people used to imagine.

This was the theoretical chapter about what are the themes we are going to encounter throughout the novels I will discuss in the next chapters. It's worth giving an accurate analysis of human nature in our historical past and considering all the facts that brought us the themes we will discuss, before passing to true science fiction texts. Now that we have a fair grasp of the past and the origins of colonization and science fiction as a genre we may pass to in-text commentary and analysis.



## Chapter 2- World Devourers in Wells' "War of the Worlds"

We are going to start with Wells's novel as it is the oldest of the three and because we are going to see the shift that occurred between the first science fiction models and the later texts to come. Furthermore, I think it is right to begin with him given that many classify this author "as the inventor of the science-fictional utopia and as the consolidator or second founder of science fiction itself" (Fitting 2000, 92).

We are going to comment on the passages of the book, analyzing the context, the situation and in the right cases the allusions to the peculiarities of the time in order to understand in which way science fiction influenced our society so much.

### 2.1- Lasers, Red Roots, Tripods and a Flu

The first page of the novel already reveals what this story is about, and who the antagonists are:

No one would have believed in the last years of the nineteenth century that this world was being watched keenly and closely by intelligences greater than man's and yet as mortal as his own; [...] they were scrutinised and studied, perhaps almost as narrowly as a man with a microscope might scrutinise the transient creatures that swarm and multiply in a drop of water. (Wells, 1)

We have already said that Wells always refers to his society in real life as the Victorian Age was spreading the hegemony of Britain at a global level; the opening confirms the period of prosperity as he says that no one could ever imagine that in such a florid period a disaster was falling on the humans' heads. It's curious how Wells says that the alien intelligences are more developed than humans' but yet "mortal as his own"; throughout this statement he clearly confirms that humanity is a belligerent civilization and its violence is not so far from the one of the Martians. However, the human power is nothing compared to the one of the aliens that, as a scientist that studies little creatures with the microscope, in this sense is infinitely superior to them. In the following passage, Wells gives a speculation about why the Martians would ever invade their neighbors:

The secular cooling that must someday overtake our planet has already gone far indeed with our neighbour. Its physical condition is still largely a mystery, but we know now that even in its equatorial region the midday temperature barely approaches that of our coldest winter. (Wells, 2-3)

He points out the fact by giving scientific explanations about the physical environment of which the planet is made up. He talks about Mars's "last stage of exhaustion", (Wells, 3), an exhaustion comparable to the one that Ghosh quoted in chapter 1.1 (Ghosh 2021, 83-84). By giving this data, Wells is able to make the reader understand that he knows what he is talking about, making the reading more realistic and actually scary as a future prospect. With these motivations, Martians are in need of moving on a new planet. It follows an example from the historical past of humanity:

And before we judge of them too harshly we must remember what ruthless and utter destruction our own species has wrought, not only upon animals, such as the vanished bison and the dodo, but upon its inferior races. The Tasmanians, in spite of their human likeness, were entirely swept out of existence in a war of extermination waged by European immigrants, in the space of fifty years. (Wells, 4)

We have already mentioned this part before (1.3 p. 18), but I had to put it in this chapter as in my opinion this represents the principal accusation that Wells moves against his own government; he acts as an enemy to the aliens, but he cannot condemn them without first taking a look at his own people, the same people that have exterminated entire civilizations in search of absolute power. Moreover, Wells specifies that the Tasmanians were slaughtered despite "their human likenesses", as a reason to consider total nonsense that beings of the same species kill each other. We could say that this is a human prerogative, as aliens are co-operating with one another to survive finding a new home and to wipe out an extraterrestrial race. It's worth saying that in science fiction the entities that come from the outside "are, as much unlike men as it is possible to imagine" (Gregory 1898, 339-40), a reminder that humans and similes should be united together and not fight against one another. In this passage we are introduced to a protagonist's friend, Ogilvy, who has different ideas about Mars's conditions and tells them to the narrator:

He was full of speculation that night about the condition of Mars, and scoffed at the vulgar idea of its having inhabitants who were signalling us. His idea was that

meteorites might be falling in a heavy shower upon the planet, or that a huge volcanic explosion was in progress. He pointed out to me how unlikely it was that organic evolution had taken the same direction in the two adjacent planets. "The chances against anything manlike on Mars are a million to one," he said. (Wells, 7)

Humanity, even if intellectually and technologically inferior to the Martians, has not been taken by surprise as the experts, like Ogilvy, notice that something is wrong on the Red Planet, but they don't manage to find an exhaustive explanation of those phenomena. They mention natural disasters that are taking place on the planet in order to avoid the creepy idea that some sentient life on Mars is trying to communicate with the Earth. The last statement about the ridiculous chances of having life on Mars seems like an excuse in order to negate the truth that everyone didn't want to become real.

One peculiar thing about this new science fiction is that "Wells eliminates a basic and force in, communal relations, love, compassion, selflessness and sensuality" (Gannon 1999, 42), as he describes in a very detailed attitude the reactions through which people face the unknown: he describes a walk in the shadow of the moon between the narrator and his wife, taking a look at the Red Planet in the sky, and describing different elements of the city life that at first sight people wouldn't classify as typical of a science fiction novel; the progress is just here as the protagonists of the novel are nevertheless people like us with thoughts, love bonds and social attitudes and one cannot simply make these things superfluous, even in a science fiction novel:

I went for a walk with my wife. It was starlight and I explained the Signs of the Zodiac to her, and pointed out Mars, a bright dot of light creeping zenithward, towards which so many telescopes were pointed[...] From the railway station in the distance came the sound of shunting trains, ringing and rumbling, softened almost into melody by the distance. My wife pointed out to me the brightness of the red, green, and yellow signal lights hanging in a framework against the sky. (Wells, 9)

It's as if this *locus amoenus* represents the calm before the storm that has to come. These sensations will turn into more negative ones as the unidentified objects that were seen after the movements on the Martian surface will approach the Earth; with the falling of the first cylinder the serenity turns into perplexity and astonishment:

At the first glance it was really no more exciting than an overturned carriage or a tree blown across the road. Not so much so, indeed. It looked like a rusty gas float. It required a certain amount of scientific education to perceive that the grey scale of the Thing was no common oxide, that the yellowish-white metal that gleamed in the crack

between the lid and the cylinder had an unfamiliar hue. "Extra-terrestrial" had no meaning for most of the onlookers. (Wells, 17)

There is a crowd of naive people all around the site on the unidentified object crashed, but given its stillness and monotony people treat it like an inoffensive object even if it is not from this world. Kids even play around it touching it and then run away. Wells in this part leaves us with the conjectures that the protagonist does in his mind, making us reflect on what that thing may become. It's not until the opening of the cylinder that people remain to stare at the object. After the appearance of the first tripod, even scarier is the presence and the description of the martian:

Two large dark-coloured eyes were regarding me steadfastly. The mass that framed them, the head of the thing, was rounded, and had, one might say, a face. There was a mouth under the eyes, the lipless brim of which quivered and panted, and dropped saliva. The whole creature heaved and pulsed convulsively. A lank tentacular appendage gripped the edge of the cylinder, another swayed in the air. (Wells, 23)

This is in my opinion the alien that most of the times we think of: something always wet with viscid tentacles, big eyes and they are not still. The fact that we imagine the convulsing aliens having multiple tentacles makes us think about a very slippery thing that cannot be controlled given his big head and hence, intelligence. The tentacles could represent perhaps the condition of imprisonment, slavery into which more advanced extraterrestrials would seize us, in hope to study us or exploit us in some way. We have been driven through these years of science fiction movies, tales and series that such features would have been synonyms of hostile extraterrestrials and that nothing would have beaten them, but as we will see further on this is not the case.

The first actual attack commences:

Then slowly the hissing passed into a humming, into a long, loud, droning noise. Slowly a humped shape rose out of the pit, and the ghost of a beam of light seemed to flicker out from it. Forthwith flashes of actual flame, a bright glare leaping from one to another, sprang from the scattered group of men. It was as if some invisible jet impinged upon them and flashed into white flame. It was as if each man were suddenly and momentarily turned to fire. (Wells, 29)

This scene pictures who the Martians truly are; it's not very clear what is happening at the beginning as Wells depicts the situation using colorful elements and strange images

like for example a “humped shaped rose, ghost of a beam, invisible jet”. These are the mere reactions of a human seeing something inexplicable for the first time. These features are similar to those of a pyrotechnic show in which the audience remains still to watch as physical and chemical transformations that no one understands are taking place in front of their eyes. Only a few moments later they realize that what they are witnessing is not something astonishing but hideous instead. This is the future striking with its relentlessness and Wells highlights this fact by foregrounding both superior technology and weapon systems, two things in which humans were extremely inferior compared to the newcomers. This is one of Wells’s peculiarities as he was one of the first to talk about civilian victims in the progress of weaponry. At that time human rights weren’t seen with the same regard that rules today and everything was apt to be the best and the strongest when talking about armed conflicts. Furthermore all eyes were focused only on those taking part in the warfare but that didn’t include civilians. Another peculiarity about Wells is that “he was also quick to realize that military technology had advanced to such an extent that any future war would not just involve the combatants but the civilian population as well, that these wars would be mechanical, and that the side with the most advanced technology would prevail” (Cornils 2003, 25).

In a dystopian future, wars are not just made to crush the opponent’s military forces, but even the opponent’s homeland, claiming victory by leaving behind a death valley. Needless to say that Wells’s theories revealed themselves to be true as “in the decades that followed the book’s publication, human beings repeatedly played the part of the inhuman marauders, devastating city after city in what may justly be regarded as a single hundred-year “war of the world” (Ferguson 2006, 61). Despite the war crimes of the Second World War, it was the Great War that best resembles this prophecy as it radically “changed the relationship between war and civilians, in terms of altered expectations of conflict, the dismantling of the pre-war distinction between combatant and civilian” (Jones 2014, 84). The male “warrior” wasn’t the one representing the conflict anymore, but the civilian had become the priority.

In this passage we can see all the speculations that the protagonist is making in order to analyze the situation:

"They can scarcely move," I said. I began to comfort her and myself by repeating all that Ogilvy had told me of the impossibility of the Martians establishing themselves on the earth. In particular I laid stress on the gravitational difficulty. On the surface of the earth the force of gravity is three times what it is on the surface of Mars. A Martian, therefore, would weigh three times more than on Mars, albeit his muscular strength

would be the same. His own body would be a cope of lead to him. [...] The atmosphere of the earth, we now know, contains far more oxygen or far less argon (whichever way one likes to put it) than does Mars. The invigorating influences of this excess of oxygen upon the Martians indisputably did much to counterbalance the increased weight of their bodies. And, in the second place, we all overlooked the fact that such mechanical intelligence as the Martian possessed was quite able to dispense with muscular exertion at a pinch. (Wells, 40-41)

Despite the reassurances of Ogilvy that confirmed that it was impossible for the Martians to live on the Earth, they are now on the planet's surface shooting rays at people. In a way the protagonist is still wishing for his friend's theories to be true, but eventually, the aliens, that are a far more advanced civilization, have found a way to counterbalance their weaknesses. Here the oppressed are wondering about the reasons why the invaders are here despite all their previous knowledge about them. Like in any colonization story the invaders never know what they will find once they arrive in the new land (in this case aliens knew all along), but yet they prepare themselves in the best way possible in order to adapt to new situations. Furthermore, it's easily intuitive that such an advanced civilization would have overcome the gravitational problems in any way. In this sense humans have declassified a major problem into a minor one, and these are the consequences of that mistake.

However, these are just suppositions as no one could imagine the outcome of this situation; at one point the protagonist even thinks that "They are dangerous because, no doubt, they are mad with terror. Perhaps they expected to find no living things--certainly no intelligent living things" (Wells, 41). Looking at our colonial past it is difficult to imagine that the invaders were scared of the indigenous people; the violence perpetrated was a motif of pride for the invaders and even if Wells extended this situation on an interplanetary scale, in my opinion the song remains the same. Surely it could be plausible that even an extremely advanced society would find itself into an intimidating situation on a new planet, but yet it came prepared and in this case it decided to act violently from the start.

Given this, it is far more difficult to imagine that they were not aware that Earth was habited by intelligent living beings; the same narrator mentions in the first page that humans have been studied like particles under a microscope. For this reason it's worth saying that they knew that Earth was occupied and notwithstanding this fact, they decided to move in any cases. To cite Rieder (2008), Martians have applied the *discoverer's fantasy* through which the invaders know very well that the land is habited

but acts as if it was empty before their arrival. In a few words, they could do whatever they want. In addition, another curious theory would be the one according to which they saw in the Earth an unproductive soil (we will see their terraformation process) and they acted as the colonizers in North America.

In this sense they applied the rule followed by human colonists by which "If within a territory of a people there is any deserted and unproductive soil [...] it is the right for foreigners even to take possession of such ground for the reason that uncultivated land ought not to be considered occupied" (Arneil 1996, 51). Again, these are just speculations that both the reader and the protagonist can only make up by their mind. Some references to the late nineteenth century follows below:

Many people had heard of the cylinder, of course, and talked about it in their leisure, but it certainly did not make the sensation that an ultimatum to Germany would have done. (Wells, 43)

In this section we can see how Wells brings attention to the contemporaneity making a clear reference to the German Empire that would have been in the next decades the most belligerent nation in the world; "In the *War of the Worlds*, Wells picked up on the fashion of novels predicting war in Europe as a result of the unification and militarization of Germany. However, he gave his tale a new dimension by elevating it onto an interplanetary level" (Cornils 2003, 26). Seeing it in this way this was a prelude to the havoc that Germany, or Prussia, would have provoked in Europe and in the entire world. Furthermore, the critical thought about the future in the German grasp around the end of the nineteenth century was pessimistic as they believed that "existing empires either had not yet been consolidated fully into impenetrable blocs or seemingly, were on the verge of disintegration [...] Intellectuals and politicians, but also many conservatives in industry predicted a further transformation of existing colonial empires into closed, protectionist entities" (Berghahn 1996, 4). This vision of the future wasn't seen well by other western countries and their writers.

In the following passage we can see that the situation is not felt in the same way by everyone:

The milkman came as usual. [...] I saw my neighbour gardening, chatted with him for a time, [...] "It's a pity they make themselves so unapproachable," he said. "It would be curious to know how they live on another planet; we might learn a thing or two." (Wells, 47)

Another peculiar thing about Wells's writing is that in this apocalyptic scenario people are still living their life in the same way they used to do before. In the places not yet struck by the aliens the invasion is just an occasion to chit-chat between neighbours; The milkman and the neighbor of the protagonist both share their opinions on what has happened, expressing thoughts and feelings that normal people would express as if they were gossiping about a friend. In this sense the use of laser beams and the killing of several men becomes "a pity they make themselves so unapproachable".

The neighbor expresses a common driving force of human nature: the desire to learn. He asks himself what things could have learnt from the newcomers wondering about the lives they are having on Mars. Unfortunately these thoughts won't matter any more as humanity's main objective now is finding a way to get rid of them. It doesn't take much time before people start fleeing from their houses and finding themselves in a battlefield. This tumult culminates in the description of the true death instrument of the aliens, the machine that Wells calls "tripod" and that many of us have seen on the big screen in Steven Spielberg's *The War of the Worlds*:

And this Thing I saw! How can I describe it? A monstrous tripod, higher than many houses, striding over the young pine trees, and smashing them aside in its career; a walking engine of glittering metal, striding now across the heather; articulate ropes of steel dangling from it, and the clattering tumult of its passage mingling with the riot of the thunder. A flash, and it came out vividly, heeling over one way with two feet in the air, to vanish and reappear almost instantly as it seemed, with the next flash, a hundred yards nearer. (Wells 59-60)

The scene is well written with the rightful intent to instill in the reader the fear that the protagonist was feeling in that moment. The invasion has officially begun and Martians have finally revealed their final weapon: the tripod. The tentacles that we have seen in the alien's body is a feature of their machines too, giving again that sensation of oppression and no place to hide; the huge dimensions and the entrance of the machine alternating between the darkness and the lights of thunders shows the catastrophic scenario in which the humans have ended. Furthermore, as if it wasn't enough, it's not that the tripod is one but another one elevates itself in front of the petrified fugitives. The cylinders that took off from Mars, unfortunately, are more than one (ten to be precise); the technological superiority is highlighted even in the quantities of resources that an invader can exploit.



## 2.2- The Battle of Dorking and the Struggle to Survive

Thinking about an extremely weak army such as the human one facing hundreds of tripods was quite disconcerting; suffice to say, from the point of view of that time, “nearing the end of the Victorian period, the Empire was already beginning to decay and its eventual decline was visible in the near future” (Keilen 2012, 3). With this perspective the future was way closer than humanity could ever think and in pair with the lurking menace of attack from the European continent, a novel like “The War of the Worlds” played upon anxieties of the readers. Such devastation was new even to a violent civilization like the human one as the passage below affirms:

Never before in the history of warfare had destruction been so indiscriminate and so universal. (Wells, 73)

Such an inescapable outcome seems quite unlikely to be seen in the real world, especially at the end of the nineteenth century. However, even before the approaching of the first science fiction, there actually was a quite realistic novel in the past that put the basis for the creation of the “invasion novels” that now we are reading: it was George Chesney's *The Battle of Dorking, Reminiscences of a Volunteer* (1871) which “had considerable impact across many areas of British public life, spawned an entire genre of “invasion literature,” and presaged science fiction tales of alien invasion, such as H.G. Wells’ 1898 classic *The War of the Worlds*” (Kirkwood 2012, 3). It was published after the Franco-Prussian War and tells the story of a volunteer and his experiences in the battle. It talks about the British army that, after having lost the entire Royal Navy, starts to rely on inexperienced volunteers in order to defend the nation. Disorganization is what controls the British army and the narrator himself. Towards the end the naive soldiers are inflamed by hope and a sentiment of bravery but eventually they lose everything. The final image of the story is a German England in which German invaders are governing the territories and subduing the population. This episode could happen for real in our world and not only in the science fiction one. The fact that this came out before Wells’s “War of The Worlds” in a plausible setting made me question myself about the non-mandatory presence of aliens in order to be invaded and subjugated by an oppressor. The reason why this novel was so effective in those

times is because “before Chesney the tale of the war-to-come was generally presented in political rather than in military terms...Before *the Battle of Dorking* no author of an imaginary war of the future ever suggested that the deliberate use of new weapons could have a decisive effect on the outcome of a battle” (Clarke 1966, n.p). *The Battle of Dorking* could have been a sad reality even before the crimes perpetrated in the Second World War, but luckily its outcomes stopped to the creation of a new genre of literature.

Turning back to *The War of The Worlds*, the havoc caused by the aliens seems not to be perceived in the same way by all the community, as different people haven't witnessed the destruction and death with their eyes:

There were scores of people, most of them sufficiently sabbatical to have assumed their best clothes. The soldiers were having the greatest difficulty in making them realise the gravity of their position. We saw one shrivelled old fellow with a huge box and a score or more of flower pots containing orchids, angrily expostulating with the corporal who would leave them behind. I stopped and gripped his arm. "Do you know what's over there?" I said, pointing at the pine tops that hid the Martians. "Eh?" said he, turning. "I was explainin' these is vallyble." "Death!" I shouted. "Death is coming! Death!". (Wells, 79-80)

This misperception about the damage caused by war is very common during a conflict. People are not the same and each one sees danger in a different way. We can see in this passage how some people still care about their flowers or clothes even though they are in an extremely dangerous situation. Old people are those more likely to be attached to their homes until the fatal moment comes, as they are in the last period of their lives. They seem not to care about their wealth anymore. These kinds of episodes were very frequent during the bombings of War World 2. Studies have demonstrated that in such occasions “a quiet night followed by a fine morning changed the atmosphere for the better” (Jones 2004, 470). Therefore, the interruption of the alien attack of that particular place has lessened the cautiousness of the people living there. However, during War World 2 the incessant bombings on the cities of England made the people more aware of themselves and more prepared in front of a dangerous situation; in Liverpool even though a major assault would have come, the emotional impact would have been lighter since people adapted to that unsafe situation. Psychiatrists and mental doctors to come said that “people generally find a continued

succession of raids less trying than sporadic ones since they become disadapted during the quiet intervals" (Jones 2004, 470). In the novel's case the soldiers struggling to take people away from the danger zone are just preventing the damage of the yet to come assault.

After having escaped another attack from the invaders in which one of the tripods had been destroyed, the protagonist in need of water meets the curate, that is the character speaking below:

"Why are these things permitted? What sins have we done? The morning service was over, I was walking through the roads to clear my brain for the afternoon, and then-- fire, earthquake, death! As if it were Sodom and Gomorrah! All our work undone, all the work. What are these Martians?" (Wells, 95)

To him such a sudden shift of condition just doesn't make sense. Furthermore a religious man in those occasions tends to believe that this is the will of God, but the questions that he asks himself and the protagonist hide desperation and a faith not strong enough to give any reason to these atrocities. The use of the two infamous biblical cities Sodom and Gomorrah clearly represents the comparison with the current condition of disorder and recklessness. He is sure that what they are witnessing is nonetheless the Day of Judgement and aliens are God's ministers (98). This is another Wells's critique of the Victorian Age and its religious doctrine. To this pessimist and hopeless curate the protagonist answers:

"Be a man!" said I. "You are scared out of your wits! What good is religion if it collapses under calamity? Think of what earthquakes and floods, wars and volcanoes, have done before to men! Did you think God had exempted Weybridge? He is not an insurance agent." (Wells,97)

He tries to snap the curate out of his panic by making him understand that praying does not guarantee you physical immunity; he brings in all the catastrophes that humans have already witnessed in the past and to those they must add the invasion of the Martians. Just like all those catastrophes all around the world the same or worst could have happened to Weybridge. Moreover, the narrator is trying to make the curate snap

out of his fear in a religious grasp; he isn't insulting the Church doctrines but simply "he too, then, sees God's hand behind catastrophes" (Gailor 1996, 273).

In another passage, the sight of the clash between the army and the tripods makes the narrator wonder about what the aliens were thinking about them:

No doubt the thought that was uppermost in a thousand of those vigilant minds, even as it was uppermost in mine, was the riddle--how much they understood of us. Did they grasp that we in our millions were organized, disciplined, working together? Or did they interpret our spurts of fire, the sudden stinging of our shells, our steady investment of their encampment, as we should the furious unanimity of onslaught in a disturbed hive of bees? Did they dream they might exterminate us? (Wells, 119)

The easy way with which they are breaking through human defense is very disconcerting; it seems like the protagonist is asking for them to appreciate the efforts to resist and the cooperation that human beings are trying to organize in order to survive. Unfortunately, the aliens seem to think of nothing but destroying everyone who stands in their way. There is nothing to understand, just running away from danger. Therefore, a new alien instrument of death is presented:

Some fired only one of these, some two--as in the case of the one we had seen; the one at Ripley is said to have discharged no fewer than five at that time. These canisters smashed on striking the ground--they did not explode--and incontinently disengaged an enormous volume of heavy, inky vapour, coiling and pouring upward in a huge and ebony cumulus cloud, a gaseous hill that sank and spread itself slowly over the surrounding country. And the touch of that vapour, the inhaling of its pungent wisps, was death to all that breathes. (Wells, 121)

The modernity of these devices is quite astonishing. Thinking of a chemical attack in 1898 almost 20 years before the Great War was like a prophecy on the future to come. Considering all these overwhelming methods, it's plausible to think that aliens aimed to conclude their invasion as soon as possible; so we could say that "*The War of the Worlds* was thus the first blitzkrieg, or lightning war [...] and the first chemical war" (Gangale 2008, 1). They have clearly adopted a strategy: starting from the outskirts of the big city they are conveying towards the centre of London and the chemical attack is an attempt, of course, to kill the enemy but mostly to disperse the enemy. A question popped into my mind. Why would the aliens ever have this chemical weapon? Was the

Earth just a planet to conquer or also a testing ground for their military weapons? Did they create this weapon on purpose to wipe out all the humans or did they have it before? It is impossible to give an answer. One thing we could say is that the gas represents a weapon of mass destruction, and this came out more in a science fiction novel than in the real world too. One thing is worth mentioning: that the real world was starting to understand the damage of bacteria and diseases in those years, but other weapons of mass destruction dealing with diseases were used in the past. We are likely to think of atomic bombs or napalm when we hear the words “weapon of mass destruction” but this category can comprehend less spectacular and striking methods of death. “Europeans had surreptitiously given blankets infected with the smallpox virus to indigenous peoples of North America more than a century before” (Gangale 2008, 32).

This episode, due to its subtlety and lack of awareness, has not been given its importance as a weapon of mass destruction at that time; but now, through a more modern grasp, we can understand how the threat of a biological weapon is way bigger than bombs and heat-rays. Furthermore, the fall of the aliens will be caused eventually nonetheless by a virus. Some limits of their military power can be seen in the passage that follows:

They were sparing of the Heat-Ray that night, either because they had but a limited supply of material for its production or because they did not wish to destroy the country but only to crush and overawe the opposition they had aroused. In the latter aim they certainly succeeded. Sunday night was the end of the organised opposition to their movements. After that no body of men would stand against them, so hopeless was the enterprise. (Wells, 124-25)

The fact that they are sparing the Heat Ray takes me back to the question I asked above; did they have a limited amount of energy to use that ray? Did they use the Black Smoke in a second moment because of its effects on the environment? It seems to me that seeing that the heat ray isn't preventing the rebellion from the human side, the aliens have resorted to the chemical weapon that can't be stopped with fire. Maybe they have thought that a few shots of laser beam would have made the day but they were wrong. In this process of invasion there isn't space for mercy and the gas is discriminant between resistance or withdrawal. Against such weapons humans even lose their little organization and give up all hopes of victory. The use of the gas isn't the primary thought of the aliens as “As a rule the Martians, when it had served its purpose,

cleared the air of it again by wading into it and directing a jet of steam upon it” (Wells, 123). Given this we can conclude that once they used that weapon they had to clean it up, or at least the one in their own way. So, to the Martians it isn't a weapon to use randomly, but it takes precise evaluation to be used in the right way. This is another hint of the intellectual superiority that aliens have.

At first it seemed like they didn't do any distinctions on what to be destroyed but in this passage we can see that they have precise target too:

They do not seem to have aimed at extermination so much as at complete demoralisation and the destruction of any opposition. They exploded any stores of powder they came upon, cut every telegraph, and wrecked the railways here and there. They were hamstringing mankind. (Wells, 147)

Here we have other evidences on how well organized the Martians are; they deduct that in order to slow down supplies and shut down communications, they have to aim the interested hotspots: they know that railroads are essential for humans to move people and weaponries and they know that people and soldiers without communication would have been hopeless. From this point of view we can understand that even Martians don't like wastes; the first wave of destruction was to frighten every human but now that they are approaching London their attacks are more cautious and focused on single objectives rather than destroying everything in their way.

### **The Tunder Child, humanity strikes back**

The following passage could be interpreted as representing a little breath of fresh air for human beings as they actually have the chance to demonstrate that they can harm the invaders:

It would seem they were regarding this new antagonist with astonishment. To their intelligence, it may be, the giant was even such another as themselves. The Thunder Child fired no gun, but simply drove full speed towards them. It was probably her not firing that enabled her to get so near the enemy as she did. (Wells, 155)

In this section we are introduced to a marvellous machinery and pride of human engineering: the Thunder Child. In the situation people are fleeing by water on a steamboat but suddenly the Martians emerge from the water; the only hope humans

have to save themselves is putting all their hopes in the Thunder Child, which is a torpedo ram ironclad armed with heavy cannons. In this passage we can see how the tripods and the Martians see in the ship something similar to them and for a moment they refrain from firing. It seems to me like if the aliens see something familiar in the Thunder Child maybe they are seeing a rudimental machine of their own past, the same past and time travel we have talked about in the previous chapter as we were talking about the encounter of two civilizations with a big cultural and technological gap between them. “The clash between Thunder Child and the Martian war-machines commences almost as a meeting of long-lost cousins, if not minds” (Cook 2014, 4). This episode is probably the most striking victory from the military point of view for the humans in the entire novel, and it is gained precisely in the battlefield in which English forces were stronger: water. To Wells the model of the ideal futuristic warchief is described with naval terms, as follows “and the captain, and the engineer, and the gunner will have to be the same sort of men: capable, headlong men, with brains and no ascertainable social position” (Wells 1902, 201). It will be that moment of hesitation in the Martians that will allow the Thunder Child to sacrifice itself taking with her two tripods in a spectacular naval warfare.

After this glorious episode, an important revelation comes to light and the protagonist starts making some thoughts about it; a tripod is chasing some humans without shooting them or asphyxiate them:

He used no Heat-Ray to destroy them, but picked them up one by one. Apparently he tossed them into the great metallic carrier which projected behind him, much as a workman's basket hangs over his shoulder. It was the first time I realised that the Martians might have any other purpose than destruction with defeated humanity. (Wells,165)

For the first time in the novel, Martians are not attacking with the intention to kill; in this section we see that aliens are grabbing humans alive and putting them in a sort of irony satchels in the back of their machine. After all the spectacular destruction humanity has witnessed until that moment, the main goal of the aliens would seem to be the complete erasing of humanity from Earth, but instead this episode foreshadows something darker: why would they spare the same people they have incinerated in the previous chapters? In our historical past there were always episodes representing captures and slavery (this is not the case as we will see later) and *The War of the Worlds* makes no

exception. As "the sense of impending apocalypse pervades all the scientific romances" (MacKenzie 1973, 120). following the Darwinian law "survival of the fittest", human are defeated in a humiliating way as they are compared to animals due to the fact that they are forced to live under the ruins of the city constantly hiding from the "predator". The fact of being grabbed and imprisoned into cages makes them a sort of lab animal. We don't know what is the purpose of this action yet and neither the narrator does, but he has understood that the invaders are up to something that went over the wiping of the terrestrial civilization.

The gruesome truth is revealed in this next passage where the narrator gets the chance to observe a martian from a closer look and we come to know different features and habits of the Martians like, for example, the fact that they are feeding themselves through human bodies:

They did not eat, much less digest. Instead, they took the fresh, living blood of other creatures, and injected it into their own veins. I have myself seen this being done, as I shall mention in its place. [...] suffice to say, blood obtained from a still living animal, in most cases from a human being, was run directly by means of a little pipette into the recipient canal.... The bare idea of this is no doubt horribly repulsive to us, but at the same time I think that we should remember how repulsive our carnivorous habits would seem to an intelligent rabbit. (Wells, 176)

In some way they "drink" the victim injecting the blood directly in their veins. Again, the protagonist compares his vision to that of a rabbit that sees a human eating flesh, another occasion in which human beings are reduced to resemble little animals. Wells is able to normalize the horrible vision of blood-sucking aliens, by taking the image into a human perspective. Since both the Martians and humans are living beings, they need to eat in some way; seen from this perspective the scene of the bloodstream in the recipient canal becomes a natural feeding scene that even merciless monsters as the Martians need. The description goes on:

Their organisms did not sleep, any more than the heart of man sleeps. Since they had no extensive muscular mechanism to recuperate, that periodical extinction was unknown to them. They had little or no sense of fatigue, it would seem. On earth they could never have moved without effort, yet even to the last they kept in action. In twenty-four hours they did twenty-four hours of work, as even on earth is perhaps the case with the ants. In the next place, wonderful as it seems in a sexual world, the Martians were absolutely without sex, and therefore without any of the tumultuous emotions that arise from that difference among men. A young Martian, there can now



be no dispute, was really born upon earth during the war, and it was found attached to its parent, partially budded off, just as young lilybulbs bud off, or like the young animals in the fresh-water polyp. (Wells 177-78)

The superiority of the aliens is so striking that they don't even actually sleep. How can you deal with an enemy that doesn't stop even to take a breath? In this perspective they seem not less robotic than their own tripods. All the theories on the weight of terrestrial gravity were now irrelevant as they are able to move on the ground without feeling any boundaries provoked by the new atmosphere; they are even starting to reproduce but in a more primitive way, if that is considered primitive. As they don't have any sexual weaknesses since they are a-sexual creatures, the reproduction is very similar to the unicellular organisms, like a gemmation. "Wells's novels include some of the most sophisticated and nuanced thinking about evolution, technology, and the new theories advanced under the rubric of eugenics" (Danahay 2012, 470), so maybe from his perspective this fact was seen as an evolutionary advantage.

The same narrator reveals that the first Martian birth on Earth had already happened, and this gives a clue about the true intentions of the Martians: after all, they are trying to establish themselves on Earth and grew the next generation of aliens on the ruins of the human civilization, starting from the destruction of the strongest empire on Earth at that time.

It is at this point that we start talking about the terraformation phenomenon, and Wells's aliens have their own method :

Apparently the vegetable kingdom in Mars, instead of having green for a dominant colour, is of a vivid blood-red tint. At any rate, the seeds which the Martians (intentionally or accidentally) brought with them gave rise in all cases to red-coloured growths. Only that known popularly as the red weed, however, gained any footing in competition with terrestrial forms. (Wells,180)

We are finally introduced to the red root, the distinctive trait of Wells's aliens. The choice of the red color resembles Mars surface that is rich in iron, or could simply resemble human defeat by the color of human blood. The latter hypothesis could be the one embraced by Spielberg's adaptation (2005) in which the red root is grown precisely harvesting human bodies and it is the blood of the victims that gives to the root its peculiar irony bloody color. The way in which the "plant" is presented to us is explained

as a random event as the narrator says that it was originary of Mars and it's not clear whether aliens took the seeds with them "intentionally or accidentally". This fact makes the reader imagine Mars as a planet entirely covered with this red root and not the red desert as we know today. Despite all of these speculations, the terraformation theory was real and they are acting it on the Earth to adapt it to their standards.

### **The Unexpected Outcome**

The Martians' description and their habits, included the red root come out in a moment in which the aliens have already won against human race, however, few pages later we learn this:

Except in the corner, where a multitude of crows hopped and fought over the skeletons of the dead the Martians had consumed, there was not a living thing in the pit. (Wells, 202)

Just in the heat of the moment, when humankind have been completely defeated, the aliens die; the protagonist is misguided by a constant silence which he thinks might be a long and strategic ambush against him, but since the days were passing he peeps again through the red root hiding his spot and the first sign that he sees revealing to him the truth is a flock of crows on the pit, that was the most dangerous place to stay during the invasion. The image of the crows that ever since stands for death has not forgiven the Martians, that to their grim eyes are nonetheless other corpses to feed themselves. The biggest invasion the human race had ever witnessed comes to an end.

As the narrator ventures himself through the valley the red root has spread itself among the city, entangling everything in its way, from bridges to buildings as it's described below:

At first I was surprised at this flood in a hot, dry summer, but afterwards I discovered that it was caused by the tropical exuberance of the red weed. Directly this extraordinary growth encountered water it straightway became gigantic and of unparalleled fecundity. Its seeds were simply poured down into the water of the Wey and Thames, and its swiftly growing and Titanic water fronds speedily choked both those rivers. At Putney, as I afterwards saw, the bridge was almost lost in a tangle of this weed, and at Richmond, too, the Thames water poured in a broad and shallow stream across the meadows of Hampton and Twickenham. (Wells, 206-207)

The rivers, including the Thames, are no more as the course of water has been blocked by those roots. It's worth mentioning the sensations of the narrator as he notices all the secondary streams and creeks that are quite uncommon in summer. In a way this is a feature of the terraformation of the red root that was turning the city into a sort of a Martian tropical forest. All the descriptions concerning roots, heat and water lead to a theory by which the aliens needed a wet environment typical of a rainforest; furthermore we have been told previously that their body is characterized by a wet exterior with tentacles that makes the reader think of an organism that needs water to survive.

Other conjectures about the nature of the red weed are discussed in the passage below:

A canker disease, due, it is believed, to the action of certain bacteria, presently seized upon it. Now by the action of natural selection, all terrestrial plants have acquired a resisting power against bacterial diseases--they never succumb without a severe struggle, but the red weed rotted like a thing already dead. The fronds became bleached, and then shrivelled and brittle. They broke off at the least touch, and the waters that had stimulated their early growth carried their last vestiges out to sea. (Wells, 207)

Like the speed through which the aliens have put humankind on its knees, so fast is the birth and the death of the red root. Adaptations is not a process that fulfills in just two weeks; the plants on the Earth have gone through millions of years of evolutionary process in order to acquire that resistance on the Earth, while the red root could do nothing but deteriorate and die not many days before its birth. This same fate falls on the perpetrators of the invasion too; the same aliens described as super intelligent life forms and able to stand against any threats are now still and inoffensive. Even these superior creatures have underestimated the biological threats that lurk in the atmosphere of an unknown planet; Furthermore, "Terraforming is being proposed as a necessary step for humankind to take in order to cleanse a particular planet of harmful pathogens in the form of microbial life that threaten the wellbeing of human life" (Hart 2019, 359). This definition speaks for humankind but the same could be for the Martians; They only focused on the menace of the inhabitants and not on the planet's one:

But there are no bacteria in Mars, and directly these invaders arrived, directly they drank and fed, our microscopic allies began to work their overthrow. Already when I watched them they were irrevocably doomed, dying and rotting even as they went to and fro. It was inevitable. (Wells, 241)

The oppressed humans didn't know at that time that the landing of the Martians implied the defeat of the same ones. "The Martians themselves, the most complex creations in the book, are already the victims of the forces they exert" (Hughes and Geduld 1993, 9).

The fact that there were not any bacterias on Mars highlights the lack of some life forms that Earth has; even bacterias and viruses are part of an ecosystem and a perfect and advanced civilization like the Martians, that have won all the diseases on their planet, or have never been ill, couldn't survive to those of another one. The evolutionary discrepancy was in this sense an abyss between the two races and Martians were behind humans when talking about immunology "because they were not, like men, the descendants of those who have survived after millions of years of struggle with the bacteria that swarm in air, earth, and water" (St. Loe Strachey 1898, 169).

## **Conclusions**

To sum up, this novel is a fair example on how both a science fiction and a colonial landscape can be interwoven into something new: a scientific treaty, a war chronicle, a novel. The focal point was without any doubt the human perspective of the invasion; the most powerful empire on Earth at that time was put on its knees by some godlike monsters and machines coming from Mars. The constant analogies between humans and little animals revealed the poor condition humankind was in. Every effort was useless as the superiority of the enemy was striking; it's worth mentioning the soldier's thought that says "This isn't a war," said the artilleryman. "It never was a war, any more than there's war between man and ants" (Wells, 217). Human are just ants to be crushed under the stomping foot of the Martians, rabbits that hide themselves in holes, bacterias to be studied at the microscope. This last metaphor foreshadows the means through which the threat will be dissolved and will reveal itself as the unknown strategy that will take the human race to victory.

The success of this book, beyond human perspective, is the place in which the plot develops: Earth. Humans always look at the sky imagining space beings and planets to be discovered, but what if those planets were the one looking for them? Until

1898, "As a rule, those who pass beyond the poles and deal with non terrestrial matters take their readers to the planets or to the moon. Mr. Wells does not "err so greatly" in the art of securing the sympathy of his readers" (St. Loe Strachey 1898, 168-69). *The War of The Worlds* takes the process of terraformation to our "*Terra*", rather than the planet x of the y galaxy, since human beings should care more about what they have under their feet instead of what there is in the deep of space.

## Chapter 3 *The Word for World is Forest*, a Fight for Freedom

We have just seen H. G. Wells's conception of science fiction through the novel that could be simply his masterpiece for the influences he has left for the twentieth and twenty first centuries. The novel I'm going to talk about right now is another strong example of colonization in science fiction but differently from *The War of the Worlds* this time the humans are the invader; we get back to the human conqueror wandering all around galaxies and colonizing worlds that is protagonist in the twentieth century. The colonization of planet Athshe is not a conventional one; we have talked about "anthropologist fantasy" in the previous chapter referring to this novel and in a sense it is suitable as the human civilization, even if in a not so friendly approach, has interconnections and cultural interchanges with the native population: the Creeches.

### 3.1- Lucid Dreams and Furry Rebels

#### **Slavery as a Mean to Colonize**

In Ursula K. Le Guin's *The Word for World is Forest* (1976) we see the effects of colonization from the perspective of both factions. The aliens speak too and we are introduced to their customs and traditions that are not so different from the indigenous tribes of the Earth, with faith in something greater than them and other rituals. There is the influence of Le Guin's Taoist doctrine in all the extra sensorial experiences presented in the novel. Within this perspective there is the intention to give a certain balance between impulses and controlled actions; Le Guin introduces us to a culture in which we see "sanity not on the razor's edge of reason but on the double support, the fine balance of reason and dream" (Barbour 1974, 169).

The universe in which the novel is set is not earth-centric, but in fact there is a sort of space government that administers the operations throughout the galaxy. As Barbour said this is the "Hainish universe, for it was the people of the planet Hain who originally "seeded" all the habit- able worlds of this part of the galaxy and thus produced a humanoid universe that is single, expanding, and historically continuous, but at the same time marvelous in its variety, for each planetary environment caused specific local

mutations in its humanoids as they adapted and developed” (Barbour 1974, 164). Therefore the Earth and humans are not the protagonists in the universe anymore, but they are part of something greater than them to whom they have to obey.

The crucial point of the novel is the setting: the planet Atshe. The planet is a giant untamed forest with its oceans and lands, in which everything seems to be interconnected in a vitalistic sense and humans, or humanoids, are exploiting its resources and its population enslaving them. This is not the first time in which planets are seen as living things: beyond the Gaia hypothesis there have been different conceptions and I would like the one by Jack Williamson that says “Earth and the other planetary bodies are eggs, their parent is the sun, which ‘expands and contracts in the rhythm of the sun-spot cycle, with a beat like the pulse of a living thing” (Williamson qtd in Pak 2016, 48). Our colonizing past is packed with examples of exploiting natural valleys of plenty and the same fate repeats in this science fiction novel in which the victim is a planet-sized forest. Despite all the economic interests in a certain land, we know deep down that when we see trees and vegetation that place is not inert; furthermore, in the novel the forest has a lot of living beings depending on its trees, but greed and hatred, as always, are stronger than a beautiful landscape. *The Word for World is Forest* starts like this:

A big, hard-muscled man, he enjoyed using his well-trained body. Ben, his creechie [...] Creeches never slept, they just sat and stared [...] For this world, New Tahiti, was literally made for men. Cleaned up and cleaned out, the dark forest cut down for open fields of grain, the primeval murk and savagery and ignorance wiped out, it would be a paradise, a real Eden. (Le Guin, 12)

We are introduced from the first pages to what the human’s intentions are: establishing themselves on that planet. The name New Tahiti (a name not new to colonization in “real” history) is how humans call it but its real name is Atshe. However the focus of the passage is the aliens: the Creechies. We come to know that they have human names like “Ben” in this case and that they are a private property of humans. One peculiar feature of the Creeches is their insomnia; just like Wells’s Martians, aliens seem indefatigable and always aware of everything. The fact that they stare at nothing makes them very tricky to understand what they are thinking. This is the first element of distance between humans and aliens.

In the following passage we are introduced to who is the character closest to be the antagonist of the novel: Davidson. "He knew what he wanted, and how to get it" (Le Guin 13):

See, you want to keep this place just like it is, like one big National Forest. To look at, to study:[...] Earth needs wood, needs it bad. We find wood on New Tahiti. [...] "When I say Earth, Kees, I mean people. Men. You worry about deer and trees and fireweed, fine, that's your thing. But I like to see things in perspective, from the top down, And the top, so far, is humans". ( Le Guin, 14)

His presentation is very blunt: he declares his purposes straight in the face of his subordinate by saying that he sees the Earth in its population and not its land. It's an intriguing point of view, but if we think about that, if there isn't the Earth there isn't the population either. He wants to cut down every tree in the region in order to get wood for his purposes and by saying that Earth needs that wood he seems like he is sanctifying his mission. However, planet Earth seems to be far away from them, not to mention the time that occurs to take back the wood through a space voyage.

Here we see that people are not used to see real animals anymore:

Davidson's vivid memory recalled the first one he had seen, here on Smith Land, a big red shadow, two metres at the shoulder, a crown of narrow golden antlers, a fleet, brave beast, the finest game-animal imaginable. Back on Earth they were using robo deer even in the High Rockies and Himalaya Parks now, the real ones were about gone. These things were a hunter's dream. (Le Guin, 14)

Life is everywhere on Athshe; despite Earth where animals were no more, on this planet there are real animals. Even a ruthless man as Davidson is struck by the sight of a real deer, albeit an alien one. We come to know about the conditions of Earth as it has lost every original deer as they have substituted with robot animals; we can also hypothesize that Earth has eventually gone through a fatal global warming as now there are parks on the Himalaya and Rocky Mountains. We can assume that glaciers have melted completely, opening the way for humans to build up facilities or, as in this case, parks in which people can see mechanical copies of the animals that once populated the Earth. So we understand that humans have already destroyed Earth and are planning to cannibalize New Tahiti too.



The mistakes committed in the past and furthermore at a planetary level should not be repeated on another world, as the risks are high as you are dealing with new civilizations and abilities that aren't comparable to anything on the Earth. It is for this reason that "lessons learned about our impact on the Earth's surface and atmosphere have relevance as we travel beyond our home planet. The unintended and often destructive effects of humankind on the Earth environment highlight the need for caution and restraint as we travel beyond our home planet" (Daly and Frodeman 2008, 139). That's how it should be, as we have learnt before humans tend to repeat the same mistakes of the past, in fact:

But men were herenow to end the darkness, and turn the tree-jumble into clean sawn planks, more prized on Earth than gold. Literally, because gold could be got from seawater and from under the Antarctic ice, but wood could not; wood came only from trees. (Le Guin, 15)

We see how gold is not the symbol of richness and luxury it used to be in the past; gold cannot provide subsistence while wood is a primary good, and its scarcity has made it very expensive. The fact that it was now wood coming from another planet, made it an exotic object that was desired by everyone. We have already talked about the charm for exotic stuff in the previous chapter. Therefore, due to this fact, companies on Athshe are well motivated to cut down trees and branches as they see another opportunity to fill their wallet. That was a business disguised as a rescue mission for Earth.

We have said at the beginning of this chapter that this novel is set in the Hainish universe, and all the planets have been inhabited by humanoids, or humans that have gone through different mutations in order to adapt themselves to the peculiar conditions of a specific planet. The Creechies are the humanoids of Athshe, but this means that on this planet there were once humans as we know today; and how to explain the fact that there are many plants and animals resembling those of the original Earth?

We come to know in the following passage that a process of terraformation has already happened on Athshe as the original humans have brought seeds of original plants and animal species directly from Earth:

All the stuff here had come from Earth, about a million years ago, and the evolution had followed so close a path that you recognised things at once: pine, oak, walnut,

chestnut, fir, holly, apple, ash; deer, bird, mouse, cat, squirrel, monkey. [...] And the nearest thing that had developed from the monkey line to replace them was the creechie - a metre tall and covered with green fur. (Le Guin, 16)

So they moved out of Earth million years ago brought here by the same reasons that science fiction human colonists share with each other: the need of a new habitable world; however, after all these ages the process is repeating itself on the opposite side as the same Earth that has been extinguished is now in need of alien worlds. It is not clear if it was a plan of the original humans all along the fact of growing life forms on Athshe that would have evolved to be growable on an infertile soil like the one of the dying Earth, but in my opinion it is just a never ending loop when talking about human colonization. Furthermore, the life forms developed on Athshe are now sentient beings and humanoids are not aware of what they are capable of yet.

Here we see how people have different conceptions of the word “slavery”:

“In that Applied History course I took in training for Far-out, it said that slavery never worked. It was uneconomical.” “Right but this isn’t slavery, Ok baby. Slaves are humans. When you raise cows, you call that slavery? No. And it works.”[...] That’s the part you forget, Ok. You think hitting one is like hitting a kid, sort of. Believe me, it’s more like hitting a robot for all they feel it. (Le Guin, 17)

Even if the first encounters with the creechies could have been peaceful, we come to know that they are now in a slavery condition under “hierarchical and oppressive structures” (Reardon, Snauwaert 2015, n.p) that humans, like Davidson, have instituted. There is a debate about whether creechies are to be considered slaves or they are just green monkeys; Davidson of course says that they are nothing more than animals and you cannot exert slavery on animals. The fact that creechies don’t seem to feel anything makes them suspicious to Davidson’s eyes that makes us understand that he has hit the furry creatures in the past and they didn’t change their behaviour. Davidson sees their lack of sensibility and apathy as an excuse to punch them without committing evil. It is ironic the fact that these people have also attended the “Far-out course” in order to be ethically prepared for this situation; evidently, they didn’t pay enough attention to the lessons.

## The Forest Makes its Move

Everything seemed to be under human control in the first pages of the novel with the colonists at the top command chain and the creechies at their feet. Humans had slaves that didn't fight back and even if they worked sluggishly they were useful as they didn't get tired or seemed not to feel pain. Everything was doing well for the subsistence of the Colony of New Tahiti. However an anomaly was about to be discovered:

He pulled the hopper up again and flew back over the camp, so low that he might have hit the high cone of the burner, the only thing left sticking up. The rest was gone, mill, furnace, lumberyards, HQ, huts, barracks, creechie compound, everything. Black hulks and wrecks, still smoking. But it hadn't been a forest fire. The forest stood there, green, next to the ruins. (Le Guin, 21)

The scene at which Davidson assists leaves him astonished as the facilities at the camp are now destroyed. For a while he was tempted to think that the perpetrators of the damage were the neighbor's camps, those of the other humanoids, but he knows by watching that the forest has not been burnt, that it is the locals' fault. This was an alien attack perfectly coordinated that left no human survivors to witness their operation. Soon Davidson is able to see the four guilty creechies:

Creechies all looked alike, but this one was different. He had written his own signature all over that face, less than a year ago. It was the one that had gone splat and attacked him down in Central, the homicidal one, Lyubov's pet. What in the blue hell was it doing here? (Le Guin, 23)

We are introduced to the "guiding light" of the rebellion of the Creechies: Selver. Davidson knew him and Selver knew Davidson very well as the two had a fight over the fact that Davidson had raped Selver's wife. This was the only episode of violence against humans that Captain Davidson had ever witnessed until today. He was used to inoffensive furry servants, not bloodthirsty monsters. Selver is the one who knows better human culture as he was saved during his skirmish with Davidson by a scientist: Lyubov, the other major character of the story that had intercultural exchanges with Selver during his permanence in Central. The creechie is the author of the assault of the camp, he and other nine hundred creechies that now have withdrawn in the forest.

The four creechies succeed in subduing Davidson that “had never looked up into a creechie’s face from below. Always down, from above. From the top” (Le Guin, 24) and they are in control of that situation now; the oppressed aliens are pointing the guns towards the oppressor turning the tables for the first time in four years of colonization.

### 3.2- All Eyes on Athshe

After the scene of the destroyed camp we are taken into a clearing where a tribe of creechies leaves:

I was Selver Thele, when I lived in Eshreth in Sornol. My city was destroyed by the yumens when they cut down the trees in that region. I was one of those made to serve them, with my wife Thele. She was raped by one of them and died. I attacked the yumen that killed her. (Le Guin, 30)

Selver ends up here to recover after the attack and he meets the chief of the tribe Coro Mena, who is a sort of shaman chief for the creechies; we see the deep connections they share with the forest and their peculiar feature of dreaming at command. These reference to the mind resembles the vitalist conception by which everything is one and one is everything; the cathartic feature of the “lucid dream” in a peaceful place like the clearing is itself “a neural simile which supports the impression that the forest itself is conscious; that it represents the subconscious mind, the dark side of awareness” (Watson 1975, 232). Here, Selver reveals his past and we come to know about the rape his wife has gone through because of Davidson. The abuses of the humans knew no restrictions. Coro Mena, the shaman chief, starts talking to him and we come to know more about the creechies and the way in which they see their oppressors.

Since Selver has been thought human culture by Lyubov, he tells the tribe what he has learnt:

“I don’t know. Do men kill men except in madness? Does any beast kill its own kind? Only the insects. These yumens kill us as lightly as we kill snakes. The one who taught me said that they kill one another, in quarrels, and also in groups, like ants fighting. I haven’t seen that. But I know they don’t spare one who asks life”. (Le Guin, 32-33)

Selver reveals Lyubov's teachings to the tribe by saying that it's in human nature to kill things. They even kill each other and the tone used by Selver when saying this makes us think that to the creechies the killing between similes was seen as nonsense. They only know about insects killing each other. We can assume that creechies have not experienced a bloody past as the one of humans' historical past and they still have a lot to learn about cultures from outer space. We know that man has conducted any kind of violence towards his fellow human beings and all of this to claim power. Since man is himself an animal, Clarke says that "Man and beast are alike in deciding to court death in the exercise of valour" (Clarke 1995, 148). In this sense men are not different from the insects on Athshe that are killing each other.

The report of humans features goes on until Coro Mena asks Selver whether the humans are able to dream as they are, whenever they want:

"Do they dream?" "As children do, in sleep." "They have no training?" "No. Sometimes they talk of their dreams, the healers try to use them in healing, but none of them are trained, or have any skill in dreaming". (Le Guin, 33)

Dreaming is a skill, as Selver says, that creechies train since they start to do so. We see here how the humans have renounced to find the right balance between reason and impulse, between real and unreal; the creechies don't have greedy desires or the ambition to be the most flourishing empire in the galaxy. They conduct their simple life being interconnected with nature, a thing that humans stopped doing a long time ago. "If they want to dream waking they take poisons so the dreams go out of control, you said!" (Le Guin 40). The allusion to drugs here is the only way humans have to "lucid dream" as the aliens. There is no dreaming in the real world except a fool's dream. What matters the most is the income and the greatness your civilization can reach throughout any kind of method, including violence and slavery. Creechies see this incapacity of dreaming as a weak point in the oppressors, that from this point of view are inferior to them.

The next step after the creation of a safe colony should have been the transportation of women on the new planet in order to procreate and maintaining the continuity of the species:

“He said that in the place where they come from. Half the race is women; but the men would not bring women to the Forty Lands until they had made a place ready for them”. (Le Guin, 39)

So there were mainly men on the colony at that moment and a ship full of females would have landed on Athshe to create other humans that once grown would have been other enemies adding themselves to the one already present on the planet. This fact could explain the sexual intercourse that happened between Selver’s departed wife and Captain Davidson. It was just frustration or it was on purpose. It is a fact that to Davidson, the female creechie was just an object to satisfy his instincts; even human women in this section seem to be useful just as means to procreate the next generation of Thaitians. There are a few women in the colony but the vision of the world is clearly man-centred. “One of the great early socialists said that the status of women in a society is a pretty reliable index of the degree of civilisation of that society. If this is true, then the very low status of women in SF should make us ponder about whether SF is civilised at all” (Le Guin 1975, 208). If we have to apply this statement to *The Word for World is Forest*, then this science fiction isn’t civilized at all.

### **Lack of Communication**

We are now back to the HQ in the human world; two big pieces of the Hainish government have arrived on the planet in order to hear the reports on the massacre of the camp:

However, this attack on your outpost camp, since it chanced to occur during our week here can’t be simply ignored; particularly in the light of certain developments which you would have been informed of a little later, in the normal course of events: The fact is that the status of World 41 as an Earth Colony is now subject to revision, and the massacre at your camp may precipitate at Administration’s decisions on it. (Le Guin, 47)

If the planet is not safe anymore, it is the government's duty to revise the state of Athshe as a non-Terran Colony. “The conference was plainly an Investigation” (Le Guin 47). They would have questioned the only survivor of the massacre (Davidson) about the circumstances in which the attack occurred. In the investigation room there are

other commanders and Lyubov himself. The fact is that the government knows about news about its colonies through the reports that arrive from the colonies themselves; they usually don't go in person to check every colony of the galaxy but in this case the situation was critical. They know about creechies' nature only thanks to Lyubov's studies, but when the scientist says that the perpetrators were the creechies themselves they are incredulous as for what they knew the Athsheans were inoffensive. We come to know that not everything was sent to the Hainish government:

Lyubov knew now that only his scientific studies had been sent up to the Shackleton; his protests, even his annual assessments of "Native Adjustment to Colonial Presence" required by the Administration, had been kept in some desk drawer deep in HQ. These two N.-T. H.'s knew nothing about the exploitation of the Athsheans. (Le Guin, 49)

So Lyubov tried to confess all the violences on the creechies but his reports were covered up, maybe by Davidson to be immune to any accusations in case a day like this would have come. We see in this case how Le Guin deals with the ethics that the government adopts when talking about colonialism; it's very unlikely that there wasn't any functionary sent on the planet by the government in order to control the situation from a closer look, but this is evidently the vision of Le Guin's dystopian/utopian science fiction in fact she "is amazingly consistent in her general preoccupation with the relationship of good and evil, [...]. She shows a corresponding and equally constant disdain for the "ordinary politics" of exploitation, alienation, and egocentrism" (Porter 1975, 243). By putting a tired government that exerts a superficial control over its domains, Le Guin hits the point when she has to accuse higher powers for their non-conformist methods.

Below we see some of the creechies rituals and habits:

The Athsheans use a kind of ritualised singing to replace physical combat. Again it's a universal social phenomenon that might have a physiological foundation, though it's very hard to establish anything as "innate" in human beings. [...] Theirs are not only aggression-releases, but an art-form. (Le Guin, 51-52)

This is a peculiar feature of the Creechies as people. They very much resemble the chanties that birds use in fact "During a territorial conflict, birds vocally communicate their competitive potential, providing the possibility of mutual assessment; this helps

them in resolving a conflict without necessarily engaging in costly physical fights” (Geberzahn and Thierry 2014, 1). Maybe they didn’t engage in a fight with Davidson to save the little energy left after the attack or maybe they thought that Davidson would have gone through a lot of trouble as he would have explained the death of two hundred colonists. However this peculiar feature of the Athsheans comes in handy during the interrogation as Davidson can use their vocalizations as an attempt on his life. Despite all Lyubov’s efforts in defending the creechies the commanders seem to win the conversation as they simply say that there is no slavery on Athshe and that there is no evidence of episodes of rebellions by the majority of the creechies:

For four years they’ve behaved to us as they do to one another. Despite the physical differences, they recognised us as members of their species, as men. However, we have not responded as members of their species should respond. We have ignored the responses, the rights and obligations of non-violence. We have killed, raped, dispersed, and enslaved the native humans, destroyed their communities [...] “Enslaved?” [...] We do not employ slaves, sir. Some of the natives serve a useful role in our community”. (Le Guin, 53)

This is the part in which Rieder’s anthropologist’s fantasy can be seen; it is Lyubov speaking so we can assume it’s true, the fact that for a pretty long period of time they have worked together with a non equal condition is unequivocal, thus, the co-existence wasn’t destined to last long. In addition, we should not forget that all the humanoids of the Hainish system were once the same human species so in a sense they are the same but with different physical and cultural peculiarities. There is always the desperate attempt by Lyubov of declaring the truth but the commanders always respond by saying that creechies are useful and that they are employees. Unfortunately this excuse wasn’t meant to last since the boundaries between employees and slaves and between employers and oppressors is very liable if we have to set it into a colonial science fiction grasp.

Since Athshe’s situation was more complicated than expected, the two “ambassadors”, Mr Or and Lepennon, decide to monitor the planet from a space distance by giving to the Tahitians a dispositive that would have reduced the communication time through space to the one of an email, as until that moment messages took years to reach the destinatary. The ICD transmitter that consisted in:



“The instantaneous transmission of a message over any distance. One element must be on a large-mass body, the other can be anywhere in the cosmos [...] The message does not take 54 years for delivery and response, as it does on an electromagnetic device. It takes no time. There is no more gap between worlds”. (Le Guin, 55)

This is the future: the demolition of any border of time and space, the here and now conception. We learn that this is a rare and extremely advanced device as it was destined to another planet, but given the tough situation, it was the best decision. So this is a privilege to have this instrument for the Thaitians. The intent is the one of preventing these things to happen as we travel through space and uncharted planets. We assume that a message that takes 54 years to be answered, especially in an emergency situation, is not the best solution to solve the gap that thousands of light-years create between civilizations.

### **The Compromise and the Revenge**

After the massacre and the intervention by the two legates of the Hainish Government, a law of restriction between colonists and colonized was instituted:

Not one had stayed. Some of them had been with their masters ever since the start of the colony, four E-years ago. But they had no loyalty. A dog, a chimp would have hung around. (Le Guin, 65)

The enslaved creechies are released and no one chooses to stay, as if they never spent four years in that facility with their human masters. This is no surprise, as they never asked to be colonized and to work for humans. The boundaries born from that permanence could not be stronger than a boundary between a doctor and his lab rat. If they would ever get the chance to escape they would take it. Furthermore we have already said that all the species of the Hainish system were once the same human species thus, even if slavery has been part of human nature since the beginning, that same human nature, that all these aliens or humanoids share, forces one living being to escape and avoid slavery. There is no chance of restoring peace when the damage has been done.

The situation is very delicate and the tension of a new attack creeps in Davidson's mind:

And they'd realise that getting rid of the creechies was going to be the only way to make this world safe for the Terran way of life [...] It actually wasn't much more exciting than hunting real rats, which were about the only wild animals left on mother Earth, but there was more to thrill to it; the creechies were a lot bigger than rats, and you knew they could fight back, though this time they didn't. (Le Guin, 68-69)

To him the solution is genocide to prevent any acts of rebellion from the creechies. As "Davidson's characterization could then be considered as expounding a symbolic dimension that correlates with the concept of dehumanization" (Zalazar 2023, 15), if you don't want to leave the planet you are colonizing, the quickest solution that jumps to mind seems to be the eradication of their furry rebels, who are now compared to big rats. To Davidson and other colonists, creechies are not recognized as human descendants, but they are just animals. Another definition of genocide describes it as "the criminal intent to destroy or cripple permanently a human group" (Lemkin 1947, 147). So the genocide only is to be involved if there are human deaths, and since the creechies are not considered humans the "true" Terrans are justified to pursue them and kill them.

This is indeed a genocide because the creechies are just an evolution of the same humans that landed here millions of years ago; but as these hideous acts have perpetrated themselves throughout the four years of colonization, is very difficult to block a long-term process of violence, especially in this moment that the creechies have already killed two hundred colonists.

By thinking back at the process of colonization of Athshe, Lepennon said "This isn't the fault of the colony's HQ or Forestry Bureau; they've simply been following a Development Plan drawn up on Earth without sufficient knowledge of the planet to be exploited, its lifesystems, or its native human inhabitants" (Le Guin 59). Episodes of colonization with lack of informations on the new land or even no information aren't new in our colonial past and science fiction makes no exception; if it's true that "force is part of the history of colonial relations and forms the backdrop for current colonial relations" (Fanon 1963, 38), if these are the current colonial relations then violence only generates other violence. Furthermore, if people like Davidson or Coen (for the Banda

Islands) are involved in the process of colonization, destructive situations cannot be prevented. It is true that in a process of colonization, in particular when talking about planetary colonization, you have to prepare yourself to face any threat that a new environment has to offer, but using people that have always been involved in military actions can be counterproductive as “appear so ‘normal’ that most individuals involved at some level of the process of destruction may never see the need to make an ethical decision” (Horowitz 1982, 17). From the words of Selver we have learnt that his village was burnt before being captured by the invaders, so the process of destruction commenced since the beginning of the invasion.

Speaking of Selver, Lyubov’s old friend has requested the scientist’s presence to talk face to face as they haven’t done for quite a long time. To reach the meeting place Lyubov, for the first time, steps foot in the open forest that have always been off-limits for the Terrans and notices this:

Like most of the Terrans on Terra, Lyubov had never walked among wild trees at all, never seen a wood larger than a city block[...]The substance of their world was not earth, but forest. Terran man was clay, red dust. Athshean man was branch and root. They did not carve figures of themselves in stone, only in wood. (Le Guin, 72)

The title of the novel is nonetheless *The Word for World is Forest* and it’s easy to understand why if we read this last passage: everything on Athshe is the opposite of the exhausted Earth that humans have left behind; everything on the planet is alive, flourishing and uncontaminated. We can see how the wood is reconnected to a vitalist conception as Selver broke one previously: “He picked up the silvery branch of one and a little blood ran out of the broken end” (Le Guin 35). The lymph in the branches is the blood of the planet, which itself is made of wood. The now lifeless surface of the Earth was the arid and red clay, a peculiarity unseen on Athshe that is made up of water and plants. In this sense, when speaking about the forest, creechies refer to the entire world in which they live, and now that world was about to become another dying Earth. Humans have always struggled to recognize life in many things and only then, after they have ruined the ecosystem, do they realize that a habitat is made up of many elements besides the animals. An interesting quotation of Wells comes to mind about this topic:

It often seems to be tacitly assumed that a living thing is at the utmost nothing more than the complete realization of its birth possibilities, and so heredity becomes confused with theological predestination [...] . We overlook only too often the fact that a living being may also be regarded as raw material, as something plastic, something that may be shaped and altered [...] a whole developed far beyond its apparent possibilities [...] that the thread of life might be preserved unimpaired while shape and mental superstructure were so extensively recast as even to justify our regarding the result as a new variety of being. (Wells qtd in Rutherford 1895, 221- 222)

Everything on Earth or on a planet is the result of millions of years of evolution processes, so it is justified to consider it alive even if it seems inert at first sight. The shape of things and the conceptions that an aimed-to-profit life have created in the humans' minds makes it hard for them to localize vital signs in everything that surrounds them.

The scientist and his creechie friend eventually meet again:

The friendship between them was too deep to be touched by moral doubt. They had worked very hard together; they had taught each other, in rather more than the literal sense, their languages. [...] Touch was a main channel of communication among the forest people. Among Terrans touch is always likely to imply threat, aggression. (Le Guin, 76)

We see here what it is perhaps the only episode of friendship between the oppressed and the oppressor; an example of what real integration should represent. The two, notwithstanding the recent facts, cannot forget what they have cultivated together, from the linguistic interchange to cultural teachings. This is a good example on how two different civilizations should come together: peacefully, learning something from each other without overwhelming the other. They are descendants of the same species after all. The symbolic use of the touch as a mean of communication is seen by humans as a regression, as a rudimentary form of communication as it is invasive from the perspective of the Terrans. However, adopting a use that is strange or unconventional for one of the two cultures is a statement that says "I want to know you", so in a sense it is a form of interaction way more advanced than Terrans could think.

Selver's respect for Lyubov is not a secret, yet he wants his fellow scientist to leave the Central for some reason. He wouldn't have stopped until the humans were gone and his friendship with Lyubov is not enough from stopping the creechie to pursue his goal. Even if the Government has suspended the tree cutting and any interactions

with the creechies, the tension between the two civilizations is very high and the situation in a stall and it would have been resolved only with a striking move:

They had listened. they had heard and had come to follow him, to follow the new path. They had taken up the fire they feared into their own hands: taken up the mastery over the evil dream: and loosed the death they feared upon their enemy. All had been done as he said it should be done. All had gone as he said it would go. The lodges and many dwellings of the yumens were burnt, their airships burnt or broken, their weapons stolen or destroyed: and their females were dead. (Le Guin, 91)

The final attack from the creechies begins. They outnumbered the few colonists on the central and they aimed for strategic objectives like their airships and their dormitories. The Athsheans are forced to overcome their fear for the fire that so much of their lives has ruined, in order to use it against the enemy; new weapons that they have learnt to use by observing the humans are now in their hands and are used for their own good. Furthermore, in order to prevent the future generation of invaders they manage to kill the females to stop any chance of procreation of other enemies. The natives were determined to expel those who have tried to conquer their planet for good. The humans were considered crazy creatures by the Athsheans since they were incapable of dreaming, and this could have affected the same creechies. This meant that their habits and uses were too different to coexist; someone who thinks that reality and dreaming are two distinct things is an enemy to a creechie's eyes.

With the remaining humans imprisoned and seeing that they have an entire planet against them the only solution is the negotiation of a ceasefire in order to organize the withdrawal of human forces from Athshe. The only one who continues burning trees and villages is Davidson and a little squad. All the impulsive and negative aspects in just a single man that is now pretending that he hasn't lost his purpose yet:

It was time to make the hopper-raid. He told his plan one night to Aabi, Temba and Post. None of them said anything for a minute, then Aabi said, "What about fuel, Captain?" "We got enough fuel." "Not for four hoppers; wouldn't last a week." "You mean there's only a month's supply left for this one?" Aabi nodded. "Well then, we pick up a little fuel too, looks like." "How?" "Put your minds to it". (Le Guin, 114)

The merciless colonist is still thinking of conducting a very risky operation to reconquer the planet with only one chopper; even his men don't really know what to do but following his foolish orders; this section represents the madness Selver has talked about. Violence without a purpose and war crimes were Davidson's daily bread. There was no place he'd rather be but the battlefield. This is pure madness and it's very unlikely for a sentient human being to act like that in the darkness of a never ending forest, in fact "He seems composed entirely of negative stereotypes and the worst parts of humanity. This portrayal is very intentional. Davidson is not meant to portray reality" (Stump 2017, 15).

All the negative aspects of the white Western thought enclosed in one single character makes it possible for him to be the true enemy of planet Athshe; his pressure seems greater than the one of all the other humans in Central. Davidson's madness and *The World for World is Forest* had a clear message for the readers, as "The story is informed by Native American epistemologies and operates in part as a protest against the US's involvement in the Vietnam War, amongst other colonial and military interventions" (Sperling 2022, 52). It's worth saying that the Vietnam war is considered the first true defeat of the U.S army in history.

After his chopper crashes, Davidson survives and he finds himself in the forest surrounded by creechies and Selver himself. They don't kill him but spare his life as great enemy of the creechies, as if Le Guin wanted to teach us that evil cannot be simply eradicated or killed. He is abandoned to himself wandering in the forest and nothing of him is ever heard again.

The departure of the remaining humans takes place in the finale with Lepennon promising Selver that no Terran will ever come back to Athshe:

I wanted to be sure that you understand that this is a permanent arrangement. We're not coming back. Your world has been placed under the League Ban. What that means in your terms is this: I can promise you that no one will come here to cut trees or take your lands, so long as the League lasts. (Le Guin, 125)

The process of colonization is over on Athshe and the Hainish Government promises that this will never repeat itself again. It is strange that this promise comes from the

same Government that has allowed such crimes, but eventually such events could even shake the irremovable claims and statements that identify human nature.

Even if a form of peace has been reached Selver and his societies will always remain victims of these events and are now profoundly changed:

You cannot take things that exist in the world and try to drive them back into the dream, to hold them inside the dream with walls and pretences. That is insanity. What is, is. There is no use pretending, now, that we do not know how to kill one another. (Le Guin, 127)

In a few words, “What it’s done cannot be undone”. The colonization has happened; creechies had learnt to use human weapons against them; thousands of lives were lost. Now that this is over, Selver makes us understand that they are no more the same creechies they were before after all that happened. “All of this is Le Guin’s way of saying, perhaps, that colonialism cannot be undone – its effects linger in the heart, in the culture, in the soil and forest, in the stories a people have to tell and the songs they sing” (Guynes qtd. in Sperling 2022, 53).

This novel is a clear example of the effects that human colonization could have on a not so well explored planet. Just like the Martians in Wells, who have committed the mistake of not analyzing well enough the bacteria present on Earth, so the Terrans have underestimated the nature of the natives they have enslaved. In both episodes there is an upheaval of the ecosystem and only then there is the true catastrophic event. When talking about science fiction colonization it’s worth mentioning this “novella for its potential to respond to actual or impending anthropogenic ecological catastrophes” (Savi 2021, 536). The recalling to real past catastrophic episodes in our past can be seen everywhere in the novel; as a matter of fact, “the obvious Vietnam analogy should not blind one to other relevant contemporary analogies-the genocide of the Guyaki Indians of Paraguay, or the genocide and deforestation along the Trans-Amazon Highway in Brazil, or even the general destruction of rain-forest habitats from Indonesia to Costa Rica. Le Guin's story is multi-applicable-and multi-faceted” (Watson 1975, 231).

Le Guin’s conception of unfit rulers can be seen in the lazy and remissive Earth and Hainish governments that seem not to take seriously the fact of colonizing planets already inhabited by sentient creatures. In addition, we have to mention that in the

period in which *The Word for World is Forest* was written, multiple episodes of colonization happened; for example, “in just a few years around 1950 almost all the Asian colonies, and around 1960 most of the African colonies, succeeded in gaining political independence. Two further waves followed: the Portuguese colonies in 1974/75 and finally, largely due to the altered global role of Russia, Namibia in 1989 and the ‘internal’ colonies of Russia and South Africa in the 1990s” (Reinard 2011, 226-227).

Very similar features of this novel can be seen in many film adaptations, as for example James Cameron’s *Avatar* (20th Century Fox, 2009), where Pandora reminds us of Athshe itself, full of vegetation and nature. Here, too, the natives are interconnected with the entire forest by using the roots as synapses. Everything is alive for them, but the human counterpart aims to gain profit thanks to the mineral that lurks under the forest. Pretty much we can see Captain Davidson in Colonel Quaritch, that even when he is defeated he fights only to satiate his thirst of blood.

Seeing that indigenous beings in science fiction are often profoundly interconnected to the place in which they live, this should teach us something; a statement from Call is worth a citation in this case: “if we would truly make the world a better place, we must abandon all pretense towards rational control. We must renounce all distinctions between ourselves and the rest of the world. Only when we know ourselves to be inseparable from the world can we dream the dreams that will change it” (Call 2007, 96).



## Chapter 4- *Farmer in the Sky* and Ganymedean Agriculture

We have just seen two examples of colonization processes aimed at conquering an already inhabited planet through different processes of terraformation and colonization. Throughout the two novels violence was the main instrument of conquest as it is the quickest method to claim your superiority over another civilization. Human approaches to these situations in science fiction are quite comparable to reality. In *The War of the Worlds* the invaders use violence without even trying to establish any kind of communication with humans; In *The Word for World is Forest*, even if the two civilizations have coexisted for a while, violence is central from the conquest and the burning of villages, to the hidden enslavement of the creechies. The first rebellion of the creechies will result eventually in a fight for freedom. If it's true that "Terraforming imagines a multiplicity of dead worlds, worlds in need of geo- and bio-constructivist interventions to create life" (Persinger 2020, 13), these two novels demonstrate the opposite as terraformation can also bring death to an already flourishing world, or substitute a vibrant and fertile world with another kind of life. The last of the three novels I've been discussing is, we could say, an exaltation of the colonial past in Western America, since the fact of colonizing a no-man's land is typical of the gold rush that has distinguished American history in the second half of the nineteenth century.

### 4.1- Private Property in Space

#### **Is Moving on a New Planet a Good Solution?**

Conversely to the first two books, the novel I'm going to talk about is a story about sacrifice, human valours, power of will and family values, virtues that are essential for a human being, especially when he has to move on a new planet to build a house from the ground only counting on his forces. Having a house on Ganymede is the dream of our men in Robert A. Heinlein's *Farmer in the sky* (1950). There is no present war in the novel and no subtle and hideous creatures threatening the life of the newcomers that in this case are humans. The main difficulties are represented by the natural ones like the atmosphere, the distance and other strange conditions at which man has to adapt if he

wants to claim his rights on the new planet, or in this case, moon, satellite. We can still talk about colonization even if a place is deserted with no living beings to defend it (perhaps reflecting an idealized version of colonization); sadly the episodes that we remember the most are those constellated with violence, genocide and the very lowest moments of human history. The real enemy here is Ganymede itself, and the difficulty stands in overcoming those difficulties with only human intelligence that has always been the most powerful weapon in history.

*Farmer in the sky* starts like this:

The ration had been cut another ten calories—which made me still hungrier and reminded me that I hadn't been home to get Dad's supper. The newscaster went on to say that the Spaceship Mayflower had finally been commissioned and that the rolls were now opened for emigrants. Pretty lucky for them, I thought. No short rations. No twerps like Jones. And a brand new planet. (Heinlein, 4)

We already see at the beginning a not regular situation; there are rations cut so that means that there is lack of food, thus some people are starving. Then, the news claimed the fact that a spaceship has been set to take off to a new planet. This situation makes us imagine that only a few chosen ones will be able to escape the precarious condition that is now reigning on Earth. Space travels aren't for everyone and time schedules in these situations tend to be very restrictive.

George and Bill are father and son and since the death of his mother Bill got closer to his father. The dream of a home on a new planet seems to be the common desire of the people in the novel. There is not much to do on Earth and the ecosystem seems to be compromised, for example when Bill tells his dad "I saw a mountain lion." "Really? I thought they were all gone" (Heinlein, 5). Animal extinction is always associated to changes in nature like global warming and the greenhouse effect. We have already seen it in *The Word for World is Forest* when they were talking about robo deers in Himalaya Parks. "Regions with large and long standing human populations, or those with large economies, may at present be threatening relatively large numbers of animal and plant species" (Smith 1993, 377). The mountain lion or *puma* is known to be a great feline typical of Northern America that we well know to re-enter in the category of large economy countries.

In this passage we see a typical father and son moment with the father giving his advice to his pupil:

“Okay, Bill. It's one thing for me to decide to take my chances with colonial life but I've got no right to get you off to a bad start. You've got to finish your education. There are no decent schools on Ganymede. You get your education, then when you're grown, if you want to emigrate, that's your business”. (Heinlein, 7)

We know that the planet to which the Mayflower (obviously recalling the pilgrim fathers' ship) is heading for is Ganymede that is not a planet, but one of the satellites orbiting around Jupiter: George is trying to escape his condition of widow by saying he wants to go but he doesn't want his son to come with him yet. He claims that there aren't reliable institutions on Ganymede and he should stay on Earth until his graduation. We are assuming that people going to Ganymede don't need further teachings as they should be experts or at least astronauts; here George, “a level headed engineer who understands both the dangers and the potentials of the Ganymede colony to which he plans to emigrate” (McGiverson 2003, 179), sees it as a place for retirement, a way of an old man to escape his past; however, the Mayflower is accepting emigrants and as far as we know emigrants could be simple people. The fact that there aren't decent schools on Ganymede makes us guess that it is not fit yet for human education and for these reasons, it is likely to be the goal for expert people that have nothing else to learn except how to live on the new planet. As for our reality, “It is also possible that Space Tourism will develop, and ordinary people will join astro-nauts in short term missions, when and if space travel becomes more available and less costly” (Van Pelt 2005, n.p). Short termed missions and tourism are not to be considered colonization expeditions; in science fiction terms these are comparable to simple school trips. We have seen that colonizing new planets and establishing on them is the result of catastrophic events in the ecosystems of Earth and not mere vagaries for new discoveries.

We can see in the following passage that we are in a future that is quite advanced:

There was a boy in my class who had been born on the Moon. His parents were still there; he had been sent home for schooling. He gave himself airs as a deep-space man. But Luna was less than a quarter of a million miles away; you could practically throw rocks at it. It wasn't self-supporting; Moon Colony had the same rations as Earth. It was really part of Earth. But Ganymede! (Heinlein, 8)

Just what I was saying before; in the novel human kind has already reached the point in which space travel is considered a sort of vacation that people use as a source of pride. Furthermore it's funny to think that the moon is now considered a pretty affordable place to go. I imagine it like the tourist villages where parents go to stay away from their children like the case of Bill's classmate. What I was trying to say with this funny speculation is that the Moon is no more that irresistible utopia of space travellers. It has already been conquered in 1969 and humanity has always aimed for the furthest possibility that, in *Farmer in the Sky*, is Ganymede. Needless to say that the distance of the Moon compared to the one of Ganymede is irrelevant.

Here we come to know a lot more about the new planet in which Bill is planning to go:

Ganymede was Jupiter-III; I should have remembered that. It was bigger than Mercury, much bigger than the Moon, a respectable planet, even if it was a moon. The surface gravity was one third of Earth-normal; I would weigh about forty-five pounds there. First contacted in 1985—which I knew—and its atmosphere project started in 1998 and had been running ever since. (Heinlein, 9)

The years in which the first colonizing project started was 1998, a future that to us is past 25 years now and results of this kind have not been even remotely reached, but this is because the book was written in 1950. Heinlein's science fiction tends not to push itself too far with years, perhaps to give the reader the feeling that the future is closer than he thinks. Le Guin, on the other hand, sets her novel millions of years in the future, a time that none of us will be able to tell whether it can resemble science fiction or not.

Nevertheless, why Ganymede? "Ganymede is the largest moon in the Solar System. It may be attractive as Ganymede is the only moon with a magnetosphere and so is less irradiated at the surface. The presence of magnetosphere likely indicates a convecting molten core within Ganymede, which may in turn indicate a rich geologic history for the moon" (Griffin n.p). There are different scientific reasons to establish a colony on Ganymede but, since we are talking about human colonization there has to be something to get profit from on the target planet, in fact "it should not be overlooked that Ganymede has abundant resources in silicates and irons suitable for mining and construction, unlike many other satellites where water-ice dominates" (Kerwick 2012, 22). We will see further on through the novel which methods these "farmers" or "miners" will adopt to build themselves a house.

Below we are dealing with the thoughts of outdated people that do not feel the Ganymede project as the solution for humankind:

“My old man says that nobody but an utter idiot would even think of going out to Ganymede. He says that Earth is the only planet in the system fit to live on and that if the government wasn't loaded up with a bunch of starry-eyed dreamers we would quit pouring money down a rat hole trying to turn a bunch of bare rocks in the sky into green pastures. He says the whole enterprise is doomed”. (Heinlein, 12)

In this statement from Duck's father (Duck is Bill's friend) we see the realist side of the coin, as he asks himself why would the government invest in the utopic and extremely difficult mission of terraforming a giant rock. We have these doubts even in our contemporary world as different companies are competing with each other in order to be the first one landing on Mars or whatever. Think of Elon Musk's SpaceX that aims to achieve this goal in a few decades. The doubt that lurks in “normal” people that see in these space programs just a waste of money is more than justified. We can say that “social objections are focused on the fact that space exploration leads to transfer resources and activities from necessary and real earthly problems to, in some sense fantastical and illusory, ideas. Ideological objections include objections against the risk of devastation of environment” (Munévar 1986, 3). If that same money would have gone to renewable resources for example that would be a step closer to recovering the Earth. Duck's father has a point as even scientists in our all-day reality claim “that it is more important to reduce existential risks to increase the probability of eventual colonization rather than to accelerate technological development so that space colonization could happen sooner” (Bostrom 2002, n.p). However the Earth in *Farmer In the Sky* is not the same as ours; the resources seem to be gone for quite a lot. Seeing this desperate situation human kind has no other choice left but the one of starting a new life on a new “giant rock”. Furthermore, “space exploration sponsored by government is not oriented toward the welfare of mankind” (Szocik 2019, 56), but to the benefit of the government itself; a thing, in my opinion, that we should be scared of.

Social objections are also very concerned about the methods used to achieve this colonizing process; those who talk like that are inexperienced people or old folks that are very stubborn when it comes to changing their own habits that have always been the same throughout their lives. Duck's dad is one of this kind as he doesn't even

believe that human technologies will last on the surface of Ganymede, causing the death of all colonists:

Well, my old man says that it is an absolute impossibility to keep a permanent colony on Ganymede. It's a perilous toehold, artificially maintained—those were his exact words—and someday the gadgets will bust and the whole colony will be wiped out, every man jack, and then we will quit trying to go against nature". (Heinlein, 12)

As a matter of fact, creating a stable atmosphere and environment on a such inhospitable satellite can be done only through bioengineering methods, that imply accurate calculations and safety measures that, if not followed to the letter, they risk to erase the entire life on Ganymede getting back into its natural state. "People have a funny habit of taking as 'natural' whatever they are used to—but there hasn't been any 'natural' environment, the way they mean it, since men climbed down out of trees" (Heinlein, 12). These are the words that George tells his son when he hears Duck's father's opinion; for what is worth, there is no environment human beings are used to, but it is only with their perseverance and judgment capacity that they have been able to survive in those hostile environments. In a few words, the power of will and love for risk is typical of human nature.

## **Departure**

Days have passed and in the meantime George secretly applied for a place in the Mayflower for him and his son. They have taken different attitude tests and physical test in order to result idoneous; Both Bill and George and the undesired George's new wife with her daughter are setting off to Ganymede:

You couldn't get within twenty yards of the dining room. There were children underfoot everywhere and squalling brats galore. There were emigrant families squatting in the ball room. I looked them over and wondered how they had picked them; out of a grab bag? (Heinlein, 21)

As we have seen before, the Mayflower was accepting any kind of people. However, Bill is astonished at the sight of seeing common and unqualified families in his opinion and wonders about the way in which they had passed the tests. Perhaps, notwithstanding the hard life and the not yet complete human colony on Ganymede,

taking away as many humans as possible was a primary need for our planet; despite the multiple possibilities of space colonization, “Earth still remains the unique human homeland, we are not multi-planetary species and this is still well beyond our capacities. Any effort to settle lifeless space must compete with care for Earth” (Reiman 2009, 83). From this point of view, taking into consideration unqualified families was another risk for the good of the homeland planet.

Here it can be seen what Bill meant with unqualified people:

My ears were ringing. I heard someone behind me say, “But I haven't had breakfast. The Captain will just have to wait. Tell him, Joseph.” It was the woman who hadn't known that the Mayflower was a space-to-space ship.[...] But the woman—the same one—didn't like it. She said, “Joseph, my head aches. Joseph, I can't breathe. Do something!”. (Heinlein, 23-24)

Examples of this ignorance can be seen during the launch sequence; just like in a normal flight you can find every kind of person: the crying baby, the excessively talkative wife and those who cannot stand the gravity consequences. “Heinlein does not tolerate fools or ignorance lightly; both come in for criticism and ridicule in the juvenile novels” (Sullivan III 2020, 150). That makes the reader think of space travel as a not exclusive experience; seeing that not so worthy people are occupying the seats of the Mayflower lessens the spirit of adventure of those who really consider this opportunity as a new life, like our protagonists, Bill and George. This can be seen even when Bill can't stand the fact that his father's new wife's daughter Peggy teases him:

I think girls should be raised in the bottom of a deep, dark sack until they are old enough to know better. Then when it came time, you could either let them out or close the sack and throw them away, whichever was the best idea. (Heinlein, 30)

Here we can see the hate that a boy like Bill could feel in a similar circumstance; his first experience in space couldn't be more different than he had imagined: his father had married just before the departure with the mother of a foolish child, and the space mission's selections seemed to be a joke. It isn't uncommon for Heinlein to use human stereotypes in his characters even when those characters are in the middle of a space launch in which only trained people should be present. “Heinlein's stereotypes include “the henpecked husband; the weak-willed, fuzzy-brained, hysterical wife...;” and the

product of their ineptitude, "the impossible brat" (Slusser 1977, 20). It is funny that Bill calls his step-sister Peggy with the latter nickname: "When I finished the Brat said, "I want to go into the control room, too" (Heinlein, 30).

In the passage we know a little more about the scientific goals that humanity has made in the novel:

He said that there had been three stages in the development of space ships: first was the chemical fuel rocket ship that wasn't very different from the big German war rockets used in the Second World War, except that they were step rockets.[...] "It is characteristic of space ship development that the ships have gotten smaller instead of bigger. The next development was the atom-powered rocket. It was a great improvement; steps were no longer necessary. That meant that a ship like the Daedalus could take off from Earth without even a catapult, much less step rockets, and cruise to the Moon or even to Mars. [...]The latest development is the mass-conversion ship, such as the Mayflower, and it may be the final development—a mass-conversion ship is theoretically capable of approaching the speed of light. Take this trip: we accelerated at one gravity for about four hours and twenty minutes which brought us up to more than ninety miles a second. If we had held that drive for a trifle less than a year, we would approach the speed of light. (Heinlein 37-38)

Heinlein here is explaining throughout the words of the Chief Engineer the history and evolution of spaceships in the novel's universe. He too finds the origin of the first space programme by looking at the missiles from the Second World War. We can assume that here too the inventor of the missile programme was Von Braun, who after the War ended was recruited by the U.S. government to begin the first space missile. It is worth saying that Heinlein focuses on the differences that technology evolution has created: from the chemical fluid rocket and step rockets to tinier versions of spaceships until the mass-conversion ship that represented the top of engineering at that moment. A technology that aims to tinier models is always aimed at an easier approach to the practical aspects of space travels. Even our Space Agency (NASA) always aims to tinier and more practical models in order to cut the costs of time and human resources; so "It is not an overstatement to say that present-day space complex characteristics revolve around control system performance and their major part is directly defined by system performance quality" (Legostaev 2013, 331).

The fact that the first rockets were chemical fluid-based and the Mayflower was a mass conversion ship gives an idea of how much the energy resources were changed. We know that planes and post-burners, or to put it simply, military and air force resources are the most expensive and polluting resources in the world, as discussed in



the first chapter. The fact that in Heinlein's novel, spaceships could move space-to-space and even reach the speed of light was an enormous jump in terms of time and pollution reduction; fast travel could resolve the problem of everlasting voyages and the fact that spaceships were no more on Earth's soil could prevent further ecological hazards that surely Earth doesn't need. Distance wasn't a problem anymore or, to say it better "distance has yielded before the onslaught of speed" (Arendt 1958, 250). Even if Heinlein's Earth is nearly exhausted, we have seen and we will see that science fiction can offer "visions of worlds where a wholly new system of *radical* sustainability and non-polluting energy expenditure has been conceived and set in practice" (Macdonald 2016, 120), visions that humans would do anything to reach. To give you the idea of the damage of the hypothetical departure of the Mayflower directly from Earth:

If the Mayflower had blasted off from Mojave space port the whole Los Angeles Borough of the City of Southern California would have been reduced to a puddle of lava and people would have been killed by radiation and heat from Bay City to Baja California. (Heinlein, 40)

This speculation is quite powerful as if it wanted to explain to us that Earth cannot stand human constant research for new sources of power or new technologies. Science fiction teach us this too: that if humans want to enlarge and extend their scientific potential they can't hope to do that on Earth, the same planet that has accompanied humankind throughout all his colonial and technological past. The perfect solution would be the one of exploring space by always monitoring the conditions on Earth and taking care of it, in order to prevent future catastrophes. When a blank canvas is all covered with colors you have to take another one if you want to keep on creating new and more sophisticated operas.

During the trip the ship is hit by an asteroid causing a hole in Bill's and all boys' compartment, but he manages to close it in time using what he had near him:

He said, "I will read from yesterday's log: 'On twenty-one August at oh-seven-oh-four system standard, while cruising in free fall according to plan, the ship was broached by a small meteorite. Safety interlocks worked satisfactorily and the punctured volume, compartment H-twelve, was isolated with no serious drop in pressure elsewhere in the ship. " 'Compartment H-twelve is a bunk room and was occupied at the time of the emergency by twenty passengers. One of the passengers, William J. Lerner, contrived a makeshift patch with materials at hand and succeeded in holding sufficient pressure for breathing until a repair party could take over. (Heinlein, 48)

This is a good example of what George taught his son as for men surviving in critical situations; in a ship full of inexperienced people that treat the voyage towards a new life as a school trip Bill distinguishes himself for his fast decision capacity impressing Captain Harkness himself who thanks him personally in front of the all the crew. The fact that those finding themselves in the Mayflower represent nonetheless an entire civilization, makes us understand that in that situation they are all the same and everyone may contribute with his actions. In that hostile condition a boy had saved an entire spaceship, an action that comradeship and brotherhood cannot ignore. The adult Captain thanking a boy is the symbol of brotherhood that Heinlein highlights when talking about people establishing themselves on a new land. They cannot survive in any way but helping each other.

Here Bill is discussing with his father the fact that many of the crew members seem unfitted to be a passenger of the Mayflower:

George stopped to peg fifteen-four, then said, "Bill, haven't you ever heard of political influence?" All I said was, "Huh?" "It's a shocking thought I know, but you are old enough to get used to the world as it is, instead of the way it ought to be. Take a hypothetical case: I don't suppose that a niece of a state councilor would be very likely to fail the psycho tests. Oh, she might fail the first tests, but a review board might find differently—if the councilor really wanted her to pass". (Heinlein, 51)

George turns out an example that very much resembles "nepotism", or the fact of favouring one family member over a stranger that maybe could be better. To Bill's justified statements about the uselessness of psychological tests to evaluate the standards of a crewmate, his father answers "Contrariwise. The tests are usually honest. As for those who sneak past, it doesn't matter. Old Mother Nature will take care of them in the long run. Survivors survive" [...]. But don't bum out your jets, son; we've got human beings, not angels, to work with" (Heinlein, 51). For what they know those that passed those tests were all human beings and thus, open to commit mistakes that perhaps they will never commit again. The point is that in the creation of a new colony you couldn't expect everyone to be perfect; George knows that and teaches it to his son; As we have seen and we will see throughout the novel "Bill's father thus has

encouraged in the boy a growing sense of responsible independence that he cannot deny” (McGiverson 2003, 179-180).

Ganymede was straight ahead, almost, and growing all the time—and here was a funny thing; Callisto was silvery, like the Moon, but not as bright; Io and Europa were bright orange, as bright as Jupiter itself. Ganymede was downright dull! I asked George about it; he came through, as usual “Ganymede used to be about as bright as Io and Europa,” he told me. “It’s the greenhouse effect—the heat trap. Otherwise we wouldn’t be able to live on it. (Heinlein, 52)

To boy’s eyes, going in outer space among colorful planets and stars, and seeing that, in the vastity of the universe, his new planet seems to be the most boring in the entire cosmo, is quite a surprise; this description seems to indicate that anything that is touched by men is going to die; however George explains that the “dull” color is good so they know that the planet is habitable thanks to the greenhouse effect. It is just a little coloring defect that doesn’t affect the continuity of human life on Ganymede. As the same Jupiter that is rich in sulfur in its atmosphere it’s worth thinking that its moons are so too, “So, it is clear that the eventual biological colonization of the neighbouring planets would be feasible only with microbes adapted to the environmental conditions in the colonising planets” (Palhares 2017, 6). Under the dull surface Ganymede was, in space colonization terms, flourishing and there was nothing to worry about at that moment.

## 4.2- Ganymede, the Promised Land

They land and soon they have to undergo some bureaucratic problems as if it was a normal trip by plane:

We went back to the main hall. There was a desk there with a man behind it; over his head was a sign: IMMIGRATION SERVICE-INFORMATION. There was quite a line up at it; we took our place in the queue. (Heinlein, 55)

Once they descend on Ganymede’s surface men and women are divided; the place is very crowded. In this scene new colonists will be assigned to their tasks by those who decide their future role. It’s curious thinking that the reception is called “immigration service-information”; aren’t the people on Ganymede the same people back on Earth?

On Earth immigrants are those people that change countries in hope of better conditions, and all of that happens across national borders. But when talking about new planets, is it right to consider immigrants those people who came from the same planet that is Earth? Is Ganymede a new State or what? It's worth saying that during the period in which Heinlein was writing "The collapse of the Cold War political consensus resulted in renewed anxieties towards the United States' own immigration influx" (Kountz 2014, 29). This is the reason why colonists on Ganymede treat their similes, even from the same nations as doubtful immigrants. They will accept them, but always by keeping an eye on them; George will be contrary to the separation of his family by saying "You can't separate a man and wife. We aren't slaves, nor criminals, nor animals. The Immigration Service surely has some responsibilities toward us" (Heinlein 56). They are not treated in the way expected and as Telotte argues "sf genre is notable for its skill in creating monstrous metaphors 'that are constantly changing in response to a variety of cultural and industrial influences'" (Telotte 2001, 9). The metaphor of suspicion towards immigrants very much recalls the tension on the borders during the Cold War.

We see in the following passage that the conditions already seem to get better once settled in:

Listen to this: For breakfast we had corn cakes with syrup and real butter, little sausages, real ham, strawberries with cream so thick I didn't know what it was, tea, all the milk you could drink, tomato juice, honey-dew melon, eggs—as many eggs as you wanted. (Heinlein, 57)

The food is very much appreciated by Bill that highlights the fact that some things he is eating are actually "real". We can only assume that back on Earth animal-derived food wasn't affordable anymore due to the conditions in which the planet was. The rations they received for their job on Earth were the respective reward for their time spent at work. This insistence on words such as "as many as you wanted, as you could drink" fairly reveals that food was a primary need that people have been desiring for a long time on Earth. Thus, now that they've landed on Ganymede, seeing large quantities of real food is nonetheless a worthy reason to have decided to join this expedition.

Below we see for the first time the "citadel" built on Ganymede:

I was sent along with the commissary tractor once to get supplies over in town. Not that I saw much of the town—and not that Leda is much of a town, anyhow, to a

person who has lived in Diego Borough—but I did see the hydroponics farms. There were three of them, big multiple sheds, named for what they grew in them, “Oahu,” “Imperial Valley,” and “Iowa.” Nothing special about them, just the usual sort of soilless gardening.[...] But I was interested in the tropical plants they grew in “Oahu”—I had never seen a lot of them before. I noticed that most of the plants were marked “M-G” while a few were tagged “N. T.” I asked one of the gardeners; he said that “M-G” meant “mutation-Ganymede” and the other meant “normal terrestrial.” I found out later that almost everything grown on Ganymede was a special mutation adapted to Ganymede conditions. Beyond there was another of the big multiple sheds named “Texas”; it had real cows in it and was very interesting. (Heinlein, 58)

The first thing that jumps to mind is the source of food, the primary need in order to survive on a new planet. There are hydroponics farms that are the buildings allowing man to grow vegetables and other biological food on an inhospitable land. The fact of having a confined environment is fundamental for the plants and the same humans to survive. This is often pictured in science fiction novels when talking about spaceships and space bases. “The closest terrestrial analogue to space life support is possibly that of the nuclear submarine. Nuclear submarines use mechanical life support systems to support humans for months without surfacing, and this same basic technology could presumably be employed for space use” (Griffin n.p). However in this case there is no possibility of “surfacing” as the first task that a space colony has to fulfill is that of having a constant environment; isolation is fundamental for the continuity of life in space; suffice is to mention the episode of the asteroid hitting the Mayflower. The facilities on Ganymede seem to be working in this way, thus, they can guarantee the survival of human species on its surface.

The fact of having different sectors with both cultivations and livestock very much recalls the image of the American farm or “ranch” that now is at space level. This is not new in fact, “because the imagery and mythology of the western frontier so pervade American culture, science fiction repeatedly internalizes the stories that Americans tell about the development of the West and writes them forward for places and times yet unknown” (Abbott 2005, 243). The American ideal of man owning a land catapults itself among the stars and we can see this in the social organization of the town:

It was like this: the colony was made up of homesteaders and townies. The townies worked for the government and lived in government-owned buildings —except for a very few who were in private trade.[...] But most of the colonials were homesteaders and that's what George had meant us to be. Like most everybody, we had come out there on the promise of free land and a chance to raise our own food. (Heinlein 60)

There is a constant research for independence; there aren't supermarkets or discounts on Jupiter's moon, but people want to take care of themselves raising their own food and surviving with their own forces. In a sense, when thinking about the future we usually don't imagine regressing to a farmer state; we picture extremely advanced societies with flying machines and aliens as neighbors, but we mustn't forget that it takes a lot of time in colonization processes as we have seen; given this, Heinlein's conception results in a nostalgic vision towards the American past. Harvesting in space seems to be outdated for such a great adventure, but what if the maximum development in technologies that we will ever have was space agriculture itself? Since Earth was irrecoverable, Ganymede was the solution humankind was looking for, the improvement that on Earth wasn't possible anymore. This thought is fairly summarized in the sentence from Neyrat "Why protect what we can improve, or reconstruct?" (Persinger 2020, 7).

What Ganymede really needed was not more farmers, but manufacturing. They needed prospectors and mines and mills and machine shops. They needed all the things you can make out of metal and which they simply could not afford to import from Earth. That's what they wanted us to work on and they would feed any of us who accepted, not just for a year, but indefinitely. (Heinlein, 62)

Despite all this great opportunity of new beginning, Ganymede is a rocky satellite and starting a cultivation isn't easy and possible for everyone. In order to get by the problem of the hard soil different devices are needed and not equipped colonists can't do a lot against that. Transportation times as in *Word for World* were very long to obtain such giant and very expensive machinery, and this was another difficulty to manage. To put it simply there was demand for work, but actually there wasn't work. People, once they arrived on Ganymede expected themselves to have their own piece of land to mould and live on but the situation was more complicated than they thought.

Second thoughts about the permanency on the new land start to crawl in Bill's and George's minds. However, even when the situation seems unsustainable, Heinlein teaches us not to despair as a little help always comes:

Papa Schultz needed a field hand about as much as I need four ears, but that didn't keep me from moving in. In that family everybody worked but the baby and you could count on it that she would be washing dishes as soon as she was up off the floor. Everybody worked all the time and seemed to enjoy it. When the kids weren't working

they were doing lessons and the boys were punished when they weren't up on their lessons by being required to stay in from the fields. (Heinlein, 77)

Just as soon as they arrive on their deserted piece of land, Papa Schultz, (or Johnny Appleseed, as he was called by the colonists), comes to the rescue; he is the role model of the perfect colonist and he will be fundamental for Bill's growth. We have seen in the previous pages a lot of examples of unfitted adults or adults that cannot stand the progress; with Papa Schultz we have a true revolution. In fact, "Despite Heinlein's use of weak-willed, non-survival-type parents as foils to growing young adults, here and there he does show us supportive parents-and uncle-figures-whose examples and teachings help foster responsible maturity" (McGiverson 2003, 177). He is well-built, strong minded and positive, virtues that cannot be absent if one wants to live on an inert land. A strong big farmer underlines the fact that "human and animal muscle power becomes as vital a terraforming tool as the mass converters" (Lubek 2019, 24).

He is authoritarian and he has traits of the American patriarch, a glorification of the historical colonial past in Western America; we can say this by seeing the authority and the respect that Bill finds in him from the first encounter. He has a large family, a devout wife and all of his descendents have a precise task to accomplish if they want to survive as a family on Ganymede. He seems like he was born on Ganymede as he knew everything about cultivations. He even claims that the tree in his garden is the only one present on Ganymede; "It was a real tree, an apple tree, growing in a fine bluegrass lawn out in front of his house. Furthermore, it was bearing fruit on two of its limbs. I stopped and stared at it" (Heinlein, 76). So Johnny Appleseed had accomplished what was the dream of every colonist that came to Ganymede. His skills and hard-work rewarded him with a habitable and terraformed piece of land. It's not wrong if we define the figure of Papa Schultz as the *deus ex machina* of the novel. It will be him the one who will help Bill in realizing his dreams; In a less theatrical metaphor, "Johnny Appleseed is the harbinger of agricultural settlement" (Abbott 2005, 242).

The creation of bill's piece of land starts:

The racket was still worse when the crusher bit into hard rock, instead of lava, but it was music to me and I didn't get tired of watching. Every bite was a piece of land to me. At suppertime the second-shift driver showed up with Dad. We watched together for a while, then Dad went back to town. I stayed. About midnight I went over into a stretch that was not to be processed now, found a big rock to keep the Sun out of my eyes and lay down for a quick nap. Then the relief driver was shaking me and saying, "Wake up, kid—you got a farm". (Heinlein, 81)

Quite some time had passed to arrive to this moment, and another voyage of the Mayflower that this time brought on the satellite's surface other mechanic crushers and fewer colonists. During this period Bill has worked at Appleseed's farm in order to learn the basis of agriculture on Ganymede until the permission to use one of the crushers for his purposes. He actually learns that you need a special soil to grow vegetables and plants on: "Pay dirt is the stuff that is actually imported from Earth, concentrated soil cultures with the bacteria and so forth in it you have to have to get a field alive" (Heinlein, 78). Although it is very valuable, it will be Appleseed to donate it to Bill. However, to use the pay dirt the land needs to be molded with a crusher that is the only device capable of such power. This is just the first step but the dreamlike scenery is starting to take shape in Bill's mind.

In the passage below we are introduced to another weak-willed adult typical of Heinlein's work, Mr Saunders:

"The only thing you can sell around this place is improved land. I'm beating them at their own game, that's what. I'll get that land in shape to unload it on some other sucker and then me and mine are heading straight back for that ever-lovin' Earth. And that's just what you'll be doing if you aren't an utter fool. You'll never make a farm here. It can't be done". (Heinlein, 84)

To the hard-working dimension and colonization prospects, people like Mr Saunders have lost faith in the project of a farm on Ganymede; as many of the colonists thought that they would have had a land and a farm as soon as they landed, the stretching of time was something they didn't take into consideration. The only hope now is starting a pseudo-terraforming operation on a piece of land, selling it and with the money earned getting back on Earth. I understand that some people can't bear the fact of waiting for their moments to have the necessary equipment to live, in particular if they aren't young anymore. For this reason the protagonist is a boy, someone that depicts a future perspective full of hope and human virtues. Space colonization is not for everyone (we will see it also with Peggy); one has to know that not everything will be as he had imagined. Furthermore, with Earth that is going towards a state of exhaustion, one should be motivated to survive on a new planet, and not let it suffer the same destiny of our mother Earth.



## Second thoughts and doubts

Even Bill starts to rethink about his life on Ganymede as right below:

I suppose we weren't bad off, but there is a whale of a difference between being a rich farmer, like Papa Schultz, with heaps of cow manure in your barn yard and hams hanging in your cold cellar and every modern convenience you could want, even running water in your house, and being poor farmers, like us, scratching for a toe hold in new soil and in debt to the Commission. It told on us and that winter we had time to brood about it. (Heinlein, 89)

Bill realizes that he didn't exactly picture these outcomes in his mind; seeing that Ganymede is always cold with snow and his family has nostalgia for Earth, makes him rethink about all this colonization deal; he isn't so sure of what he is doing there, taking in consideration even the idea of returning back on Earth. It is just not simple to adapt to a new land. It comes to my mind that just like animals and plants, men too are able or not to adapt to a certain environment. For example, when talking about adapting colonization, "Failures may occur due to biological factors such as inappropriate genetic mixing of populations leading to inbreeding depression, genetic swamping or hybridization" (Gallagher 2015, 17). Even Heinlein uses plant metaphors to describe Peggy's worsening conditions as the days go by on Ganymede when he says "It wasn't just the pressure; something else was wrong. She didn't belong here and she wouldn't grow here. Have you ever had a plant that refused to be happy where you planted it? It was like that" (Heinlein, 89). If they want to adapt to the new surface it is very unlikely for humans that just a few months ago were still living on Earth; physical tolerance comes within evolution periods; it is likely that newborn on the planet will be more adapted than their parents from Earth. To reconnect to the plants, "Species with long generation times have slow replacement rates, fewer chances for genetic recombination and reduced opportunity to increase evolutionary responses to climate change than species which reproduce more frequently" (Gallagher 2015, 14). The long gestation and development of human life cycle very much resembles a plant with long generation times that makes adaptation to a new habitat very difficult. Only Appleaseed with his well built constitution seems to be in his habitat, but he is in fact the exception, as Heinlein needed to picture the figure of the true space colonist living in a futuristic house with his family.

The peak of disgrace is when a quake shakes the entire town, taking out the power plants and leaving all the houses without vital supports:

Our job was to settle the doubt about those other names and—theoretically—to rescue anyone still alive. We didn't find anyone alive. The lucky ones had been killed in the quake; the unlucky ones had waited too long and didn't make it into town. Some we found on the road; they had tried to make it but had started too late. The worst of all were those whose houses hadn't fallen and had tried to stick it out. Hank and I found one couple just sitting, arms around each other. They were hard as rock. (Heinlein, 100)

The extremely low temperatures freeze those who didn't make it in time to the central facility, and the snow storm makes it impossible to orient among the streets. Peggy's conditions are bad but she is still alive as the family makes it to the shelter. This is precisely one of the outcomes on a new planet when the created-by-human environment doesn't remain constant anymore; the violent shake hits the power station that gives energy to all the colony and the result is nonetheless the one described above. To such an unfortunate situation everyone was unprepared, but they have to deal with it in some way; even Papa Schultz in order not to freeze to death with his family cuts down the so worshipped Tree to start a fire and survive. "What remained of the tree was ashes in the fireplace. Papa had cut it down as soon as the power went off and the temperature started to drop—and then had fed it, little by little, into the flames" (Heinlein, 101).

### **No colony for weak people**

The colony seemed doomed just like Duck's father said, and a return on Earth seemed obvious for the entire family; however, when Bill sees that those returning on Earth are people like Mr Saunders (the one who didn't want to wait for his turn to use crusher) and Noisy Edwards (the one that created havoc in the Mayflower) he is pervaded by a sense of dignity as he says: "I've been thinking. You know, George, I don't like being classed with these lugs" (Heinlein, 104). He doesn't want to be compared to those that for one reason or another fell off with the idea of going to Ganymede. Bill is there because he wanted it so much and the quake wouldn't have stopped him to pursue his dream. They most of all were getting back on Earth because of Peggy's health that in a few days, unfortunately dies and so, Bill is determined to stay:

She was dead and there was nothing more I could do about it. She was dead and it was all my fault . . . if I hadn't encouraged her, they would have been able to get her to go back before it was too late. She would be back Earthside, going to school and growing up healthy and happy—right back in California, not here in this damned place where she couldn't live, where human beings were never meant to live. (Heinlein, 105)

The loss of the little girl is without any doubt a tragedy in the novel, a testimony that claims that if one isn't fit for space colonization the consequences will be terrible. This is depicted in some certain attitudes of some members of the crew and sadly on the wealth conditions that for Peggy revealed not to be strong enough for such a change. In *Farmer in the Sky* you can distinguish who is going to survive and who is going to be left behind like mother Earth; "In the same way that terraforming imagines certain kinds of people as having a futurity but not others, there is also an imagining of new worlds having a futurity which is not possible for the Earth" (Persinger 2020, 7). It is a sort of Social Darwinism that reveals the mere reality by which some things just cannot be recovered.

Some cycles after the quake, the situation was about to get better; cultivated fields were spreading. Those who remained were working together as a team always remembering the victims of the past quake as a motif to not giving in. "It was just that you work from day to day and that keeps your mind busy [...]. You can grieve only so much; after that it's self pity. So George says" (Heinlein, 106).

The next step to the colonization of Ganymede would have been the planet survey with the purpose of enlarging the site with other two landing zones and other power stations. During the expeditions the crew with same Bill speculates about the future of Ganymede with always more people coming:

Not only is it physically impossible for a little planet to absorb the increase of a big planet, as Seymour pointed out, but there is another reason why we'll never get any such flood of people as a hundred thousand people a day—a psychological reason. There are never as many people willing to emigrate (even if you didn't pick them over) as there are new people born. Most people simply will not leave home. Most of them won't even leave their native villages, much less go to a far planet". (Heinlein, 111)

Paul Du Maurier, the leader of the company gives his perspectives by saying that in the future there won't be overpopulation problems in the outer planets as for the same

number of people leaving Earth, there will be another large number of people refusing to go since they are attached to their native land. It is worth saying that “For psychoanalysts, attachment is cemented by the *jouissance* it delivers. While this *jouissance*, as noted earlier, is rarely unequivocally pleasurable, rather offering pleasure and pain in equal measure, the fleeting pleasure it does provide reinforces commitment via the fantasy that the pain can be overcome and pure pleasure attained” (Fletcher 2018, 59-60). To sum up, attachment is everything one individual has always dealt with and knowing that, notwithstanding bad situations, everyone will overcome those, it is very unlikely for someone that thinks that everything will fix itself automatically, to move out of his native place. Du Maurier seems sure about this; it is as if he was betting on human foolishness.

The expedition continued after the dark phase of Ganymede (the period in which sunlight didn't reach the satellite) and Bill and Hank decided to explore around. In a canyon full of crystal they find what is perhaps the biggest revelation of the novel:

Hank took me back and showed me. I don't know how to describe the walker wagon—maybe you've seen pictures since. If a centipede were a dinosaur and made of metal to boot, it would be a walker wagon. The body of it was a sort of trough and it was supported by thirty-eight legs, nineteen on a side. (Heinlein, 120)

The device was something they've never seen before; the Covered Wagon as they will call it is the revelation that someone had been on Ganymede before; the centipede shape could make you think that it was a human creation but the guiding system was way beyond human wheel. Hank eventually manages to pilot the Walker and takes Bill home, since he was ill. Once at home, colonists investigate on the nature of the new discover:

But they were men in the real sense of the word, even though I don't doubt that I would run screaming away if I met one in a dark alley. The important thing, as Mr. Seymour would say, they had—they controlled their environment. They weren't animals, pushed around and forced to accept what nature handed them; they took nature and bent it to their will. I guess they were men. (Heinlein, 124)

On asking themselves the nature of whoever built the walker, the colony could have just said that they were aliens. Since in the three novels analyzed this is the only one without visitors except humans we have assumed that throughout the entire novel

aliens didn't exist. Heinlein uses experts' voices like the one of Paul Du Murier to speak about the future; even when asked whether war will ever be an option on Ganymede, Du Maurier answers "War is not less than forty Earth years away, not more than seventy" (Heinlein, 112), like he knew for sure this was about to happen. Maybe the future war will be against the makers of the Covered Walker that are defined as "men" by Mr Seymour. It is interesting to consider that any creature in the vast immensity of the cosmos, able to bend nature to their will, is to be considered a "man". In this sense human nature is to be found in any sentient organism in the galaxy, that would be not so different from us. To the possibility that humans are not alone in the universe, Bill decides to go back on Earth and take a degree to explore Callisto too, but suddenly, all the experiences he had on Ganymede stop him once again accepting with joy his destiny as a Farmer in the Sky:

I wondered how I would feel to be back on Earth? How would it feel to weigh three times as much as I did now? I didn't feel heavy; I felt just right. How would it feel to swim in that thick dirty soup they use for air? (Heinlein, 126)

In looking back at the three novels that we have analyzed in this thesis, we had a taste of which the shades of science fiction are; very often, for various reasons, the difficulties and the negative aspects are major than positive things, but in some way everything comes to an end after the moment of struggle. Even if these novels were written many years ago picturing that future in our present day, given our current technologies, it is very unlikely for human research to reach such a result in the next decades. A large number of problems with which we deal nowadays " can be especially observed in terraforming narratives, which frequently seem to be a biopolitical and technopolitical way of conceptualizing and responding to the anxieties induced by climate change in ways that broadly displace climate anxiety onto other, non-Earth planets and allow for the sense that these anxieties are at once remote and solvable" (Persinger 2020, 3). Environment, seems to be the key element when talking about science fiction; the same one we have terraformed on our planet is the goal at which we aim when speaking about planetary colonization. These processes cannot be conducted alone; there must be relationships between the human-human type and human-environment type. The last conception in *Farmer in the Sky* about which all that can bend nature to their will are to be considered men, is quite a powerful statement. I personally agree with the

thought by which conquering and gaining power, or to put it simply, satisfying any desire, is at the base of the human being; for this reason seeing these virtues in other alien species, or just imagining this species with the same goals of human beings is enough to recognize as men even a society anyone knows about. Furthermore human colonists and the “ancient outsiders” shared the common objective of colonizing Ganymede.

## Conclusion

We finally came to the conclusion of this thesis which was meant to be a journey through a lot of aspects about two phenomena that cannot be separated in my opinion: colonialism and science fiction.

I've started with a long introductory chapter that includes a lot of examples from the history of colonial past in the real world. This theoretical chapter is fundamental if we want to know what colonization truly is for both colonizers and colonized. I will say that this thesis wouldn't have come to my mind without Ghosh's book *The Nutmeg's Curse*, as it very much reveals episodes and shows data that are not mentioned a lot in today's discourse.

I took Ghosh and the Banda Islands plot as a starting point in order to understand what are the most horrible outcomes of colonization; and the genocide was the answer. The fastest solution to get the monopoly over a certain land from the economic and political point of view is nonetheless the eradication of the opponents, intended as the natives and as other nations who wanted to get the new resources; in Ghosh's chosen case study, the nutmeg.

All this thirst for power and authority cannot leave the target land without any modifications. We have seen that the entrance of colonizers in a new land will for sure imply different changings in the ecosystem; we have seen this with the example of the American buffalo or, to return on the Banda Islands plot, with the cutting of the nutmeg's trees. These phenomena even if not meant are to be considered modifications that will change that territory permanently. Just try to think of climate migrations that are far underestimated as a principal cause of migration; when a territory changes irreversibly, its natives are forced to change too alongside their homeland, otherwise they look for better perspectives in other countries.

All these modifications of the territory brought me to talk about the terraforming process that has been part of the colonization processes throughout history. This particular phenomena is very much expanded on a broader scale when talking about science fiction. On the other hand, the Gaia Hypothesis, or the theory by which a planet is to be considered alive, is the key to the connection between science fiction and colonization. If it's true that our Earth is a living entity and we have kept conducting land molding and other damaging operations on its surface, it is not a secret that the consequences of these actions will be catastrophic. These outcomes could represent a

reason in a further future to think of planetary colonization as a not so absurd hypothesis.

It's science fiction that focuses on these hypotheses that are not impossible in its fantastic but ultimately realistic world. In all the three major novels discussed, the invasions taking place enact a process of 'terraformation' of the planets that invaders are trying to "bend to their will" to cite Heinlein.

We can see this in *The War of the Worlds* with the devastation of London and its suburbs, but at the same time that desolation gives birth to the red weed that is to be considered a typical plant of Mars that aliens can't live without. In this sense the destruction of the terraformation would also imply a sort of new beginning.

In *The Word for World is Forest* the colonization and terraformation of Athshe is framed by the colonizers as a sanctified mission in hopes to bring back Earth to the state it was long time ago. In this novel Earth has perished and humans have already colonized many planets creating the Hainish Government a sort of "Galactic Empire". The fact is that humans would go through anything in order to reach their goals; we can see this in the violence perpetrated on the crechies throughout the four years of coexistence. Notwithstanding the attempt of interaction with the natives of the planet, the outcome is the same: war. What had started as a colonizing process results in a fight for freedom against the human invaders that are destroying Athshe as if they had rights over the planet. The strong boundaries between the crechies and the planet's vegetation very much recalls the vitalist conception and the Gaia Hypothesis.

Heinlein's *Farmer in the Sky* deals with a different approach to colonization; the scientific reasoning that is present throughout the novel reveals how complicated colonization of a planet is. From the problems of living in an inhospitable land to the ones you have to deal with during a long trip towards the new colony. This novel teaches us that not everybody is fit for colonization as it implies many difficulties physically and mentally speaking. The idolatry to the Western American past is central throughout the novel as the American dream has always been the one to become owner of an untamed land. This is a never ending circle as we have seen in our historical past that a land that seems unproductive to someone couldn't be so to another one. Given this even the colonization of Ganymede would result in a mistake, but since here too Earth was already exhausted human beings were forced to look for another land to live in.



All the examples made throughout this thesis dealt with problems that could exist in the real world but in a not so far future, even though they reflect both a historical past and a present condition of colonial conquest; all the environmental disasters that humans have left behind clearly will have consequences in the years to come. In their hunger for enrichment and exploration the human creature cannot make discoveries without modifying the land and the inhabitants that for the first time see their land as not theirs anymore.

In our difficult times some people and scientists are trying to prevent the things that science fiction foreshadows, always finding new solutions for the preservation of the environment; however, at the same time, other people are trying to accelerate the condition of disaster that we have witnessed at an apocalyptic scale in the novels discussed. Of course science fiction talks about these possible catastrophes mixing them with spectacular fantastic elements like super technological weapons, strange shapes for the aliens and a lot of light and colorful images; of course since it is fiction it has to entertain the reader in some way. Nevertheless, science fiction is a didactic exercise that can teach people to be more aware of the world around them. A phrase by Ghosh could be recalled, which wonders whether “Is it the case that science fiction is better equipped to address the Anthropocene than mainstream literary fiction?” (Ghosh 2017, n.p).

If we think about it the examples made deal in some with very real problems that have extended with the coming of the Anthropocene, this new geological era that identifies itself in the modifications that humans have made all over the world acting on the soil, the atmosphere and the same people living on the planet. These are nonetheless the same ingredients which science fiction is made of.

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