



Vol. 10, No. 1

CLRI February  
2023

Page 181-201

# Shifting Dynamics of Balance: An Ecofeminist Critique of Paolo Bacigalupi's *The Windup Girl*

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**Abstract:** The interrelation between nature and women that underlies ecofeminism initially is an ambivalent one, with workings of the relational balance of and in nature, in both theory and practice. Given the centralised nature of both environmental issues and gender, the ecofeminist paradigm provides an effective approach for uniting concerns related to the oppression of nature and women and building a sustainable developmental alternative around these concerns. This paper utilizes textual analysis of the renowned 21st-century fictional work *The Windup Girl* by Paolo Bacigalupi, and unites ecofeminist criticism with ecofeminist literary criticism, to maintain natural ecological order and propel forward the gendered revolution. To progress economically capitalism needs women and nature and their productive powers. Every relation in this capitalist world becomes part of this technology with compromised principles and zero ethics. Thus, by balancing the scientific angle with the ecological issue, Bacigalupi subverts the rigid boundaries and values of the man-centred capitalist culture and reduces them to open non-hierarchical questioning by destroying in the novel whatever capitalism stands for.

**Keywords:** Ecofeminism, Nature, Balance, ecological thinking, Transgenic, Capitalism.

## Introduction

*It is a historical fact that technological innovations within exploitative and unequal relationships lead to an intensification, not attenuation, of inequality, and to further exploitation of the groups concerned. (Mies 225)*

The interrelation between nature and women that underlies ecofeminism initially is an ambivalent one, with workings of the relational balance of and in nature, in both theory and practice. Given the centralised nature of both environmental issues and gender, the ecofeminist paradigm provides an effective approach for uniting concerns related to the oppression of nature and women and building a sustainable developmental alternative around these concerns. This paper utilizes textual analysis of the renowned 21st-century fictional work *The Windup Girl* by Paolo Bacigalupi, and unites ecofeminist criticism with ecofeminist literary criticism, to maintain natural ecological order and propel forward the gendered revolution through the transgenically created character of Emiko. Furthermore, this work is one of the few works in the literary world where anthropomorphism is celebrated by instilling in Emiko human characteristics.

*Ecofeminism is a philosophical and political theory that posits that humanity's failure to recognise and act upon its various ecological crises is due to it having lost its immersion in 'nature', which is also reflected in the poor treatment of human minorities and the 'other', including women (Alonso 63).*

Modern scientific knowledge related to agriculture has excluded women from the latter domain by marginalizing and devaluing their indigenous knowledge and skills. The paper delves into a world of scientifically created transgenic women and food and shows how transitioning into a sustainable survivalist mode using women's knowledge (that she is optimal) is a necessity as biotechnology makes its products spiritless. 'For biotechnologists, human beings are just heaps of organic matter, DNA, raw material, which can be dissected and reassembled into new bio-ma-chines.' (p. 230). *The Windup Girl* takes on the form of a search, a search for the human subject lost in the world of capitalism with nature as the background. In this search, Bacigalupi drives home the message that is ecologically governed and feminist, encrypted in science fiction. It deals with the formative aspect of the new variety of fruits, just like the formation of Emiko scientifically. The evolution of life is thrown off balance by the manipulation done by the agricultural capitalists and the changes are experienced by the protagonist Emiko during her evolution as a GMO, and the metamorphosis of the climate into a climate crisis makes the influence and power of the capitalists over nature very conspicuous.

We study the climate crisis vividly through Emiko's struggle as 'she is manufactured to have porcelain skin and reduced pores which mean she is subject to overheating. Her lungs burn. She breathes shallowly.' (p.105) The creation of Emiko as a commodity to enhance market investments can be seen as something capitalists are in dire need of. To progress economically they need women and nature and their

productive powers. Every relation in this capitalist world becomes part of this technology with compromised principles and zero ethics.

## **Notion of Balance**

The paper, therefore, makes a conceptualised attempt through the notion of balance in grasping the relationship between the environment in use and socio-cultural birthing in the capitalist world. The idea of balance makes its presence known in the plain perception of the mind of humans. The way we perceive daily scenery and things, whether natural or artificial, reveals the manifestation of the dimension of balance in us and affects our social behaviour. This perception is made explicit by Bacigalupi who takes the responsibility of enunciating communication among humans from the capitalist and consumerist world with the nonhuman world through sci-fi.

The earliest natural history's theological attempt at defining the balance of nature is a series of pronouncements provided by God, to traits inculcated in species by the divine power which rejects dominion over nature and therefore, the possibility of ecocide and extinction were not seen as a possibility during this time. To meet this independent will endowed by God in all the species equally, there stood an idea of intervening God in the medieval ages who snatched away these inherent traits which focussed on balance. Similarly, the shift in the focus of balance from theology to biology under Darwin's theory of evolution by natural selection moved the

cosmological balance to a new biological worldview, which transmitted ideas beyond the prevalent selected order to consideration of the place of the human subject and women in the nonhuman world and on ecological roles. Furthermore, the introduction of technology that needs nature and women as subordinates for its sustenance disrupted this balance within nature. From the use of the balance of nature metaphor to locating balance within nature, there has been quite a shift in the perspectives delineated by theologians, biologists and ecofeminists. On the surface, they seem to bring together notions of interconnectedness, interdependence and respect for nature, women and all the species alike, that complement each other, but if seen historically, the idea of balance creates controversies in different fields of studies.

The balance within nature is completely disrupted when Anderson locates anthropocentrically produced 'gnaw' in the market. A product whose origin remains anonymous but is used as a weapon when its DNA is altered, it's made ubiquitous and proper labelling is buried so that the alteration of the food chain becomes possible with an increase in the food carbon footprint. The manipulation of the genes of the product by the market capitalists to further their profits as 'Ngaw: apparently impervious to blister rust and cibiscosis even when directly exposed; A perfect product' (p.2) whose production and reproduction are still a health concern for humans and planet earth. Bacugalupi provides nature with the power to make itself visible to humans in the form of plagues and viruses. It is this perceived sense of being visible that has propelled nature to display subjectivity to humans.

This subjectivity is what Emiko brings forth by making herself visible to humans despite trying hard not to. Socialist ecofeminists see how her production process converts her into a product that has to labour but is denied reproduction. Bacigalupi makes it mandatory for humans to understand the destruction of this sense of balance within nature. The separation of soil from the food product by calorie companies and of Emiko from her reproduction ability makes the concept of balance very relevant. The need to observe and mutely communicate with nature in order to generate cognitive knowingness and familiarity of nature that has situated humans within it in the past and that inhabits humans in the present is completely destroyed in this mode of production.

## **Workings of Nature**

As seen, his way of writing reverses the historic injustice done to nature in the form of anthropocentrism. Here, it is nature that problematizes the place of man in it and defies the anthropocentric attitude by making it inferior to the power of voice communicated by it despite all capitalism's efforts to dominate it. But the most striking feature of this natural creativity by Bacigalupi is that nature makes its place definite by using the human subject as the pivotal point. Hock Senge notices, 'some of the algae is not producing the skim. It is not productive.' (p.16) which means that the changes in nature show the anthropocentric outlook that is not stationary but transmutes into different forms, forms never experienced before.

The paper thus presents a diverse yet organised living ecological model with female individual experiences to elucidate how transgenically created women are unlinked from the earth but oppressed in the same way by the capitalist world that relies upon genetically modified women and crops for its survival thus disturbing the relation. Women and food hence, become instruments in the hands of these profit seekers who engage with them only for their use value. Shift in the focus of balance from theology to biology under Darwin's theory of evolution by natural selection moved the cosmological balance to a new biological worldview, which transmitted ideas beyond the prevalent selected order to consideration of the place of the human subject and women in the animal/ nonhuman world and on ecological roles.

## **Ecological Thinking and the Anthropocentric Attitude**

The balance of nature approach somehow assigns nature with instrumental value instead of valuing nature for its intrinsic worth. This balance within nature approach is sought through a significant issue that drives this literary project and believes in the reconciliation of concepts that have hitherto been seen as contradictory. The cross-fertilization or hybridization of scientific hypothesis seen in seeds and women like Emiko in literary artistic imagination creates a dialectic space in the novel. This dialectical space gives new dimensions to resolve issues surrounding environmental crises and gender disparity through ecological thinking. Thus, ecological thinking can be seen as the:



*way of developing a conceptual framework for a theory of knowledge—an epistemology— sensitive to human and historical-geographical diversity and well-equipped to interrogate and unsettle the instrumental rationality, abstract individualism, reductionism, and the exploitation of people and places that the epistemologies of mastery have helped to legitimate. (Code 88)*

Anthropocentric attitude with a regime-oriented mentality and thinking around the human subjects has always believed in the philosophy of 'cartesian duality' that separates nature from culture and humans and promotes rigid binaries with a lack of communication and collegiality. The principle of 'take' as opposed to the principle of 'give and take' without any involvement of ecological thinking, has given rise to an ecological crisis. Hence, the need, as it becomes apparent in Bacigalupi's work, is for a new way of thinking that reconfigures duality, removes its dualism, supports post-cartesian mentality, and can end other tendencies that create a divide.

*The Tiger is dead, shamed somehow, though no one seems to know the specifics. Was he truly unmanned? Was his head truly mounted in front of the Environment Ministry as a warning to the white shirts? (p.197)*

The death of Jaidee, someone who fights the trade ministry and the capitalists to secure his nation's ecology shows how market capitalism's hubris becomes the cause for the exploitation of nature and everyone linked with it, created for its own benefit.

*We are nature. Our every tinkering is nature, our every biological striving. We are what we are, and the world is ours. We are its gods. Your only difficulty is your unwillingness to unleash your potential fully upon it. (p. 247)*

A new sort of ecological thinking with the deployment of a scientific angle is also scrutinized, and articulated by Rachel Carson in her work *Silent Spring*. She alludes to the changelessness of the fairy tale tradition in the opening line of her work:

*There was once a town in the heart of America where all life seemed to live in harmony with its surroundings, but soon the image is subverted with a catastrophic image, then a strange blight crept over the area and everything began to change (Garrard 1).*

This subversion hints at the human intervention in the natural order of nature that makes humans, not just a culprit and victimizer but a victim of deteriorating environmental health. Carson moves into the realm of ecological science with new ecological thinking instead of delving into philosophy for the representation of nature. This also creates a subversion of the ideas around science as attempted by Bacigalupi and the artistic mobilization of ecological thought patterns. He conflates the art of ecological thinking with feminism when he uses Gibbon the scientist's power to introduce reproduction power in new people through a strand of hair giving them a revolutionary tool in the denouement to reveal a new dimension of his ecological thought in the capitalist world. Emiko is:

*trapped in this suffocating perfect skin by some irritating scientist with his test tubes and DNA confetti mixes made her flesh so smooth, and her insides too hot. (p.39). It's an odd thing, being with a manufactured creature, built and trained to serve. She herself admits that her soul wars with itself. That she does not rightly know which parts of her are hers alone and which have been inbuilt genetically. (p.198)*

*The WindUp Girl* as a literary art invents a new imaginative form, a novel genre that moves past historical models of fantasy to establish a radical alternative that encourages its readers across cultures to know what it is to experience multiform countless voices around gender and environmental concerns by ensuring that equality and ecological thinking are passed on and the readership is kept fully informed about growing literature's pace with progress in gender and environmental studies.

## **Ecological Model**

Balance within nature encapsulates within it a process of 'becoming'. This becoming is not limited to any particular thing but expands to landscape as Bangkok exits below sea level, and to Emiko who realises her optimal powers and starts listening to her conscience. The relationship between sexes and the prosthetics of ecological science takes a sharp turn when Anderson who knows the impact of capitalism on the climate still after the seed bank of Thailand and succumbs to the temptation of Emiko despite despising her for being artificial. It establishes a tough relationship between the text

and the world, between ideas and environment where both sides affect each other and are affected by the other side and become ecologically interdependent. This implies the idea of literature functional for a specific educational purpose:

*If literary works are read and interpreted in an ecologically conscious fashion, they become a potential instrument for gender and environmental education, thus orienting human interactions with the more-than-human environment in more responsible directions. (Iovino 2010)*

It can be perceived that the novel unsettles the stifled ideas and dogmas around genetically modified organisms and the environment, as it creates commotion in the minds of readers to align their thinking with the new ecology of mind. British epistemologist Gregory Bateson introduced this concept of ecology of mind as the process of mutual actions occurring between ideas and, more in general, between nature and culture, ideas and environment. In Japanese culture:

*She is a wonder. Here, she is nothing but a windup. The men laugh at her strange gait and make faces of disgust that she exists at all. She is a creature forbidden to them. The Thai men would happily mulch her in their methane composting pools. (p. 40)*

This consumption pattern opens up rigid boundaries between set premonitions and ideas around binaries and contradictory judgements. Within this openness, the true façade of the market economy is revealed that profits on consumerist ideology. This ideology erases the distinction between food and women as food and confirms women's sexist stereotypes.

The paper further tries to explain that the key to facing ecological and equality issues lies within the ethics of care that can see beyond the use value. The balance within nature approach defends the relationship of women with nature as being of strength rather than weakness, for this planet. The idea of this relationship has always been a debatable one as women should not be seen as the sole agents of positive change but as significant beings capable of bringing such a change. This relationship has been interpreted and understood by the mainstream west only in association with modern technology and capitalism, and industrialization that neglects the dichotomies and dualisms which continuously construct inferior positions for women.

The representation of nature and women as instruments show economic connections that bring to the fore the deteriorated view of progress in the present times. The implications that this connection could have for the ecological health of this planet as well as the psychological health of women is far worse in the novel. The experiences and spaces of genetically modified marginalized-dominated women such as Emiko are subversive and have multiple shades of formation and understanding. It probes into a seemingly never-ending debate of the authentic representation of the nature-women relationship by looking into the future, collecting and studying the history of the ecological crisis with the present transformation of earth's ecology. The focus lies on unlearning of stereotypical gender roles, and the principles of hegemonic masculinity to empower women and ecology. Emiko's experiences, feelings, life story and the acceptance of her

transformation, feared by the people of Bangkok become important to make ecological transformation possible. The use of a scientific prism of knowledge along with a literary and artistic point of view to generate a theoretical model offers non-categorizing, non-dualistic views using a particular place like Thailand in South Asia, with mixed traditions from other Asian nations to explain everyday life under ecological crisis and capitalist imperialism, and harmonises this knowledge with common values.

Ecological realities in the novel are created, generated and regenerated through its characters, and make ecological crisis and the concept of Anthropocene implicit in feminism as it has the potential to offer transformative critiques around the masculinist logic surrounding this crisis. Thus, Bacigalupi very ingeniously contextualises feminist dystopia and eco-critical dystopia and constructs a different human identity that is geocentric.

This construction dissolves the logocentric and essentialist notions not just around women but men too and offers a revolutionary blend of the two to handle the ecological crisis successfully by analysing the negative environmental impacts we are experiencing today. The paper uses socialist ecofeminism as a framework to focus on the western democratic countries whose selfish corporate interests govern science and perpetrate ecocide, and on how women dream of utopia for themselves as well as the environment through their productive relations with it can be seen in Emiko's urge to go north into the world of newcomers where the temperature suits her. It further brings environmental activism

and foregrounds environmental consciousness as non-static, and a shift in perspective with a shift from passive to speculative space.

The study suggests that women are different from men both biologically and socially, however, they are made sterile and non-reproductive and consciously devalued so that they can be used by the capitalist for its profits. It can be alleged that the world in the novel has 'undergone ecological change due to rampant and unrestrained capitalism.' (Schmeink 75). It shows how global economic shifts influence the everyday life of women, and resonates with the ideology of the environmental activist Vandana Shiva. Shiva targets the new world order of modernisation, globalisation that intrinsically assigns homogeneity to women with genetic engineering and new reproductive technologies, fails to understand the diversity of women's experiences and falls prey to capitalism's ethnic objectification built on as Ariel Salleh says: 'on the domination of nature and domination of Woman as nature.' (Merchant 34). It recognises the difference, complexity, hybridity and fluidity embedded in such connections as proposed by the theorists like Bina Aggarwal to depict the western developmental attitude that has destroyed, 'Indian agrarian culture, indigenous people's knowledge about nature, sustainable way of life and biological diversity.' (Shiva 45).

*The Windup Girl* possesses what philosopher Warren refers to as, 'a hierarchical, oppressive, conceptual framework, a set of basic beliefs, values, attitudes and assumptions that justify relationships of unjustified domination and subordination,'

(p.26) which explains both the treatment of women and the treatment of ecology within them. Emiko invokes her environmental identity to deal with the exterior unfamiliar circumstances of the white shirts following her to kill her as they mistake her for the military type of windup who has the capability to kill. This invocation if not entirely emancipatory is at least strengthening and makes her survive the attacks by the white shirts and the citizens. Her experiences and personal relationships with the natural world and the capitalist world penetrate the true nature of modes and means of production trajectory. The ecofeminist approach probes into the genetic transformation that utilize the female voice, community and knowledge to develop a sustainable society as opposed to profit-driven capitalism. This paradigm helps in grasping local and global environmental issues:

*Particularly the combination of genetic engineering and reproductive technology. It is precisely this combination that brings to light their destructive potential. — one intended for industrial societies and the other for underdeveloped societies. This separation of spheres and contexts, which essentially are linked, makes a critical assessment of this technological development very difficult. (Aggarwal 142)*

Why not make genetically modified men? If no reproduction is assigned to women, then why not produce genetically modified men? Emiko's production is happening, but reproduction is compromised eliminating any ethical consideration inherent in modern reproductive technology.



With a change in her physical characteristics weather around her also changes. This industrialisation of women's bodies through genetic engineering snatches away the human status from women and denies them any sort of agency making them an object for the male subject.

The same philosophical dualism influences behaviours both inside and outside the natural setting in the work, only to have different implications on women, nature and the people around them. The idea is to build on the critique of anthropocentrism and emphasize that natural and social worlds coexist. This further brings out the connections between the natural and the techno-driven worlds which are re-appropriated into women-biocentric resistance and revolutionary narratives.

The ongoing tensions around the globe regarding changing climatic conditions both culturally and scientifically create effects both spatial and temporal and open up spaces for acceptance and renewal. Anderson is 'just another grubby farang entrepreneur trying to make a buck along with jade prospectors and the clipper hands,' (p.63) as despite being aware of the impact of the energy crisis seeks profit and ignores the emergency calls while on the contrary Kanya takes action against it and risks everything.

## **Conclusion**

The novel's historical relevance lies in the oppression and exploitation of women, and their subordination as domestic beings visible in the widening gap between nature and

culture. Its contemporary relevance manifests itself in exacerbating pollution, capitalist tendencies, and disinvestment of women in the status quo, who have the liberating potential to establish structures. It becomes important to mitigate the growing disparity between the internal mindscape and the external landscape to gain freedom of expression in present times. It imbibes the ecofeminist idea of women's unique agency in the era of ecological crisis, and offers anti-reductionist perspectives, and hence the parameters of comparison can be established well. He offers a way out of the maze of dualism through a strong heteroglossia that breaks age-old patriarchal barriers. Hence, makes sure that human identity moves toward the evolution of a greater consciousness regarding ecology, relations and interdependence (non-dominating relationships).

The outcome of this ecologically-structured narrative is an inexplicable evolution of Emiko with the evolution of the environment. By balancing the scientific angle with the ecological issue, Bacigalupi subverts the rigid boundaries and values of the man-centred capitalist culture and reduces them to open non-hierarchical questioning by destroying in the novel whatever capitalism stands for. Through an ecofeminist lens this questioning takes the form of a challenge that has the capacity to create another eco-conscious political subversion. He ignites the reader's curiosity to know whether a man can locate his subjectivity and his place in nature in the absence of that very place. Thus, it can be said that this sustainable developmental model connects GMO creation,

GMO choices and usage with the present-day environmental crisis to create balance within nature.

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