

“One is too few, but two are too many”: Gender, Biopolitics, and Cyborg

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Abstract

Cyborg as a “man-machine” organism transcends every socio-cultural binary oppositions, but at the same time, they embody “fear” and “anxieties.” This new technological embodiment is a biopolitical subject. Biotechnology is a new phase of biopolitics; it also marks the integration of anatomo-politics, and the species body. We all are aware of the proclaimed truth that technology has erased our humane qualities, exposed us to environmental threats, corporational greed, and sexual exploitation, but this is not the entire scenario. The world of cyborg also addresses how technologies help to overcome, especially our bodily restrictions (my emphasis on the female body), sexual exploitation, and other binary oppositions. This paper will give special attention to the pathways by which these new hybrids dismantle every single discrimination, and try to overcome “bodily” restrictions. For the theoretical argument, I will focus on several tropes such as cyborg, prosthesis, gender, and biopolitics. I will also thematically analyze the politics that have been “performed over the construction of the physical body. My close readings will show how the Cyberpunk genre in the select Sprawl Trilogy of William Gibson utilizes images of the technological body to comment on the commodification of knowledge, health, beauty, and personal identity.

Keywords *rosthesis, iopolitics, yborg. oucault, araway.*

Well I stopped in at the Body Shop
Said to the guy:
I want stereo FM installed in my teeth
And take this mole off my back
And put it on my cheek.
And uh... while I'm here, why don't you give me
Some of those high-heeled feet?'

The cyborg is not subject to Foucault's biopolitics; the cyborg simulates politics, a much more potent field of operations.ⁱⁱ

Posthuman bodies are always a form of biological and technological embodiment. Manfred E. Clynes and Nathan S. Kline first put forward the term “cyborg” for the first time in 1960, by articulating that “cyborg” will be a self-regulating flexible man-machine system. Cyborg is a Posthuman body. Donna Jeanne Haraway, the theorist of cyborg identity in her *A Cyborg Manifesto* (1985) says, “By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism—in short, cyborgs. The cyborg is our ontology; it gives us our politics” (5). Yes, the “identity” of a cyborg can ground a new vision, but still, we must address the underneath gender politics of man-machine world as Haraway says, “[t]he idea of the cyborg -an

amalgam of human and machine, biological and mechanical- as the model for a new form of consciousness and political activism”. Biotechnology is a new phase of biopolitics; it also marks the integration of anatomo-politics, and the species body. We all are aware of the proclaimed truth that technology has erased our humane qualities, exposed us to environmental threats, corporational greed, and sexual exploitation, but this is not the entire scenario. The world of cyborg also addresses how technologies help to overcome, especially our bodily restrictions (my emphasis on the female body), sexual exploitation, and other binary oppositions. I quote from Haraway (1985):

Chief among these troubling dualisms are self/other, mind/body, culture/nature, male/female, civilized/primitive, reality/appearance whole/part, agent/resource, maker/made, active/passive, right/wrong, truth/illusion, total/partial, God/man [...]. To be One is to be autonomous, to be powerful, to be God; but to be One is to be an illusion, and so to be involved in a dialectic of apocalypse with the other. Yet to be other is to be multiple, without clear boundary, frayed, insubstantial. One is too few, but two are too many. (A Cyborg Manifesto 58)

The tone exemplifies the "unity", a technology-sponsored transcendence beyond physicality. In this process, the soul, as well as its substitute, computer consciousness, is subtly marked as feminine. Therefore, as I have already developed some of the critical ideas of cyborg in the previous chapter, I will be more attentive to the construction of hybrid bodies (my emphasis) that blur the distinction between the "man-machine" world.

The idea of cyberculture and cyborg encapsulates many unnecessary anxious encounters regarding the man-machine, natural/artificial, technological, and biological organism, as I have mentioned in the introductory part of this chapter. Haraway (1985) defines cyborg as "A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (3). In *Simian Cyborgs and Women: The Reinvention of Nature* (1990) she also writes up:

[c]yborgs are compounded of special kinds of machines and special kinds of organisms appropriate to the late twentieth century. Cyborgs are post-second World War hybrid entities made of, first, ourselves and other organic creatures in our unchosen "high-technological" guise as information systems, texts, and ergonomically controlled labouring, desiring, and reproducing systems. The second essential ingredient in cyborgs are machines in their guise, also, as communications systems, texts, and self-acting, ergonomically designed apparatuses. (Introduction 11)

To Haraway, cyborg as a "identity" stands as a "metaphor of choice" for such a movement that is both strange and ironic. Although this sounds a strange contradiction, it also resolves when one explores that

there are a hundred ways to become a cyborg. As Haraway says:

From one perspective, a cyborg world is about the final imposition of a grid of control on the planet [...] about the final appropriation of women's bodies in a masculinist orgy of war. From another perspective, a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints. (154).

Dani Cavallaro, a Cyberpunk critic, in his book *Cyberpunk and Cyberculture: Science Fiction and the Work of William Gibson* (2000), like Haraway, he also mentions about the fear and tension regarding this techno-body: "(1) the cyborg is both a creature of myth and a creature of social reality; (2) the cyborg incarnates conflicting visions of power and powerlessness; (3) the cyborg embodies cultural fears and anxieties (45). But feminists are hopeful that the image of cyborg would bring up the total triumph of genocidal patriarchy, which will "(...) build a political myth faithful to feminism, socialism, and materialism" (A Cyborg Manifesto 149).

Thomas Foster in his essay "Incurably Informed: The Pleasures and Dangers of Cyberpunk" (1993) argues that Cyberpunk literature always interrogates the pleasurable crisis of white masculinities as well as human subjectivities (8-10) by drawing comparison between the oppositional categories of masculinist rationality and feminized "meat." William Gibson's *Neuromancer* (1984) Henry Dorset Case is a cyborg who wants to be free from his physical "meat". Yes, it is possible to transform the body purely into an information code by which he can escape his "meat". Interestingly, a man whose dream of technologically induced death appearing closer to Haraway's dream of a cyborg:

Beyond ego, beyond personality, beyond awareness, he moved [...] grace of the mind-body interface granted him, in that second, by the clarity and singleness of his wish to die precipitates him into a rebirth of human body and mind, instead of forward into a transcendent information-state. Back in his "meat", he spends the "bulk of his Swiss account on a new pancreas and liver". (270)

There is always a way out for a male to have bodily sensations through virtual reality. This type of technology is presented in *Neuromancer* (1984), and it is called

simulated simulation [emphasis mine] or in short "simstim." Through "simstim", Henry Dorsett Case always tries to have sexual experience but unable to have because the transmission is a one-way feeling system, not a communication system. The experience can be described in this way:

[H]e heard the words and felt her from them. She slid a hand into her jacket, a fingertipcircling a nipple under warm silk. The sensation made catch his breath. She laughed. But the link was one way. He had no way to reply. (Gibson 1984, p.39)

The irresistible dominating culture of patriarchy made technology more masculine. This male-dominated parochial discourse is still available at the root of science and technology, and we can trace it the way technologies "monitor" and "regulate" the female "body. But, the inevitable question is how does the gender politics work in the "simstim?" For the textual analysis, I will give an example from the novel *Neuromancer* (1984). Molly Millions, "the razor girl" in *Neuromancer* with her implanted glasses and burgundy-painted razor nails, is a cyborgian assemblage of "man and machine." Molly is just a ride for Case. It is one-way ecstasy that subjugates Molly as she is the virtual presentation provider, and Case is the receiver. Joseph Lanza, in his essay "Female Rollercoasters" wrote that cyberspace is a medium for modern-day "penetration" and "perform" cyber-eroticism. Lanza wrote, "Travel into time-space warp. Swim through your own birth canal and even be the woman giving birth to yourself. The thrill ride of the future is with us today. Let her entertain you! (Lanza, 1992, p.51). So, Molly, too, performs her gender "role." Even, in virtual space, she is not free from that. Her body has been transcended but not the "roles." Judith Butler in her book *Bodies That Matter: On the Discursive Limits of Sex* (1993), explains about the misconceptions of gender "performativity". She argues that it is always through the process of "iteration" we eventually follow the particular track of gender "performativity".

This male "gaze" signifies female "objectivity", and the "Otherization" proclaims that the sensory system in the "man-machine" interface has been used to conquer the female "body"—a "body" that has been changed into a "project" in this techno-capitalism. This practicing culture of "body as a project" is associated with the techniques of

"biopower" and "biopolitics" introduced by French Philosopher Foucault. Foucault's "The Birth of Biopolitics" is a part of lectures that were delivered at College de France between 1978 and 1979. His ideas were influenced by the Italian philosopher Giorgio Agamben, influenced by the Aristotelian reading of "bare life in Politics (Aristotle, and H. Rackham 1959). The Greek term "Oikos" refers to the three different things: family, family's property, and the house. The term also refers anybody living in the house (26-32). The argument is that "bare life" is not a natural life per se—it has also politicized, always has been. Agamben's idea of "biopolitics" denotes "bios" as political life i.e. a form of life regulated by notions of the good and "zoe" as the proper and the simple fact of life itself, i.e. which animals and humans have in common. Following this, Foucault explained that the relationship of abandonment to an unconditional power of death always refers to the power of sovereignty. The techniques of "biopower" allow the practice of social stratification by which the social hierarchy has always been maintained. It also determines the way human subjects experience the materiality of their bodies. Foucault in his revision of Aristotle writes in the First Volume of *The History of Sexuality*, "[f]or millennia, man remained (...) a living animal whose policies place his existence as a living being in question" (143). In this age of Posthumanism, the cyborg has become the "biopolitical subject." Susan Suleiman in her anthology *The Female Body in Western Culture: Contemporary Perspectives* (1986) poses the question of female "body" by underscoring the importance of reading the body as "a symbolic discursive constructions" [original in italics]. Following Foucault, she wrote:

The cultural significance of female body is not only (not even first and foremost that of aflesh-and-blood entity but that of a symbolic construct. Everything we know about the body—certainly as regards the past, and even, it could be argued, as regards the present—exists for us in some form of discourse: and discourse, whether verbal or visual fictive or historical or speculative, is never unmediated, never free of interpretation, never innocent. (23)

For this theoretical counterpart of "practice" in the field of science and technology, I will first give an example from Mary Poovy who in her famous essay "Scenes of an

Indelicate Character": The Medical "Treatment of Victorian Women" (1986) who also examined medical textbooks of the 19th century, and illuminate the historical construct of the female body as the object of medical attention and control. Moreover, she also argues how this practicing modern medical discourse is constructing the "female body as excessive and threatening to the epistemological boundaries of the prevailing social order" (qtd. in Anne 19). The cyborg body is the (re)construction of "female body" in a Posthuman World, although the continuous "medical monitoring" exhibits that the cyborg "body" is also stands as a "cultural text" through which the "Sexual/Textual Politics" can be practised too. I quote from Poovy:

On the one hand, representing a woman as an inherently unstable female body authorizes ceaseless medical monitoring and control. But, on the other hand, this representation of women as always requiring control produces her as always already exceeding the control that medicine can exercise. (147)

This so-called "exercise" includes "objectivity" in the field science, technology, and gender politics, which can only be decoded through Haraway's understanding of "situated knowledge" (581) in her essay "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective" (1988), she wrote:

Gender is a field of structured and structuring difference, in which the tones of extreme localization, of the intimately personal and individualized body, vibrate in the same field with global high-tension emissions. Feminist embodiment, then, is not about fixed location in a reified body, female or otherwise, but about nodes in fields, inflections in orientations, and responsibility for difference in material-semiotic fields of meaning. Embodiment is significant prosthesis; objectivity cannot be about fixed vision when what counts as an object is precisely what world history turns out to be about. (589)

But, my counter-argument is that, if the so-called hegemonized "monitoring" session (mentioned by Poovey) evinces the determinism of patriarchal discourse, how does cyborg defy every norm of gender politics? Or, there any politics in the world of Posthumanism at all? Where does the politic begin? Kirby Farrell in *Post-traumatic Culture: Injury and Interpretation in the Nineties* (1998) wrote:

Where do the self-stop and the tool begin? If a house or a piece of clothing functions as a shell, where do the self-stop and the environment begin? And because other people can extend our will as tools do, in a host of relationships from slavery to parenting, we sometimes need to ask where the self leaves off, and the other begins. (Farrell 76).

Here, I will introduce two theoretical models. The first one is borrowed from Sadie Plant's book *Zeroes+ Ones: Digital women and the new technoculture* (1997) where she posits her optimism about shifting the "role" through technology. She used the binary method to deconstruct that is used in the binary codes for a machine language. She considered "0" as a woman and "1" as a phallic one. She holds her argument that in the non-linear world of cybernetics, the "0" displaces the phallic one indicating the digital future, which is essentially feminine. I quote from Sadie Plant's essay:

[...] [z]ero is not the other, but the very possibility of all the ones. Zero is the matrix of calculation, the possibility of multiplication, and has been reprocessing the modern world since it began to arrive from the East. It neither counts nor represents, but with digitization it proliferates, replicates, and undermines the privilege of one. Zero is not its absence, but a zone of multiplicity which cannot be perceived by the one who sees. (272)

The second theoretical argument is borrowed from Ruth Bleir, who in her book *Science and Gender: A Critique of Biology and Its Theories on Women* (1984) grounds her theoretical argument on the relationship between gender and science in, a consideration of biological determinism. She identifies "nature versus nurture," as a false debate:

The underlying scientific issue in evaluating any theory of biological determinism is the feasibility of isolating biological from learned influences in the determination of physical characteristics, behaviors, social relationships, and social organisation. The effort to separate genetic and environmental influences continues to plague thinking in many [scientific] fields. Yet it represents a false dichotomy that does not reflect biological processes, but like other dualisms...may serve reactionary social and political purpose. (7)

Haraway, firmly negates every socio-cultural binary responsible for gender discrimination. She wrote:

[b]odies as objects of knowledge are material-semiotic generative nodes. Their boundaries materialize in social interaction. Boundaries are drawn by mapping practices [...] Objects are boundary projects. But boundaries shift from within; boundaries are very tricky. What boundaries provisionally contain remains generative, productive of meanings and bodies..." (595)

In *Neuromancer* (1984) Molly turns out to be a famous "simstim" girl. She, like Rikki in *Burning Chrome* (1995) both try to subvert the gendered-identities. They gave consent for the technological implantation to their brains in order to give their clients' sadistic fantasies. This "prosthetic" operation also gives them a "phallic" power that they cannot even think or access in the physical world. Molly's prosthetic body does not affect her cognitive capabilities; her body as a 'cultural text' showcases the physical manifestation of Posthuman discourse. Unlike Molly, Johnny's extended memory capacity is a result of a computer chip implantation into his brain, redeems his mental abilities. Despite having superior cognitive capabilities that are induced by a technological prosthesis, Johnny and Case still seem to consider themselves as 'meats.' Johnny describes himself to Ralfi, a gangster, as "a nice meatball chock-full of implants where you can store your dirty laundry" (Gibson, JM 16). In Johnny's referral to himself as 'meat,' the acute sense of awareness of his material body is traceable. The irony is that a "male" cyborg is still concerned about his "meat."

Molly and Rikki both are "simstim" stars crossed the boundaries of so-called 'nature/ culture' binary opposition and became the Supergirl (s) whose "glasses were surgically inset (...) smooth pale cheekbones, framed by dark hair cut in a rough shag (...) the fingers curled around the fletcher were slender, white, tipped with polished burgundy. The nails looked artificial" (Gibson 24). But they never escape from male sexual gratification. This Molly turns out to be a projection of sexual fetishism to Riviera's sexual fantasy in the virtual-space "[...] Molly's body [...] his mouth is opened but it wasn't Molly; it was Molly as Riviera imagined her [...] The head was there, the image complete. Molly's face with smooth quicksilver drowning the eyes (Gibson 140).

Therefore, I must say the fate of the "body" is never a "tabula rasa" never actually it was. From a feminist

perspective, it would be ill-fated if we do not endeavor to address the underneath issues related to contemporary social order and the female "body", to be precise, the "gendered" body. It remains for all the branches of feminism, and intersectionality would be a vital site to discuss politics, theories, and practices of Posthumanism. Therefore, by using cyborg as an image in this hyperreal world, women can create a new history where DNA is code, and our Freudian mythic root will be free from body politics as Haraway wrote, "I will be a cyborg than a goddess" (36) in a world where "the clitoris is the direct line" (VNS Matrix 1991). To quote from VNS matrix:

We are the modern cunt
positive anti reason
we are the virus of the new world disorder
rupturing the symbolic from within
saboteurs of big daddy mainframe
the clitoris is a direct line to the matrix
infiltrating disrupting disseminating
corrupting the discourse
we are the future cunt (VNS Matrix 1991)

Endnotes

ⁱ"*Monkey's Paw*" is a song from the album "Strange Angels" sung by *Laurie Anderson* released in 1989.

ⁱⁱ Haraway, Donna Jeanne. "A Manifesto for Cyborgs: Science, technology, and socialist feminism in the 1980s." *Socialist Review* 5.2 (1985): 65-107. Print.

ⁱⁱⁱ Stimulation of the brain and nervous system of one person using a recording (or live broadcast) of another person's experience. This hypothetical technology is a key element in some of the early short stories of William Gibson, including his 1977 debut *Fragments of a Hologram Rose*, where it is called ASP (Apparent Sensory Perception). In his *Sprawl* trilogy, it is termed Simstim (Simulation Stimulation), and described as the most popular form of entertainment, perhaps equivalent to 20th century pop music.

^{iv} Stimulation of the brain and nervous system of one person using a recording (or live broadcast) of another person's experience.

^v "Performativity" is a concept that can be thought of as a language which functions as a form of social action and has the effect of change. The concept is first

described by philosopher of language John L. Austin when he referred to a specific capacity: the capacity of speech and communication to act or to consummate an action. Influenced by Austin, philosopher and gender theorist Judith Butler argued that gender is socially constructed through commonplace speech acts and nonverbal communication that are performative, in that they serve to define and maintain identities. Butler, Judith. *Gender Trouble*. New York: Routledge, 1990. Print.

ii "Iteration" is an expression that Butler borrows from Jacques Derrida arguing that repetition itself forces to follow the cultural practices and norms.

iii Toril Moi made her name with *Sexual/Textual Politics* (1986), a survey of second-wave feminism in which she contrasted the more empirical Anglo-American school of writings, such as gynocriticism, with the more theoretical French proponents of *Écriture féminine*.

iv "Situated knowledge" refers to the way our knowledge is situated. It specially focuses on "positionality". Haraway discussed it from four points of view: epistemological, ontological, ethical, and political.

v "Tabula rasa" is the theory that individuals are born without built-in mental content, and, therefore all knowledge comes from experience or perception. John Locke's formulation of tabula rasa in *An Essay Concerning Human Understanding* (1689).

vi "Neither Cyborg Nor Goddess: The (Im)Possibilities of Cyberfeminism." Ed. by Stacy Gillis Gillis et al. Palgrave Macmillan, 2004. Print.

References

Agar, Nicholas. *Humanity's End: Why We Should Reject Radical Enhancement*. Cambridge: MIT Press, 2010. Print.

Balsamo, Anne. *Technologies of the Gendered Body: Reading Cyborg Women*. Duke U, 1999. Print.

Bleir, Ruth. *Science and Gender: A Critique of Biology and Its Theories on Women*. Pergamon, NY, 1984. Print.

Bukatman, Scoot. *Terminal Identity: The Virtual Subject in Postmodern Science Fiction*. Durham: Duke UP, 1993. Print.

Bukatman, Scott. "Postcards from the Posthuman Solar System."

Posthumanism. Ed. Neil Badmington. London: Palgrave, 2009. 98-111. Print.

Caidan, Martin. *Cyborgs*. New York: Ballantine Books, 1978. Print.

Butler, Judith. *Bodies that matter: On the discursive limits of "sex."* New York: Routledge, 1993. Print.

Cavallaro, Dani. *Cyberpunk & Cyberculture: Science Fiction and the Work of William Gibson*. New York: The Athlone Press, 2000. Print.

Deleuze, Gilles. "Postscript on the Societies of Control." October 59. Winter (1992): 3-7. Web. 27 March 2020. <<https://www.jstor.org/stable/778828>>.

Farrell, Kirby. *Post-traumatic Culture: Injury and Interpretation in the Nineties*. London: The Johns Hopkins University Press, 1998. Print.

Foucault, Michel. *Discipline and Punish*. London: Penguin, 1977. Print.

—. *The History of Sexuality*. Vol. 1. New York: Vintage, 1980. Print.

Freud, Sigmund. *Civilization and Its Discontents*. Trans. James Strachery. New York: W.W. Norton & Company, 1961. Print.

Fukuyama, Francis. *Our Posthuman Future*. London: Profile Books Ltd, 2002. Print.

—. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York: Picador, 2002. Print.

Garland-Thomson, Rosemarie. *Starng: The Way We Look*. Oxford: Oxford Up, 2009. Print.

Gibson, William. "Burning Chrome." Gibson, William. *Burning Chrome*. Londn: Palgrave, 1995. 195-200. Print.

—. *Burning Chrome*. London: Voyager, 1995. Print.

---. "Dogfight." Gibson, William. *Burning Chrome*. London: Palgrave, 1995. 167-94. Print.

---. "Jonny Mnemonic." Gibson, William. *Burning Chrome*. London: Palgrave, 1995. 14-36. Print.

—. *Monalisa Overdrive*. New York : Bantam, 1988. Print.

---. *Neuromancer*. New York: Ace Books, 1986. Print.

---. "The Winter Market." Gibson, William. *Burning Chrome*. London: Palgrave, 1995. 140-66. Print.

- Gray, Chris Hables. *Cyborg Citizen: Politics in the Posthuman Age*. London: Routledge, 2002. Print.
- Grosz, Elizabeth. *Time Travels: Feminism, Nature, Power*. Durham and London: Duke, 2005. Print.
- Guattari, Gilles Deleuze and Felix. *A Thousand Plateaus*. Trans. Brian Massumi. London: Anthlone Press, 1994. Print.
- Habermas, Jurgen. *The Future of Human Nature*. Cambridge: Polity Press, 2003. Print.
- Haraway, Donna. "A Manifesto for Cyborgs: Science, technology, and socialist feminism in the 1980s." *Socialist Review* 5.2 (1985): 65-107. Print.
- . *Modest Witness Second Millennium, Female Man Meets OncoMouse: Feminism and Technoscience*. New York: Routledge, 1997. Print.
- . *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. New York: Routledge, 1989. Print.
- . *Simians, Cyborgs, and Women: The Reinvention of Nature*. London: ---."Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14.3 (1988): 575. Print
- Aristotle, and H. Rackham. *Aristotle: Politics*. Heinemann, 1959. Print.
- Hollinger, Veronica. "Cybernetic Deconstructions: Cyberpunk and Postmodernism." McCaffery, Ed. Larry. *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*. London: Duke University Press,, 1991. 203-18. Print.
- Lanza, J. *Female Rollercoasters (And other virtual vortices)*. *Performing Arts Journal*, 14(2), 51-63. Cambridge, MA: Performing Arts Journal, Inc. McCaffrey, Anne. *The Ship Who Sang*. London: Corgi Books, 1961. Print.
- Negri, Michael Hardt and Antonio. *Empire*. Cambridge and London: Harvard University Press, 2000. Print.
- Plant, Sadie. *Zeroes+ Ones: Digital women and the new techno culture*. London: Fourth Estate. 1997. Print.
- Preciado, Paul Beatriz. *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*. New York: The Feminist Press, 2013. Print.
- Poovey, Mary. "Scenes of an Indelicate Character": The Medical "Treatment" of Victorian Women." *Representations* 14 (1986): 137-68. Print.
- Puar, Jabir. *Terrorist Assemblages: Homonationalism in Queer Times*. Durham and London: Duke University Press, 2007. Print.
- Rabinow, Paul. *Essays on the Anthropology of Reason*. Princeton, NJ: Princeton University Press,, 1996. Print.
- Sargen, Pamela, ed. *Bio- Futures: Science Fiction Stories about Biological Metamorphosis*. New York: Vintage Books, Vintage Books. Print.
- Sterling, Bruce. *Schismatrix Plus*. New York: Open Road, 1985. New York.
- Suvin, Darko. *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. CT: Yale Up, 1979. Print.