# DETERRITORIALIZATION OF THE EARTHIAN POLITICS ON MARS: POLITICAL ALLEGORIES IN KIM STANLEY ROBINSON'S MARS TRILOGY

## Aara Mithilee M L

Research Scholar, Reg. No: 21113114012031

Department of English, Nesamony Memorial Christian college, Marthandam,

Affiliated to Manonmaniam Sundaranar University, Tirunelveli - 627012, Tamil Nadu, India

#### Dr. M. Prabha Punniavathi

Assistant Professor and Head, Department of English,
Nesamony Memorial Christian college, Marthandam,
Affiliated to Manonmaniam Sundaranar University, Tirunelveli - 627012, Tamil Nadu, India

#### **ABSTRACT**

American science fiction writer Kim Stanley Robinson's *Mars Trilogy* explores Martian politics and the influence of Martian concepts on political revolutions. Mars settlers are diverse in their thoughts, and each settler group has varied concepts connected to the future of planet Mars. Among those diversified groups, the Terrans and the Martians are stronger and more popular. Terrans are the supporters of Earth who live on Mars, obey Earthians rules and support to change Mars similar to Earth. They eventually supported terraforming Mars. Martians aim for a democratic politics, fulfilling all the needs of Mars settlers without changing the original Mars. This article aims to highlight the political elements in Robinson's *Mars Trilogy* that drive towards political change on Mars. Its purpose is to grasp how reterritorialization takes place in the political affairs of Mars. Exploring Martian politics, Martian political factors, Martian political revolutions and effect and result of Martian political change are the objectives and moves on with the hypothetical statement 'Deterritorialization of Earthian Politics policies in Mars generate uncertain revolutions in terms of culture, science, spirituality, ecology and history' to analyse further. Background study is done with abroad articles written on *Mars Trilogy*.

## KEYWORDS: Culture, Science, Spirituality, Ecology, History

Kim Stanley Robinson is a Hugo and Nebula award winning American science fiction writer. Robinson's *Mars Trilogy* records the planet Mars settlement and terraformation through personal and detailed views of a wide range of characters. In this process, he has brought in several characteristics, including politics. This article aims to highlight the political elements in Robinson's *Mars Trilogy* that drive towards political change on Mars. Its purpose is to grasp how reterritorialization takes place in Mars's political affairs. Comprehending Martian politics, exploring Martian political factors, analysing the Martian political revolutions, and understanding the effect and result of Martian political change are the objectives employed to study the political allegories in Robinson's *Mars Trilogy*. This Article moves on with the hypothetical statement 'Deterritorialization of Earthian Politics policies in Mars generate uncertain revolutions in terms of culture, science, spirituality, ecology and history'. Abroad studies were reviewed for the background study to bring out this article.

Mars Trilogy exposes a general evolution toward a global democratic policy. Many notable moments pass along the way. Martian politics is restructured each time, providing contributions to each political moment. Robinson portrays the political view with the hierarchy and violence to negotiate and direct democracy. From the past victories and errors they try to learn the prominent political power. To establish rules and values, large democratic conferences were held on Mars. This revolution is highly effective with very little violence. This article examines the influence of culture, science, spirituality, ecology, and history in leading revolutions for political change.

Robinson allows the social, political and economic situation of Earth to reterritor Mars rapidly in his trilogy's progress. Mars becomes a contrast and a more desirable place for social, political, and economic arguments. The revolutions on Mars are generated to prevent the potentially destructive influence of Terrans. The anti-immigration campaign in *Blue Mars* is a popular political situation created to save Mars from the capitalist system and the Terran cultures. Psychologist Michel, an important character in *Blue Mars*, calls "terran cultures were all neurotic at their core, and when the neurotic is confronted with the same, it usually get more neurotic than ever. And the sane don't know what to do, so they press to stop immigration. And put us at risk of another war" (*BM* 594). In fact they experience threats

from Earth. In the mindscape of Martians, the authoritative nature of Earth controlling Mars is not embraced. The Earthians were eager to occupy the open land of Mars, and the Terrans were very eager to land them on Mars.

The immigration of people from Earth to Mars is considered to be the destructive exploitation of Mars and Martians. According to Maya, immigrants belong to an old culture. So, culture is a political factor in Martian politics. It is considered worse than terran immigration. The fear of adjustment and new traditions is believed to corrupt Mars. The present social relations among Martians are destroyed by allowing "... all xenophobia and misogyny to break out again in these ancient cultures" (*BM* 594). This situation is the beginning of a new race on Mars. Newcomers are not ready to mingle with Martians. The Martians resist the negative influence of the revolutions. They provide a negative political agenda, stating that capitalist manipulation and hierarchical inequality should not occur on Mars. Their only wish is to stop these explorations on Mars.

A positive political agenda is drawn up at the Dorsa Brevia conference. Although the negative political agenda focuses on external pressures, it has some important concepts as well. The members of the agenda creation team imagined a heterogeneous group of Martians, both politically and culturally. They understood that a heterogeneous group is always troublesome to manage. So, it suggests a homogeneous group. The Martians failed to reach a culturally unified system of human relations. But they find common moral principles practised among different Martian communities. At present, on Mars, there are five hundred visitors representing fifty groups. Martians struggle for harmony at Dorsa Brevia conferences because arguments and verbal abuse begin there. It is like "Arab ululations harmonizing with yodels" (*GM* 356). Hiroko Ai, the mysterious leader says, "We are children of Earth" (*GM* 358), which expresses her philosophy of life and advises all to worship work. Her ideas were more political than philosophical. Art Randolph convinces the crowd and indirectly soothes them. As he senses violence in advance and tries to escape the possibility of reaching a global consensus.

Nadia, the chief member of the First Hundred, still has lots of questions in her mind about 2061 as, "What had happened? What has gone wrong and why?" (*GM* 359). Nadia and her crew form a line under a hill to find out the reasons behind the Mars revelations. George, a chemist and aerospace expert, speaks about the need of the Martian System with the assessment of military forces.

Nadia wants to assess the whole model of revolution, which Arkady, Nadia's boyfriend, fails to do in 2061. Arkady views the Mars Society with the vision of a revolution based on anarchy. He prepares a secret revolution, which allows many new immigrants to help his cause. He urges with his followers to stash weaponry infrastructure and to go into hiding, disappear from under the radar and to be ready for the day. One of his close associates was Mikhail Yangel. He was a friend of John, with whom he discussed his ideas.

Art Randolph is the one who discovers the Martian underground and is also the lover of Nadia after Arkady's death. Art's smartpolitical judgmentt reminds Maya of Frank Chalmers. Art is there to convince us that global unanimity can be reached. He says: "They don't agree about much, he admitted ... but that's always starts the way" (*GM* 362). The conference continues, and Nadia begins to speak about the issue of terraforming. The 'Reds' are a group of people who oppose terraforming. They are against the disappearance of Martian identity. People who support terraforming are called the 'Greens'. The younger ones among the First Hundreds do not accept the idea of terraforming. They formed a new group to voice their ideas and labelled them as 'Greens'. They want change but blindly follow Frank because there is no one to guide them. Hiroko, the founder of the Areophany movement, says: "A nation founded in genocide is not what we want" (*GM* 365). But Ann answers that a bloodless revolution is not possible.

The revolutions found in *Blue Mars* and the conferences in *Green Mars* are closely associated. Both are intended to establish internal coherence, to determine the defining principles held in Mars by Robinson. Martian politics exist inside and outside Mars. The revolutions held in Mars are held as resistance to the influence of Terran. In terms of geographic domain, Terran history is external to Mars because it is interrupted by Earthmen from Earth. The Martians decide to use internal pressure to protect the division between Mars and Earth. It requires and produces resistance to imagine an alternative to the history of Terrans. So, they agree to disconnect the communication.

Next to culture, science is also a political factor in Martian politics. Science is becoming increasingly politicised because of its interactions with the environment. On the other hand, politics is influenced by scientific perspectives through the protagonists of the trilogy. As the Martians build their resistance against Terran forces, their political strategies vary like scientific experiments. This is most evident in the reflection on earlier revolutions and their results. This article shows the shifting scientific perspective, which offers possible analyses of the *Mars Trilogy's* democratic processes.

In its first chapter, The *Red Mars* dramatically highlights the ideals of John Boone, the first man on Mars, against the harsh suspicion of Frank Chalmer, the United States ambassador to Mars. Cho argues that "... in Robinson's *Red Mars*, separation is carried out symbolically, rather than physically, when the first hundred ignore the parameters of the UN Charter" (67). This separation is sufficient for the idealist John to assure a crowd of followers that they all become "fundamentally different beings" (*RM* 4). However, for his long-time antagonistic friend Frank Chalmers, these are "all lies, but lies were what people wanted; that was politics" (*RM* 7). Frank Chalmers plots the murder of John Boone, thinking that he is his political rival and commits a pure political murder. Markley calls it "an act of near-biblical betrayal" (788). This highlights the ethical disparity between would-be brothers John and Frank and the stretched history of violence on Earth. Robinson succeeds in lowering the expectation of a clean break from history with the murder of Boone.

Spirituality is yet another political factor in Martian politics in the *Mars Trilogy*. Robinson, through Frank, recognizes the Martian terrain's spiritual influence. But his contempt for the Arab faction reminds him that the new world can still be destructive. Machiavellianism is a political theory by Niccolo Machiavelli, which views that any means can be used if it is necessary to maintain political power. So Frank uses murder as a tool to succeed in the political field. Revolution is a tool used to bring about change; thus, it is used in the process of reterritorialization of Martian politics. The first revolution had its historical importance on Mars, and the preparation for it is skillfully portrayed by Robinson. Arkady Bogdanov invigorates socialist ideals and emphasises the possibilities of an autocratic settlement; thus, "Everything should be redesigned from the beginning, with our own thinking expressed" (*RM* 59). Arkady tries to influence his peers with a socialist approach. But the power of the Terrans on Mars grows, and Arkady assures John that:

It will take something much more radical to stop these people, John. Direct action . . . Seizure of some property, or of the communication system - the institution of our own set of laws, backed by everyone here, out in the streets . . . Mass demonstration and mass insurrection are the only things that will beat them, history shows this. (*RM* 334).

Arkady, an outspoken revolutionary of the First Hundred, is killed in the 2061 revolt. Due to the vulnerability of the Martian settlements, the first revolution was a total failure.

Arkady's inventions made the Martian towns doomed by translucent plastics and these fragile biotopes are easily poisoned by leaving or adding oxygen and then burning the air. Arkady is killed in a Carr Crater firestorm, and Cho argues that, "Robinson is clearly not interested in glorifying or romanticising revolutionary violence" (68). Arkady is not a martyr, but one of the many deaths on Mars, and his revolution only brings destruction.

Sixty-six years later, in 2127, another revolution breaks out. Despite the first failed revolution's disillusionment, especially among the First Century, the Martians try twice again. Zizek and Bloch observe and say about the failure of first revolution thus:

The failure of an action creates the conditions for its success so that it can be repeated, even begging. On this utopian account of repetition, the technique of Robinson is actually an attempt to reclaim the utopian kernel of the revolutionary method. As a result, the Green Mars revolution redeems what is missed in the monstrous Revolution of 2061. (71)

Similarly, the Dorsa Brevia conference tried the same goal of the first conference. When a declaration of common principles is held at the Dorsa Brevia conference, the failed revolution is a hot topic. At the conference, arguments included 'Mars as a community' and 'effective forms of resistance'. Of the two general meetings that take place every day it is said, "One . . . would focus roughly on the problems of achieving independence, the other on what came after" (*RM* 341). Art Randolph talks about the means and ends of the meetings. One of the means under scrutiny is the 2061 revolution. As Cho writes, "the fact that (it) failed in the past is not evidence that it is outmoded or incompatible with Utopia" (72). Thus, it has a completely new concept.

Robert Markley, notes from the Dorsa Brevia Conference of 2128 Constitutional Congress notes that "(they) are foreshadowed, in some respects, by the scientific conference on the progress of terraformation" (34) Here, political influence (Terran) is tainted by scientific discussion. According to Markley, this "blasted ideal of disinterested politics" becomes "... the animating force behind the efforts . . . to broker an ecologically sensitive politics . . . What finally succeeds at Dorsa Breva and the constitutional conference is the process of compromise itself, a kind of Utopia by committee." (791) Thus, Martian ecology became a hot topic of Martian politics. Scientific inventions are affecting the Martian environment.

The adjustment to a more political mindset does not necessarily impede the protagonist's scientific prowess. In fact, the conference in Dorsa Brevia presents scientific modelling and experimentation as a definite means of solving political problems. The conference is organised by the Swiss, a model for rational diplomacy by Robinson which borders on stereotype. They cast the future of Mars as a set or system of separable engineering problems by dividing the conference into different workshops.

The positivist perspective gets crowned on Mars and becomes influenced. Markley draws one's attention to the "historical simulations" and "oxymoronic phrase" (775). Simulation is essentially creation, because it creates a simulacrum. Although simulation does not change the material world, it is real and presents another world that is cognitively structured and perceptible. Markley opines thus, "sci-fi does not represent historical experience but generates simulations of what that experience may become" (774). One can argue that the scientists at the Dorsa Brevia conference, imagined the past, present, and future history. Various models are compared in the 2061 revolution workshop and hypotheses about a successful revolution are tested. Sax surface is the passionate disinterested voice of scientists and also the cause of disappointment. Sax in the conference stands over his head and waves to Ai. He feels crushed and says, "Need facts -first, Then the dialysis- the analysis" (GM 361). The groups are in search of facts and truth.

The most important simulations are terraforming simulations. The Dorsa Brevia Conference goes beyond the ecological impact of certain interventions and considers all the issues in political terms. Interestingly, Terran's external pressure is used as an argument for terraforming. The 2061 workshop posed 'the atmosphere on Mars' as a decisive factor. Later considers this issue as the revolution's failure. Ethical arguments regarding the bias of terraforming are not accepted. Tented cities were easily destroyed. Robinson presents the inevitable argument between Ann Clayborne, a geologist who opposes terraforming and Sax The spearheading of terraforming over terraforming is considered the worst ending of Mars. But, with Sax, Ann practically shares the necessary synthesis of science and politics. The ethical arguments go against terraforming politics. Their discussion repeatedly shows that the ethical arguments against terraforming cannot be overcome. However, politicians offer Sax to solve the solvable, scientific problems.

During the independence revolution, Ann acts as a liaison between the Reds Kakaze and the rest of the Martian rebels. After the failure of conservative Red in the second revolution, she supported a more moderate, non-violent stance for the Red movement, to occupy high-altitude areas in order to keep them untouched and convince the population of the rightfulness of their cause through open debate.

Nadia, a part of the first and second Martian revolutions, forestalls and addresses the mob when the second revolution begins. It is said, "Now came the chaos. At the heart of any phase change there was a zone of cascading recombinant chaos. But there were methods to read it, to deal with it" (*GM* 599). It is only during this chaotic period that readers understand the efforts made in preparation for the revolution. It is clear that General Sax has developed revolutionary arms, satellites and tool kits that contain carbon dioxide masks. The integrated concept of pest management by Art Randolph properly describes the strategy, "a variety of methods of varying severity are used to deal with the pests you have" (*GM* 391). Pest management is a political issue, and it indirectly creates misfortune.

The second revolution proves to be successful with good experiments like 'the surface viability prediction' by Sax to track the possibility of oxygen in Mars. First, the oxygenated air allows Sax to set the security compound of the metanat on fire. Sax with this invention takes revenge for his torture and the burned civilians of 2061. Secondly, the levels of oxygen in conjunction with a high atmospheric pressure spell and face another tactic. When the Burroughs settlement is flooded by an act of misdirected violence, Sax's face masks allow the emigration of the city "symbolically walking away" (*GM* 523) "from the old system, the old way of life" (Jameson 415). To implement the government scheme of the United States, Burroughs are evacuated from their settlement by spilling Methane. Sax's face mask helps people save their lives.

However, the second revolution comes to an end. During the course of the war, the most violent Red revolutionaries lost their lives. They take over the first revolution's left off attitudes. They used separate destructive tactics for each situation. In addition, they are the most ideologically entrenched group that not only opposes the Terrans, but also many Martians. This is considered an example of politics within a political group and it symbolically shows the origin of budding political groups. In due course, the planetary ecology and climate gets established in *Blue Mars*. This resolves the antagonism that exists between the Reds and Greens.

A constitutional conference is held on Mars after the second revolution to temporarily reduce the influence of Terrans on Mars. The goal of the conference is internal consistency rather than a successful revolution. Robinson says, "They were in a bubble in history, a moment only; it could collapse any time" (BM 126). William Burling offers the difference

between revolutions and congress as 'popular struggle' and 'democratic struggle'. The former is (double-sided) like the opposition of Mars and Earth. This latter occurs in "... capitalistic societies where a 'variety of possible antagonisms' exists, many in opposition to each other" (*BM* 78-79). In this, the democratic antagonisms build a political consensus together but not necessarily resolved. When the Martians arrive at the constitution, the debate on terraforming is not fixed, but the different parties agree to create a common space for this discussion, which leads to the settlement of specific debates.

The constitutional congress is the yearly get together of all the settlers of Mars. It has different subjects, obviously using the same structure as the conference in Dorsa Brevia. The various topics discussed there reflect the different aspects of life that the constitution has to weigh against each other. Social engineering is the appropriate way to balance the various groups and interests on Mars. Since Nadia works to provide an all-inclusive political structure, "She was encouraged by the options Charlotte had described; they were structures, after all. Engineering of an imaginary sort, which nevertheless resembled real engineering" (*BM* 140) According to the leader of the 2061 revolution, Arkady's remarks on the social functions of architecture, there is precedent for the analogy between engineering and political line; "Buildings are the template of a society" (*RM* 59). Similarly, the constitutional congress tries to design a Martian society template.

Robinson highlights the obviously utopian possibilities of the various ideas and models presented at the conference, and it is said thus, "The potential was so delicious . . . To go from that to the mundane problematic of the constitution as written was an inevitable letdown" (*BM* 153). However, Nadia eventually decides that it is "time to drop the keystone in the arch" (*BM* 153) and asks all parties to complete their part of the constitution by maintaining the sociopolitical structure of Mars by balancing various interests.

The complexities bring more differences than similarities between its constituents. Burling recognizes the multiplicity of voices, but argues that "(The Martians) are used to the idea of multiple perspectives, and genuinely respect the existence of such views" (82). In the words of Robinson, there is no fixed action as far as "the political melange, the impossibility of block voting, or even thinking in the normal constituencies" (*BM* 151) is concerned. Thus, the interplay of various groups emerges. As Marina observes, "Everyone should make their living, so to speak, based on a calculation of their real contribution to the human ecology" (*RM* 298). When the Martians draw up their constitution, the most detailed topic is the transition from capitalist economics to eco-economics, a model developed by Vlad and Marina.

Science is a source of political power and is definitely subordinated to democratic decision-making. Robinson lists that "the days were long gone when Sax or anyone else could choose a terraforming project and then go out and do it" (BM 324). However, the work is done more efficiently as financial influence is kept to a minimum. It is said that "With scientists in control of their work, to a degree never seen in his (Sax's) youth on Earth, the work itself had an unprecedented rapidity and power" (BM 669). Knoespel comments on the elision of the workings of technological systems thus, "Although economic theories are considered, the finance systems that enable the Martian cities to be sustained are not described. As a consequence, technological apparatus . . . contribute to an ideological trajectory" (109). The Martians insist on strict democratic control of all systems.

The representation of the democratic process itself depends on the elision of crucial moments in order to resolve apparent binaries such as those between the Reds, the anti-terraforming group and the Greens, the terraforming supporters. Nadia's insistence on a final draft "... revealed something that had not been clear before, which was that most of the issues had been resolved to the satisfaction of most delegations" (BM 154). Her questioning of the democratic Martian process produces two observations. First, any political position is fluid and subject to constant change. The Martian political landscape thus allows for heterogeneity and hybridity. Robinson avoids the separation and opts for political positions based on ideology. The second observation is based on political identity and the objective of the democratic process. According to Burling, "the only possible objective and measure of political success is social agreement. Because, the relationships and identities of the antagonists and their differential elements are forever incomplete and permeated by contingency" (83). The political process does not end so far as it reflects the various political agents that are always in flux. The Martians finally agree with a society that is never completed but takes the form of a constant democratic process. The Martian environment court and eco-economics demands a sustainable ensured ecology and consider it as the heart of their constitution. Through the Mars Trilogy, Robinson moves from a mechanical view of the universe to integrate the limits of predictability and human consciousness in the form of the theory of emergence.

History is a strong factor in Martian politics. History is a changing configuration of materials and the political agents are active as the congress is, by analogy, part of a structure from which a new formation emerges. The strongest arguments for political analysis come from the *Mars Trilogy's*, *Blue Mars* which reflects their political history. The interest of Sax in humanities leads him to analyse history and politics. He thinks that "One could try to regard politics as a kind of science - a long series of experiments in communal living . . . Certain constants or principles seemed to have emerged over the centuries" (*BM* 433-434). Charlotte Dorsa Brevia, who is largely responsible for the organisation of both the Dorsa Brevia conference and the constitutional congress, gives a 'meta-history' describing "an emergent complex of overlapping paradigms" (56), in which all great socio-political era consists of approximately equal parts of the systems immediately contiguous to their past and future. Althusser describes over determination as "the reflection in contradiction itself of its conditions of existence, that is, of its situation in the structure in dominance of the complex whole" (209) The illogicality in the history of Althusser is not pure form, it has has a "variation" of the historical situation in which it exists. In simple words, Mars and Earth are not absolute binaries; the contradiction between them is determined by present and past history.

The Terrans' past to the Martians is "a positive and active structural reality" (Althusser 115), and it does not suddenly fall away after the revolution. The third revolution is the most successful attempt at a synthetic, non-violent, smooth 'areogel revolution'. And even this revolution needs constant affirmation to succeed, an ongoing attempt to "take the moment and wipe it in a new direction, a new treaty with Earth" (*BM* 756). Old treaties need to be revised and rewritten.

After so many natural disasters, Mars remains fresh. It has forbidden its immigrants from Earth, which has made the Martians lose hope in the Mars government because it has broken its laws. Mars expects a new government, and a political emergency is declared on Mars and the planet is ready for war with the request that "The Earth-Mars relationship has to be renegotiated" (*BM* 745). In the beginning, when the 'First Hundreds' began their journey to Mars, they were together and shared each other's happiness. Even though they process different philosophical strategies, they were able to overcome it with adjustment. Egoism did not rule them because they were vulnerable in the beginning of their travels. When the *Mars Trilogy* ends, their philosophical thoughts, egoism, selfishness and materialism result in the birth of numerous political groups. This leads to the reterritorialization of Martian politics by deterritorializing past Earthian politics.

The scientific development of a political system promotes this, and all Martians eventually adhere to it. Technological means are both problematic and endowing for the political problems faced by the Martians. The re-establishment of a space elevator "is the persistent emblem of the threat of Terran politics and intervention, and the dilemmas of Mars' autonomy and" delink "(Jameson 412). Martian politics has been developed to counter both the destabilising and unpredictable technological impulses and Terran communities 'neuroticism'.

## **WORKS CITED**

#### PRIMARY SOURCES

Robinson, Kim Stanley. Blue Mars. New York: Bantam Books, 1996. Print.

- ---. Green Mars. London: Harper Collins, 1996. Print.
- ---. Red Mars. London: Harper Collins, 1993. Print.

### SECONDARY SOURCES

- 1. Althusser, Louis. For Marx. Trans. Ben Brewster. The Penguin Press, 1969. Print.
- 2. Burling, William J. "The Theoretical Foundation of Utopian Radical Democracy in Kim Stanley-.Return to Mars. New York: Eos-Harper Collins, 1999. Print.
- 3. Robinson's Blue Mars". Utopian Studies 16.1 (2005): 75–96. Print.
- 4. Cho, K. Daniel. "Tumults of Utopia: Repetition and Revolution in Kim StanleyRobinson's Mars Trilogy". *Cultural Critique* 75.1 (2010): 65–81.Print.
- 5. Derrida, Jacques. Dissemination. Trans. Barbara Johnson. Chicago: The University of Chicago Press, 1981. Print.

- 6. Jameson, Fredric. Archaeologies of the Future: The Desire Called Utopia and Other Science-Fictions. New York: Verso, 2005. Print.
- 7. "The Politics of Utopia". New Left Review 25.1 (2004): 35–54. Print.
- 8. Knoespel, K. "Reading and Revolution on the Horizon of Myth and History: Kim Stanley Robinson's Mars Trilogy". *Configurations* 20.1-2 (2012): 109–136. Print.
- 9. Leane, Elizabeth. "Chromodynamics: Science and Colonialism in Kim Stanley Robinson's *Mars Trilogy*". *Ariel* 33.1 (2002): 83-104. Print.
- 10. Markley, Robert. "Falling into Theory: Simulation, Terraformation, and Eco-Economics in Kim Stanley Robinson's Martian Trilogy". *Modern Fiction Studies* 43.3 (1997): 773–99. Print.
- 11. Pak, Chris. Terraforming: Ecopolitical Transformations and Environmentalism in Science Fiction" Liverpool Science Fiction Texts and Studies 55 (2016): 168–03. Print.
- 12. Seed, David, ed. A Companion to Science Fiction. Oxford: Blackwell Publishing, 2005. Print.
- 13. Suvin, Darko. Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre. New Haven: Yale University Press, 1979. Print.
- 14. Wells, H.G. A Modern Utopia. Auckland: The Floating Press, 1905. Print.