JOURNAL OF SCIENCE FICTION
VOLUME 1 ISSUE 1

01 —
2016

Sponsored by the
Museum of Science Fiction
Washington, DC

Artwork by Mike Winkelmann

*MOSF Journal of Science Fiction*
Volume 1, Number 1 - January 2016

## Table of Contents

*MOSF Journal of Science Fiction*
Volume 1, Number 1 - January 2016

## Letter from the Editor

The prospect of creating an academic journal for the Museum of Science Fiction filled me with elation and trepidation. My months of research and planning would be for naught if I couldn't assemble the necessary teams of editors, peer reviewers, and—most importantly—authors who would breathe life into the *MOSF Journal of Science Fiction*. My vision was—and still is—not to replace the other well-established academic journals of science fiction studies that already exist, but to complement them.

The *MOSF Journal of Science Fiction* encourages people who can write a well-researched, well-argued paper to submit their work regardless of whether they are established academics or just entering the realm of enthusiastic research. For this inaugural issue, we received inquiries and submissions from all over the world, including Canada, France, Germany, India, Malaysia, Romania, Spain, the United States, and the United Kingdom. No two articles were alike, and while we couldn't accept every submission, we are thrilled to say we already have many more manuscripts under consideration for our next issue.

This first issue of the *MOSF Journal of Science Fiction* features four articles that explore science fiction through analysis of various themes, including—but by no means limited to—globalization, mythology, social commentary, and assemblage theory. Derrick King's discussion of Paolo Bacigalupi's critical dystopias explores utopian political possibilities that biogenetics could create, while Sami Khan's analysis of Hindu gods in three Indian novels reveals how closely mythology and social commentary entwine with science fiction. Karma Waltonen examines how female science fiction writers have used loving the "other" as a means of challenging societal taboos about sex, and Amanda Rudd argues that Paul's empire in Frank Herbert's *Dune* (1965) is an entirely new assemblage composed of rearranged elements from the previous ruler's empire and the indigenous Fremen culture.

We thank you, the readers, for supporting this first issue of the *MOSF Journal of Science Fiction*. We are incredibly grateful to the wonderful authors who submitted their works for consideration—you truly have surprised us with your talent and insight. Our heartfelt thanks also goes to the peer reviewers who played an essential role in ensuring the quality of our publication through your constructive critiques.

In closing, I wish to personally thank the co-editors who helped me make this first issue of the *MOSF Journal of Science Fiction* a reality: Rachel Lazarus, Heather McHale, and Barbara Jasny. This journal would still be languishing in creative purgatory without your dedication, guidance, and assistance. Thank you!

—Monica Louzon, MLS
Managing Editor of *MOSF Journal of Science Fiction*

## Reflecting on Science Fiction

*For the first issue of* MOSF Journal of Science Fiction*, our editorial team reached out to science fiction scholars around the world and invited them to tell us how science fiction has changed how they perceive the world. Here's what some of them said.*

"Science fiction is the genre in which I feel most at home, despite its association with the alien, futuristic, and off-world. Perhaps it's because science fiction was an integral part of my childhood, as present as religion was absent. My parents were self-described secular humanists who never spoke about God, although they frequently made reference to "grokking," a term that, even at an early age, I understood to mean a kind of spiritual communion (I learned of its Heinleinian derivation only after raiding my parent's bookshelf as a teenager). We lived in a small New York City apartment whose cramped quarters were expanded by big ideas, some of them about space and time, topics that fascinated my father. Copies of *Astronomy Magazine* and *Sky & Telescope* were strewn around our living room. During the summer, a large telescope was permanently positioned out our bathroom window. *Star Trek* was one of our few family rituals.

The first film I remember being taken to see was *2001: A Space Odyssey* at Hayden Planetarium. I was six years old, far too young to understand the narrative, but I still experienced the film as a kind of visual symphony. On my second viewing in college, I wept inconsolably during the final scenes with the Star Child and, when friends asked why, I was only able to express a feeling of primal longing. The longing was, in retrospect, for home, although not the one I had left behind despite my early encounter with the film. Rather, it was for the home I had yet to discover. The teleology and sense of inevitably that the film conveys in such poetic and monolithic terms filled me with a desire for meaning and purpose, both of which eluded me at that age. The power of science fiction has, for me, always been in part about the curiosity and even longing that it inspires in relation to the uncharted. By rendering the familiar strange and the strange familiar, science fiction fosters a psychological, spiritual, and intellectual reorientation that makes it not only a form of entertainment, but also a mode of critical inquiry.

A good deal of my current work as a digital media maker and scholar is focused on questions around media, technology, and the body—that is, the ways in which consciousness, perception, identity, and desire are mediated by, projected onto, and expressed through visual and communications technologies. I have found not only science fiction, but also what Istvan Csicsery-Ronay Jr. calls *science-fictionality*, "a mode of response that frames and tests experiences as if they were aspects of a work of science fiction,"[1] indispensable for both thinking through and helping my students to engage with these questions. Science fiction films, from *Metropolis* to *The Matrix*, have provided some of the most enduring critiques of the socio- and psycho-physiological effects of visual media technologies, from the cinema to the internet. It is the unique propensities of science fiction for self-reflexivity, in addition to its ability to reorient, that inspire me to return to it again and again."

—Allison de Fren, Ph.D.
2010 winner of the Science Fiction Research Association's Pioneer Award

[1] Istvan Csicsery-Ronay Jr., *The Seven Beauties of Science Fiction* (Wesleyan University Press, 2008).

"As a long-time science fiction reader, I no longer have much interest in novels of psychological realism. Realist novels tend to treat the world as a background to the foreground of individual character development and conflict. The world of such novels is a given and, therefore, requires very little attention except insofar as it impacts the characters who are central to its particular plots. In science fiction, the world itself is foregrounded and its characters are embedded in that world—whether that world is a future Earth, some other planet, or the whole of the universe. Psychological realism magnifies the specifics of the individual psyche, while science fiction is the genre of the zoom-out.

My favourite example of this comes at the end of H.G. Wells's short story, "The Star" (1897), which tells of the catastrophic impact on the Earth of a passing planetary body. In the final paragraph of his story, Wells shifts the perspective from human beings to that of astronomers on Mars. Viewed through their telescopes, the Earth seems barely touched, "which," as the narrator points out, "only shows how small the vastest of human catastrophes may seem, at a distance of a few million miles" (Wells, 1897).

Reading science fiction can also affect how one thinks about the relationships among past, present, and future. As has often been noted, science fiction can historicize the present, inviting us to view it as the past of some future time and, therefore, as having some direct responsibility for creating that future. Once again, Wells has given us a perfect example in *The Time Machine* (1895), in which the Time Traveller contemplates his own Victorian moment from the perspective of the radically transformed far-future world of 802,701. The implication in Wells's novella, of course, is that the Victorian present is more or less directly responsible for the devolution of humanity into the grotesque remnants that are the Eloi and the Morlocks. Also implicit in this is the idea that the future is not a single fixed and determined point toward which we are inevitably drawn, but something contingent and undetermined, capable of being shaped in many different directions. Everything in the world, both past and future, shares in this contingency, and this leaves us free to dream of worlds and futures that could be otherwise. Ultimately, science fiction has politicized my view of the world."

—Veronica Hollinger, Ph.D.
Co-editor of *Science Fiction Studies*

*MOSF Journal of Science Fiction*
Volume 1, Number 1 - January 2016

# Biogenetics, The Nation, and Globalization in Paolo Bacigalupi's Critical Dystopias

*By: Derrick King*

Abstract:
This essay explores the Utopian political possibilities of biogenetic seed production through a reading of two critical dystopian works by Paolo Bacigalupi: *The Windup Girl* and "The Calorie Man." These texts are set in a dystopian future in which food production is completely controlled by a handful of global corporations who have successfully genetically engineered seeds to be unfertile. While extrapolating tendencies of the present overlap between neoliberal global capital and the development of patented genetically modified (GM) food production, Bacigalupi's work also reveals fissures between the nation-state and global capitalism in the latter's quest for unfettered circulation of profits. This essay tracks Bacigalupi's representation of biogenetics across time and space, exploring how seeds and other genetic material can become a terrain of struggle between nation states and multinational capital and not simply a commodity through which value flows from the nation to global corporations. This essay argues that Bacigalupi's work educates our desire for an alternative to the current configuration of biogenetic engineering—not in the service of a nostalgic rejection of bioengineering, but instead a future-oriented transformation of the conditions in which bioengineering is used and a movement toward a utopian future.

*Keywords:* biogenetics, critical dystopia, globalization, bioengineering, transformation

Following the successful production of recombinant DNA—the ability to construct original DNA sequences in a laboratory—the first "genetically modified organism" (GMO) was created by Herbert Boyer and Stanley Cohen in 1973. In retrospect, 1973 would prove an important year for a number of other reasons as well. As Joshua Clover (2014) explains, 1973 marked a major "shift from industrial to finance capital" because of the publication of the derivative pricing formula known as Black-Scholes[2] as well as

> the first in a massive series of 'oil shocks'; the final collapse of the Breton Woods agreements setting the stage for increasing global trade and current account imbalances; the secular decline in industrial profitability and the departure from the Fordist mode of production" (p. 11).

Finally, 1973 was also the inaugural year of the politico-economic formation known as neoliberalism: following the U.S.-backed coup beginning on September 11, 1973, Milton Freedman and his "Chicago School" assisted the military dictator Augustus Pinochet in restructuring Chile's economy according to neoliberal principles (Klein, 2007, p. 8). These principles, which included corporate deregulation, resource privatization, and the slashing of

[2] Briefly, Black-Scholes allows for a "perfectly hedged portfolio that would earn a "riskless rate of interest" by exploiting mispriced assets (called "arbitrage") (Clover, 2014, p. 11). Unlike previous pricing models, Black-Scholes ostensibly allows for "mathematically rational option pricing, independent of guesswork about future turns of the market" (Clover, 2014, p. 11).

social welfare programs, were quickly imported back into United States, solidifying neoliberalism as a global "*political* project to re-establish the conditions for capital accumulation and to restore the power of economic elites" (Harvey, 2005, p. 19, emphasis in original).

While the simultaneity of these scientific, economic, and political shifts is largely a calendrical coincidence, the form in which biogenetics developed is tightly bound up with these post-1973 economic transformations and the rise of neoliberalism. For instance, Melinda Cooper (2008) argues that biogenetics was quickly taken up by the petrochemical and pharmaceutical industries as a response to the impact of the oil shocks in the early 1970s (pp. 22-23). Neoliberalism's drive toward privatization can also be seen in the passage of the Bayh-Dole Act in 1980, which had wide-ranging effects on scientific research. Cooper (2008) explains that, as a result of the Bayh-Dole act, "publically-funded science institutions would not only be authorized but well-nigh obligated to patent the results of their research," allowing this publically funded research to be "privately exploited by the patent holders, who might choose to issue exclusive licenses to large private companies, enter into joint ventures, or to create their own start-up companies" (p. 27). This act also captures the central operation of neoliberalism, in which the privatization of public goods—or the increasing enclosure of the commons—is achieved through state intervention. Kaushik Sunder Rajan (2006) uses the phrase "biocapital" to describe this conjunction of the life sciences and neoliberal capitalism, reminding us that the life sciences are always "overdetermined" by the "political economic systems in which they emerge" (p. 6).

Paolo Bacigalupi's (2009) award winning science fiction (SF) novel *The Windup Girl* delves into precisely this conjunction of economics, geopolitics, and biogenetics by imagining a dystopian future in which food production is completely controlled by a handful of global "calorie companies" who have successfully genetically engineered seeds to be non-fertile. Meanwhile, environmental catastrophe and food-borne diseases such as "cibiscosis" and "blister rust" threaten the world's remaining population. However, Thailand, where the novel is set, has achieved a degree of autonomy from global capital due to its possession of a large "unmodified" seedbank. While extrapolating key tendencies of the present overlap between neoliberal global capital and the development of patented GM food production, Bacigalupi's novel also reveals fissures between the nation-state and global capitalism in the latter's quest for unfettered circulation of profits. This essay tracks *The Windup Girl*'s representation of biogenetics across time and space, exploring how seeds and other genetic material can become a terrain of struggle for the nation state and multinational capital—not simply a commodity through which value flows from the nation to global corporations. Both *The Windup Girl* and Bacigalupi's earlier short story "The Calorie Man" (2008)—set in the same world as *The Windup Girl*—also engage utopian alternatives to biocapital and insist that other futures are possible. In *Windup Girl*, these alternatives take the form of this productive friction between the nation state and global capital in response to biopiracy. "The Calorie Man" extends this critique, ending with an authentically utopian moment in which genetically engineered (GE) seeds can become a part of the global common. Bacigalupi's fiction thus uses the dystopian form to imagine the possibilities for an alternative, post-capitalist future for biogenetics.

SF is a key site for cultural narratives about biogenetics to take shape because biogenetics itself is centrally concerned with the possibilities of the future. As Cooper (2008)

explains, biocapital production can be understood as a break with traditional industrial production in that it reverses the flow of commodification from the past to the future:

> While industrial production depletes the earth's reserves of past organic life (carbon-based fossil fuels), postindustrial production needs to depotentialize the future possibilities of life, even while it puts them to work. This counterlogic is perhaps most visible in the use of patented sterilization technologies, where a plant's capacity to reproduce itself is both mobilized as a source of labor and deliberately curtailed, thus ensuring that it never reproduces 'for free.' (p. 25)

Yet its depotentialization of future resources is not the only way in which biocapital is engaged in the management of the future. As Rajan (2006) explains, the "grammar of biocapital" is essentially "speculative" and concerned with the production of futures: because investment in biotech startups is always predicated on what *might* be produced, "hype" becomes speculative capitalism's mode (pp. 110-111). Within this speculative mode, "the future [is] always being called in to account for the present" (Rajan, 2006, p. 116). For financialized biocapital, the "future" thus becomes a resource, or something to be used up to advance the goals of capital accumulation in the present.

Biocapital thus depends on the neoliberal ideological climate that Mark Fischer (2009) calls "capitalist realism," or "the widespread sense that not only is capitalism the only viable political and economic system, but that it is now impossible to *imagine* a coherent alternative to it" (p. 2). Indeed, Rajan (2006) notes that his term "biocapital" attempts to capture the sense that biogenetic innovations are occurring within a socio-political framework (neoliberalism) in which capitalism is "considered the 'natural' political economic formation, not just of our time but of all times" (p. 3). It is here that SF can play a crucial role in questioning the inevitability of (bio)capitalist realism and—while it cannot provide a direct image of an alternative to capitalism—educate our desire for another kind of future.

At first glance, Bacigalupi's dystopian world might seem to acquiesce to such a dark vision of capitalist realism by presenting the likely consequences of our current path. However, I argue that we need to read Bacigalupi's work within the SF subgenre Tom Moylan (2000) names the *critical dystopia*, which is constructed to reveal both a bleak future and a hopeful alternative. The critical dystopia resists the ideological enclosure of capitalist realism and "reaches toward utopia not by delineation of fully detailed better places, but by dropping in on decidedly worse places" (Moylan, 2000, p. 106). If the classical dystopia suggests resistance will only end up making things worse, Fredric Jameson (2005) reminds us the critical dystopian text is in fact "a negative cousin of the Utopia proper, for it is in the light of some positive conception of human social possibilities that its effects are generated and from Utopian ideals its politically enabling stance derives" (p. 198). The addition of a desire for utopia, as well as an inkling that such an alternative is possible, distinguishes the critical dystopia from the anti-utopian defeatism of the classical dystopia. The critical dystopia thus keeps alive a radical systemic critique of the status-quo that serves as a warning against inaction or mere reformism.

It is through his dystopian vision of the future that Bacigalupi gives us both an estranged image of our present and the possibility of radical change. Kanya, a central character in *The Windup Girl*, provides an overview of its geopolitical setting:

> [The Thai Kingdom is] alive when whole kingdoms and countries are gone. When Malaya is a morass of killing. When Kowloon is underwater. When China is split and the

> Vietnamese are broken and Burma is nothing but starvation. The empire of America is no more. The Union of the Europeans is splintered and factionalized" (Bacigalupi, 2009, p. 214).

Thailand, however, is in the grip of a crisis, which primarily plays itself out through the conflicts between two government organizations: the pro-globalization Trade Ministry and the nationalist Environmental Ministry. Meanwhile, the calorie companies continue to gain a foothold in Thailand, looking to reestablish global trade and force the Thai Kingdom into their global hegemony.

Bacigalupi's work is thus centered on the global. This global focus is not surprising for a work of contemporary science fiction; as Phillip E. Wegner (2014) notes, a "crucial desire of contemporary science fiction is to think the global" (p. xv). Indeed, Bacigalupi allegorizes our contemporary global system through its figuration of a new global "expansion." The events of *Windup Girl* occur at a crucial juncture in Bacigalupi's fictional world: while our own period of globalization—or what the novel calls the "old expansion…when petroleum was cheap and men and women crossed the globe in a matter of hours" (Bacigalupi, 2009, p. 16)—has ended due to ecological and biogenetic disaster, a "new expansion" is underway. For the Calorie Companies, the new expansion means "the return to truly global trade. Supply lines that circle the world" (Bacigalupi, 2009, p. 63). For the Thai Kingdom, however, the new expansion means the return of the "calorie companies and their plagues and their patented grains" (Bacigalupi, 2009, p. 27). The novel's representation of biogenetics is centered on this tension between the nation and multinational corporations. What is ultimately at stake is not so much the autonomy of Thailand itself, however, but rather the ownership of the Thai seed bank. Indeed, the existence of the seed bank is the only reason the Thai Kingdom has been able to resist the Calorie Companies. The novel is an attempt to bring into focus these tensions between the nation state and global capital, particularly as these tensions intersect with the ownership of genetic material such as seeds.

In *The Windup Girl*, the Thai Kingdom also functions as a way of imagining nationalist resistance to global capital. Anderson Lake, who works for one of the world's major calorie companies (AgriGen), describes the significance of the Thai seed bank:

> Somewhere in the country a seedbank is hidden. Thousands, perhaps hundreds of thousands, of carefully preserved seeds, a treasure trove of biological diversity. Infinite chains of DNA, each with their own potential uses. And from this gold mine, the Thais are extracting answers to their knottiest challenges of survival. With access to the Thai seedbank, [the AgriGen labs in] Des Moines could mine genetic code for generations, beat back plague mutations. (Bacigalupi, 2009, p. 86)

Even Minister Akkarat, head of the Trade ministry and sympathetic to globalized trade, refuses Anderson's request to "sample" the seedbank, telling him that "the seedbank has kept us independent of your kind[…] When India and Burma and Vietnam fell to you, we stood strong" (Bacigalupi, 2009, p. 151). The novel offers a complex portrait of the intersections between globalization and biogenetics: while biopiracy and the patenting of genetic material are ways in which multinational corporations extract surplus value from the world's populations—and, as in the novel, this extraction overwhelmingly flows from the global south to corporations centered in the global north—genetic materials (cells, plant life, DNA) are also a point of resistance through which a nation-state might establish a temporary degree of autonomy from

multinationals. The primary task of *The Windup Girl* is to imagine these productive disjunctures between the nation state and globalized capital and interrogate how these disjunctures might open up onto political alternatives.

However, while the novel uses the nation state to undercut the seamless power of global capital, it not simply advocating nationalism as a solution to the problems of globalization. At the same time it demonstrates the friction between the nation state and global capital, the novel also points towards the limitations of any nationalist-based conception of politics. Bacigalupi primarily accomplishes his critique of nationalism by co-articulating the Thai Kingdom's nationalist resistance with a racist cultural nationalism in which immigrant workers and "windups," or genetically engineered human-robot hybrids used as soldiers or slaves, are treated as second class citizens—if they are allowed into the country at all. Immigrant workers—most of whom are from Malaysia, which is beset with religious violence—are pejoratively referred to as "yellow cards" and unable to find legal work. As Anderson explains, "Thai workers for Thai jobs. Yellow card refugees from Malaya are starving in the streets, but [factory owners] can't hire them" (Bacigalupi, 2009, p. 16). These immigrants primarily live in a large slum area precariously located by a seawall so that "if the seawall gave way, the entire slum would drown" (Bacigalupi, 2009, p. 69). This flooding becomes a very real possibility when Richard Carlyle, an employee of a calorie company, holds up a shipment of equipment for the city's levees (Bacigalupi, 2009, p. 97). The potentially utopian autonomy achieved by the Kingdom thus slides into a disturbing isolationism. Hock Seng, an immigrant factory worker, refers to the Thai Kingdom as a "sealed city" once the conflict between the Trade and Environmental Ministries turns violent, which results in the borders all being closed (Bacigalupi, 2009, p. 226). The novel ends with the city flooding, turning this isolationism into a death sentence for much of the Kingdom, but especially for the immigrant poor living in the slums.

Rather than advocating for one side in the conflict between the Thai Kingdom and the calorie companies, the novel is best read as an attempt to keep these two terms—allegorically, the nation and globalization—within a constant tension. While the nation remains a potential point of resistance which can never be fully subsumed under global capital, the ease in which it can be co-opted by capital prevents it from ever solidifying into a permanent alternative. In reading the novel, we should seek to keep this tension alive through a dialectical double negation in which the nation is used to critique globalization while the larger globalized system points to the inadequacy of an isolated nationalism. The goal in such a reading is to open the space for a neutral—or neither/nor—position that prefigures a global, utopian solution. As Jameson (2005) argues, the utopian solution to any ideological opposition lies in its neutralization, or the attempt to "retain two negative [positions…] along with their mutual negation of each other" (p. 180). In an ideological neutralization, the oppositions must

> neither be combined in some humanist organic synthesis nor effaced and abandoned altogether, but made more virulent, their incompatibility and indeed their incommensurability a scandal for the mind, but a scandal that remains vivid and alive, and that cannot be thought away […] the biblical stumbling block, which gives Utopia its savor and its bitter freshness when the thought of Utopias is still possible. (Jameson, 2005, p. 180)

Since the opposition between the nation and capital in *Windup Girl* and "The Calorie Man" revolves around patented biogenetic food production, I will ultimately suggest that the utopian

solution in Bacigalupi's SF world lies in the common, or a new form of unfettered, free growing and unpatented food crops.

Through this double negation of the nation and globalized capital, Bacigalupi allows us to imagine productive tensions around biogenetics that hold open the possibility of a utopian future. This tension is figured in the novel by the character Kanya, who is torn between her loyalties to both Akkarat from the Trade Ministry and Jaidee, the head of the Environmental Ministry. Indeed, her torn loyalty generates the larger ideological opposition between these two Ministries, allowing us to see how the globalization/nationalism conflict takes shape *within* the nation state itself. As I will argue, however, the infighting between these two ministries is always already framed within the flows of globalized capital. So while the opposition between the Trade and Environmental Ministries that plays itself out in the novel allows us to grasp the fissures or gaps between the nation state and global corporations, this struggle itself is already overdetermined by the larger economic structures of capitalism. Thus the utopian solution cannot lie in either the Trade Ministry's position or the Environmental Ministry's position, but must instead be a negation of both positons.

The novel's action takes place during a moment of shifting hegemony in which the Environmental Ministry's influence is giving way to the Trade Ministry's pro-globalization stance. Jaide observes that in the ten years he has worked in the Environmental Ministry, their "budget shrinks yearly while that of Trade increases" (Bacigalupi, 2009, p. 122). Minister Akkarat of the Trade Ministry becomes increasingly hostile to the Environmental Ministry, especially to Jaidee and his group of loyal supporters called the "white shirts." Unlike most of the Thai Kingdom's government, Jaidee and his white shirts refuse bribes from the calorie companies to import unapproved equipment and genetic material. For example, early in the novel, Jaidee and his supporters destroy a shipment of equipment and nutrient cultures imported by Anderson's company, despite the fact that Anderson has paid the customs agents to let the shipment pass (Bacigalupi, 2009, p. 52). Jaidee takes it as his mission to protect the borders of the Thai Kingdom from dangerous genetic material, which poses a problem for Akkarat, who desires the money and political influence the calorie companies can provide. The power of Akkarat and the calorie companies grows as the novel progresses, leading to the public humiliation of Jaidee and his eventual death. Kanya, Jaidee's second in command, is then promoted to head of the Environmental Ministry, an act which ostensibly secures Akkarat's victory since Kanya has been secretly working for him as a double agent. This victory is not absolute, however: after Jaidee's death, his ghost begins appearing to Kanya in visions, leading to her final act of loyalty to Jaidee in the novel's conclusion.

While the figure of Jaidee—both alive and as a specter haunting Kanya—represents a nationalist point of resistance to the multinational calorie companies, it is important to understand the ways in which the conflict between the Trade and Environmental Ministries is also overdetermined by the forces of globalization. It is not until the final moments of the novel that a true rupture becomes possible; prior to this moment, the calorie companies hold a great deal more power than even Minister Akkarat realizes, allowing the novel to demonstrate the limitations of national autonomy in an era of globalization. These limitations are revealed early in the novel when we learn that Anderson's company Spring Life—a front for his work for Agrigen—pays the Thai Kingdom "handsomely" to use part of their global "carbon budget" (Bacigalupi, 2009, p. 10). While the novel does not reveal the means by which a global carbon

budget is enforced, it seems to be modeled on contemporary "cap and trade" policies which turn carbon use amounts into a speculative commodity. Here, the deal between Anderson and the Thai governments reveals the limits of the latter's autonomy and how the Thai Kingdom is already enmeshed within the flows of global capital.

The limitations of the Thai Kingdom's national autonomy become more overt later in the novel when Carlyle reveals his plan to hold up a shipment of equipment used to keep the Thai Kingdom from flooding. By "holding the city hostage" to ensure Akkarat deals with the calorie companies, Carlyle demonstrates once again that the Thai Kingdom is already globalized (Bacigalupi, 2009, p. 97). He tells Anderson "the white shirts seem to have forgotten they need outsiders. We're in the middle of a new expansion and every string is connected to every other string, and yet they're still thinking like a contraction Ministry" (Bacigalupi, 2009, p. 97). In these passages, Bacigalupi works through the limitations of a strong nationalism under globalization. In a world in which complete national autonomy is impossible, no form of nationalism can become a permanent solution to the threat posed by multinational capital. Such a critique is reinforced by Bacigalupi's setting: by situating the novel's action during a second expansion—or a "repetition" of our moment of globalization—*Windup Girl* suggestions that any kind of contraction caused by ecological or biogenetic crisis would only be temporary. The novel reminds us that, for better or worse, we are struck in an era of globalization and that any form of politics we imagine must deal with this reality.

While the novel rejects a simplistic retreat to national autonomy, the ending also demonstrates that the forces of global capital can never fully subsume nationalist resistance, either. The novel concludes with the apparent victory of the calorie companies: sterile seeds are being introduced to the country and Akkarat has promised AgriGen access to the Thai Seedbank (Bacigalupi, 2009, pp. 342, 348). As she is overseeing the transfer of the Thai Seedbank to the AgriGen scientists, however, Kanya is visited by Jaidee's ghost. His appeal to her is explicitly nationalist, referencing the conclusion to the Burmese-Siamese War of 1767 which ended the Ayutthaya Kingdom: "would you not prefer to be remembered as a villager of Bang Rajan who fought when all was lost, and held the Burmese at bay for a little while, than as one of the cowardly courtiers of Ayutthaya who sacrificed a kingdom?" (Bacigalupi, 2009, p. 351). Jaidee's ghost also metaphorically associates the seedbank with Thai culture, telling Kanya it is more important to preserve the seedbank than the city (which will be flooded if they refuse to comply with the calorie companies): "…it is our people who carry the lifeblood of our country, not this city…it is our people who are everything. And it is this seedbank that sustains us" (Bacigalupi, 2009, p. 351). The kind of nationalist resistance Jaidee is proposing here is thus very different from the territorial, geographically-based state nationalism of the Thai Kingdom at the beginning of the novel. With Jaidee's encouragement, Kanya kills the AgriGen representatives and sends the seedbank away with a group of monks bound for "a secret place, far from calorie company reach, watched over by Phra Seub and all the spirits of the nation" (Bacigalupi, 2009, p. 353). As the city floods, Kanya, along with a new group of "white shirts," leads the city's population away from the flood, keeping the possibility of resistance alive.

The radical possibility embedded within Kanya's actions also reaches toward a global, potentially utopian future. Kanya's execution of the AgriGen representatives and measures taken to keep the seeds safe also allows for the possibility of a utopian solution to take shape later in the future. As Wegner (2014) argues in his reading of these final moments of the novel,

"*The Windup Girl* presents us with a striking refusal to let history, the concrete possibility for things to be otherwise, to come to an end" (p. 101). This refusal of historical closure is also figured in the appearance of Jaidee's ghost, which should not be understood as simply a reflection of the past, but rather an opening up onto the new. Here we might remember Derrida's (1994) reading of the specter in the opening sentence of *The Manifesto of the Communist Party*: the "specter of communism" invoked by Marx and Engels is only frightening for the bourgeoisie because it is "to come;" because "the specter is the future" (pp. 47-48). Ghosts are then never only about the past, but also the way in which the past causes us to act in order to bring about a different future.

Indeed, while Kanya's actions might seem to "resolve" the tension I have observed in the novel between the nation and global capital, it is significant that she only acts in the interests of nationalism *after* global capitalism has seemingly won. Prior to the moment of AgriGen's victory, she was keeping the two sides in tension within herself. Once the victor has been decided, she chooses to strategically align herself with the loser—not to resolve the tension between the two sides, but to keep it alive. By refusing to give AgriGen access to the seed bank and leading a new army of white shirts away from the city, she ensures the possibility of future struggles against their global hegemony. Kanya's actions are nationalism as negation: a strategic use of nationalist violence in service of a revolutionary movement against global capitalism. It is important that her actions are not based on the creation or maintenance of a strong nation state; they are simply the opening up of unimaginable future possibilities. As a negation of the forces of global capitalism, her actions also have a global dimension.

Such a distinction between Kanya's nationalism at the novel's conclusion and the Thai Kingdom earlier in the novel is important because the Thai Kingdom's nationalism is co-articulated with an anti-immigrant racism against both Malaysian workers and windups. Indeed, there are tense scenes in the novel in which Hock Seng (a Malaysian immigrant working for Anderson) and Emiko (a windup used as a sexual slave who, it later turns out, also has military software implanted within her) must both "pass" for Thai around groups of white shirts (Bacigalupi, 2009, pp. 204, 253). The case of the windups is especially important as it brings in issues of posthumanism and a critique of naturalist essentialism that will have a bearing on the representations of biogenetic seed technologies in Bacigalupi's fiction. Indeed, *Windup Girl* rejects the conservative position opposed to biogenetic engineering because it is "unnatural." Politically, this is a crucial move: not only does such a conservative position suppress the important issues revolving around global capitalism, but it also puts forth a nostalgic, essentialist imaginary of an "unspoiled" nature that is ahistorical and deploys homophobic and racist tropes. Precisely this sort of rhetoric is being deployed by the Thai Kingdom in *The Windup Girl*: as Emiko observes, she is considered by many "a transgression against niche and nature" (Bacigalupi, 2009, p. 106). The novel's critique of nationalist racism thus also extends to the kind of genetic normativity that reifies a conception of the natural. The utopian openings in both *The Windup Girl* and "The Calorie Man" reject such nostalgic positions, instead suggesting a repurposed biogenetic engineering pressed into the service of a new vision of the common.

While it is only in "The Calorie Man" that Bacigalupi makes explicit such a utopian possibility for seed production—although Kanya's refusal to hand over the seedbank to AgriGen keeps such a possibility alive—*The Windup Girl*'s ending does imagine a post-human collectivity prefiguring a new world for the oppressed windups. After the city floods, Emiko is able to

survive in the city's ruins without interference—there are plenty of animals to catch for food and the water is helpful because she overheats easily. She soon comes across an old man named Gi Bu Sen (or Gibbons), a generipper kept prisoner by the Thai Kingdom to deal with cases of foodborne illness. When Emiko angrily confronts him about her programing and her sterility (since generippers are this world's version of bioengineers, scientists like Gibbons were responsible for creating windups), he tells her he can help overcome the design limitations of the windups, which he calls "New People." Gibbons tells her that while he cannot change her physically, he can produce a different kind of New Person from Emiko's genetic material: "a strand of your hair will do. You cannot be changed, but your children—in genetic terms, if not physical ones—they can be made fertile, a part of the natural world" (Bacigalupi, 2009, p. 358). Gibbons imagines a new "natural world" in which Emiko and her children will be able to live freely; by removing programing forcing them to be obedient, they will no longer serve as slaves to humans. Early in the novel, Emiko is comforted by a utopian vision of a village of free windups living in the north without owners (Bacigalupi, 2009, p. 46). The novel's final passages suggest that such a utopian vision can become real.

The alliance between Gibbons and Emiko in the final moments of the novel also rebukes the nostalgic imaginary of the White Shirts and the Thai Kingdom. In a tense meeting between Kanya and Gibbons earlier in the novel, he refuses her dichotomy of natural and unnatural: "nature…*we* are nature. Our every tinkering is nature, our every biological striving" (Bacigalupi, 2009, p. 243, emphasis in original). Gibbons is a complex character, however, and certainly not entirely sympathetic. For instance, his statement that "the world is ours. We are its gods" (Bacigalupi, 2009, p. 243) problematically places humans outside of nature and thus provides an excuse for its continued domination. Gibbons also reasserts a hierarchical vison among humans, replacing his collective vision of human gods with a telling singular one: "If you would just let me, I could be your god and shape you to the Eden that beckons us" (Bacigalupi, 2009, p. 243). It would therefore be unwise to read Gibbons and the post-human utopia suggested by *The Windup Girl*'s final moments as an unambiguous representation of the text's vision of utopia; rather, Gibbons is necessary as an ideological negation of the white shirts and Kanya.

The two utopian figurations of the novel—the new band of white shirts lead by Kanya and the post-human alliance of Gibbons and Emiko—thus continues the ideological tension I have argued runs throughout the novel. Gibbons points toward the problematic essentialism undergirding Kanya's version of nationalism while Kanya serves as a check on Gibbons' aggressive post-human experimentation that, as the novel's setting demonstrates, is quite amenable to global capitalist control (indeed, prior to being held captive by the Thai Kingdom, Gibbons worked for one of the calorie companies). Not only does this final double negation continue the novel's unbudging opposition between globalization and nationalism, it also suggests a way of thinking through biogenetic seed technologies. Both Kanya's and Gibbons' positions are deeply problematic when it comes to addressing bioengineering: Kanya's nostalgic essentialism is clearly inadequate to the complexities of the world, but Gibbons' hierarchical vision and unwillingness to consider the implications of his research for the rest of the world places him in precisely the position of the calorie companies. What is needed is a double negation of these positions that turns their utopian impulses—Kanya's opposition to global capitalism and Gibbons' opposition to biogenetic essentialism—into an anti-capitalist, global vision of equal access to the technologies of food production.

Such a utopian vision is closely related to the recent revitalization of the concept of the common on a global scale by Hardt and Negri (2009). Indeed, as a negation of neoliberalism's ever-encroaching privatization, the common is a crucial element in the struggle over genetically modified seeds. Following the work of Hardt and Negri (2009), we need to understand the common as an open signifier: not only does it include the classical conception of the "commonwealth of the material world"; but, perhaps even more importantly, it also includes "knowledges, languages, codes, information, affects, and so forth" that "are necessary for social interaction and further production" (p. viii). The common therefore should not only be conceived as the "relatively inert, traditional notion that generally involves natural resources," but also as "dynamic, involving both the product of labor and the means of future production" (Hardt and Negri, 2009, p. 139). This dual conception of the common is especially important for an analysis of genetically modified seeds, for which both kinds of common are relevant. Indeed, by imagining the common as Hardt and Negri (2009) do, we can also prevent it from being deployed as a nostalgic attempt to return to the pre-capitalist past preceding what Marx (1867/1976) calls "the enclosure of the commons" (p. 885). This anti-nostalgia also critiques the conservative position seeking a return to an "unspoiled" nature. Indeed, as a utopian project of imagination, the goal of the "common" is to negate the present—not as a way of returning to the past, but rather as a way of opening up the horizon of the future.

While such a vision of the common remains a repressed potentiality in *The Windup Girl*, it is given expression in Bacigalupi's earlier *Windup Girl*-world story "The Calorie Man," which is also his most straightforwardly utopian work. While published before *The Windup Girl*, "The Calorie Man" seems to take place after the events in the novel: the story's final moments suggest a utopian future that would completely transform Bacigalupi's dystopian world. The story takes place in the United States, home of the calorie companies, among the "lush sprawl of SoyPRO and HiGro" grown and shipped down to New Orleans to meet the calorie needs of the world (Bacigalupi, 2008, p. 93). A small-time smuggler named Lalji is hired to take Charles Bowman, a genetic engineer wanted by the calorie companies, down the Mississippi River so that he can escape the country. Lalji and his crew run aground of an Intellectual Property (IP) patrol while transporting Bowman. Bowman is killed in the skirmish along with the IP officers, which allows Lalji to escape along with Tazi, a young girl who Bowman has been protecting. In the story's final moments, Tazi reveals that she has a bagful of seeds Bowman has designed and asks for Lalji's help planting them.

Bowman, a former employee of the calorie companies, has developed a new strain of seeds that, unlike the patented ones owned by corporations, will breed on their own, thereby transforming all food production into an un-patentable common. Earlier in the story Bowman explains that his seeds will mix with and transform the sterile calories produced by the calorie companies:

> What would happen if we passed SoyPRO a different trait […] what if someone were to drop bastardizing pollens amongst these crown jewels that surround us? [...] Resistant to weevil and leafcurl, yes. High Calorie, yes, of course. Genetically distinct and therefore unpatentable? [...] Perhaps. But best of all fecund. Unbelievably fecund. Ripe, fat with breeding potential […] Seeds distributed across the world by the very cuckolds who have always clutched them so tight, all of those seeds lusting to breed, lusting to

> produce their own fine offspring full of the same pollens […] (Bacigalupi, 2008, pp. 115-116)

These seeds created by Bowman share some similarities with the utopian potential of seeds we have seen in *The Windup Girl*: because they are fertile and unpatented, they offer a way of imagining an alternative future in opposition to the monolithic vision of biocapitalism.

There are some important differences between "The Calorie Man" and Bacigalupi's novel, however: while the seeds in *The Windup Girl* carry with them a nostalgic connotation or an attachment to the past, Bowman's seeds—no less genetically modified than the sterile calorie company ones—are unabashedly new and symbolic of the future. In "The Calorie Man," Bacigalupi cuts through the opposition between natural and unnatural that undergirded *The Windup Girl*'s competing utopian impulses. "The Calorie Man" imagines scientific innovation pressed into the service of a collective future rather than a capitalist one. This story is thus an important intervention into discourses of biocapital, in which a key ideological assumption is that capitalism is "considered the '*natural*' political economic formation, not just of our time but of all times" (Rajan, 2006, p. 3, my emphasis). Biocapitalism—like much of the discourse surrounding globalization—implies that innovation must be irrevocably tied up with the expansion of capitalism. Bacigalupi reminds us that other futures are possible by rejecting both senses of "natural": the nostalgic associations of the term and the reification of capitalist realism.

The story concludes with an image of a new kind of globalization tied to the reinvention of the common—not a return to a pre-capitalist past, but an unnatural outbreak of a new common. After Bowman's death and Lalji's realization that he still has the GE seeds designed to breed with sterile ones, Lalji smiles and imagines the seeds' global pathway: "around [the river], the crowding hulks of the grain barges loomed, all of them flowing south through the fertile heartland toward the gateway of New Orleans; all of them flowing steadily toward the vast wide world" (Bacigalupi, 2008, p. 121). This final image is a figuration of a new globalization being actively produced by Bowman's engineered and fertile seeds. This utopian figuration is an important leap forward from the safeguarding of seeds found in *The Windup Girl*. As Hardt and Negri (2009) argue in their work on the common, it is crucial to understand the distinction between the traditional use of the "commons" as a pre-capitalist formation and what they call the "biopolitical conception of the common": the struggles over the latter are not merely about "preserving" the common, but instead "struggling over the conditions of producing it, as well as selecting among its qualities, promoting its beneficial forms, and fleeing its detrimental corrupt forms" (p. 171). Bowman's GE seeds are precisely such an intervention into the ongoing production of the common: they are not a preservation of what currently exists, but a radical creation of the new.

With this short story, Bacigalupi provides a positive utopian vision to complement the utopian negations structuring *The Windup Girl*. The futurity unlocked by Bowman's seeds extends the possibility of the common embedded within the seedbank in *Windup Girl*. This representation of seed fertility becomes a powerful figuration for radical change. Within the context of biocapitalism—or the conjunction of bioengineering with the ideology that only capitalism can spur these scientific innovations—Bacigalupi's works are powerful reminders that other futures are still possible. Positing the common as a utopian demand worth struggling for, these texts educate our desire for an alternative to the current configuration of biogenetic

engineering—not in the service of a nostalgic rejection of bioengineering and return to the pre-capitalist past, but a future-oriented transformation of the conditions in which bioengineering is used and a movement toward a utopian future.

References

Bacigalupi, P. (2008). The Calorie Man. In P. Bacigalupi (Ed.) *Pump Six and Other Stories* (pp. 93-121). San Francisco: Night Shade Books. (Original work published in 2005)

Bacigalupi, P. (2009). *The Windup Girl.* San Francisco: Night Shade Books.

Clover, J. (2014). *Retcon*: Value and Temporality in Poetics. *Representations 126* (1), 9-30. doi:10.1525/rep.2014.126.2.9

Cooper, M. (2008). *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era.* Seattle: University of Washington Press.

Derrida, J. (1994). *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International.* New York: Routledge.

Fischer, M. (2009). *Capitalist Realism: Is There No Alternative?* Washington: Zero Books.

Hardt, M. and Negri, A. (2009). *Commonwealth*. Cambridge: Harvard University Press.

Harvey, D. (2005). *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

Jameson, F. (2005). *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. New York: Verso.

Klein, N. (2007). *The Shock Doctrine.* New York: Picador.

Marx, K. (1976). *Capital: Volume 1.* (Ben Fowkes, trans.) New York: Vintage Books. (Original work published 1867).

Moylan, T. (2000). *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia.* Boulder: Westview Press.

Rajan, K.S. (2006). *Biocapital: The Constitution of Postgenomic Life.* Durham: Duke University Press.

Wegner, P.E. (2014). *Shockwaves of Possibility: Essays on Science Fiction, Globalization, and Utopia*. New York: Peter Lang.

*MOSF Journal of Science Fiction*
Volume 1, Number 1 - January 2016

# *Gods of War Toke* While Riding a *Vimana*[3]: Hindu Gods in Three Indian Science Fiction Novels

*By: Sami Ahmad Khan*

Abstract:
This paper studies the overt manifestations of Hindu gods in three Indian science fiction (SF) novels written in English, and the reasons behind such vivid portrayals. It analyses the specific mechanics of these representations, whereby Hindu mythology is hybridized and transposed with the quasi-science of SF to propel the narrative. This paper discusses the appropriation of these mythological narratives, their subsequent reinterpretation in Indian SF, and how this reworking constitutes a direct critique of contemporary material realities. It aims to place the "divine" within the context of the materiality of a text, and to that effect, borrows Darko Suvin's "novum" as a theoretical framework to first locate the tangible heart of a text, and then explains how and why Hindu gods play an important role in the contouring of this kind of "mythological SF".

*Keywords:* Hindu gods, Indian science fiction, appropriation, mythology, novum

*The Saffron*[4] *starship came out of the sun… its overall hue was saffron,*
*the shade of a bindi dot on a Hindu married woman's forehead …*
*and assumed stable orbit at Sun-Earth LeGrangian Point L5.*
-- Ashok Banker, *Gods of War*, 2009a, p. 3-4

"Science" and "God" are not always locked in a persistent battle of binary opposition—at least not in the context of Indian Science Fiction (SF). If SF can bring together "science" and "fiction", two vastly diverging structures of human knowledge and experience, then is it not possible that SF, in its myriad forms, can transcend the binaries of faith and rationalism, the dichotomy between belief and empiricism, and result in a kind of fiction that—despite being rooted in science—can also feature divine beings?

The presence of mythological and spiritual themes in global SF is nothing new. Roger Zelazny's *Lord of Light* (1967) and Steven Spielberg's *Close Encounters of the Third Kind* (1977), to cite just two examples from popular culture, explore these dimensions of SF. This paper is conscious of the cultural paradigms which Western authors (such as Roger Zelazny) appropriating Indian (in this case, Hindu/Buddhist) imagery might have missed (since it is written by an Indian). [5]

Hugo Gernsback once famously wrote, "The ideal proportion of a scientifiction story [SF] should be 75 percent literature interwoven with 25 percent science" (as cited in Landon, 2002, p. 51). In the case of these three novels, a significant mythological component constitutes the

[3] "Vimana" translates to a "flying vehicle".
[4] Saffron has a particular significance to Hindus as it is associated with light, renunciation and salvation.
[5] No offence is intended to the genius of such writers, and I salute their path-breaking, genre-bending endeavours.

"75% literature", too. In addition to Gernsback, many great minds have tried to define SF and propounded definitions that attempt to holistically capture the essence of SF. The question of their success lies beyond the purview of the paper, but let this suffice—if defining American SF is hard, the problem of accurately encapsulating the core of Indian SF in words is all the more difficult, even when one narrows it down further to SF written by Indians in English. This difficulty results from the diverse responses exhibited by a heterogeneous, polyphonic and prismatic country like India when reacting to trends and traditions in "western" SF. [6]

While SF is generally built on a platform of science or—to be more precise—pseudo/quasi-science, Indian writers, in accordance with the hybrid literary genres and ludic forms of representation usually prevalent in the country, often appropriate "semantic" elements from "western" SF but rearrange them in a "syntax" that reads as radically different from SF being produced in the United States (U.S.) (Altman, 1984, p. 10). An example of this Indian science fiction syntax is Shirish Kunder's Bollywood film *Joker* (2012), where aliens land in an Indian village but only *after* a villager prays to the gods and seeks divine intervention towards securing first contact with an extra-terrestrial species. Moreover, the hallmark of divinity granting that wish is visible in the simple fact that when an alien spacecraft *does* land in that quaint Indian village, the UFO is shaped like a *Shiva-Linga*, a manifestation of Shiva—the Destroyer, one of the three major Hindu deities.[7]

The presence of gods in Indian fiction is nothing new, and Indian classical narratives are full of such appearances. Historically, India has had a healthy Speculative Fiction (SpecFic) tradition: these literatures of "what if" include genres such as Science Fiction, Fantasy (F), Mythology etc., and differ from realist and mimetic stories. Until the recent past, the tilt has been towards fantasy and mythology, though now SF is becoming increasingly popular.[8]

The existence of non-mimetic worlds in Indian Speculative Fiction is quite common. In the context of Indian SpecFic films, M.H. Srinarahari (2004) writes:

> A number of India's films in the nineteen sixties have shown imaginary worlds with imaginary beings. There is: the paradise, the pathala (an imaginary world in the centre of the Earth); the fairy worlds such as Gandharva lok (lok means world) Yaksha lok; Kinnara lok; Mathsya lok (an underwater world with aquatic beings that have mermen and women: human bodies in their upper part and the lower part resembles the scales of fishes, but usually with divine qualities); Chandra lok (the Moon); Naga lok (the world of snakes) and others. (para. 4)

Interestingly, all the tropes and narratives of SF, and more importantly, the reactions they elicited, were successfully evoked by Indian classical texts over time. For example, what the 'other' aliens of western SF elicited in a reader—havoc, wonder, and possibly even terror—is evoked in Indian Fantasy and Mythology by hostile beings from other *lokas* (planets/worlds): the *daityas* and *rakshasas*. Replacing one "other" from Mythology/Fantasy with another was not that difficult: with the "modernization" of India, religion and mythology's "other" gave way

[6] "Western SF" is an umbrella term in itself, and I use it to here to refer to SF emerging out of North America and Europe.

[7] I have written about this aspect of Bollywood SF film in another paper, "Bollywood's Encounters with the Third Kind" (Khan, 2014).

[8] Regional languages in India such as Marathi, Bengali and Tamil have had a healthy SF tradition too.

to science's "other" in fiction as a rational-scientific education (modelled on western systems) became the norm.

Anil Menon addressed these changes, writing in the comments section of an article on Indian SF hosted by Jeff VanderMeer's website:

> Hindu mythology does talk about stuff like flying vehicles, world-nets and mantra-guided missiles. But I don't think we really had a science-fiction tradition till the British arrived. However, we seem to have had a speculative-fiction tradition that's remarkably postmodern in temperament" (2008, para. 1).

Thus, though elements and phenomena in Indian classics could be interpreted as being flying vehicles, aliens, and nuclear weapons, making these texts "replete with examples of Indian storytellers' fascination with the occult and supernatural phenomena that, seen through a modernist lens, resemble some of the conventions of SF", the fact remains these classical texts are *not* SF (Khan, 2014, p. 187) but are instead Speculative Fiction.

This is why studying the literary manifestations of this epistemological shift when gods "chose" to appear in hard-core SF narratives becomes important. It is with this background in mind that this article studies three Indian SF novels (in English) and locates the reason why Hindu gods work well within SF narratives. Moreover, each of these three novels portrays the gods as slightly different epistemological categories, though they are always benevolent, helpful and "good". Mainak Dhar's *Vimana* (2012), for example, builds on the "ancient astronaut" hypothesis, which posits that aliens visited Earth in the past and shaped humanity's evolution. *Vimana* portrays Hindu gods as advanced extra-terrestrials chaperoning humanity towards progress, but they only unveil themselves to the world at large to combat the forces of global terrorism. Jugal Mody's tongue-in-cheek *Toke* (2012) uses the figure of Vishnu—the Preserver—and Shiva—the Destroyer—to rail against global capitalism and indicts an increasingly consumerist society that systematically negates individual choices and free will by viewing people through the prism of productivity and purchasing power alone. The third text, Ashok Banker's *Gods of War* (2009a), features Ganesha—a much-worshipped god in the Hindu pantheon—as he leads a motley crew of humans from parallel universes to prevent the fall of "heaven" to the forces of darkness, while at the same time critiquing *machtpolitik*[9] in the contemporary world order. In this essay, I study these "gods" and link them with contemporary material realities.

**Flying Saucers Battle Al Qaeda: Hindu Gods as Ancient Astronauts**

*Vimana* is a 2012 SF novel by Mainak Dhar for young adults that features the Hindu holy trinity of Brahma, Vishnu and Shiva. To borrow Rick Altman's terminology again, this novel uses overt semantic elements usually associated with SF (such as spaceships, high-tech bases, aerial dogfights, etc.), and arranges them in a syntax that is quite unconventional: this in-your-face SF novel contains advanced aircraft, state-of-the-art weapons, and Hindi gods.

*Vimana* traces the journey of a college-student, Aaditya, who is an expert at flight-sim games and dreams of following the footsteps of his father by joining the Indian Air Force after college. However, Aaditya loses a leg in an accident and his dreams are shattered. To make things worse, Aaditya's father, a fighter-pilot, goes missing in action during a sortie, thereby

[9] Machtpolitik is a term for power politics in which sovereign powers threaten each other with military, political and economic aggression to protect their own interests.

subjecting Aaditya to simultaneous personal and professional loss, even as the teen struggles to lead a normal life. One day, he comes across some individuals attacking a woman in a park. Concerned, he joins the fight to save the woman, only to realise this is not just some random gang-related violence, but a trans-human engagement.

Aaditya is unwittingly caught in a fight between two covert, all-powerful groups. One represents the forces of good – the gods – and the other, evil: these are the *daityas*, who are a

> mixture of early proto-human species and created cloned monsters. Strong, ruthless and obedient, but not very smart. With those demons, they unleashed their reign of terror. They sided with human dictators, promising them power and helping with these demons and their technologies, but in reality making them slaves. (Dhar, 2012, pp. 95-96)

Aaditya then realises that the members of the group to which he has sworn allegiance not only happen to have names of Hindu deities, but actually *are* those very gods. Much to his chagrin, they also have extra-terrestrial origins. These gods tell him that his father might have been shot down by another group of technologically-advanced people led by Kalki,[10] the same people who are fighting these extra-terrestrial gods. Kalki intends to conquer and/or destroy the planet Earth. Aaditya sides with the gods, wins their confidence by proving his mettle in a fight against the demons, and prepares for the final assault. He raids the *daitya* base on the sunken city Atlantis, frees his father and other prisoners of war, and then helps secure the defeat of Kalki and his evil minions. The novel ends with the extra-terrestrial gods finally revealing themselves to humanity.

The fusion of science and spirituality is evident in the novum of *Vimana*. The novel exemplifies Darko Suvin's concept of the "novum", or that "historical innovation or novelty in a SF text from which the most important distinctions between the world of the tale from the world of the reader stem" (Csicsery-Ronay, 2008, pp. 118-119). In *Vimana,* Hindu gods are actual extra-terrestrials and live away from humanity's gaze in a secret base on Mount Kailash, the abode of Shiva (a mountain considered holy by all Hindus). These gods are introduced to the reader thus:

> The first to speak was Narada.
>
> "Aadi, we have met, but let me introduce myself properly. I am Narada Muni and I handle Intelligence here."
>
> Next to him was the ash-covered man, looking none the worse for wear from his drinking bout. "And I am Shiva. I lead our Special Forces."
>
> The woman he had met in the fracas that had started this all was seated next to Shiva. She was wearing a red-bordered white suit, and she smiled as she introduced herself. "I am Durga, and I never did thank you for trying to help me."
>
> Some connections were forming in Aaditya's mind, when the last three men there introduced themselves. The tall, muscular man with a beard spoke next. "We have met in the air, Aadi. I am Indra, the Military commander here."
>
> Next to him was a man with a dark complexion, who seemed to be playing with a disc shaped object in his hand. "And I am Vishnu. I am the administrative head here.

[10] Similar to the Second Coming of Christ for Christians, Kalki is the tenth and final incarnation of Vishnu (in the current age) for Hindus. Kalki will usher in *Satya Yuga* by bringing about the end time in Hindu eschatology.

> Think of me as the Chief Operating Officer, if that analogy works for you." (Dhar, 2012, p. 80)

Aaditya first thinks that these are extra-terrestrials messing with his head, but then Brahma tells him that he leads a group of pioneering, galactic travelers, hyper-sentient beings who came to Earth almost 15,000 years ago. When Aaditya asks if these Vedic gods were aliens, Brahma replies, "So many people say that. What a curious word. *Alien*. Considering how long we've been here, one would have hoped for more hospitality" (Dhar, 2012, p. 91).

Brahma then explains that his people were part of a galactic alliance that sought out intelligent life and shepherded them towards a certain level of self-awareness, after which they were asked to join this galactic community. He tells Aaditya that long ago, when humanity was still in its crib, some humans chanced upon these benevolent alien visitors and began to think of them as gods. This is a mirror reflection of what Erich von Daniken proposed in *Chariots of the Gods?,*[11] his 1968 cult-classic:

> The gods of the dim past have left countless traces which we can read and decipher today for the first time because the problem of space travel, so topical today, was not a problem, but a reality, to the men of thousands of years ago. For I claim that our forefathers received visits from the universe in the remote past. Even though I do not yet know who these extra-terrestrial intelligences were or from which planet they came, I nevertheless proclaim that these 'strangers' annihilated part of mankind existing at the time and produced a new, perhaps the first, homo sapiens. (p. 8)

While this theory has been totally rejected by academics and scientists as pseudo-history, SF still uses the ancient-astronaut hypothesis with great enthusiasm. The same technique is employed by Dhar in *Vimana*. One of these visitors, upon seeing the nascent stage of humanity's development, starts considering himself as superior, and decides to rule as a divine being. As author Damien Walter (2013) wrote, "If SF is grounded in hard scientific fact, and science is killing God, then what place does that leave for divine intervention in the pages of SF literature?" (para. 1). Walter further remarked, "When I tweeted this question, [author and video game designer Dave Morris] gave Arthur C. Clarke's famous dictum a twist, quipping, 'Any sufficiently advanced technocrat will be indistinguishable from God'"(2013, para. 1).

Technological advanced-ness transforms into organic, physical and intellectual superiority. The fallen visitor referred to above is Kalki—who, along with his other supporters, left the visitors to embark on his quest of world domination. Brahma further says, "We knew him and his crew as Ashwins. Indian mythology calls them Asuras and we became known as the Devas. The land they hid in is known to your people as Atlantis" (Dhar, 2012, p. 93). In the novel, the gods attacked and destroyed Atlantis, and it sank to the bottom of the ocean. The lost city still remains the epicenter of Kalki's power and *devas* must invade it during the novel's climax. Dhar fuses a scientific outlook with mythology, religion and fiction, and uses the "extra-terrestrials have long been involved with earth" belief to further his novel's plot.

The "ancient astronaut" hypothesis can also be linked with what Stephen Clark writes in an essay on SF and religion. Clark argues, "But science fiction is often 'religious' in a wider

[11] Not only has Daniken's hypothesis been rejected, it has also been accused of plagiarising from other contemporary thinkers and texts. I use Daniken here only since I regard him as one of the most well-known thinkers to popularize the ancient astronaut theory.

sense, even at its most atheistic. Sometimes this is no more than euhemerism, the theory that God and the gods are memories or premonitions of technologically advanced intruders or especially gifted leaders" (2005, p. 95). Dhar's *Vimana* looks back at a "golden past" from the perspective of a technologically inferior present and regards the past as the point of origin for all technologically advanced marvels which redefine the new millennium. In fact, a crater at Lonar is revealed to be the site of Earth's first nuclear attack thousands of years ago, thereby evidencing the Indian belief that time is cyclical and not linear.

The relevance of the semantics and syntax of such a narrative as Vimana is hard to miss. The novel's theme of good versus evil spans across time and space—and highlights global terrorism. The gods have been fighting the *daityas* for time immemorial, and their fight in our times has metamorphosed into the battle between Al Qaeda and the rest of the world. This fight against Kalki, Shaitan, Satan, the Devil, and the Anti-Christ is fought not only by Indians, but also by people from across the world. For example, when Kalki's base is breached by Aaditya and the gods, men and women from across the globe cast away their shackles and raise their voices against his tyrannical oppression by attacking the base from within. Kalki represents global terrorism literally too: his *daityas* supply Al Qaeda with a nuclear weapon intended to be deployed at a civilian target in the U.S. Aaditya, however, aided by the gods, prevents this horrific eventuality from happening.

*Vimana* might be a YA narrative that aims at wish-fulfillment (the protagonist emerges as a "chosen one" and is accorded the honour of fighting alongside the gods) but there is a deeper meaning at play. Stephen Clark further wrote,

> On the one hand, alien or mechanical intelligences that purport to have the power of gods are routinely shown to be demons or ordinary creatures of no higher metaphysical or moral standing than ourselves. On the other hand, human beings themselves may become "like gods": immortal, powerful, and creative. (2005, p. 102)

The gods are shown to be extra-terrestrial but still on the same metaphysical plane as the humans; Aaditya, on the other hand, emerges as more than just a human. In re-reading mythology that posits gods as extra-terrestrials, Dhar engages in a "scientification" of faith and religion. By bringing gods from the realm of the mythological, the incomprehensible, to the realm of the science-fictional (and by extension, the scientific), he engages in a massive decentering of the contemporary fascination for "God". The interpretations surrounding God have fragmented societies, people and polities—in both the novel and the world we live in—as evident from the rise of religious fundamentalism, parochialism, and fanaticism. By placing God within a structure that may be empirically validated—in this case, by the "ancient astronaut" hypothesis—Dhar undercuts the roots of fanaticism built around the conception of a god as the *ultimate creator*, and instead focuses on God as a device to bring people together to combat a greater foe—terrorism. In this respect, the portrayal of gods in *Vimana* as ancient astronauts has contemporary political relevance.

**Ganesha to the Rescue: Indian Gods Meet the New New York Police Department**

Ashok Banker's *Gods of War* is an anti-war novel that often borrows thematic elements from Philip Pullman's science-fantasy *His Dark Materials* trilogy. The novel follows five individuals from five different parallel universes "only a fraction of an instant apart in the ring-around-the-sun parallax continuity" (Banker, 2009a, p. 50). These five individuals are as different as chalk and cheese, but travel together with Ganesha to the end of space and time to

fight the ultimate evil. Santosh is a ten-year-old from a Mumbai slum, Salim is a socialist trader from Birmingham, Ruth is a ship-welder from New Jersey, and Akechi and Yoshi are Japanese twins.[12] These five individuals resist assimilation by the Oort, a hyper-intelligent, pan-dimensional entity that is harvesting worlds across the space-time continuum. Oort cannot compute how these individuals resisted assimilation, and addresses this quandary by quarantining their respective worlds outside the known boundaries of the multiverse.

These five are brought together by Ganesha, one of the most worshipped gods in the Hindu pantheon, in an effort to fight the forces of darkness. The group travels with Ganesha to *Lokaloka*, the space between worlds, and sees countless beings from across space-time gathering to witness a cataclysmic event, a sight which amazes, terrifies, and shocks the travellers. Before they can come to terms with what is happening around them, Ganesha is assassinated. They run for their lives and suddenly come across the *New* New York Police Department (N2YPD), which polices the entire creation, and the novel ends before these five join an all-out war for the existence of reality as we know it.

*Gods of War,* with its subject matter and style of narration, manages to instill a "sense of wonder" in its readers, which may be why the text also resists critical commentary from the perspective of the reader. According to Istvan Csicsery-Ronay,

> Readers of sf expect it to provide an intense experience of being translated from the mundane to the imaginary worlds and ideas that exceed the familiar and the habitual. They expect to feel as if they are witnessing phenomena beyond normal limits of perception and thought that people have not been able to witness before, or perhaps even to imagine. (2008, p.146)

This could explain why and how Banker brings religion into SF; the responses elicited by a phenomena that exceeds the normal limits of perception among the characters and readers alike is clearly a mark of wonder. The way Banker describes gods, journeys to other worlds, their physicality, and inhabitants is meant to evoke not only wonder, a sense of not only colliding people, worlds, mythologies, and perspectives, but also ruptures in reality itself.

Interestingly, despite the overt presence of SF elements, Banker vehemently denies *Gods of War* being SF. In a 2009 interview, Banker said, "I would debate the classification of *Gods of War* as science-fiction. It is a very basic and generic contemporary story, which uses some scientific devices and concepts. But that does not make it a hard-core science fiction"[13] (Banker, 2009b, para. 3). Banker's disdain for tags and classifications is also evident in a comment he left on the blog post "In Search of Indian Science Fiction" by Anil Menon and Vandana Singh:

> I object to the term "Indian SFF" on the grounds that it implies an Indian embracing of the western SFF tradition, which I, for example, don't attempt to do at all, contrary to opinion. I see myself very much as trying to go back to the roots of Indian epic storytelling and finding a new form, a kind of hybrid beast that romps and frolics through Indian tropes—pushpaks and maya, instead of Ramjets and sorcery, to simplify

[12] Perhaps it is this coming together of humans and uniting despite differences of race, religion, gender, orientation, and nationality on which Banker wants to focus.

[13] This is not the first time an Indian Speculative Fiction writer has chosen to stay away from the label of SF. Jugal Mody, for example, prefers *Toke* to be called SFF rather than SF.

> briefly—and to follow a pathway that is neither SF, F, Dark Fantasy, Military SF, Heroic Fantasy, S&S, or any existing category, but a wholly new category altogether, or perhaps a very old one, the oldest of all, before there were chain stores and any need for categorization, apartheid, and all these separatist pigeon-holing […] I would rather stand alone without a genre, than be filed away in what I see as a non-genre, or an imitative one. (Banker, 2008)

Banker's argument does make sense in these times when genres are increasingly being fused. I, however, read this text as SF due to its novum—extra-terrestrial intervention from outer space, which, in this case, happens to be something on the lines of sentient nano-technology (the Oort cloud). The novum of *Gods of War* features nanotech-esque bugs—reminiscent of Scott Derrickson's *The Day the Earth Stood Still* (2008)—that cover this world in a thick blanket of black clouds and enter every human being, rendering him or her incapable of individual thought. The entire population goes immobile in a trance—humming. Moreover, this affects not just our world but everyone on *all* Earths across multiple planes and dimensions (except for a select few); all humans gather together at certain specified places, as if under remote control. In order to combat this sudden disruption of life, Ganesha comes to Earth and recruits five civilians from around the globe to win the "War of the Worlds", the ultimate battle between the forces of light and the scourge of darkness—that rages on throughout multiple dimensions and alternate realities.

Studying this text by looking at its novum becomes all the more important in the light of Banker's own assertions enumerating on the linkages between writing and material realities. In the author's note to *Gods of War*, Banker wrote,

> For my part, I believe it's no longer possible for any writer to just 'tell a story', without regard for the connections between that story to the writer's own life, milieu, socio-cultural and political background and environment, and the myriad crisscrossing lines that traverse from fiction to fact and back again." (2009a, p. xii)

The critique of *machtpolitik* in the current world order also finds a direct reference in the text with the N2YPD. The figure of the U.S. as a global policeman is manifested in how the N2YPD polices not just the entire city, or the globe, but *all* of creation itself. N2YPD serves as Banker's satirical take on American foreign policy, and illustrates how he is not comfortable with the interventionist approach adopted by the US. However, the N2YPD is not entirely American—there are marked differences between this organization and U.S. that are evident in how these police officers think.

Ogbunabali, chief of the N2YPD police unit that comes in contact with the five, raises the issue of secularism versus faith when she declares:

> We are proud of our faith and our gods. We all are. Every last citizen of New New York is a religious fundamentalist. That is what New New York stands for. The freedom to follow one's faith without restrictions. All gods in harmony. We are not […unionists, secularists, scientists] *Americans!*" (Banker, 2009a, p. 232)

One can infer that Americans are different from New New Yorkers, who are deeply fundamentalist yet somehow respect each other's religions, unlike those in a "secular" state. Ogbunabali continues,

> We did not kill your god. Or any god. It's unthinkable, unspeakable […] It would have been our privilege and his [Ganesha's] grace had we experienced such a darshan

> [meeting the divinity]. We only came here to the interzone in pursuit of crossover criminals [mostly Americans]. (Banker, 2009a, p. 232)

With nano-beings invading not only earth but all of creation, and a god (Ganesha) utilizing scientific (or what appears to be magical/scientific) equipment, coming to earth, and recruiting a motley crew to save the creation, *Gods of War* blurs the boundaries between SF and F. Banker, a staunch critic of American foreign policy vis-à-vis intervention and expansionism, plays with the invasion metaphor. With the Iraq and Afghanistan fresh in his mind, this novel paint a glum picture of invasion, and how an innocent populace has to suffer. Only a handful manage to fight back—who, in this case, happen to be aided by a Hindu god, one who exhorts the five to forget their differences and see each other as human beings alone, thus raising them above the paradigms of nationality, religion, colour and orientation. Banker might be making a point about how faith—and not religion—can play a role in healing this world. He implies coming together is not difficult for people with different faiths as long as organised religion does not come between them.

Maybe, by choosing this novum, Banker draws upon a template through which he can include the thematic issues and concerns that bother him the most. When asked by Sonam Jain of *The Hindu* about the core concerns behind *Gods of War*, Banker replied,

> The core concerns that we all have as human beings: War and how to avoid it, violence and how to stop it, love and how to proliferate it to name a few. I always write with an agenda. For instance, in *Gods of War*, you will find an introduction that talks about violence and why should it be there in the first place. In which so-called science fiction book do you ever find such an introduction? (Banker, 2009b, para. 9)

It is this anti-war, syncretic message radiating from the text that makes *Gods of War* a direct response to the times in which it was written. The novel emerges as a critical dystopia, especially in its attempts to caution *a la* a parable if humanity continues on its current path, then earth's future is in peril. As Banker mentions multiple times, he is not very comfortable with superpowers imposing their will on others and proliferating violence in the name of the war against terror. He is simultaneously critical of using terrorism as a tool of political change and emphasizes humanism (at the expense of organized religion) as a solution to the socio-political ramifications of a unipolar world. *Gods of War* exhorts people to unite and seek similarities in differences rather than vice versa.

**Stoned Gods versus Brain-dead Zombies**

If *Vimana* uses gods to unite people so that they can combat the chimera of global terrorism, and *Gods of War* employs divine beings to indict current *machtpolitik*, then Jugal Mody's *Toke* utilizes Hindu deities to critique the social and personal ramifications of global capitalism and commodity fetishism. *Toke* recounts the story of how three friends—Nikhil, Aman and Danny—save the world from the forces of evil. Nikhil is the classic representative of an average, angst-ridden, middle-class Indian youth caught between a corporate desk job he hates and a family unit with oppressive moral values. He finds solace in zoned-out dreams and by hanging out with Aman and Danny, his friends who spend their days doping, watching films and playing videogames. One day, Nikhil is fired from work for sleeping during work hours and makes his way to Aman and Danny's flat. There, after the three friends have had a couple of drags, Vishnu—the Preserver—appears and tells them of a startling development. The world is

about to end and only this gang of chilled-out dopers can save it from assured destruction when united as the "Boys of Vishnu":

> "So, er, what do you want from me?"
>
> "I am here to be your friend, Nikhil."
>
> "Really?"
>
> "What are you? Stupid? I'm here because Earth is about to be destroyed in the next few days."
>
> "What?! And aren't you going to stop it?"
>
> "Actually, not Earth, but human life as we know it, which will then lead to the absolution of the universe." Very calm and taking slow long puffs.
>
> "AND AREN'T YOU GOING TO STOP IT?"
>
> "I could, but it is too late for me to take another birth, and if I do take the kalkin birth, then I'd have to demolish the entire planet single-handedly—like the Judaeo-Christian god—by raining sulphur probably. I'm in a particularly caustic mood, so I might just use Sodium Hydroxide instead." He passes me the joint. (Mody, 2012, p. 32-33)

The gods have spoken. The world is about to end—and only these three friends can save it. To do that, they have to fight demon-zombies, and keep their wits by toking constantly.

The novum of this tongue-in-cheek, satirical zombie-comedy—featuring Indian gods, doped youths, and mindless zombies—is as mind-bogglingly strange as a novum could (and should) be. Vishnu explains that the forces of evil, led by demons, have infected the world with special maggots—which enter the body via the oral passage, swim directly to the brain, and take control of the subject. Vishnu commands the three friends to fight on his behalf, and explains the threat to the trio:

> Vishnu takes his trademark deep drag and makes his elaborate smoke clouds that look just like his throne. "Yep. The maggot slowly gains control over the brain and starts converting all brain signals into its own language. The minute the last neuron of your brain hands over power to the maggot, you are technically dead and your soul is gone. Your weight will go down by twenty-one grams, but your body will continue all its functions like normal. After which, as days go by, your body starts preparing itself as the pod for a demon soul. Meanwhile, you will continue working as usual, following your everyday routine and, slowly but surely, as the last human turns undead, free will as we know it will die." (Mody, 2012, p. 44)

Not only does Vishnu quantify the exact weight of the human soul (twenty-one grams), but he also enumerates on the exact procedure as to how these maggots take control. Alarmed by this news, the three friends decide to fight back. Using a special instrument given to them by Vishnu—which can teleport them to places of their choice—the trio, joined by two Japanese twins, then visit a marijuana field in Himachal Pradesh, Nikhil's office (where he rescues the girl he likes), and an experimental laboratory. They then hijack a plane, crash it into a slum full of zombies, evade the state apparatuses (which have been overtaken by zombies), and battle maggot-infested zombies to save this world from total annihilation.

Over time, the gang discovers that the maggots die when exposed to marijuana smoke. They use this to their advantage, keep toking, and travel around to destroy more zombies. Eventually, they successfully combat Scott Ludwig, one of the evil brains behind this apocalypse, and save the world. As the novel ends, the reader sees the frustration of Nikhil

stuck in a dead-end job, one who is bitter at being regarded as inferior to an elder brother who sells spare automobile parts.

This ending lends even more credence to the interpretation that *Toke* is a critique of contemporary society rather than a narrative of mindless blood, gore, and drugs. Set in today's Mumbai, the apotheosis of toking and the subsequent counter-culture is a larger commentary on how the middle-class veneer of respectability, when combined with corporate/government work-cultures, dehumanizes people. It also emphasizes how the pressure to succeed professionally makes Indian youth opt for careers that do not really interest them—often at the cost of individualism, creativity, and freedom. The Taylorian imposition of order on chaos has also been critiqued in the way Mody's beloved Mumbai—a city full of haphazard chaos and disorder, something that makes it what it really is—becomes very un-Mumbai-like after the zombies have infiltrated all levels of social, political and economic organisation. Mumbai looks like "the insides of a massive clock, which is completely made out of humans. Everybody is constantly ticking" (Mody, 2012, p. 158).

The gods play an important role in this narrative since they not only give the protagonists the tools to fight against the forces of evil but also make them realize something is amiss. Nikhil had accepted his fate until Vishnu came to him and implicitly told him that he must fight the system—he must not become a zombie, quite literally. Vishnu and the other gods led Nikhil to realize he must not simply be a conformist or status-quoist; instead, he must chase his dreams and stand up for what he believes. He should not be what his family or bosses want him to be—rather, he should be what *he* wants to be. A god taught him to think for himself, have an individual opinion, and follow one's heart—not any political, institutional, or religious leader. Therein lies the indictment of rituals, institutions, fundamentalism, conformism, organized religion, and parochialism. Thus, while *Toke* may feature Hindu gods, it subverts religion. It condemns imposition of religious rituals. Nikhil's family chides him for missing the morning *aartis,* and he hates his family forcing him to take part in a religious ceremony that holds no interest for him. If gods undercut religion and rituals, they reinforce the importance of faith and belief, moving towards a liberal, spiritual, and more progressive world order. Inspired by Shiva and Vishnu, Nikhil and his friends develop the strength required to challenge the status quo.

*Toke* also critiques a corporate work-culture that focuses on tangible productivity, on-the-dot punctuality, a hierarchal chain of command, etc. For example, the protagonist, Nikhil, has a strained relationship with his boss, Anil George. Later, when Nikhil battles zombies, he runs into Anil George again, who is now a zombie warrior:

> I presume you've met one of our warriors, specially trained with demon strength. Inside each one there is a demon consciousness that has hatched**.** *The evilest of the evil suits. The best CEOs and vice presidents who have made their companies billions, who are at the forefront of human civilization, development and sophistication*… (Mody, 2012, p. 192, emphasis mine)

I have italicized a few sentences to show what Mody thinks about corporate ethos. He does not look kindly on the CEOs who have made their companies billions as he regards these financial successes to be driven by crass consumerism, unbridled greed, and societal pressure, not enlightened self-interest, genuine interest, or passion. *Toke* highlights how "suits" become mindless zombies serving a demon consciousness of commodity fetishism, social respectability

(at the cost of one's own preferences), and the tendency to judge everything on its ability to be monetized. Having divested people of their basic humanity, free will, and the power to choose, the zombies pretend the benevolent *rakshasas* do so for the betterment of the masses. By depicting the zombies as the epistemological category of the mindless "other", *Toke* is not merely against capitalism per se; both fascism and communism utilize the forceful imposition of uniformity to serve a higher purpose. *Toke* categorically rejects these three paradigms of social organization and borders on the anarchic. The protagonists are social misfits, rebels who fight the system with the help of Hindu gods who tell them to follow their hearts (without becoming fundamentalists). *Toke* is thus not specifically against capitalism, communism, religion, or any other -ism, but rather against any ideology that denies humans their free will and imposes its own diktats on them, making it all the more relevant to today's India.

**"Mythological SF" in India Today**

Indian SF has a unique operating logic of its own that manifests in the novels *Vimana*, *Gods of War*, and *Toke.* These novels feature a kind of science which is as connected to society and politics as it is to religion and faith. Thomas M. Disch wrote in "Mythology and SF",

> As mythmakers, science fiction writers have a double task, the first aspect of which is to make humanly relevant—literally, to humanize—the formidable landscapes of the atomic era [...] The second task of sf writers as mythmakers is simply the custodial work of keeping the inherited body of myths alive." (2005, p. 22-23)

The presence of gods in these three SF novels by Indian writers can be reinterpreted in the light of Disch's second task. For example, Dhar's emphasis on the golden past in *Vimana* successfully keeps Indian myths alive. The novel even begins:

> *"The Pushpaka vimana that resembles the Sun and belongs to my brother was brought by the powerful Ravana; that aerial and excellent vimana going everywhere at will […] that vimana resembling a bright cloud in the sky [...] and the King got in, and the excellent vimana rose up into the higher atmosphere."*
>
> The earliest written account of a flying vehicle called a vimana. This is found in the Indian epic the Ramayana, which was written at least 3000 years before the Wright Brothers made what we widely believe to be the first manned flight on Earth in 1903. (Dhar, 2012, p. 0)

*Vimana* tries to popularize the view that Indian civilisation was at its peak during the Vedic age, and what we witness today is a product of devolution, not evolution. On a similar note, though with very diverging politics, *Gods of War* begins with an invocation to Lord Ganesha, and seeks his blessings in an almost Milton-esque vein:

> Salutations to you, O Ganesha,
> O lord with a twisted trunk and immense body
> Radiant with the effulgence of a million suns
> O lord may all our endeavours
> Always be accomplished without obstacles. (Banker, 2009a, p. 0)

Perhaps only an *Indian* SF text can begin with an invocation to the gods. *Toke* also begins with a god—Krishna. Keeping in line with the rest of the novel's tone, *Toke* begins not with an invocation or prayer, but instead with a dream, which is distinctively more sacrilegious since it features seductively a god dancing seductively. In the opening scene, Nikhil dreams tantalisingly about a god (Krishna) gyrating to a James Bond opening song and waving a golden Desert Eagle

in his face. This sets the tone for the rest of the novel—there are no sacred cows in this text, only toking gods and mindless zombies.

One can conclude that in these three novels, faith and belief in divinity are just as important as faith and belief in SF's pseudo-science. These novels cater to a framework where science (or pseudo-science) is not antithetical to divinity and they portray a universe where science complements, rather than counters, religion. Perhaps Priya Sarukkai Chabria, a noted Indian SF writer, best rationalized this when she said,

> Speculative fiction—at least ours—draws significantly from the esemplastic imagination and our folktales and epics that explore the fantastic. The thrust of sub-continental art has been the quest for 'inner vision' not only the achingly real. Speculative fiction—more than sci-fi—is deeply contemplative. One looks into the future as one does into the past to seek *atmagyana* to live in the aching real and know there is something far vaster than ourselves and the undoubtedly real." (Personal communication, 9 May 2011)

Even SF in India redirects the quest for knowledge inwards (apart from its external projections), and works at the confluence of multiple structures of knowledge, thought and experience.

This inward-directed quest for knowledge, apart from a desire to comment on external reality, is evident in the novels *Vimana*, *Gods of War*, and *Toke*, and how their authors use the influence of western SF to fortify Indian "mythological" SF is noteworthy point. These novels proudly contain Hindu gods, faster-than-light spaceships, Islamic angels, teleportation devices, Al Qaeda terrorists, helpful aliens, baked youth, mind-controlling slugs, talking birds, parallel universes, rakshasas, and mythological beings. The fluid, fuzzy boundaries of SF in the Indian context is cause for celebration, not alarm. In *The Cambridge Companion of Science Fiction*, Farah Mendlesohn wrote, "Science fiction is less a genre—a body of writing from which one can expect certain plot elements and specific tropes—than an ongoing discussion" (James and Mendlesohn, 2003, p. 1). The word "discussion" describes Indian SF well because Indian SF can be read as an interaction between the structures of western SF (zombies, for example), Indian mythological and fantasy narratives (gods and *daityas*), and techno-science (such as advanced weapons and nano-clouds).

SF is not a genre but a mode. Since SF employs the narrative structures and tropes of other genres with so much panache that the appropriation becomes utterly natural, SF, especially Indian SF in English, emerges as a mixture of genres borrowing semantic elements from all of them and arranges these characteristics in a distinct syntax separate from the assimilated genres. This complex synthesis also explains why there are multiple definitions and viewpoints to look at SF. The novels *Vimana*, *Gods of War*, and *Toke* draw upon western SF traditions and then reinterpret them as per the material realities of India—and their ensuing psycho-spiritual aspects—and then fuse this reinterpretation with the structures of Indian Speculative Fiction. The extent to which Dhar, Banker, and Mody have influenced global SF can only be ascertained in the future, but a new sub-genre of "mythological SF" has already successfully evolved and will likely continue to mutate.

## References

Alessio, D. (2007). "Nationalism and Postcolonialism in Indian Science Fiction." *New Cinema: Journal of Contemporary Film*, vol. 5 (3). 217-229.

Altman, R. (1984). "A Semantic/Syntactical Approach to Film Genre." *Cinema Journal*, vol. 23 (3). 6-18.

Bali, R.R., Jindal, D., Khan, F. Kumar, A., Kunder, S., and Tevatia, Y. (Producers) & Kunder, S. (Director). (2012). *Joker* [Motion picture]. India: Three's Company Films.

Banker, A. (2008, October 8).Web log comment. "In Search of Indian Science Fiction." *The Southern Reach.* Retrieved from http://www.jeffvandermeer.com/2008/10/07/in-search-of-indian-science-fiction-a-conversation-with-anil-menon/

Banker, A. (2009a). *Gods of War*. New Delhi: Penguin Books India.

Banker, A. (2009b). Interview with Sonam Jain. "An epic storyteller." *The Hindu*. Retrieved from http://www.thehindu.com/features/magazine/an-epic-storyteller/article28261.ece

Banerjee, S. (2010). *Other Tomorrows: Postcoloniality, Science Fiction and India*. Unpublished doctoral thesis, Louisiana State University., Retrieved from http://etd.lsu.edu/docs/available/etd-06012010-164011/

Boardman, P.H., Goodman, G., Stoff, E., and Towns, M., Jr. (Producers) & Derrickson, S. (Director). (2008). *The Day the Earth Stood Still* [Motion picture]. United States of America: Twentieth Century Fox Film Corporation.

Clark, S.R.L. (2005). "Science Fiction and Religion." In D. Seed (Ed.), *A Companion to Science Fiction* (95-110). Oxford: Wiley-Blackwell.

Csicsery-Ronay, Jr., I. (2008). *The Seven Beauties of Science Fiction*. Middletown: Wesleyan University Press.

Dhar, M. (2012). *Vimana*. New Delhi: Penguin Books India.

Disch, T. (2005). "Mythology and Science Fiction." *On SF*. University of Michigan Press. Retrieved from https://www.press.umich.edu/pdf/9780472068968-3.pdf

James, E. and Mendlesohn, F., eds. (2003). *The Cambridge Companion to Science Fiction*. New York: Cambridge University Press.

Hoagland, E. and Sarwal, R., eds. (2010). *Science Fiction, Imperialism and the Third World: Essays on Postcolonial Literature and Film.* Jefferson: McFarland &Company, Inc.

Jameson, F. (2005). *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions.* New York: Verso.

Khan, S. A. (2014). "Bollywood's Encounters with the Third Kind." In Kishore, V., Sarwal, A., and Patra, P. (eds.), *Bollywood and its Other(s)* (186-201). United Kingdom: Palgrave Macmillan, UK.

Landon, B. (2002). *Science Fiction after 1900: From the Steam Man to the Stars.* New York: Routledge.

Menon, A. (2008, October 8).Web log comment. "In Search of Indian Science Fiction." *The Southern Reach.* Retrieved from http://www.jeffvandermeer.com/2008/10/07/in-search-of-indian-science-fiction-a-conversation-with-anil-menon/

Menon, A. and Singh, V. (2008). "In Search of Indian Science Fiction." *The Southern Reach.* Retrieved from http://www.jeffvandermeer.com/2008/10/07/in-search-of-indian-science-fiction-a-conversation-with-anil-menon/

Mody, J. (2012). *Toke*. New Delhi: HarperCollins Publishers India.

Paylow, C.L., Phillips, J., and Phillips, M. (Producers), & Spielberg, S. (Director). (1977). *Close Encounters of the Third Kind* [Motion picture]. United States of America: EMI Films.

Sarwal, A., and Geetha, B., eds. (2011). *Exploring Science Fiction: Text and Pedagogy.* New Delhi: SSS Publications.

Seed, D. (2011). *Science Fiction: A Very Short Introduction.* Oxford: Oxford University Press.

Srinarahari, M. H. (2004). "Koi … Mil Gaya, India's First Science Fiction Film." *The Science Fact and Science Fiction Concatenation.* Retrieved From http://www.concatenation.org/articles/koirevised3.html

Suvin, D. (1979). *Metamorphoses of Science Fiction.* New Haven: Yale University Press.

von Daniken, E. (1968). *Chariots of the Gods?* New York: The Berkley Publishing Group.

Walter, D. (2013). "Does God Have a Place in Science Fiction?" *The Guardian*. Retrieved from http://www.theguardian.com/books/2013/jun/07/god-in-science-fiction

Zelazny, R. (2010). *Lord of Light.* New York: Harper Voyager.

*MOSF Journal of Science Fiction*
Volume 1, Number 1 - January 2016

# Loving the Other in Science Fiction by Women

*By: Karma Waltonen, Ph.D.*

Abstract:
This essay interprets fantasy and mythology as the precursor/twin to science fiction, thus arguing societies have long told stories of gender bending, extraterrestrial impregnation, and the problematic eroticization of the "other". By examining the works of several contemporary female science fiction writers, this essay asks the questions once considered taboo: How does inter-species sex stand in for interracial encounters? Is cyborg sex a logical extension of current cyber-sex practices and the automation of our lives? If power differentials exist in sexual encounters, are the relationships always exploitative, or can they be viewed as symbiotic? Do our traditional family arrangements and sexual taboos still make sense?

Marge Piercy's *He, She and It* (1991), Johanna Sinisalo's *Troll: A Love Story* (2000/2003), and Octavia Butler's "Bloodchild" (1984/2005) and *Fledgling* (2005) probe these and other questions. The stories feature both men and women in non-traditional relationships with various "others"—androids, trolls, aliens, and vampires. In doing so, they undermine our preconceived notions of sex, challenging taboos and encouraging us to find new definitions and "norms" as we move further into the new century. As we get swept up in the stories, we find ourselves falling for machines, finding the erotic charge from another species, wondering how much age should matter (on both ends of the spectrum), preparing to carry the eggs of someone we love, overcoming jealousies, rejecting monogamy, and losing ourselves in the forest of the unknown.

*Keywords:* inter-species sex, relationships, gender, interracial encounters, power, taboo

Ellen Datlow, in the introduction to *Off Limits: Tales of Alien Sex* (2012), argues that science fiction "has traditionally been a bit hesitant about dealing with sexual and gender themes." If we see fantasy and mythology as the historical precursor and current sibling to science fiction, however, we know that societies have long told stories of gender bending, extraterrestrial impregnation, and the problematic eroticization of the "other". Contemporary science fiction and fantasy seems finally to be embracing this aspect of the taboo. (Of course, the era of pulp science fiction, largely written and consumed by men, featured alien sex, but these works were not often interested in testing the limits of desire or allegorical discussions of non-heteronormative sexualities.) By examining the works of several contemporary female science fiction writers, we can start asking the questions pertinent to our time: How does inter-species sex stand in for interracial encounters? Is cyborg sex a logical extension of current cyber-sex practices and the automation of our lives? If power differentials exist in sexual encounters, are the relationships always exploitative, or can they be viewed as symbiotic? Do our traditional family arrangements and sexual taboos still make sense?

Four contemporary works probe these and other questions—Marge Piercy's *He, She and It* (1991), Johanna Sinisalo's *Troll: A Love Story* (2003), and Octavia Butler's "*Bloodchild*" (2005a) and *Fledgling* (2005b). The stories feature both men and women in non-traditional relationships with various "others"—androids, trolls, aliens, and vampires. In doing so, they undermine our preconceived notions of sex, encouraging us to find new definitions and "norms" as we move further into the new century.

### *He, She and It*

David Levy, author of *Love and Sex with Robots* (2008), described the history of our understanding of attachment, which includes Bowlby's early theory of maternal deprivation as well as Hazan and Shaver's 1987 connection of romantic love to the attachment process between mother and child. Theorists postulate that attachment history with the mother is reflected in later attachment capacity; Levy uses attachment theory to argue that we will be able to grow romantically attached to our technology as adults if we are surrounded by it as children (Levy, 2008, p. 30).This tendency towards love is perhaps why it is against the law to build a humanoid robot in the world of Marge Piercy's *He, She and It* (1991).

The protagonist of *He, She and It*, Shira, begins the novel by losing a custody battle to a husband she wishes she could have reprogrammed. In this dystopian future, what was once America is now a corpocracy, in which a war is being conducted between corporations and between corporations and townships that wish to remain "free." Shira retreats to her hometown, a Jewish free city, where she is courted by the first successful (and illegal) sentient cyborg, Yod. Although Shira and her grandmother work to socialize Yod, his original creator intended to craft a weapon and orders Yod to kill himself in a suicide attack against a threatening corporation. Yod goes on his mission reluctantly and leaves behind a bomb that kills his creator. At the end of the novel, Shira mourns her one perfect "man" because although she discovered notes that would allow her to resurrect him, she chooses not to do so because she feels the desire "to make a living being who belongs to me as a child never does and never should" (Piercy, 1991, p. 429). The text artfully weaves the futuristic tale with the golem legend of early modern Prague[14] and references Frankenstein's monster, illustrating that human inventions are closely interwoven with the desire to create and the responsibility for one's creation.

Through Shira's growing acceptance of Yod as her lover and partner, we see how attachment theory may work in future applications. Shira acknowledges that, as a child, her talking, sensing, protective house was as real to her as a person. As an adult, she must question the difference between her childhood affection for the house and her adult desire for Yod. Her acceptance of Yod is signaled by her changing pronoun use—first "it," then "him," then "mine." As Levy (2008) explains:

> Attachment to a material possession can develop into a stronger relationship as a result of the possession's repeated use and the owner's interaction with it. This phenomenon is known as 'material possession attachment' .[…] The computer is no longer simply *a* computer, it quickly becomes *my* computer. Not so much 'my' in the sense of its being

[14] According to folklore, a Jewish Rabbi created a humanoid creature of clay and gave it life by inserting a tablet with a written magic phrase into its mouth. The golem worked tirelessly and never needed to rest, eat, or drink. The rabbi had to deactivate it by removing the tablet from its mouth every Sabbath day or else it would go berserk.

> owned by me, but more in the sense of its being the particular computer with which I associate myself, the one that I feel is part of my being ( p. 28).

Levy would likely argue that Shira is predisposed to accept Yod as a romantic partner, despite her initial reservations, due to her attachment to technology during childhood. Her grandmother's home has a house computer that monitors its residents, talks, plays games with children, delivers messages, etc. As Shira's grandmother is a programmer, her house computer has even more personality than most, leading to a greater sense of identity. The house is even able to display a bias against Yod—it frequently reminds Shira that Yod is not human and should not be allowed to look human, act human, or engage in human activities.

These kinds of arguments encourage the audience to consider one of the primary themes of the book—freedom. Shira's town wants to remain free just as Prague's Jews wanted to be free of persecution. Shira wants to be free to see her son even a corporation has the power to take him from her. Yod wants to be free to choose not to be a weapon.

In the first moment Shira sees a prototype of a humanoid robot as a young girl, she makes a distinction between worker-robots and this new being:

> Robots cleaned streets and the houses of those who could afford them, fixed everything from pipes to vehicles, did the general dirty work. Middle-class kids grew up with at least one toy robot, and rich kids had fancy ones to ride on or play with, but this was a strange humanoid robot. (Piercy, 1991, p. 46)

In *He, She, and It*, Yod hears a story about a golem who also wants the freedom to love women and to choose a destiny that its makers have denied it. Sentience distinguishes the golem in the story and Yod from other tools. Yod sees sentience as the reason why he must destroy himself and his creator: "A weapon should not be conscious. A weapon should not have the capacity to suffer for what it does, to regret, to feel guilt" (Piercy, 1991, p. 415).

The distinction between Yod and the other robots is not clear, however. He is humanoid in appearance and has biological components, but he is not alone in having sentience, since Shira's grandmother's house is also sentient. Yod's form is illegal, and because corporations want him as their own cyborg, he becomes a danger to his home city. In fact, the corporations want him so badly that they orchestrate Shira's custody problems and her return home so that they can try to take him. Shira also notes that Yod is not that different from the humans in the book, who, due to their numerous implants, could all arguably be called cyborgs (although they are less programmable).

Yod is weapon, lover, and would-be stepfather, but the message in the book is that no one should be controlled by another. Shira, though tempted, does not make a new Yod: "She could not manufacture a being to serve her, even in love" (Piercy, 1991, p. 428); "She had set him free" (Piercy, 1991, p. 429).

The theme of freedom is also reinforced by Shira's sexual release with Yod. Shira experienced a passionate first love, but has since felt disinterested. This relationship with a cyborg changes her:

> Making love with Yod made her feel strong […] He pleased her. She no longer ever doubted he would. She seemed to please him. He was not changeable. He would not tomorrow decide she was not good enough or that he wanted someone else instead. He had the reliability of a well-designed machine that, as long as it worked, would do what it was supposed to. But that was unfair, because he was far more sensitive to her

> desires and responses than any man she had been with, the most unmechanical in his lovemaking. (Piercy, 1991, p. 322)

Although the central problem of *He, She, and It* is whether Shira can love Yod (and then whether their relationship can withstand the corporate onslaught), the book also raises other issues of sexuality. Shira's mother is a lesbian who conceived via artificial insemination.[15] In learning more about her mother, Shira must come to terms with family secrets and with what our relationships with our family mean about us. She must also resolve her haunting childhood love with a close childhood friend, which ended badly many years earlier, as well as the lingering jealousies it created in her.

Shira must also accept that Yod's first lover was her own grandmother, Malkah. Malkah, in fact, is the most sexually intriguing character in the book. While she did not fall *in* love with Yod, she does love Yod and never seemed to have the reservations Shira did about seeing him as a person. Malkah is open about her sexual past and present—having taken many lovers—and refuses to tie herself to any one person. As she is now older, we are treated to the way she still flirts via her various avatars on the net, gender-bending at will. She also discusses sex as an older woman, providing a nice complement to the frank discussion of the frenetic teenage sex Shira enjoyed as a young woman.

In his interview on *The Colbert Report* (Hoskinson, 2008), David Levy predicted that we would be having sex with robots within five years and that love will come later. As far as I know, this has not yet truly happened, though the concept appears in many science fiction pieces, including the television series *Humans* (2015). However, the world Piercy creates seems closer to our own every day. Perhaps one day we will see the logical progression of our attachment to technology, leading to a new social catchphrase—once you go bot, you never go back.

### *Troll: A Love Story*

We return to the present in Johanna Sinisalo's *Troll: A Love Story* (2003), in which Mikael (nicknamed Angel), falls in love with a young troll.[16] Angel rescues and cares for the troll he names Pessi, a name originating from an old Finnish fairy tale. He loves the animal like a pet and is surprised when he has an erotic reaction to its touch. Angel resists the eroticism, first trying to free Pessi and then sublimating this desire through sex with two human males who pursue Angel's affections. Angel discovers that Pessi emits powerful pheromones and that he (Angel) is prepared to choose Pessi over his former heart's desire, the elusive, heterosexual Martes. This conflict of interests, however, does not come to a head until Pessi becomes lethally violent while defending their home from "strange males." Angel takes the troll into the forest to protect them both, but there he discovers a larger troll community. Through a combination of Pessi's pheromones and the larger trolls' mastery of stolen human weapons, Angel becomes a figurative and literal prisoner of the troll community.

Issues of exploitation and power suffuse the book. Angel's fears about the inappropriate nature of his desire underline the possible exploitative nature of the relationship with Pessi, though the ending shows that the power has always been unbalanced in the other direction.

---

[15] Within the world of the book, homosexuality and polyamory are common, but we should remember that 1991 was a long time ago in terms of the social sexual history of the United States and thus that the future world of the book was more shocking at the time of publication.

[16] Within the world of *He, She, and It*, trolls are a rare, endangered species.

The reader, however, understands why Angel is so reluctant to acknowledge his attraction to Pessi. His first sexual encounter in unintentional and is immediately followed by regret and shame:

> He bounces straight onto my lap on the sofa and wraps himself into a ball on my knees […] He's lazily cleaning the blood from the corners of his mouth, when, hardly knowing what I'm doing, I draw him a little closer to me, just a little and ever so cautiously—and the moment his hot back touches my belly I ejaculate like a volcano. (Sinisalo, 2003, pp. 135-136)

However, when Angel tries to send Pessi back into the forest, he realizes that life in his heated apartment has caused Pessi to lose his winter coat, leaving him too vulnerable to the elements. Angel's solution is then to transfer his desire to the men pursuing him, although he knows he's using them: "Just now I want something so badly it hurts, and so I don't care whom I harm or how much" (Sinisalo, 2003, p. 124).

Thus, both the inter-species and intra-species relationships in this text are exposed as inherently exploitative, as love is defined as possession rather than connection. Both of Angel's lovers express their desire for him in much the same way he expresses it for Pessi. Martes also uses his knowledge of Angel's attraction to him to manipulate Angel in their business relationship (and seems to receive an erotic stimulation from his power over Angel).

Exploitative relationships are also seen with Angel's neighbor, Palomita, who is a mail-order bride to a possessive, abusive husband. Palomita is from the Philippines and left her home believing she was going to be a nurse. Trafficked into marriage, she lives locked in her new home in a country whose language she does not understand, forced to use contraception because her husband does not want children, and forced to engage in sadomasochistic play because that her husband's whim. Palomita at one point comes across the advertisement that portrayed her and led her husband to buy her. This somewhat parallels Pessi's experience, as Angel uses Pessi in an advertisement, taking pictures of Pessi in jeans in order to sell the denim. While the ad campaign is a success, Pessi reacts badly to the pictures, and Angel is aware that he exploited the creature.

Angel's understanding of Pessi's intelligence grows. Pessi builds cairns and paints on the wall. Our ultimate understanding of the trolls is that they are arming themselves against humans—and taking Angel prisoner—as a reaction to human encroachment of their territories. As one character notes earlier in the text, "we won't recognize the chimpanzee as a person until it rises up against us in rebellion" (Sinisalo, 2003, p. 225). Notably, on the very next page, Palomita says, "And I can't rise up against Pentti. It's impossible. It's forbidden. A woman doesn't abandon" (Sinisalo, 2003, p. 226). Palomita, as an immigrant and a woman, is contrasted with other species, illustrating significant power imbalances.

The majority of the characters, as we've seen, are marginalized figures—endangered species, trafficked immigrants, and gay men. By focusing on these characters, the author both normalizes the world of those who are usually submissive (and ignored) and allows us to consider their position relative to those who usually occupy the more powerful and central position. One character, when commenting on a straight woman at a gay bar, notes the gay men avoid her:

> Someone might argue we're zoo animals for her. But I've another theory. For her, we're noble savages, a kind of gray area outside the respectable, minutely organized

> community, an untamed wilderness it takes a lot of guts to step into. (Sinisalo, 2003, p. 107)

The gay bar, then, is a "neutral zone" where straight and gay might meet.

*Troll: A Love Story* manifests these spaces, switching not only between different points of view, but also including parts of Finnish histories and fairy tales. The novel even directs readers to a made-up entry on a real Finnish website about the natural world, which explains that trolls were discovered in 1907: "Before then [they were] assumed to be a mythical creature of folklore and fairy tale" (Sinisalo, 2003, p. 10). While this text could easily play on folklore positing that trolls are closely related to humans, it reminds us several times that the "real" trolls in this world are actually closer to cats. However, the majority of the imagery in both the main narrative and the intertexts emphasizes the demonic association with trolls. For example, we have a passage from Iivari Kemppinen's *Finnish Mythology* (1960), which discusses "demonized animals" like trolls (cited in Sinisalo, 2003, p. 20).

It is not coincidental, of course, that Mikael is our Angel, and Pessi is our Demon. Nor is it a coincidence, according to one character, that one kind of relationship to animals has been demonized: "As soon as the god of Israel took over the reins, animals were no longer permitted to serve as gods, and all other ritualistic connections between the species, including sex, were excised" (Sinisalo, 2003, p. 225). As the book questions the binary between Angel and Pessi, human and troll, civilized and not, subject and abject, we find ourselves at the edge of the forest, in a liminal space where all obsession is problematic, where power is the determining factor, where love seems to be missing, and where pheromones might destroy us. Angel is right to worry: "I've locked him in here. I've tried to capture part of the forest, and now the forest has captured me" (Sinisalo, 2003, p. 166).

### *Bloodchild*

Octavia Butler's award winning short story "Bloodchild" can also be read as an exploration of exploitation. A group of humans has traveled across the galaxy and colonized an alien planet ruled by a species of large insects. The humans barter for the opportunity to stay by allowing their bodies to serve as hosts for the grubs of the aliens. To protect the breeding potential of the human women, human males are typically "impregnated" and suffer the same dangers of birth that women do. This particular story is about a human, Gan, who has been promised to an alien, T'Gatoi, by his mother. T'Gatoi has been a part of his life since birth, and he develops an attachment to her, but he is reluctant to put his body in danger.

Many critics read the story as a slavery parable, but Butler disagrees, calling this her "pregnant man story […] I wanted to see if I could write a dramatic story of a man becoming pregnant as an act of love—choosing pregnancy in spite of as well as because of surrounding difficulties" (Butler, 2005a, p. 30). Indeed, the male pregnancy story provides an opportunity to look at male/female relationships anew. To what extent have women "chosen" or been promised in marriage to protect themselves, even though the relationship carries risk? How many of us could mirror Gan's thoughts about watching a violent birth? "The whole procedure was wrong, alien. I wouldn't have thought anything about her could seem alien to me" (Butler, 2005a, p. 17).

Gan sees a birth that goes wrong and fears his looming future as a mate. This fear is common enough for anyone who might one day give birth, but the story emphasizes that there is great danger in a birth that goes wrong for these humans, as the grubs would begin to eat

their human host to escape. Gan, however, understands better than most how things work on their new planet. T'Gatoi is a politician. She is on the side of the humans—wanting them to be able to "choose" to procreate and to live on preserves as a subclass of species rather than as simple breeding animals. Humans enjoy the longevity given by unfertilized eggs, but they are not permitted to have weapons in their preserves. Gan is not only "promised" to T'Gatoi, we might also see them as related—she was taken out of his father's body, making them somewhat siblings. However, T'Gatoi is his mother's friend and is more like an aunt or a mother:

> sometime before my older sister was born, my mother promised T'Gatoi one of her children. She would have to give one of us to someone, and she preferred T'Gatoi to some stranger[…] I was first caged in within T'Gatoi's many limbs only three minutes after my birth. (Butler, 2005a, p. 8)

After seeing the violent birth, Gan gets the gun the family keeps hidden and considers using it on himself. He also considers having T'Gatoi impregnate his sister instead of himself. Yet Gan ultimately chooses to keep his promise to his intended, after she agrees to let him keep his gun, displaying mutual trust in each other:

> "But you came to me […] to save [your sister.]"
>
> "Yes […] And to keep you for myself," I said. It was so. I didn't understand it, but it was so.
>
> She made a soft hum of contentment. "I couldn't believe I had made such a mistake with you," she said. "I chose you. I believed you had grown to choose me." (Butler, 2005a, p. 28)

It is here that "motherhood" has become a "choice" and this is where we explore the line between choice and coercion.

### *Fledgling*

Butler's last novel, *Fledgling* (2005b), explores the terrain of choice in more detail. A vampire, Shori, wakes from a violent attack of amnesia. In exploring why her family was killed, she discovers what it means to be a vampire, a separate species living in relative secrecy separate from the human majority. Although Shori will one day propagate with a group of vampire brothers, to survive, she needs to form a community of at least eight human symbionts to sustain herself. The humans will live longer and be healthier due to her saliva, but they also become physically addicted to it. Shori is careful to ask her would-be symbionts to choose this relationship before they are unable to leave her. Humans entering into the relationship are confronted with not only an alien relationship with Shori, but with each other, as they are in a polyamorous relationship and jealousies must be overcome. The book also interrogates heteronormative and ageist assumptions, as Shori is polysexual and blind to the notion that partners should be of a common age.

The text has been criticized because Shori, although over fifty years old, looks like a child. Thus, the "visible," though not actual "precociousness", has led some to see this book as child pornography. Shori, however, is not a child. She is intelligent, mature, sexual, and very much stronger than those around her. Her physical form does nothing to detract from the power she has over her symbionts. Although Shori is adamant about respecting her "family," the relationship is unbalanced because she is the matriarch.

Shori is also part African-American and faces prejudice at the hands of older, more "traditional" vampires, who see her as an aberration. As they attempt to eradicate her, she must fight against racism and rankism masked as "tradition", in favor of a postmodern identity rooted in scientific understandings of biological evolution, equality, and multicultural pluralism. Shori is a constructed vampire—her genes have been spliced with those of another species—humans. Specifically, Shori was made black in an attempt to allow her to withstand the sun and to be able to be awake at day. Those sympathetic to her family see her as a miracle and as an evolutionary advantage, especially after she saves them from daytime attacks. Another family is disgusted by Shori, believing her to be a "mongrel," both for the small part of her that is human and for the visible blackness of her skin. This is why they attempted to kill her entire family, leaving her wounded and without memories. A modern audience is unlikely to find Shori's race or humanity disturbing because one can easily side against the racist and species-ist vampires in the novel. The novel, however, also explores issues that are likely to make modern audiences squeamish and to force them to question the other –isms that are, at present, more socially acceptable than racism: ageism, rankism, deeply rooted sexism, heternormativity, etc.

Shori, as I've noted, appears to be much younger than she is. When she wakes and meets her first partner, Wright, he thinks she is an eight-year old child. She bites him and seduces him, even though he protests that something doesn't seem right about her adult desires: "You're a vampire, you know […] And you're way too young […] Jailbait. Super jailbait" (Butler, 2005b, p. 18). The first sex scene comes before the reader is assured that Shori is actually in her fifties, and that although she is on the edge of vampire-timed fertility, she has had sex with her human symbionts for decades. Shori's age is not much of an issue as the novel progresses. Her father reassures Wright: "Once you're living with us, there will be no need to hide. And to us, there is nothing improper about your relationship" (Butler, 2005b, p. 74). When characters who live in the vampire world note her appearance, they most often comment on her height. Perhaps due to her human DNA, she is very short for a vampire her age. However, age becomes an issue again when Shori chooses her second partner, a much older woman with grown children. Shori and her new lover are probably the same age, but many other vampires and symbionts note that an older woman is an odd choice for a young vampire—for any vampire, really. Symbionts are usually chosen when they're relatively young and then enjoy a very long life with their host vampires.

Shori also breaks the bounds of human propriety when she takes her father's lovers and symbionts as her own. She does so not because she wants them (they don't want her either), but because the two women, who escaped from the massacre by being out of town during the attack, will literally die without the vampire saliva their bodies now need to survive. Her decision to take the women as her own, while distasteful even to her (though not for the same reasons it might disturb us), is to save their lives and to care for them as her father would have done.

As Shori tries to learn what it means to be a vampire, she hears different theories about how her species came to be, ways to exist in a mostly human world, and her responsibilities in her relationships with humans and other vampires. She must relearn what it means to be a matriarch. In the vampire world, the sexes must live separately, especially once adulthood is reached. Shori thus lived with her mother before the massacre. Females and males will meet to mate, but their mating hormones are too powerful and distracting for day to day life. Thus,

Shori's adult community will always be a matriarchy and after the massacre, she must find a way to build another female-run community.

Female vampires more powerful than males in this world because their venom is stronger. Once Shori bites a male vampire, he will never be able to mate with another female vampire. Shori's living situation will always ultimately be a reverse harem. Her human symbionts are allowed to have other human partners, but they *belong* to Shori. The set of brothers who will choose to mate with her must settle for her alone because her sisters are dead.[17] Unless Shori can "adopt" sisters from families with too many girls, the set of brothers in her "harem" must place all the hope for their lineage in her youth-like, small frame.

Shori, like all female vampires in her world, is cast in the traditionally male role—she must protect and provide for her family. As one woman explains, "among the [vampire species], the females competed. It's like the way males have competed among humans" (Butler, 2005b, p. 115). However, they understand the rules of the larger world: "female [vampire] families had passed for human for thousands of years by marrying male symbionts and organizing their communities to look like human villages" (Butler, 2005b, p. 240). The analogy becomes clearer as the book vilifies those who mistreat their symbionts, just as women have sometimes been mistreated in human heterosexual relationships. Instead, Shori and the more progressive vampire respect their human partners, who must be given choice, sexual freedom, and the ability to seek pleasure and fulfillment outside of their primary relationship.

Shori's symbionts must also learn to embrace polyamory because it is impossible for Shori to survive in a monogamous relationship. Her first new symbiont is especially unwilling to accept this arrangement because, unlike the other symbionts, he was not already a part of the vampire community. When he begins his relationship with Shori, he does not know that her venom is addictive, nor does he realize she will partner with so many others—old, young, male, female, vampire, human—as a matter of course. When Shori discovers the power of her venom, she tries to release this man while he can still live without her, to give him the choice, but she explains neither the addiction nor the necessity for polyamory. Her failure to do so stems, in part, from her amnesia-induced ignorance as well as from her desperation to have him. Still, when he learns about the tradeoff inherent in being a symbiont and grows enraged about trade-off, the reader tends to sympathize with him because he did not receive the fully-informed choice Shori promises the rest of her family.

As we've seen, social arrangements in Shori's world are designed to preserve one's own survival and bloodline. This means relationships must be non-monogamous, matriarchal, polysexual, slightly incestuous, communistic, and arranged, with no prior courtship before the arrangement. No one partners for love, which all assume will come later as a byproduct of the hormones released by biting and the ensuing chemical and material co-dependency. Vampires do not appear to place taboos on many types of partnership, though they only rarely mate with siblings; instead, new relationships are formed based on logical decisions. While contemporary humans would like to believe our choices are at least a bit logical, when confronted with Butler's text, we must accept how arbitrary our taboos and love/community arrangements actually are.

## Conclusion

[17] In Fledgeling, sets of brother vampires customarily mate with sets of sister vampires.

"*Only hatred shocks me. If we can love a date palm or a puppy or a cyborg, perhaps we can love each other better also*" (Piercy, 1991, p. 421).

Many collections of science fiction by women reference the authors as Cassandras, as prophets whose warnings, though valid, are not heard. This comparison to the Greek heroine is perhaps more profound than we might expect. Cassandra is not simply a prophet of doom, but also a woman punished for daring to deny a god's sexual advances. Not only is she unable to warn her fellow Trojans, but she is raped by the conquering army when her prophecy is fulfilled.

Female science-fiction writers are in a similar position. They often go unheard as they write literature of social protest in an undervalued genre; they are also frequently overlooked as writers in their genre because they are female. While many of their works draw special attention to the complex matrix of sex, class, race, and power, they are routinely dismissed as simply writing about gender issues if sex/gender systems are included in the story matrix at all.

The issues that all these texts have in common are profound; science fiction attempts to make sense of the world around us through storytelling, and these texts about relationships are, of course, about *our* relationships. Their foci on power highlight the problematic power differentials inherent in our couplings, which are unlikely to feature people who are completely equal in the sex/gender system and whose power relationships are further complicated by issues of education, class, income, nationality, race, etc. As we struggle to move forward in the 21st century toward a future with less oppression we cannot ignore how many religions and cultures expect one partner to have power over the other.

In each of the relationships discussed in this essay, there is an element of violence. Yod, Pessi, and Shori are deadly to people who threaten (or appear to threaten) their partners. Yet Pessi, T'Gatoi, and Shori are also potentially dangerous to their own partners. Pessi traps Angel, T'Gatoi endangers Gan through pregnancy, and Shori cannot outlive every symbiont she will ever have possess, and the ones left behind will die without her.

Each of these relationships challenges taboos. As we get swept up in these stories, we find ourselves falling for machines, finding the erotic charge from another species, wondering how much age should matter (on both ends of the spectrum), preparing to carry the eggs of someone we love, overcoming jealousies, rejecting monogamy, and losing ourselves in the forest of the unknown.

These relationships, despite all the challenges they face, also feature eroticism and the possibility of love. They remind us that a relationship with the other is possible: "We look at each other, me and the troll. The lamplight's casting a pale halo around my head, and at my side Pessi is a dark silhouette. We look at each other and then at the mirror and then back at each other" (Sinisalo, 2003, p. 141). As Robert Silverberg notes, in his Preface to *Off Limits: Tales of Alien Sex* (2012), every human relationship is just as complicated and alien as those we find in science fiction:

> There is only one of me on this planet, and only one of you, because nobody else has my particular mix of genes, and nobody else has yours, and therefore we are really alien beings in respect to each other. Yet we each have something the other wants; and so we come together, in trepidation and hope, attempting to transcend the boundaries that separate us from each other. Sometimes the effort is successful, sometimes not. In any

case, it remains fundamentally true that all sexual encounters are meetings between aliens who must transcend the barriers of their alienness if they are going to attain any kind of union.

I was once asked why feminist theorists were so often drawn to science fiction. I answered that science fiction has traditionally been the genre that allowed us to imagine different worlds. Science fiction gave us the first inter-racial kiss on television on *Star Trek*, a show that also gave us a female officer working with a multi-racial crew. Its dystopias show us what can go wrong; its utopias show us how we might get it right someday. Because we can imagine alternate worlds and alternate futures through science fiction, the genre allows us to see societies and relationships arranged differently from our own. Reflecting on alternate futures encourages us to wonder why we have arranged our lives the way we have and whether we want to change them.

Our Cassandras, then, may be heard after all.

## References

Butler, O. (2005a). Bloodchild. In *Bloodchild and Other Stories* (2nd ed.). New York: Seven Stories Press. (Original work published in *Isaac Asimov's Science Fiction Magazine*, 1984.)

Butler, O. (2005b). *Fledgling*. New York: Seven Stories Press.

Datlow, E. (2012). Introduction. In E. Datlow (Ed.) *Off Limits: Tales of Alien Sex* (Kindle version). Retrieved from Amazon.com

Hoskinson, J. (Director). (2008). *The Colbert Report*. New York: Comedy Central (appeared 17 January, 2008).

Levy, D. (2008). *Love and Sex with Robots: The Evolution of Human-Robot Relationships*. New York: Harper Perennial.

Piercy. M. (1991). *He, She, and It*. New York: Fawcett Books.

Silverberg, R. (2012). In E. Datlow (Ed.) *Off Limits: Tales of Alien Sex* (Kindle version). Retrieved from amazon.com.

Sinisalo, J. (2003). *Troll: A Love Story*. (H. Loman, Trans.). New York: Grove Press. (Original work published in 2000).

*MOSF Journal of Science Fiction*
Volume 1, Number 1 - January 2016

# Paul's Empire: Imperialism and Assemblage Theory in Frank Herbert's *Dune*

*By: Amanda Rudd*

Abstract:
In his article, "History and the Historical Effect in Frank Herbert's Dune," Lorenzo DiTommaso argues that history within *Dune* is a purely linear and progressive process. DiTommaso claims that Paul's actions are pre-determined by the logical progression of history. Paul constructs his empire from the Galactic Imperium left by Shaddam, making it merely the next step in the causal and evolutionary chain as already determined by the Butlerian Jihad. However, DiTommaso's construction of history is overly-deterministic, and does not attend to the complexity involved in building any empire, particularly Paul's. Instead, reading *Dune* through the lens of Michael Hardt and Antonio Negri's *Empire* and Manuel DeLanda's assemblage theory allows for a more complete understanding of the empire Paul assembles from the pieces of Shaddam's. It is possible to pay proper attention to the historical dimensions of Paul's power while still acknowledging and examining the paradigmatic breaks that occur in his construction of empire. Furthermore, by approaching the Galactic Imperium as an assemblage per DeLanda, in which components may be re-ordered, removed, and plugged into different assemblages, we may understand Shaddam's empire as one assemblage, which is disassembled by Paul and his Fremen forces. Therefore, Paul's empire, composed of the elements of Shaddam's (re-arranged and placed in new relations to each other), along with elements from Fremen culture and militia power, is in fact an entirely new assemblage, which is both properly oriented to its linear historical processes and a total paradigmatic shift from the previous empire.

*Keywords:* imperialism, assemblage, history, paradigmatic shift, empire, science fiction

Author Notes
My thanks to Dr. Jennifer Wingard at the University of Houston for introducing me to assemblage theory and for her guidance through early drafts of this paper, and also to Joanna Spaulding for her assistance in the editing process. Sections of an early draft of this paper were presented at the International Conference for the Fantastic in the Arts 35 in March 2014.

"There is no escape—we pay for the violence of our ancestors" (Herbert, 1965, p. 146); so spoke the prophet Paul Muad'Dib in "The Collected Sayings of Muad'Dib," signifying an inescapable connection to the past. This quote, if read in isolation, would lend support to Lorenzo DiTommaso's (1992) argument in "History and Historical Effect in Frank Herbert's 'Dune'" that *Dune* demonstrates a clear linear relationship between past and present, and that these historical structures of linearity underpin many of the themes and institutions of the novel, including, but not limited to, the Padishah Emperor's Galactic Imperium and Paul's role as a catalyst for change. According to DiTommaso (1992), the structures of *Dune* show that Herbert himself believed that "history is a linear and progressive process, whose effects, while not always predictable, are nonetheless logical and understandable" (p. 311). As prime

evidence, DiTommaso (1992) cites references to the Butlerian Jihad, which in being called "the last jihad" implies a series of previous jihads. "This apparent incidence of multiple jihads," DiTommaso (1992) posits,

> should not be taken as being representative of a theory of cyclical history. Indeed, Herbert's treatments of the diverse religious traditions and the politico-social history of all aspects of the Imperium clearly reveal the evolutionary nature of his vision of history. (p. 311)

While DiTommaso's (1992) analysis of history within the context of the *Dune* series is thought-provoking, it is flawed in several places and leads to an overly-simplistic determinism that negates the agency of the characters and does not account for the complexity inherent in empire-building. DiTommaso's (1992) explication of what he terms the "Vitality struggle"—a binary opposition between vitality (life) and stagnation as represented by the conflict between the Imperium and Paul Muad'Dib—is particularly astute, and offers a unique angle on the main thematic and philosophical conflicts within the first novel of the series. However, this reading neither requires nor advances his interpretation of time and history as linear and progressive.

For instance, neither textual evidence from the novel nor theory provides a reason to believe DiTommaso's (1992) claim that the series of jihads cannot be read as cyclical. From what little evidence Herbert provides in the Appendices of *Dune*, it is just as plausible to read the jihads as cyclical. Furthermore, DiTommaso's (1992) argument falls apart when he applies his reading of linear history to Paul's empire-building project, claiming that Paul's actions are pre-determined by the logical progression of history, and that the empire Paul inherits is "derived from the same homogeneous effects of the history" (p. 322) that created Shaddam's empire; it is thus merely the next step in the causal and evolutionary chain as already determined by the Butlerian Jihad. While some attention to historical processes is admittedly important to an understanding of the imperialism portrayed in *Dune*, DiTommaso's (1992) construction of history and empire is ultimately deterministic and does not account for the special conditions of Paul's empire-building.

There are several signs that history within the context of *Dune* is not the simplistic linear progression that DiTommaso (1992) makes it out to be. While Herbert (1965) acknowledges a connection to the past in such passages as the quote from Muad'Dib mentioned above, there is nothing simple about his representation of history and time. He may state in one place that "there is in all things a pattern that is part of our universe" (Herbert, 1965, p. 380), which implies the kind of logical processes that DiTommaso speaks of. Yet, in another passage, Herbert claims, "The concept of progress acts as a protective mechanism to shield us from the terrors of the future" (1965, p. 371). Defining progress as a shield that protects us from the changes that come with the passage of time defies the very idea of progress, separating history from "the old concepts of continuity, causality, and temporal progression" as the "dream of progress" is buried "beneath the rubble of World War II, the Holocaust…" (Gomel, 2010, p. 2). Despite the fact that the Bene Gesserit and the Houses of the Landsraad pay attention to linearity and genealogy, the novel itself seems in several ways to negate DiTommaso's argument for a history that is linear, progressive, and evolutionary in nature. By negating this concept of temporal history, the novel also demonstrates that we cannot simplify empire to a deterministic evolutionary progression as characterized by DiTommaso, particularly when we approach empire in a more critical manner.

I would argue that by reading *Dune* through the lens of Michael Hardt and Antonio Negri's (2000) *Empire*, and Manuel DeLanda's (2006) assemblage theory, we come to a more complete understanding of Paul and the empire he assembles from the shattered pieces of the previous Imperium. As Hardt and Negri (2000) explain in their discussion of capitalism and imperialism, most current frameworks of empire do not stand up to the current moment. It is still possible to pay proper attention to the historical and *ab origine* dimensions of Paul's power while acknowledging the real paradigmatic breaks that occur as he constructs his empire. Moreover, by approaching the Galactic Imperium as an assemblage per DeLanda (2006), we may understand the Imperium of Padishah Emperor Shaddam IV as just one possible assemblage, which is disassembled by Paul and his Fremen forces. Therefore, Paul's empire, composed of the elements of Shaddam's (re-arranged and placed in new relations to each other), along with elements from Fremen culture and militia power, is in fact an entirely new assemblage, both properly oriented to its linear historical processes and also a total paradigmatic shift from the previous empire.

In constructing his argument about the Vitality struggle, DiTommaso (1992) makes several claims about the operations of history in empire building, and how Paul is oriented to history, but his interpretation of history within these contexts is faulty. For instance, he states that the Vitality struggle is a conflict between the Imperium and Arrakis as entities that are different in degree, not in kind (DiTommaso, 1992, p. 313). Paul comes to power by operating within the system of the already established empire, the control of which, DiTommaso claims, "naturally encourages a lowering of race consciousness and a slowing of history" (1992, p. 313).[18] This is neither an accurate reading of Paul specifically, nor of empire in general. DiTommaso (1992) seems to be using a mainly Hobbesian theory of empire—focusing on the transference of sovereignty (i.e., from Shaddam to Paul), and attributing the legitimacy of that sovereignty primarily with a "contractual agreement grounded on the convergence of preexisting state subjects" (Hardt and Negri, 2000, p. 7). Yet Hardt and Negri (2000) point out that this theory of empire "cannot account for the real novelty of the historical processes we are witnessing," nor does it "recognize the accelerated rhythm, the violence, and the necessity with which the new imperial paradigm operates" (p. 8).

Though Hardt and Negri (2000) discuss empire within the context of contemporary globalization and neoliberalism, I believe their notions can be applied in this case because they offer a framework by which we can examine the exceptional quality of Paul's empire-building, including the accelerated rhythm and violence he employs through *Dune*. As Istvan Csicsery-Ronay, Jr. (2003) states, whether Hardt and Negri's (2000) theory is accurate as a critique of global capitalism or not, it is

> immensely useful as a tool for understanding contemporary geopolitical mythology […] As a world-model, it is simultaneously an ideological fiction and a way of experiencing the world. It is also what Peter Stockwell calls an architext: a complex cognitive metaphor onto which can be mapped readers' sense of reality and also the many different parts of the science-fictional megatext. (p. 232)

[18] Ironically, Hardt and Negri (2000) would posit almost the exact opposite: imperialism creates a perception of difference (among many lines, including race and ideology) as it develops a nationalized identity of "the people" (p. 128-129). Thus the Reverend Mother calls the Fremen "those people" and speaks of them as monstrous.

We can easily apply Hardt and Negri's cognitive metaphor of the new imperial paradigm to Paul's empire—which is built rapidly, using the force of physical, economic, and ideological violence that Shaddam neither anticipates nor understands, and with a sense of necessity for his own and Arrakis's survival. In Paul Muad'Dib's use of physical, economic, and ideological violence, he marks a paradigm shift. In constructing his empire, Paul does indeed utilize all the pieces of Shaddam's Imperium, broken, rearranged, and reconsidered, but he does so in combination with a multitude of new elements and with new networks and connections. The struggle between Shaddam's Imperium and Paul's is, therefore, a clear break from the old reality, a conflict arising from a difference of *kind* as well as degree.

DiTommaso (1992) further argues, "Paul does not escape from the system when he becomes the Prophet" (p. 316), but merely adjusts his position or stance within the system. Paul is therefore a mere catalyst who "sparks the awesome inertial forces of history into motion" (DiTommaso, 1992, p. 321), triggering a series of events that were already set to occur by the linear and evolutionary progression of history. Hardt and Negri (2000) contradict this when they specifically begin their argument with the proposition that we "rule out from the outset […] the notion that the present order somehow rises up spontaneously out of the interactions of radically heterogeneous global forces, as if this order were a harmonious concert orchestrated by the natural and neutral hand of the world market" (p. 3). In this case, of course, the concert would be orchestrated not by the market but by the determinism of the Butlerian Jihad. If we accept Hardt and Negri's (2000) stance, then the emergence and/or creation of imperial structures requires a more complicated process than a natural combination of preexisting conditions already at play within Shaddam's empire. Instead, viewing the imperial forces of *Dune* through the lens of assemblage theory offers a more complete picture.

In his book *A New Philosophy of Society*, Manuel DeLanda (2006) extends Deleuze and Guattari's (1987) theory of assemblages, first set forth in "1914: One or Several Wolves?" from *A Thousand Plateaus*, which posits a theory that can be applied to a "wide variety of wholes constructed from heterogeneous parts" (p. 3). DeLanda (2006) argues that rather than viewing wholes (whether those wholes are material, social, etc.) as either single irreducible entities or only equal to the properties of its separate parts, it is possible for a whole to be "both analyzable into separate parts and at the same time have irreducible properties that emerge from the interactions between parts" (p. 10). These are assemblages: "wholes characterized by relations of exteriority. These relations imply, first of all, that a component part of an assemblage may be detached from it and plugged into a different assemblage in which its interactions are different" (p. 1).

Over the course of the first chapter of his book, DeLanda (2006) spends considerable time building upon the theory of assemblages and explicates a series of elements within his theory. The relations of exteriority that characterize an assemblage can be "logically necessary relations" between parts, or they can be only "contingently obligatory" (DeLanda, 2006, p. 11). Furthermore, DeLanda defines assemblages along two axes or dimensions. The first axis "defines the variable roles which an assemblage's components may play" (DeLanda, 2006, p. 12), the two sides of which are the material and the expressive. The second axis "defines variable processes in which these components become involved and that either stabilize the identity of an assemblage [...] or destabilize it" (DeLanda, 2006, p. 12). The two sides of this axis are called territorialization and deterritorialization. It is important to note that these two axes

do not exist in binaries, but are spectrums or continuums. Combining these two axes results in an array of components that may perform a variety of functions and could have both territorializing and deterritorializing effects. Throughout the book, DeLanda (2006) demonstrates how this assemblage theory may be applied on different scales, beginning with individual interactions between people or objects, up through the scale of cities and organizations, and ending with nation-states. Adding or removing components will not always alter an assemblage, but because the functions and properties of an assemblage are defined not by the components but the interactions between components, a significant fracturing, re-ordering, or re-structuring of components can, in some cases, result in the creation of an entirely new assemblage. This is, in its essence, what I argue takes place over the course of *Dune*, as Paul Muad'Dib Atreides attacks and disassembles Shaddam IV's Imperium, replacing it with an empire of his own making, which reorders all the components of Shaddam's empire while adding components of Fremen culture and militia power to the mix.

It is essential first, though, to note the ways in which Paul himself is also an assemblage that cannot be predicted or controlled by the old system. DiTommaso (1992) argues that Paul's abilities and status as the Kwisatz Haderach separate him from the Spacing Guild, the Mentats, and the Bene Gesserit by a difference in degree (p. 316). He views Paul's abilities as simple extensions of the same "awareness-spectrum" that the Spacing Guild uses, increased by a combination of the Mentat training from Thufir Hawat and the Bene Gesserit training from his mother, Jessica. Furthermore, because Paul resorts to using his position as a Duke within the Imperium in his dealing with Shaddam IV, DiTommaso (1992) claims that he merely works within the already-established system and does not in any way constitute a break. There is no denying the importance of Paul's background, the training that is the foundation of his development, or his connections to the institutions of the Spacing Guild, the Mentats, and the Bene Gesserit.

Nevertheless, if we view Paul's abilities as only an intensification of each institution we risk ignoring the novel ways these elements interact with each other. No human being before had ever received both Mentat and Bene Gesserit training . These two elements alone, powerful in their own rights, would interact in unpredictable ways, feeding off and building from the properties of each element to create entirely new abilities.[19] Combining these two already-formidable components with Paul's initial spice consumption, the philosophies and religion of the Fremen, his personality as a Duke's son, and his final consumption of the Water of Life[20] could not fail to create an entirely unique entity that could not have been created or predicted by any of these elements individually. The properties, abilities, and powers of the Kwisatz Haderach as embodied by Paul are different from and greater than any of these individual properties, and are dependent upon the interactions, or relations of exteriority, between these elements. This is, in effect, the very definition of an assemblage. Though

[19] It may be important to the overall interaction of the various components that make up Paul as an assemblage to note that Jessica disobeyed her Bene Gesserit by having a son instead of a daughter, and that by giving Paul Bene Gesserit training *she* is the one who makes the first paradigmatic break from the old system, in which Bene Gesserit training is for women *only*.

[20] Also a task meant only for women, specifically for women who are Bene Gesserit trained and intend to become Reverend Mothers.

DiTommaso (1992) argues that Paul's prescience is only an extension of the Mentat ability to read paths and probabilities, the scenes when Paul experiences his more powerful prescient visions demonstrate an experience and knowledge that is not only different in intensity but vastly different in quality and kind than a Mentat's computational predictions.

Paul, as the Kwisatz Haderach, is not just playing the odds and dealing with probabilities and statistics. He is stepping outside the stream of time and *experiencing* events—following the paths and possibilities past their conclusions, becoming aware of the consequences of consequences of consequences *ad infinitum*, in ways that neither the Mentats nor the Spacing Guild could ever dream of. His abilities develop slowly, in small flashes such as in the scene just after he and Jessica escape the Harkonnen attack, and Paul sees

> two main branchings along the way ahead—in one he confronted an evil old Baron and said: 'Hello, Grandfather.' The thought of that path and what lay along it sickened him. The other path held long patches of grey obscurity except for peaks of violence. He had seen a warrior religion there, a fire spreading across the universe with the Atreides green and black banner waving at the head of fanatic legions drunk on spice liquor. (Herbert, 1954, p. 199)

Already here Paul sees farther and in more visionary ways than the Mentats could, but it is early still, and he does not see clearly. Paul gains greater understanding of the currents he steps in as the novel continues:

> Awareness flowed into that timeless stratum where he could view time, […] the one-eyed vision of the past, the one-eyed vision of the present and the one-eyed vision of the future—all combined in a trinocular vision that permitted him to see time-become-space" (Herbert, 1965, p. 295).

And once he drinks the Water of Life, Paul's sight, his ability to be "many places at once" (Herbert, 1965, p. 444), becomes complete. His mother Jessica knows in that moment that he is, in fact, the Kwisatz Haderach. Yet, though the Bene Gesserit have hoped for the Kwisatz Haderach, have predicted it, and have actively manipulated genetics in order to bring him about, the reality of Paul's existence as an assemblage of many elements leads to a creature that they could not have accurately predicted and will certainly never be able to understand or control.

> This fact is highlighted in the last chapter. The epigraph to the chapter announces: There is no measuring Muad'Dib's motives by ordinary standards. […] Remember, we speak of the Muad'Dib who ordered battle drums made from his enemies' skins, the Muad'Dib who denied the conventions of his ducal past with a wave of the hand, saying merely: 'I am the Kwisatz Haderach. That is reason enough.' (Herbert, 1965, p. 466)

Paul as Muad'Dib and Kwisatz Haderach cannot be predicted or measured or held to the same standards as either the Fremen or the ducal houses of the Landsraad. When the Bene Gesserit Reverend Mother Gaius Helen Mohiam first realizes that Paul is in fact the Kwisatz Haderach she feels vindicated, going so far as to say that she can forgive Jessica for "the abomination of [her] daughter" (Herbert, 1965, p. 477) because Jessica gave birth to Paul. However, the Reverend Mother quickly realizes that the Kwisatz Haderach is not what she (or anyone) thought it would be. Paul disabuses her of her self-congratulatory attitude by stating not only that he will never do what she wants of him, but also by making her aware of her own limitations and faulty predictions: "you saw part of what the race needs, but how poorly you

saw it. You think to control human breeding and intermix a select few according to your master plan! How little you understand…" (Herbert, 1965, p. 478). At this point, the Reverend Mother's self-satisfaction transforms to rage and horror as she shouts for Jessica to "Silence him!" (Herbert, 1965, p. 477) and demands: "Jessica, what have you done?" (Herbert, 1965, p. 478). Thus, she disavows the entity she had some part in creating, but which has so far exceeded and defied her expectations that her success might as well be considered a failure.

In many ways, Paul exemplifies the kind of multiplicity described in Deleuze and Guattari's (1987) "One or Several Wolves?" which became the foundation for DeLanda's (2006) assemblage theory. Their statement that "the unconscious itself was fundamentally a crowd" (Deleuze and Guttari, 1987, p. 17) fits neatly with the process of drinking the Water of Life, in which the Bene Gesserit Reverend Mothers, and eventually Paul as Kwisatz Haderach, become connected to each other on some meta-cognitive and spiritual level. "It is like an ultimate *simpatico*," Jessica thinks as she takes the Water of Life, "being two people at once: not telepathy, but mutual awareness" (Herbert, 1965, p. 355). In that moment, Jessica connects to the previous Reverend Mother, Ramallo, and is given all her experiences and memories, including the memories of the Reverend Mother before Ramallo, and the one before that, as far as back as can be conceived. In this way, Jessica becomes a crowd, as does Paul when he later drinks the Water of Life. But unlike Jessica, who merely gains access to previous Reverend Mothers, Paul gains access to more histories, voices, and visions than even he can control.

Paul embodies multiplicity in other ways as well, particularly by virtue of his many names. According to Deleuze and Guattari (1987),

> the proper name (nom proper) does not designate an individual: it is on the contrary when the individual opens up to the multiplicities pervading him or her, at the outcome of the most severe operations of depersonalization, that he or she acquires his or her true proper name. The proper name is the instantaneous apprehension of a multiplicity. (p. 17)

That name, here, is Muad'Dib, which encompasses and gestures toward the multiplicity of Paul's identity: Paul, Duke, Fremen, Usul, Lisan Al-Gaib, Kwisatz Haderach, and eventually Emperor. The name Muad'Dib signals the assemblage of Paul, the many elements and relations of exteriority that make him who and what he is. As Deleuze and Guattari explain: "Lines of flight or of deterritorialization,[21] […] becoming-inhuman, deterritorialized intensities: that is what multiplicity is" (1987, p. 11). The multiplicity and the assemblage are one and the same, the assemblage is what makes Paul a multiplicity, and makes him something other or more than human: the Kwisatz Haderach.

The figure of Paul is not, however, the only assemblage to be found in the novel, for the entirety of his empire stands as one as well. In his analysis of organizations and governments as assemblages, DeLanda (2006) chooses to focus on

> what all these organizations share in common: an authority structure. We can separate those elements that play an expressive role, that is, those components that express

[21] Defined by DeLanda (2006) as the process of destabilizing the internal homogeneity or boundaries of an assemblage (p. 12).

> legitimacy of the authority, from those playing a material role, those involved in the enforcement of obedience…" (p. 68).

In doing so, he employs Max Weber's categories of three types of authority structures: efficient bureaucracy—"in which a complete separation of position or office from the person occupying it has been achieved"; religious/monarchical governments—"in which positions of authority are justified exclusively in terms of traditional rules and ceremonies inherited from the past and assumed to be sacred"; and charismatic individuals who repudiate the first two and are "treated by followers as a leader by virtue of personal charisma" (DeLanda, 2006, p. 69). These three structures tend to exist in mixtures, making most if not all organizations and governments assemblages. By discussing Paul's empire in these terms, I am greatly simplifying DeLanda's (2006) analysis, which makes a concerted effort to distinguish these kinds of hierarchical organizational assemblages "from the kingdom, empire, or nation-state that [they] control" (p. 87). In reality, on the level of kingdom, empire, or nation-state, we must also deal with the "interactions with other organizations, with coalitions of networks, or with populations of individual persons" (DeLanda, 2006, p. 87), which make that kingdom, empire, or nation-state an assemblage of many other assemblages (Deleuzian multiplicity in its largest form). That said, if we accept from the outset that any empire *is* an assemblage of many other assemblages, then it is possible to delineate several ways in which Paul deconstructs and changes Shaddam's assemblage empire into a new one.

The Galactic Imperium, as ruled by Shaddam IV, is in most respects a mixture of bureaucratic and monarchical structures, in which Shaddam is a monarch with limited power, enforced mainly through the deployment of his Sardaukar military forces. Rather, much of the authority comes from the contractual agreements with the noble Houses of the Landsraad, and, in the end, largely from the bureaucratic forces of the Spacing Guild, who have a monopoly on space travel and essentially have the final word on all matters through their ability to control mobility, trade, and even where and when Shaddam may deploy his Sardaukar. This then, though simplified, is the general makeup of Shaddam's assemblage empire.

On the simplest level, because Paul is a new and forceful component of the assemblage, he changes the structure of that assemblage merely by his presence. As stated previously, adding to, removing, or rearranging the components can significantly alter an assemblage. This is true in the case of Paul because he clearly fits the definition of Weber's charismatic leader, and thus creates a ripple effect of change in the makeup of Shaddam's empire. As DeLanda (2006) notes: "the kinds of individuals that have played this role [of charismatic leader] have ranged from 'prophets, to people with a reputation for therapeutic or legal wisdom, to leaders in the hunt, and heroes of war'" (p. 69). Importantly, Paul fulfills all of these roles. He is first and foremost, the Lisan Al-Gaib, the prophet and leader foretold by Fremen myth who can see the future and will bring about change on Arrakis. Second, due to his training as a Duke's son, and his prescient knowledge of Fremen culture, he brings new wisdom to the Fremen clans, following their customs when it is useful, and also changing them when he deems it necessary.

This is most apparent when Paul refuses to follow Fremen culture by challenging Stilgar and killing him in order to take over leadership of the Fremen forces. Instead, he applies his special brand of wisdom to the crowds, explaining that he has already been established as ruler by teaching the Fremen the "weirding way" style of fighting, and because Stilgar already does his bidding and honors him in the Fremen council. He does not need to go through with the

combat challenge in order for the Fremen to recognize his leadership. He will not "smash [his] knife before a battle" or "cut off [his] right arm and leave it bloody on the floor of this cavern" (Herbert, 1965, p. 427-428). Lastly, he also becomes a great war-leader for the Fremen, both by teaching them the weirding way, and also by leading them on highly successful and brutal missions against the Harkonnen, even before he is recognized as the leader. It is his role as the charismatic leader that gives him access to the Fremen forces that allow him to deconstruct Shaddam's empire, and later gives him the religious mystique that helps to justify his unquestioned rule in the following novel, *Dune Messiah*.

Paul begins to deconstruct Shaddam's empire when he changes the relations of exteriority with the Spacing Guild. As Paul and the Fremen continue their attacks on the Harkonnen, their master plan is to so completely disrupt the mining and production of the all-important spice mélange that it will capture the undivided attention of the Spacing Guild and the Emperor. The Spacing Guild needs the spice because it fuels their ability to fold space and travel between planets. The Emperor needs the spice because it fuels the entire economy, and because without it the Spacing Guild will cut off his ability to travel as well. For decades, the Spacing Guild has been the power behind the throne, and even the Emperor must often bow to their demands. As Paul states to Shaddam, the Guild only permitted him to mount the throne on the assurance that the spice would continue to flow. This balance of power changes in the final chapter, with Paul. When Shaddam threatens Paul with an armada of ships from the Great Houses of the Landsraad ready to attack at any moment, Paul does not respond to the Emperor, but to the two Spacing guildsmen in the room, ordering them to "Get out there immediately and dispatch messages that will get that fleet on its way home" (Herbert, 1965, p. 475). The guildsmen respond by explaining that they do not take orders from him. In order to gain their attention, Paul threatens to destroy all spice production on Arrakis: "The power to destroy a thing is the absolute control over it,"[22] explains Paul (Herbert, 1965, p. 477), and therefore the Spacing Guild is now also under his control. He describes the guild as a village beside a river:

> They need the water, but can only dip out what they require. […] The spice flow, that's their river, and I have built a dam. But my dam is such that you cannot destroy it without destroying the river. (Herbert, 1965, p. 477)

By exerting his power over the Spacing Guild, Paul dismantles nearly all the bureaucratic power it has over the empire, vastly restructuring the relations of exteriority between it and the throne.

Paul breaks apart and rebuilds Shaddam's Imperium in other ways as well. When he removes the Sardaukar from power, and announces that he will turn their prison/training planet Salusa Secundus into a "garden world, full of gentle things" (Herbert, 1965, p. 488), he eradicates the Galactic Imperium's only other real method of enforcement outside the bureaucratic structures of the Spacing Guild. Instead, Paul replaces the Sardaukar with his Fremen forces, leading the Reverend Mother to burst out in fear and horror: "You cannot loose these people upon the universe!" (Herbert, 1965, p. 488) when she senses the coming jihad. Paul responds: "You will think back to the gentle ways of the Sardaukar!" (Herbert, 1965, p. 488). This further highlights the difference Paul envisions in the way his forces with interact

[22] Or, as the Baron Harkonnen says in the 1984 film version: "he who controls the spice controls the universe."

with the empire and the universe at large. By making the Fremen one of the most significant components of his empire, Paul also restructures the ceremonial and expressive elements of the assemblage. The Fremen religion becomes a new method for enforcement and obedience as their sacred histories and rites influence the expected behavior, language, and hierarchies of all the people in the empire.

Furthermore, these ritual aspects are not material components, but are highly important as expressive elements that sacralize, historicize, and justify both Paul's power as emperor and the actions of himself and his followers (this is especially true in *Dune Messiah*, in the case of his sister who is called St. Alia of the Knife[23]). In addition, in Shaddam's empire, religion had little influence or importance (perhaps none). While the Bene Gesserit are in some ways a religious group similar to an order of nuns, who seed messages of their beliefs within the myths and religions of all the worlds they contact (through a project called the Missionaria Protectiva,[24] which left seeds within the Fremen religion making it possible for Jessica to claim support and safety), these religious elements have little to no effect on the governmental organization or bureaucracy of Shaddam's empire. Paul's empire, on the other hand, contains strong threads of the Fremen religion within its foundations. It is this religion that first posits Paul as a prophet and grants him the role of charismatic leader, which he uses in combination with his role as a Duke of the Landsraad to claim Arrakis and eventually the empire.

Paul does not, of course, deny his inheritance as Duke Atreides after the death of his father, Leto. Because he uses his name as an Atreides to his advantage, DiTommaso argues that Paul merely operates within the already-established system and does not constitute a paradigm shift. However, this claim ignores the fact that Paul is an assemblage, a multiplicity of names and roles that interact and relate to each other in complex ways. Paul knows it would be foolish and damaging both to his cause and to his own identity if he were to disavow his name and responsibility as Duke of House Atreides. He therefore uses every aspect to his advantage as he negotiates with Gurney Halleck, one of his father's best commanders, with the Sardaukar, and with Emperor Shaddam IV himself. In demanding the Emperor's surrender, Paul sends a message: "I, a Duke of a Great House, an Imperial Kinsman, give my word of bond under the Convention. If the Emperor and his people lay down their arms and come to me here I will guard their lives with my own" (Herbert, 1965, p. 469). When the Emperor and his entourage come before him, Paul behaves as a Duke of a Great House should behave. He follows the rules and rituals afforded to him as a Duke. Paul even accepts a combat challenge from Feyd-Ruatha and fights the battle within the rules of the Convention that controls the actions of the Houses of the Landsraad, despite the fact that as a Fremen warrior and leader, there is no need for him to fight Feyd himself. He could just as easily allow Gurney or even his lover Chani to kill Feyd for him, but he obeys the dictates of the system he resides within as a Duke because it is politically effective for him to do so.

[23] Alia is often seen giving speeches or sermons about her brother's philosophies and godhood, and is described as "a Reverend Mother without motherhood, virgin priestess, object of fearful veneration for the superstitious masses" (Herbert, 1969, p. 68).

[24] Defined in the Appendices of *Dune* as "the arm of the Bene Gesserit order charged with sowing infectious superstitions on primitive worlds, thus opening those regions to exploitation by the Bene Gesserit" (Herbert, 1965, p. 524).

Paul follows the conventions of the Landsraad only to a point, and only so far as it suits his needs and whims. Because he is a multiplicity contained within the name Muad'Dib he feels no compulsion to limit himself to the rules that dictate the actions of a duke. He thus feels no compunction against threatening the Emperor with violence and imprisonment. When the Emperor exclaims: "I put down my arms and came here on your word of bond! […] You dare threaten—" (Herbert, 1965, p. 487), Paul's response is a clear sign of his ability to fragment his actions between his multiple roles: "Your person is safe in my presence […] An Atreides promised it. Muad'Dib, however, sentences you to your prison planet" (Herbert, 1965, p. 487). It is as if he contains two different people with two different sets of motives and morals. As Atreides, he demands the hand of the eldest Princess, Irulan, in marriage, in order to secure the throne and justify his rule in the eyes of the Landsraad. As Muad'Dib he threatens the Spacing Guild and sends the Fremen out into the universe with their strength and their religion to justify his rule in the eyes of everyone else. While Paul Atreides would worry for his sister, Alia, who is only four or five, Muad'Dib is only proud of her ability to kill as he tells his mother that Alia is "out doing what any good Fremen child should be doing in such times […] She's killing enemy wounded and marking their bodies for the water-recovery teams" (Herbert, 1965, p. 470). It is Muad'Dib who swears to his lover Chani that she will have his love and his children and his loyalty, but it is Duke Atreides who bargains to marry the Princess Irulan anyway. Despite the presence of the Duke within him, and his ability to work within the old structures as needed, Paul makes it clear in the conclusion of *Dune* that the old law is dead and he is the new law. As he says of Arrakis:

> The Fremen have the word of Muad'Dib […] There will be flowing water here open to the sky and green oases rich with good things. But we have the spice to think of, too. Thus, there will always be desert on Arrakis… and fierce winds, and trials to toughen a man. We Fremen have a saying: 'God created Arrakis to train the faithful.' One cannot go against the word of God. (Herbert, 1965, p. 488)

He adds later that the Fremen are his and "what they receive shall be dispensed from Muad'Dib" (Herbert, 1965, p. 489). There is no question that he dispenses law, and the empire, not just Arrakis, will be one of *his* making. And yet, because his empire is an assemblage, with a multitude of components that interact in various and often-unpredictable ways, even Paul fails to account for and control everything. This becomes abundantly clear in *Dune Messiah*, as his jihad escapes his control, and he is eventually betrayed.

Manuel DeLanda's (2006) assemblage theory gives us the tools and lens through which the intricate nature of imperial power is demonstrated in *Dune*. However, this only begins to scratch the surface of the possibilities of how both assemblage theory and Hardt and Negri's (2000) *Empire* can be applied to the series as a whole. A more in-depth analysis of the multitude of assemblages that appear in Herbert's world-building could offer promising insights into his portrayals of religion and the politics of the masses. Moreover, the capitalistic nature of the spice trade and the Spacing Guild are ripe for an analysis based upon the issues of capitalism and globalization discussed in *Empire*. It would also be intriguing to see how Paul's role as a charismatic leader and Kwisatz Haderach complicates the proposition by Hardt and Negri (2000) that we should rule out the possibility of "a single power and a single center of rationality transcendent to global forces, guiding the various phases of historical development according to its conscious and all-seeing plan" (p. 3). That is not to say, of course, that Paul is in

control of every single event or sees every single outcome. The events of *Dune Messiah* and *Children of Dune*, the third novel of the series which focuses on Paul's children, certainly remove that possibility. And yet, as The Tleilaxu Godbuk states in *Dune Messiah*:

> No matter how exotic human civilization becomes, no matter the developments of life and society nor the complexity of the machine/human interface, there always come interludes of lonely power when the course of humankind, depends upon the relatively simple actions of single individuals. (Herbert, 1969, p. 209)

No single, all-seeing individual may orchestrate the concert of imperial forces; but occasionally, a charismatic and powerful individual such as Paul Muad'Dib Atreides has the ability to break through systems, shift paradigms, and change the paths of those forces.

## References

Csicsery-Ronay I., Jr. (2003). Science Fiction and Empire. *Science Fiction Studies, 30* (2), 231-245. Retrieved from http://www.jstor.org/stable/4241171

DeLanda, M. (2006). *A New Philosophy of Society: Assemblage Theory and Social Complexity.* London: Continuum.

Deleuze, G., and Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia.* Minneapolis: University of Minnesota Press.

DiTommaso, L. (1992). History and Historical Effect in Frank Herbert's "Dune." *Science Fiction Studies, 19* (3), 311-325. Retrieved from http://www.jstor.org/stable/4240179

Gomel, E. (2010). *Postmodern Science Fiction and Temporal Imagination.* London: Continuum.

Hardt, M., and Negri, A. (2000). *Empire.* Cambridge: Harvard University Press.

Herbert, F. (1965). *Dune.* New York: Ace Books.

Herbert, F. (1969). *Dune Messiah.* New York: Ace Books.