

Tor Magnus Sjømæling

In the Shadow of Prophecy: Inevitability in Herbert's Dune and Asimov's Foundation

Bachelor's project in ENG2502

Supervisor: Yuri Cowan

January 2019

Tor Magnus Sjømæling

In the Shadow of Prophecy: Inevitability in Herbert's Dune and Asimov's Foundation

Bachelor's project in ENG2502
Supervisor: Yuri Cowan
May 2019

Norwegian University of Science and Technology
Faculty of Humanities
Department of Language and Literature



Tor Magnus Sjømæling

Professor Yuri Cowan

ENG2502

15 May 2019

In the Shadow of Prophecy:

Inevitability in Herbert's *Dune* and Asimov's *Foundation*

Prophecies are rooted in the idea of potentiality. In contrast, this same potentiality is also concerned with inevitability. Without this tension between inevitability and potentiality, the potentiality of prophecies falls apart. Frank Herbert's *Dune* and Isaac Asimov's *Foundation* series are both science fiction novels with plots about prophecies interconnected with the theme of inevitability. We will be taking a closer look at Paul Atreides' rise to power in *Dune*, and the events of the *Foundation* novels and how one prophecy succeeds in defending a nation singlehandedly. The type of inevitability we see in these novels raise valid questions revolving the driving forces behind these prophecies, how personal responsibility of future events matter in the face of an inevitable future that is already written, what the ramifications of these prophecies are in these two fictional novels and how they affect its heroes and universe. It is vital to establish who holds precedence over whom and whether it is future history, or prophecy, that puppeteers the individual, or the individual who controls their own destiny. If prophecies are meant to be the bringers of growth and potentiality, then we need to understand how this potentiality ties into inevitability which is an element not usually depicted with something as hopeful as potentiality. Another important component to unfolding the novels' prophecies is chaos theory which will be used to explain the inner workings of inevitability pertaining to these two specific narratives. In exploring this tension between potentiality and inevitability, this paper will utilise Frank Herbert's *Dune* from 1965

and all of Isaac Asimov's *Foundation*, *Foundation and Empire* and *Second Foundation* novels from 1951, -52 and -53, respectively.

The plot in *Dune* follows the young protagonist Paul Atreides as he begins his new life on the desert planet of Arrakis. Initially, the story of *Dune* looks like it revolves around the control of a precious resource and drug called the spice that only exists on the arid desert planet, but it quickly evolves into a story about Paul's awakening as the Kwisatz Haderach. The Kwisatz Haderach is a superbeing and the prophesized messiah of the native inhabitants of Arrakis, also known as the Fremen. It is with these people that Paul finds purpose as they help him learn the ways of the treacherous desert planet. Slowly, he also grows to accept the role of messiah that is thrust upon him. What Paul does not know is that this prophecy, among several others, was planted by the sisterhood of witches known as the Bene Gesserit long before the events of the novel begin. Their vision is to bring humanity to the next level, and they do this by manipulating bloodlines and arranging marriages from behind the scenes so that the ultimate superhuman being can be created to usher humanity into a new era.

In *Foundation*, we follow a series of events in a prophecy set in motion by the psychohistorian Hari Seldon. Psychohistory is a term created by Asimov, which is meant to resemble actual chaos theory, and is a discipline in the novel that studies the flow of past human trends to predict future history via the combination of psychology and sociology. The story does not follow one protagonist, like in *Dune*, but instead shifts between many different characters throughout time as their actions influence key moments in history. The Foundation, a group of scientists relocated to the remote planet of Terminus by Hari, are a focal point in this story. They serve as the remaining humans tasked with paving the way to a new galactic empire while the rest of the galaxy fall into barbarism in the present dark age that we see begins in the first novel. The scientists of the Foundation make it through a series of historical crises guided by holographic messages left behind by Hari; moreover, they are

also aided by a secret Second Foundation from the shadows, whose obligation it is to ensure the prophecy continues along its intended path by any means.

Both *Dune* and the *Foundation* novels are heavily centralised around prophecy, and an important part of what defines a prophecy in *Dune* and (especially) the *Foundation* series is the term *manifest destiny*. Historically, this is a term that dates to the idea of American manifest destiny in the 18th century (Käkelä 435). We see an example of manifest destiny in *Foundation* when Hari first reappears after his death as a hologram before the scientists of the Foundation. In this chapter, Hari tells the scientists of their true purpose, revealing his plan and granting the scientists providence of their promised future (*Foundation* 92-96). Hari demonstrates here the concept of manifest destiny by assuming ownership of a potential future and presenting it as fact. It sounds like an absurd and intangible idea to give away a portion of the future, but it becomes plausible when one obtains complete understanding of the principles of psychohistory, or chaos theory, which Hari did.

Chaos theory is a deeply complex science extrapolated from many different fields of study that have been around since the late 18th century. However, it was not articulated as chaos theory until the 60s. Despite this, Asimov effectively intuited and applied the concept for his *Foundation* novels (Riggs, 481). Ilya Prigogine, an early chaos theorist, describes chaos theory as a cosmic death and rebirth cycle that serves the purpose of the ‘ego’s passage through various “rites of passage” from one identity to another ... which reflects the constant metamorphosis of the universe’ (qtd. in Maertens 246). This is exactly what happens in both *Dune* and the *Foundation* novels. In *Dune*, Paul is harkening humanity into a new chapter with his newfound powers, and in the *Foundation* novels, each crisis symbolises necessary trials that the scientists of the Foundation must overcome to become what they need to be. This very cosmogonic cycle of continuous death and rebirth from ashes is what *Dune* and the *Foundation* novels capture so well, and it would be unachievable without the dynamic

between inevitability and potentiality (Maertens 246). The universe is in a constant state of change, and chaos theory reflects this. It is when a subjective party obtains control of this unstoppable force of change that conditions of potential growth or tyrannical destruction can be facilitated.

Michael Shermer explains how a series of events creates ripe conditions for significant change, producing a limited range of future possibilities that resemble each other. These contingent events are sensitive to initial conditions, meaning that the slightest variation of the initial conditions will have noticeable long-term consequences (Shermer 63). The biggest priority for anyone attempting to facilitate a specific series of events would be to ensure the highest likelihood of those events happening, and it is this that brings us to fractal aesthetics.

Fractal aesthetics are characterised as a structure inwardly like itself at infinitely decreasing levels. Looking at it will reveal similar patterns that, while seemingly chaotic, results in a kind of order. (Maertens 245). Fractals are like the pieces of historical events that lead to other similar events in a chain much like the butterfly effect which is an effect characterised by how ‘small actions by individuals can lead to massive changes on other scales’ (Maertens 245). In *Dune*, we see how Paul’s father, Leto Atreides, alludes to this concept in his *feint within a feint* speech: ‘Knowing where the trap is – that’s the first step in evading it. This is like single combat, Son, only on a larger scale – a feint within a feint within a feint ... seemingly without end. The task is to unravel it’ (*Dune* 47). In this quote, Leto essentially describes much of how the plot in the two series are constructed. The importance of proactively anticipating your opponent and taking control of the flow of events to gain an upper hand are key in both *Dune* and the *Foundation* novels. However, this theme on disguises within disguises is only one level of fractal aesthetics. Another example would be the *snatching victory from the mouth of defeat* theme in the *Foundation* novels which is a

theme reiterated again and again in similar, but never quite identical, narrative patterns (Maertens 245).

A prophecy is not a living organism that can distinguish between morals of right or wrong, but a human concept constructed for the purpose of predicting one, or several, events in the future. It is like a narrative that has already been written. This narrative is dependent on the execution of a series of contingent historical events to finally lead to a specific future over others. It then stands to reason that for any prophecy to produce anything fruitful there must be an outside overarching force with an inherent will, or personal agenda, to drive it towards an outcome that manipulates pivotal moments in the present which serves to twist the paths of history to one desired endpoint that can be rooted in either hope or despair (Huntington 351). Without any such shepherd to guide it, a prophecy's ability to steer itself towards any specific outcome would lead to unfavourable results. If a prophecy is so reliant on an overarching force to guide it then the prospect of inevitability requires some defending. The fact that a prophecy even needs to be guided is a critical weakness for a prophecy that is supposedly meant to be inevitable. So, what is it that drives these prophecies to make them appear so inevitable? The answer is humanity itself.

In *Dune*, the masses themselves seem to compel Paul towards his apparent destiny where he plays out that destiny through the power of his prescience:

Wild legions would charge into battle screaming their war cry: 'Muad'Dib!' *It must not be*, he thought. *I cannot let it happen*. But he could feel the demanding race consciousness within him, his own terrible purpose, and he knew that no small thing could deflect the juggernaut (*Dune* 341, italics original).

One could ask here why Paul does not just desist from the prophecy altogether if he knew it was going to end badly for him which he clearly understands through reiterating emphasis of his terrible purpose numerous times. The key lies in the *juggernaut*; furthermore, this word

symbolises the immensity of his prescience and how it propels him forward. This could imply that the inevitability in the prophecy is driven by such a colossal force that he alone could never hope to alter its set trajectory so long as the dominant force is intent on that scenario's execution. We see an example of this later in the novel where Paul describes him resisting the will of this force as 'a river hurtling toward a chasm' (*Dune* 418). This force could very well be the weight of humanity itself, which Paul grows to acknowledge and even fight for in his own warped way at the cost of himself (DiTommaso 283). Juan A. Prieto-Pablos even goes so far as to compare Paul to a god, saying he is the Kwisatz Haderach 'whether he wants it or not' (Prieto-Pablos 68). This would mean that Paul's will is, in a sense, governed by the will of humanity.

When discussing the overarching force behind a prophecy like this, it is important to remember that it is the sisterhood of witches, the Bene Gesserit, who are the conjurers of the prophecy in *Dune*. Even though the prophecy may appear to move of its own volition by the force of humanity, it is due to the Bene Gesserit preparing that prophecy that allows for those events to unfold in the landslide-like manner that they do, very much like a snowball-effect. This brings an interesting point of view to light which is that of humanity as the blind contributors to the churning of the great wheel that is the overarching force in these inevitable prophecies. If you could harness humanity's power and make it move in the direction you wanted, then such a terrifying power could be manipulated to shape the universe into any form desirable. But there is more to it than just initiating the prophecy. The relationship between the *unconscious* movements of the masses and the *conscious* actions of its constituent individuals play a precarious balancing act as the prophecy develops (DiTommaso 279).

A prophecy's potential is nurtured by the relationship between the unconscious masses and the conscious individual, and in the *Foundation* novels Hari illustrates how he

has managed to chart the future in such a way that the scientists of the Foundation only need to act when there is no other choice. This plan gets named the Seldon Plan and is a plan that successfully predicts humanity's movements in favour of the Foundation. Hari almost makes predicting the future of the blind masses look easy, but it becomes a different story when dealing with individuals. As per the nature of chaos theory, the *Foundation* novels explain that psychohistory can only calculate possibilities and cannot promise absolutes (*Second Foundation* 117). This is because individuals have the power to influence the force of the masses. So, what happens when someone is informed of your plan, or not even accounted for? It is for this reason Hari prepared secret countermeasures; he created the hidden Second Foundation. Their purpose would be that of a proxy, handling unforeseen circumstances that posed a threat to the Seldon Plan so that it would be able to continue unobstructed. This was a highly strategic move on Hari's part to offset unpredictable variables that psychohistory could not account for.

We have learned how tenuous a prophecy can be as the force of humanity can be affected by an individual. It is paramount that a prophecy is guarded and upheld to proceed as intended, but instances of this failing happen in both *Dune* and the *Foundation* novels precisely because of individual action. In the very beginning of *Dune*, we learn that Jessica, Paul's mother, was never meant to give birth to a boy according to the plan of the Bene Gesserit sisterhood. But because she did, the prophecy had to accommodate that change. Luckily for the Bene Gesserit, the change does not have devastating consequences and only forces them to expedite their plans sooner than they would have liked. Another example is Yueh's betrayal, a man trusted by the Atreides family who deliberately murders Paul's father to further his own agenda (*Dune* 171-172). Interestingly, both of these events lead Paul to the Fremen so he can discover his destiny. These events are small in scale, but they illustrate just

how powerful individual action is and how crucial the butterfly effect is in changing the course of history.

The *Foundation* novels see its prophecy threatened in the second novel, *Foundation and Empire*, by a man called the Mule. He was a mutant warlord who succeeded in conquering the Foundation for a time, and he would have shattered the Seldon Plan to pieces had it not been for the intervention of the Second Foundation. However, in dealing with the Mule, the Second Foundation became active participants in the prophecy they were only meant to shepherd: 'We revealed our existence, and, infinitely worse, a portion of our power. The First Foundation has learned of us, and their actions are now predicated on that knowledge' (*Second Foundation* 120). Here, the term *active agent* becomes vital. In the case of the Second Foundation, they revealed themselves too early and made the Foundation aware of their existence, meaning the Foundation's actions were, from then on, predicated on knowledge they should not have. The reason this is so important is because this causes the Foundation to no longer move along its natural course of evolution that Hari predicted in his plans. This causes a temporary deviation from Hari's prophecy where the Foundation actively attempts to locate and destroy the Second Foundation, whom they now perceive as dangerous. Desperate, the Second Foundation sacrifices fifty of their own to trick the Foundation into believing they have been defeated which finally succeeds in reverting the prophecy back to its original course (*Second Foundation* 251-252). This is an example of the unveiling of the agent which brings with it all manner of chaos since it makes the unconscious masses aware of who is attempting to control their destiny. But it also serves to demonstrate the resilience that prophecies can have when faced with disorder and how rich with potential a prophecy can be if tended to properly. With this in mind, we move on to the topic of individual responsibility.

Paul gains a superhuman awareness of his role in the universe as an individual thanks to the spice augmenting his powers as Kwisatz Haderach. In his *theatre of processes* speech we learn how Paul feels like he has lost his position in time, causing past, present and future to become intermingled (*Dune* 410). This shows that Paul understands how every action he takes brings dire consequences for the future and decides what future, out of many possible futures, gets chosen. Fundamentally, this is an ability inherent to everyone. Anyone's actions can and will affect the world around them in various ways. Chaos theory does, after all, explain that the slightest individual action can have tremendous impact on history, a fact we see multiple examples of throughout both *Dune* and the *Foundation* series. But what makes Paul so unique here is the fact that he is *conscious* of this power. While he cannot always see a specific future clearly, he can see blurred visions of possible futures intermingling with each other. And even the slightest movement he makes dynamically changes these visions.

Isaiah Berlin argued that 'a predictable and hence inevitable historical process eliminates the possibility of personal responsibility' (qtd. in Rotenstreich 385). What this means is that if the future could be predicted, then the authority of the agent is removed. Naming the future as something that can be predicted would imply that it has, in a sense, already happened. To Berlin, this is the same as positing that the future is the past, since only the past can be *known* or function as a proponent of history as it happens in the present. Thus, if predicting the future was possible, it would mean admitting that temporal remoteness—meaning the distance between future and present—is not essential to determining the nature of the future (qtd. in Rotenstreich 386). If this is true, then is it even possible to establish any historical responsibility for the individuals in *Dune* and the *Foundation* novels who are acting, or not acting, in accordance with a prophecy? To Berlin the counterargument is as simple as pointing out that the future cannot be the past, and that if it were, then humanity would settle into a complacent role of continuous postponements:

In the ... flow of ... process[es] towards the future we are cast upon reefs of subjectivity where we find ourselves possessed of the power to shape, ... where we experience history actively, where we no longer postpone deliberate experience, bequeathing it to those who shall come after us, in the future. (qtd. in Rotenstreich 387)

Here, Berlin distinguishes between what it means to actively take responsibility, versus the act of giving up responsibility and postponing your *power to shape*. In the latter scenario, the prophet of a given prophecy has, effectively, sanctioned all actions in the current present and convinced its participants that the future will redeem whatever imperfections there are in the present (Rotenstreich 387). It is very much this feeling that the scientists of the Foundation feel as they rely more and more on the Seldon Plan to save them in the event of a crisis, going so far as to actively do nothing so the prophecy can play itself out (*Foundation* 281). But not all participants of the *Foundation* universe follow this philosophy; some believe the prophecy to help those who help themselves which is a testament to the power of individual action and responsibility that lies at the heart of the *Foundation* novels (*Foundation and Empire* 127). In sharp contrast to this, *Dune*'s Paul becomes a character who acts as if he is history itself where his prescience puts him in a role of postponement as events unfold around him. Nevertheless, this does not absolve Paul of responsibility, and it presents us with a flaw in his character. Rotenstreich says 'at times history befriends man, at times it besieges him and there is no denying its overwhelming force. All the same, history does not create man' (Rotenstreich 391-392). The essence of this citation ultimately translates to how humanity is the sum of their actions. Paul's flaw is that he lets the sum of his humanity become measured by his inaction. This looping dynamic between the present and his prescience serves to trap Paul in a tragic prophecy that, by the end of *Dune*, truly becomes inevitable.

Humanity itself is an important contributor to what makes prophecies appear inevitable and can be an overwhelming factor. While it may seem like it is the masses who are the driving force of a prophecy, it is in tandem with individual participants that a prophecy can move in a productive direction. Without the Bene Gesserit or the Second Foundation, these prophecies would not hold the same level of potential that they do. What differentiates the prophecies in these two universes is that the individual's actions in the *Foundation* series are what make up Hari's prophecy, while Paul's increasing inaction in *Dune* traps him in the Bene Gesserit's prophecy. The balance between the masses and the individual do not lean in Paul's favour, unlike in the *Foundation* novels where exercising individual freedom is seen to direct the course of humanity instead. This is a crucial contrast between the two narratives that shows just how differently inevitability can be applied while still upholding the prophecies' potentiality.

In conclusion, it is the balancing act between the force of humanity and its individual contributors that move a prophecy forward. This dynamic is essential as it is humanity's will and constant drive for self-betterment as a collective unit that constitute the inevitability in these prophecies which makes them into such a terrifyingly powerful force. At the end of *Dune*, in Paul's final battle, he comes to terms with humanity's will and accepts how it will even transcend him entirely should he die: '*if I die here, they'll say I sacrificed myself that my spirit might lead them. And if I live, they'll say nothing can oppose Muad'Dib*' (*Dune* 521, italics original). In that moment in time, Paul's visions blurred to the point where his fate became uncertain due to the magnitude of the historical event that the battle was. Whether alive or dead, Paul's purpose in the prophecy at that moment would have been fulfilled in a way, and humanity would have carried out the rest. Conversely, the Mule's failure to defeat the Foundation, despite having conquered almost the entire galaxy, was thanks to the individual involvement of members from the Second Foundation (*Second Foundation* 80-97).

Since they were not bound by prescience, they could instead play the role of humanity's shepherds to defend and nurture their prophecy.

Inevitability in prophecy can be a benevolent force but considering how Paul is involuntarily forced into a participatory role on a galactic scale can make inevitability and personal responsibility in prophecy seem malevolent and cruel. While this is true for *Dune*, simply labelling inevitability malevolent would be doing it, and all of chaos theory, a great disservice. In the bigger picture, the inevitability of these events, which are built upon its reiterating fractal aesthetics, prove to lead to both order and harmony through a series of processes that just seems chaotic on the outside. James W. Maertens said, when talking about fractal aesthetics, that these events 'remain ... seemingly chaotic, and yet out of them emerges a kind of order' and that it is this idea that 'characterize[s] the universe of chaos theory' (Maertens 245). *Dune* does end with a sense of reform after its conflict is resolved, showing that order is not necessarily always *good*.

Both *Dune* and the *Foundation* series show how the theme of inevitability permeates through every layer of the plot, its characters and their universe. While a prophecy can look mostly inevitable, it is never stronger than the sum of both humanity and the shepherds that guide it. This balance is tenuous, and both narratives show how individual actions can drastically change and potentially even destroy a prophecy altogether if control of the masses goes unintended. This dynamic between *conscious* individual action versus *unconscious* collective action in *Dune* and the *Foundation* universes is what determines the strength of inevitability in prophecy at its core, whether it is for the benevolent sake of creating the Second Galactic Empire or for the malevolent sake of unleashing a religious jihad upon the universe. Regardless of which it is, so long as the prophecies in *Dune* and the *Foundation* novels continue to meet these criteria, then those prophecies will have the potential to blossom into the final futures that their creators intended.

Works Cited

- Asimov, Isaac. *Foundation*. New York, New York: Bantam Spectra Books, 2004.
- Asimov, Isaac. *Foundation and Empire*. New York, New York: Bantam Spectra Books, 2004.
- Asimov, Isaac. *Second Foundation*. New York, New York: Del Rey Books, 2017.
- DiTommaso, Lorenzo. "The Articulation of Imperial Decadence and Decline in Epic Science Fiction." *Extrapolation* Vol. 48. No. 2 (2012): 267-291.
- Herbert, Frank. *Dune*. London, United Kingdom: Hodder and Stoughton General Division, 2015.
- Käkelä, Jari. "Asimov's Foundation Trilogy: From the Fall of Rome to the Rise of Cowboy Heroes." *Extrapolation* Vol. 49. No. 3 (2008): 432-449.
- Maertens, James W. "Chaos Theory, Asimov's Foundations and Robots, and Herbert's Dune: The Fractal Aesthetic of Epic Science Fiction." *Utopian Studies* Vol 14. No. 1 (2003): 244-246.
- Prieto-Pablos, Juan A. "The Ambivalent Hero of Contemporary Fantasy and Science Fiction." *Extrapolation* Vol. 32. No. 1 (1991): 64-80.
- Riggs, Don. "An Asimov Companion: Characters, Places, and Terms in the Robot/Empire/Foundation Metaseries." *Pocatello* Vol. 28. No. 3 (2017): 480-482.
- Rotenstreich, Nathan. "Historical Inevitability and Human Responsibility." *Philosophy and Phenomenological Research* Vol. 23. No. 3 (1963): 380-396.
- Shermer, Michael. "Exorcising Laplace's Demon: Chaos and Antichaos, History and Metahistory." *History and Theory* Vol. 34. No. 1 (1995): 59-83.

