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THE DYSTOPIAN WORLD OF THE WINDUP GIRL

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INTRODUCTION

Paolo Bacigalupi's *The Windup Girl* (2009) is a dystopian novel that successfully depicts how techno-scientific developments might bring about dire – sometimes catastrophic – consequences. The story takes place in the distant future – several centuries from now – in Thailand. The only food available is genetically modified fruits and vegetables and the calorie companies control the food market. “The Windup Girl focuses most on the sociopolitical dimensions of genetic modification: population overrun, the ownership of genetic information, programmed traits such as infertility, and the jurisdictions of regulation, quarantine, and importation” (Selisker, 2015: 505). In particular, the novel concentrates on the conflicts between transnational corporations, nationalistic local businesses and local governments. Narrated from multiple perspectives, it draws attention to the degradation of the ecosystem resulting from the development of (bio)technology and neoliberalist global trade.

INCREASING COMPLEXITY IN A DYSTOPIAN WORLD

Emiko, the main character, is one of the New People. She is not human, neither is she a robot, she is in fact better than a robot. She is an engineered humanoid, designed to satisfy the sexual needs of the Kyoto businessmen. In the world ruled by calorie companies, she – just like the rest of the New People – has become a toy for the rich. Emiko says, “My body is not mine

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... the men who designed me, they make me do things I cannot control. As if their hands are inside me. Like a puppet, yes?" (Bacigalupi, 2012:183). As these words convey, Emiko has no freedom and no agency. Her existence is completely conditioned and controlled by her makers and owners.

Anderson Lake presents himself as a company manager, yet this is his cover-up. In reality, he is in search of food stuffs thought to be extinct. He falls in love with Emiko who was originally manufactured as a geisha for the Japanese market but ended up in a Bangkok brothel. Although this imagined community is strikingly different from our world in many ways, there are also interesting parallels such as the salience of fanatical fundamentalists, merchants who are obsessed by profit, and politicians who suffer from power poisoning. The story suggests that although the US is certainly a global superpower that wields considerable influence in global affairs, the eastern countries will become more active and powerful in the future. In the novel, Thailand is presented as the only country independent of American calorie companies. So, in this future world, power centers have changed also. They have moved away from Beijing and Washington D.C to Des Mines and Iowa. The different perspectives of several characters give the story a depth of meaning and provide deeper insights into these shifting power dynamics on a global scale.

Throughout the novel, Bacigalupi examines how food scarcity can upset the balance of power in the world. Food is essential for our existence and yet it can also be used as a dangerous weapon against humanity to destroy it. It all depends on who is holding the strings and what kind of an agenda they have. To be more precise, the writer draws attention to the companies that should support each other but in this futuristic dystopia they aim to destroy each other. The Ministries of Trade and Environment are in conflict with one another: The Ministry of Trade aims to open borders to foreign investments while the Ministry of Environment – the more cautious of the two – enforces borders to prevent the spread of epidemics that destroy crops.

This dystopian world is also a dangerous place with genetically engineered animals that roam the streets and attack people and other animals. Genetically engineered cats feed on the dead and elephant-like creatures are used to supply fuel energy to the factories. The genetically engineered crops and their diseases also pose a significant problem. Soy PRO and U-TEX rice pass as food. Therefore, Bacigalupi uses this futuristic template to show how research in biotechnology and genetic engineering

might lead to groundbreaking developments that will introduce drastic – and strongly contested change – to the social fabric of society. In doing that, he also shows how the neo-liberal agenda is closely intertwined with techno-scientific research. Written in a speculative vein, the novel thus draws on contemporary trends and follows these trajectories to some possible conclusions that are deeply worrying. So the novel also speaks to contemporary – and prevalent – fears and anxieties about the exponential growth in the fields of biotechnology and genetic engineering.

All in all, Bacigalupi does not paint a rosy future. Having adopted protectionist policies, Thailand has closed its borders to foreigners and authorities destroy everything coming from outside their borders. The writer narrates his story from the perspectives of five characters. These people have depressing lives and nothing gets better for them as the story progresses. The novel also engages with the ecological crisis. As Andrew Hageman observes: “the novel reflects the belief that Capitalism can readily be retrofitted into a sustainable economic system with greater profit margins. The novel engages with ecological crisis, destruction of crops, global warming, the future of the nation-state in the face of transnational corporations and explores the dynamic between capitalist commerce and ecological sustainability” (2012: 284). In this sense, the novel contributes to heated debates about the problematic relationship between capitalist commerce and the ecological crisis. Bacigalupi’s perspective is aligned with ecocritics and climate activists who are clearly alarmed about the future of our ecosystem that is severely impacted the pace of industrial and techno-scientific advancement as well as overpopulation.

Each character responds differently to these pressing issues and alarming conditions. Emiko, the mysterious and beautiful windup girl, is programmed to please others and obey orders. Humans look down on her and the New people. She is considered a prostitute. Although one wonders whether feelings and emotions can exist in such a world, Anderson Lake falls in love with Emiko. Through this fascinating love plot and the interaction of the human and the machine, the novel also draws attention to the blurring boundaries between “nature” and “human” and analyses how these concepts might change over time. As Selisker suggests: “In *The Windup Girl*, the uncertainty surrounding Emiko’s agency is suspended between her interpersonal interactions and two distinct paradigms—and scales—of human programming. The split prompts a question about genetics as programmed: if all forms of life are literally programmed (written in advance) by DNA, at what subjective level could that determination

feel like programming? (2015: 511). Selisker's point is interesting in that it foregrounds the so-called agency of an engineered humanoid entity who is struggling to find her authentic voice and her unique place in the world. From an alternative standpoint, the reader is also encouraged to reflect on the "human condition", namely to what extent carbon-based human beings are endowed with and can exercise free will. The novel shows that, whether you are one of the "old" or the "new" people, there are many forces beyond one's control that act on individuals and circumscribe their free will.

The fact that Bangkok is set as the future capital of finance gives another interesting twist to the story: Global ecological changes may also involve geographical changes. The writer highlights the difference between the former Thailand and the new one. Yet New Thailand remains a nation state. The pictures and statues on the walls of Thai Temples recall the old days of Thailand and yet the people of present Thailand also respect Buddhist figures that endow their society with a sense of continuity. One reason why people from Thailand could keep their solidarity intact is because they aimed to revive the Buddhist philosophy that connected them in former times. While thinking about a new disease that spread in Lake's factory due to Hock Seng's laxity, Kanya observes: "We are alive. We are alive when all 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 Europe is splintered and factionalized. And yet we endure, even expand. The Kingdom survives. Thank the Buddha that he expands a compassionate hand, and our queen has enough merit to attract these terrifying farang tools without which we would be completely defenseless" (Bacigalupi, 2012: 214). Kanya's words attest to the fact that tradition is a very important and active force that can strengthen and sustain a society, especially in times of crisis. These words also reveal how drastically the world has changed and how the once seemingly invincible powers of America and Europe have lost their earlier power and glory.

Emiko is programmed to obey male authority. She symbolizes the subservience of the Asian woman. Hock Seng is in the seed bank when Kanya goes there. When the revolution starts unexpectedly, Hock Seng does not think of preserving himself at whatever cost. In fact, he finds a way to save a Thai girl instead of thinking of saving himself first. He probably remembers the genocide that destroyed members of his family and the trauma he had experienced then. He represents hope and sacrifice in an atmosphere of grim executions and uprisings. Hock Seng, Lakes' employer,

is of ethnic Chinese and Malaysian origins. Jaidee Rojjana, on the other hand, is the captain of the White Shirts. He aims to prevent illegal imports and the spread of bio-engineered viruses from crossing Thai borders. These characters react in different ways to various situations and their different responses give a vitality to the text. On the other hand, the Thai words scattered over the pages and the fact that Bacigalupi does not aim to make the setting familiar to his readers mean that the writer expects real effort from the reader.

As mentioned above, the writer draws a rather bleak picture of the future. The narrative makes us understand how precious food is and how its scarcity may create havoc across the world. The time setting is just after Contraction, a worldwide energy collapse that has led to the scarcity of electricity and fuel. Still, the West is portrayed as a powerful block with its companies controlling the global food production and distribution. Calories have replaced money. However, the Eastern countries display great strength also. Thailand, together with some other Asian countries that have followed a similar strategy, has become powerful because it closed its borders and had its own seed banks.

The postcolonial discourse of the novel foregrounds the fragmented identity of the characters and also aims to familiarize the readers with the traditions and social norms of the East. Also, Bacigalupi examines the close relationship between the evolution of technology and market demand. Emiko was produced and programmed to please men but at the same time society dislikes the New People. As Gilbert Simondon suggests: “machines are restricted in becoming what they might be when manipulated according to the demands of market forces” (2017: 326). Simondon further observes that “In order to make the scientist a machine automatic, it is necessary to sacrifice many of its functional possibilities and many of its possible uses” (13). In the novel, the scientist Gibbons draws attention to the nature of the New People and the problems that result from their creation. He also empathizes with them, treating them as individuals.

Gibbons feels empathy with these creatures and has a liking for Cheshire cats. Society generally treats them with fear and hatred because they can elude human control and engender food webs but for the scientist, they are a marvel. They are depicted in the following manner: “They are clever, thriving at places where they are despised. Almost supernatural in their tenacity. Sometimes it seems they smell blood even before it is spilled. As if they can peer a little way into the future and know precisely when the next

meal will appear” (Bacigalupi, 2012: 2026). As a scientist, he can understand them and blames humanity for making them too perfect. Gibbons also recalls a time when the scientists thought themselves to be Gods – powerful enough to envisage a new earth and create new beings.

Bacigalupi also draws attention to the main security and social problems of this futuristic world. The case of banks, for instance, is one of the issues: “The problem with keeping money in the bank is that in the blink of a tiger’s eye it will turn on you: what’s yours becomes theirs, what was your sweat and labor and sold off portions of a lifetime become strangers ... This is the problem with a bank. As soon as you place your money in its mouth, it turns out that the tiger has gotten its teeth locked around your head” (66). Therefore, the people of this futuristic world do not even have absolute control of their money. Since money is integral to one’s survival and social needs, not having control over this important asset makes people vulnerable and, in fact, a “slave” to the system.

There are several important characters in the book: Jaideer Rojjanuscha and Kanya are “white shirts” officers of the Ministry of Environment. Their job is to destroy invasive species and plagues that enter the borders of Thailand. Hock Seng, who works for Anderson Lake, is a Malaysian Chinese refugee who fled Malaysia after his family was butchered by fundamentalist Muslims. Yet, as mentioned before, Emiko is the most important character of the novel. She is considered soulless and is despised by most humans. However, she can harm people when she feels resentful. There are no pores on her skin. Hence she cannot sweat and at times she can get too hot. She wonders if she were a different kind of animal, some mindless fury Cheshire, say, she would feel cooler. Not because her pores would be larger and more efficient and her skin so painfully impermeable, but simply because she wouldn’t have to think. She wouldn’t have to know that she had been trapped in this suffocating skin by some irritating scientist with his test tubes and DNA confetti mixes that made her flesh so smooth and her insides too hot. We are told that “She is an animal. Servile as a dog. And yet, if he is careful to make no demands, to leave the air between them open, another version of the windup girl emerges. As precious and rare as a living *bo* tree. Her soul emerging from within the strangling strands of her engineered DNA. Carlyle wonders if she were a real person, if she would feel more incensed at the abuse she suffers. It’s an odd thing, being a manufactured creature, built and trained to serve” (Bacigalupi, 2012: 184). As these words convey, the writer is clearly sympathetic towards the plight of Emiko who is endowed with individuated sentience. Her being sentient

means that she has the ability to feel which makes her servitude all the more deplorable.

Meanwhile, we learn that Thailand is on the brink of chaos. The White Shirts have arranged an attack and destroyed a shipment of contraband. Anderson and others blame the honest captain of White Shirts, Jaidee Rojjanasukchai, and want him imprisoned. Anderson tells Emiko of a place in the north of Thailand where “new people like Emiko live. Emiko wants to go to this place, live with her kind at whatever the cost. At the end of the novel, Gibbons, the old scientist, finds Emiko and promises her that he can make her fertile. He will create a new race of “new people” and Emiko will thus live with her own kind. Gibbons observes: “I can do that for you and much much more” (356). He promises a future when ovaries and sperms won’t play a role in conception. Gibbons also promises at the end of the book that technology will eventually be able to solve the enigma of nature and the Human.

Unlike most works of science fiction, *The Windup Girl* includes an abundance of dialogue. The dialogue between characters gives a more realistic picture of this community. Still, one doesn’t feel sympathy towards any of the characters. Everything and everyone is depicted in a shade of gray. Emiko dreams of another life, just like any human being: a life where she won’t be ordered about, a life that would allow her to enjoy freedom. She muses: “She cannot help dreaming of that place without patrons. North. She breaths deep, taking in the scents of sea and burning dung and the bloom of orchid creepers. Down below, the wide delta of the Chao Phraya laps at Bangkok’s levees and dikes. On the far side, Thonburi floats as best it can on bamboo rafts and stilt houses. The temple of the Dawn’s prang rise from water, surrounded by the rubble of the drowned city. North” (197). These are all what we would consider “human” dreams and we are made to feel disgust and loathing for the obviously “dehumanized” humans who have created new people to serve as slaves.

Bangkok, the main place setting, is portrayed as the city of bribes and illicit business deals. Anderson and Carlyle talk with the 3 generals. They also meet Somdet Chaoprya, protector of the child queen. According to rumor, Somdet Chaoprya had killed more people than the number of chickens slaughtered by the Environment Ministry. “With the Somdet Chaoprya backing a change of government, anything is possible” (230). Yet at the meeting, the three generals don’t trust Anderson. Anderson has all the necessary equipment to deal business in Bangkok. He observes: “I’ve

got weapons and the money for bribes ready to be landed. I can buy and equip them. Where is the risk for them?” (232).

The book also reflects the social attitudes and the religious beliefs of Thai society. Fanaticism plays an important part in their business relations. Their strong belief in the conservation of animal and plant life is likewise reflected. Jaidee muses on his beliefs about the Buddha: “Nothing is permanent, this is the central teaching of Buddha. Not a career, not an institution, not a wife, not a tree... All is change, change is the only truth” (168). Jaidee also laments the destruction of the environment and the irreversibility of ecological degradation. “In thousand years will they even know that *bo* trees existed? Will Niwat’s and Surat’s great-grandchildren know that there were other fig trees, also all gone. Will they know that there were many trees and they were of many types? Not just a Gates tea, and a generipped PurCal banana and many, many others as well? Will they understand that we were not fast enough or smart enough to save them all? That we had to make choices?” (168-69).

He thinks of “The Grahamites who preach on the streets of Bangkok, who talk their holy Bible and its stories of salvation. Their stories of Noah Bodhissatva, who saved all the animals and trees and flowers on his great bamboo raft and helped them cross the waters, all the broken pieces of the world piled atop his raft while he hunted for land. But there is no Noah Bodhissatva now. There is only Phra Seub who feels the pain of loss but can do little to stop it, and little mud Buddhas of the Environment Ministry, who hold up rising waters by barest luck” (168). The Grahamites follow the dietic system of Sylvester Graham who was an American Presbyterian minister and dietary reformer. Graham was an avid advocate of vegetarianism and the temperance movement and he emphasized the importance of healthy living and moderation in all areas of life.

The novel also reflects the 21st century concern with diseases and plagues which continue to be a threat. We are told that the plagues, that followed the rising sea levels and “the oversight of power contracts and trading in pollution credits and climate infractions” threatened the Kingdom’s survival (121). Within this context, survival is the main theme of the book. As always, big corporations put profit above all else. Calories are the new form of cash. The main idea of *The Windup Girl* is that we are a part of nature. When we destroy nature, in reality we are destroying ourselves. As Jensen suggests, the meteoric rise of cli-fi testifies to “climate disruptions brought about by human stupidity, negligence, or indifference,

the consequences of which are felt not elsewhere in the galaxy but mainly on our home planet. Rather than steadily marching towards a better future, as far as pop metaphysics goes it now seems that we are hurtling into a climate abyss” (2018: 189).

The Windup Girl is deeply infused with nostalgia for the past times. Kabak observes that Bacigalupi uses “the dystopian form to imagine the possibilities for an alternative, post-capitalist future for genetics” (2019: 2). The theme of nostalgia is depicted through the main characters. Hock Seng feels nostalgic for the time before the massacre in Malaya that destroyed his country and his family while Lake’s nostalgia is for a “golden age”, “the Eden of Grahamite bible” (64). The Thai general’s nostalgia is for the former Thailand which was free from foreign control. Emiko longs for the North, where she hopes she can find people of her own kind.

As mentioned before, the novel also opens to discussion the dangers of genetic engineering. Reflecting on Timothy Morton’s words, Kim argues that “What’s wrong with genetic engineering is that it turns life forms into private property to enrich huge corporations” (2020: 86). In the novel, Thailand has survived the biological and financial disaster because of its secure seed bank and embryo policy. Uncertainty about the consequences of genetic engineering is yet another issue that is highlighted in the novel which shows how the epidemic of plagues that result from random genetic mutations threaten both food supplies and people. Gibbons, the gene ripper, makes the following observation about his own philosophy of life: “Our every tinkering is nature. Our every biological striving. We are its Gods. Your only difficulty is your unwillingness to unleash your potential fully upon it” (Bacigalupi, 2012: 243). He adds that he made important discoveries in the field and did not care about what they did with his research. He observes: “I built the tools of life. If people use them for their own ends, then that is their karma. Not mine” (245).

The book also entails a lot of discussion about genetically modified food. No one knows how the genetically modified seeds will affect the ecosystem, especially in the long term. Gibbons, likewise, draws attention to the possible dangers and consequences of genetic engineering. He observes: “This is the nature of our beasts and plagues. They are not dumb machines to be driven about. They have their own need and hungers. Their own evolutionary demands. They must mutate and adapt... We have released demons upon the world, and your walls are only as good as my intellect. Nature has become something new... And if our creation devours us, how

poetic that will be” (246). In this respect, one could strongly argue that the writer elaborates on the theme of “Playing God” depicted in so many works of science fiction, starting with the very first example of the genre: Mary Shelley’s timeless classic *Frankenstein* in 1818. Here, the scientist Gibbons makes a very important point that was expressed by many others before him, namely that scientific research that is divorced from moral concerns could have devastating consequences for all those involved as well as the world. Those who play God – mainly the scientists and those who use them for their purposes – suffer from hubris and greed that blind them to the implications of their plans and schemes. However, as Gibbons reminds us, their shortsightedness will probably bring about their downfall since they have no control over the powers that they have themselves unleashed into the world.

CONCLUSION

In conclusion, *The Windup Girl* is a successful example of biopunk science fiction that draws on current trends to show where they might lead. The time setting in the novel is the 23rd century. The world is starved as a result of the energy crisis and climate change. Bacigalupi warns the reader that a bleak future awaits us because human beings are reluctant to change their ways. The degradation of women is also examined through the story of the windup girl Emiko. Petroleum is non-existent. Despite the strong dystopian elements in the narrative, the ending of the novel is not overly pessimistic. Gibbons promises Emiko that he can make many important changes in her that would be beneficial. He observes: “I cannot change the mechanics of what you really are. Your ovaries are nonexistent. You cannot be made fertile any more than the pores of your skin supplemented. Don’t look so glum! I was never much enamored with a woman’s eggs a source of genetic material anyway. A strand of your hair would do. You cannot be changed, but your children – in genetic forms, if not physical ones – they can be made fertile, a part of the natural world” (358).

Perhaps we can surmise from this ending that the development of technology can succeed in creating a better life if it takes into consideration not to endanger species and cause pain and damage to humanity. Arguing that “Science fiction is an optimal medium through which to navigate the trajectory of global capitalism”, Sun states that novels like *The Windup Girl* “point out that the new tendencies of globalization require fundamentally new ways of conceptualizing the relation between global and local, human

and animal, and human and machine” (2019: 304). In this sense, *The Windup Girl*’s ending encourages us to think about environmental and techno scientific problems on multiple scales simultaneously and thus inspires us to seek solutions that address these problems.

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