

Cyborg Identities: Rethinking the Human in Paolo Bacigalupi's *The Windup Girl*

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Abstract

This chapter investigates the intersection of hybrid identities and posthumanist critiques of anthropocentrism in Paolo Bacigalupi's *The Windup Girl* (2009). Set in a post-expansionist Thailand, the novel depicts an ecologically ravaged world where the ontological boundaries between human, animal, and machine are systematically dissolved. By focusing on the genetically engineered "New People", specifically the protagonist Emiko, this analysis explores how bioengineered bodies become sites of gendered politics and resistance. Utilising Donna Haraway's cyborg theory, the paper argues that the novel's portrayal of anthropogenic climate change and biotechnology necessitates a shift toward posthuman care that extends ethical consideration beyond the human species.

Keywords: Cyborg, Anthropocene, Biotechnology, Posthumanism, Genetic Engineering, Paolo Bacigalupi

Introduction

The Anthropocene, the term proposed by Paul Crutzen and Eugene Stoermer for the current geological epoch, forms the backdrop of Paolo Bacigalupi's award-winning novel *The Windup Girl* (2009). In a 2000 paper, they proclaimed that the period from the second half of the 18th century should be referred to as the "Anthropocene" because that is when the effects of human activity on the environment became apparent. Although the International Union of Geological Sciences formally rejected the term on 20th March 2024, it has nonetheless gained currency in various disciplines to address issues related to human centrism, climate change, and ecological crisis. Posthumanism takes up these issues head-on by redefining the position of the human with respect to technological advancements. Donna Haraway's concept of the cyborg, which signals the breaking of boundaries between human, animal, and machine, forms the cornerstone of this thought. In Bacigalupi's dystopian world, ravaged by climate change and capitalist greed, the genetically engineered creatures and food substances invoke these posthuman themes. This chapter will first look at Haraway's cyborg theory, then examine the genetically engineered characters and the setting. It argues that anthropogenic climate change and biotechnology have made human existence vulnerable, necessitating an ethic of care that goes beyond just the human.

To understand the posthuman condition in *The Windup Girl*, it is necessary to first define the hybridity that Haraway's cyborg addresses. Pramod K. Nayar, in *Posthumanism* (2014), defines posthumanism as the "...radical decentring of the traditional sovereign, coherent, and autonomous human to demonstrate how the human is always already evolving

with, constituted by, and constitutive of multiple forms of life and machines” (ch. 1). Instead of human exceptionalism, posthumanism sees humans as an “assemblage” entirely interwoven with the non-human and technology. The cyborg is the most visible form of this representation. It is a creature in transition, “between the human and the machine, neither human nor machine, both human and machine” (ch. 1). While Chris Hables Grey notes that the term “cyborg” was originally coined to describe modifying humans with implants for space travel, Donna Haraway redefines it in “A Manifesto for Cyborgs”. She views the cyborg as “a creature in a post-gender world” (8) devoid of roots in traditional dualistic space. The cyborg represents the dismantling of three boundaries: human and animal, human and machine, and physical and non-physical. This crossing destabilises existing power relations. As Haraway claims, “They are the illegitimate offspring of militarism and patriarchal capitalism.... But illegitimate offspring are often exceedingly unfaithful to their origins” (10). The figure of the cyborg offers a very potent metaphor for transgression, potentialities, and “a way out of the maze of dualisms...” (39). The bioengineered Windups in Bacigalupi’s novel bring this metaphor for transgression to life.

Genetic Hegemony and the Calorie War

The setting of *The Windup Girl* is defined by a brutal “calorie war” (2) that underscores the entanglement of capitalism and biology. The novel opens in a post-oil contraction era where the world is dominated by “calorie companies” like AgriGen, which have weaponised food production. While nations like India, Burma, and Vietnam have collapsed due to starvation and rising waters, the Thai kingdom remains the last bastion of biological independence, protecting its population with a secret seed bank and the seawalls erected by King Rama XII. This seed bank represents a form of botanical resistance against the genetic hegemony of the West. Derrick King notes that in this critical dystopia, GMOs become the primary site of political struggle between the Environment Ministry and the Trade Ministry. The landscape is populated by sterile, patented foods such as “U-tex Rice”, “TotalNutrient Wheat”, and “SoyPRO” (164). These “dead-end foods” are designed not for sustainability but for profit; they are sterile by design, forcing nations to remain dependent on the calorie companies for survival. This biological monopoly is enforced through artificially created diseases like blister rust, the Nippon genehack weevil, and cibiscosis, which mutate constantly to destroy natural food sources and kill those who rely on them. In this context, the genetic modification of food mirrors the genetic modification of the “New People”—both are commodities created to serve a capitalist market, yet both possess the potential to destabilise the very systems that created them.

New People

The search for this hidden seed bank leads Anderson Lake, an AgriGen representative, to the genetically engineered female windup, Emiko. Emiko is a liminal character whose existence oscillates between human, animal, and machine. A Japanese “New Person” manufactured by the Mishimoto company, she was left in Thailand by her previous patron. To some, she is “almost human” or “more than human”, but mostly she is treated as a “soulless creature” (50). Currently owned by Raleigh, she is kept illegally and sexually exploited. Her hyperfeminine features, like smooth skin, come at the expense of dangerous overheating. Her abuse enforces the gender hierarchies of a male technocratic society. However, Emiko’s sense of selfhood awakens when she learns of a place where windups live without patrons. This thought defies her genetic “niche”—the indoctrination that compels her to serve. As the text notes, “She has been enslaved to think against New People, even when she herself is one of them” (223). Her struggle with hybridity questions the boundaries between her technical and

true self, reflecting Haraway's blurring of human and machine. When she eventually kills Raleigh and the Queen Protector, her revolt confirms the cyborg's irreverence toward its creators.

The anxiety surrounding the "New People" is further illuminated through the character of Kanya, a lieutenant of the Environment Ministry, and her encounter with another windup, Hiroko. When Kanya meets Hiroko, her reaction is a volatile mixture of fascination and repulsion: "The creature beside her is beautiful. Her skin is sleek, and her movements are surprisingly elegant. And she makes Kanya's skin crawl" (461). This visceral reaction highlights the 'uncanny valley' occupied by the windups; they are too human to be dismissed as machines, yet too engineered to be accepted as natural. Through Hiroko, the text reveals the inherent superiority of the windup design. Kanya learns that these creatures possess lethal superhuman abilities and that it is only their conditioning and their training that render them docile. Like Emiko, Hiroko experiences profound emotions such as hate, anger, and despair, yet she remains bound to the masters who created her. For Kanya, Hiroko remains an abnormal "pretty puzzle", a soulless entity that defies the natural order. This interaction reinforces the posthumanist critique: the 'human' definition is maintained only by violently excluding and 'othering' the genetically modified subject, even when that subject displays more resilience and adaptability than the humans themselves.

The Theology of the Object: Grahamites and the Soulless Body

It is impossible to fully understand the plight of the 'New People' without looking at the religious and moral framework that condemns them. The novel does not just present a conflict between man and machine; it presents a conflict between the sacred and the profane. In the world of *The Windup Girl*, the environmental collapse has led to a resurgence of fundamentalist ideologies, most notably the Grahamites. This sect preaches a return to a 'natural' order, viewing the genetic manipulation of life as a direct affront to the divine. For the Grahamites, and for many in the Thai Kingdom, a creature like Emiko is not just a technological marvel or a labour source; she is a sin made flesh. The text describes how Emiko is viewed as a "soulless creature" (50) by the general population. This lack of a soul is the primary justification for the violence inflicted upon her. If she has no soul, she has no rights, and therefore, her pain does not register on the moral compass of the human characters. This theological rejection is what allows the "white shirts" of the Environment Ministry to police the boundaries of humanity with such brutality. They are not just protecting the gene pool; they are protecting the definition of the human spirit.

However, Bacigalupi complicates this by showing us Emiko's internal life. We see her struggle with loyalty, her desire for freedom, and her capacity for suffering. When the Grahamites or the Ministry officials look at her, they see only a violation of nature—a "mulch" of genes that should not exist. But the narrative forces the reader to look closer. We see that the so-called 'soulless' creature is often more 'humane' than the humans who persecute her. The humans in the novel are driven by greed, lust, and political manoeuvring. Raleigh, her owner, sees her only as a toy for "herky-jerky sex" (62) and financial gain. The Grahamites see her as an abomination to be purged. Yet, Emiko demonstrates a depth of feeling and a capacity for survival that challenges these rigid categories. This tension highlights a critical aspect of the Anthropocene: as we manipulate the building blocks of life, we destabilise our old religious and ethical certainties. The Grahamites try to hold onto a past where nature was pure and untouched by human hands. But as the novel shows, that world is gone. In a world of blister rust and gene-hacked weevils, nature is already dead. The Grahamites' hatred of the Windups is a misplaced grief for a world they have lost. By

projecting their anxiety onto Emiko, they try to purify a world that is strictly, and irreversibly, hybrid.

Cyborg Environment

It is not only the New People who embody hybridity; the environment itself is cyborgised. Natural vegetation is largely absent, replaced by the sterile technologies of the calorie companies. Technology has penetrated the ecosystem entirely. Artificially created diseases like blister rust and cibiscosis constantly mutate, attacking both people and GMO crops. The engineered fauna of this new world further erodes the distinction between the natural and the artificial. In addition to the Cheshire cats, the ecosystem is populated by gene-hacked creatures that serve specific utilitarian or aesthetic functions for the elite. These organisms, often patented and trademarked, represent the ultimate commodification of life. They are not born of natural selection but of corporate design, their very genetic code inscribed with intellectual property rights. This bio-capitalism turns the environment into a marketplace where only the profitable species are permitted to survive, while natural species are pushed to extinction, unable to compete with the enhanced durability and aggression of their engineered counterparts. This reflects posthumanism's insistence on the interconnectedness of all life forms. The Windup Cheshire cats, creatures that mated with natural cats and exterminated them, loom everywhere. Emiko compares her existence to these Cheshires. If she could reproduce, she could "supplant the human species with her own improved version" (164). In this world, it is no longer possible to ascertain where technology begins and nature ends.

Furthermore, the seed bank itself becomes a potent symbol of this cyborg ecology, functioning as both a museum of the past and a weapon for the future. The Thai Kingdom's survival hinges on this repository of non-modified genetic material, which stands in direct opposition to the sterile dead-end crops of the calorie companies. However, even this natural refuge is maintained through intense technological intervention and political manoeuvring. The preservation of the natural is, paradoxically, a highly artificial process, requiring climate-controlled environments and military protection. Thus, the seed bank does not represent a return to a pre-technological Eden but rather a different kind of cyborg existence—one where the natural is artificially sustained within a hostile, post-natural world.

The Neocolonial Calorie: Food as a Weapon of Control

While the cyborg figure of Emiko dominates the foreground of the novel, the background is ruled by a different kind of monster, the Calorie Companies. The ecological crisis in the novel is not just a backdrop; it is an active system of control. The calorie war mentioned in the text serves as a critique of modern global capitalism, specifically how it intersects with biology. In the novel's present, food is no longer a basic human right; it is intellectual property. The text lists patented foods like "U-tex Rice", "TotalNutrient Wheat", and "SoyPRO". These names are significant. They sound industrial, sterile, and corporate. They act as a constant reminder that the natural cycle of agriculture has been replaced by a linear system of production and consumption owned by a few powerful entities. The "Calorie Man", (12) Anderson Lake, represents AgriGen, a company that essentially weaponises starvation. By introducing diseases like cibiscosis and blister rust, these companies destroy traditional agriculture, forcing nations to buy their disease-resistant, sterile seeds. This dynamic creates a form of biological neocolonialism. The Thai Kingdom's resistance—its refusal to sign trade agreements and its protection of the seed bank—is an anti-colonial struggle. King Rama XII's seawalls keep the ocean out, but the Trade Ministry and the

Environment Ministry are fighting to keep the foreign calories out. The seed bank is described as a treasure, not because it holds gold, but because it holds the genetic history of life before it was patented. Bacigalupi uses this economic setup to show how the posthuman condition is also a post-natural economic condition. The New People, like Emiko, and the genetically modified crops are two sides of the same coin. Both are engineered for servitude. The crops are engineered to feed; the Windups are engineered to serve. Both are sterile and controlled, ensuring they cannot reproduce without permission. This is the ultimate capitalist fantasy: a labour force and a product line that have no future outside of what the corporation dictates.

However, the novel suggests that biology always finds a way to rebel. Just as Emiko breaks her conditioning to kill her masters, the biological world refuses to be fully contained. The diseases mutate faster than the scientists can create cures. The Cheshire cats wipe out the natural cats. The illusion of control that AgriGen maintains is fragile. The Calorie War is not a war humans are winning; it is a war they are surviving, inch by inch, by turning themselves and their world into commodities.

Anderson Lake: The Complicity of the Human

Finally, we must turn our attention to Anderson Lake, the character who acts as the bridge between the world of the exploiters and the world of the exploited. It would be easy to categorise Anderson simply as the villain, as he is the Calorie Man, the agent of the very company responsible for much of the world's suffering. He comes to Thailand to steal the secrets of the seed bank. Yet, his relationship with Emiko complicates this reading and offers a nuanced look at human complicity in the Anthropocene.

Anderson is not immune to the toxic environment he helps perpetuate. He buys the “Ngaw” (1) fruit because he is looking for something that hasn’t been corrupted by the plagues. He is searching for purity in a world his employers have polluted. His fascination with Emiko is similarly contradictory. On one hand, he participates in the economy that enslaves her. He knows about her identity and illegality as property. But on the other hand, he recognises a kinship with her. When he falls sick with a mutating disease at the end of the novel, the power dynamic shifts completely. This shift is crucial to the novel’s posthuman argument. Anderson, the sovereign human with all the money and political backing, ultimately becomes just another failing biological organism. His body, like Emiko’s, is vulnerable to the environment. The “trans-corporeality” of the world—the way the environment moves through the body—does not care about his status as a Calorie Man. The disease invades him just as the “white shirts” invade the slums. His relationship with Emiko, therefore, becomes a dark reflection of posthuman care. It is transactional, but it also becomes desperate and necessary. He saves her, and she saves him. In his sickness, he is decentred. He is no longer the master of the universe; he is just meat, waiting to rot, kept alive by the ‘soulless’ creature he once viewed as a curiosity. This relationship dismantles the idea of human exceptionalism. We are not above the system we create. If we poison the world, we poison ourselves. Anderson’s fate is a warning: in a damaged world, even the masters are not safe from the wreckage.

Conclusion

The genetically engineered creatures and the biotechnological environment in *The Windup Girl* not only critique anthropocentrism but also explore the ethical dilemmas it creates. Reading *The Windup Girl* through Haraway's cyborg theory provides us a better

understanding of the anxieties and possibilities of post-human existence in the Anthropocene. Emiko's relationship with Anderson Lake symbolises Haraway's ethical figuration of "companion species". As Haraway writes, "I have come to see cyborgs as junior siblings in the much bigger, queer family of companion species" (11). Humans have always evolved with non-human life forms. Therefore, it is imperative to acknowledge and respect the "significant otherness" (25) of other beings, whether human, non-human, or artificial, for a more ethical posthuman society.

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