

ECO-PERFORMATIVITY IN MULTIVALENT TEXTUAL ECOLOGIES

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Eco-Performativity in Multivalent Textual Ecologies

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ABSTRACT

Thesis Title: Eco-performativity in Multivalent Textual Ecologies

Intervening within contemporary ecosophy, this thought experiment reframes the idea of the human while taking into account nonhuman semiotic potential. It postulates literary theory and texts as agents that participate in the material world's meaning-making tableau while subverting the nature/culture and human/nonhuman divides. Through a transdisciplinary itinerary, my work provides a much needed intervention within the field of literature as it foregrounds the narrative potential of nonhuman actants and its impact on the assumptions regarding the human body. Since stories have historically prescribed the centrality of the human as a logocentric agent, I argue that stories can also be used to dismantle this anthropocentric tilt. In so doing, they can establish the idea of a reparative humanness that takes into account the material-semiotic agency of the world within which the human is enmeshed. Via the idea of textual ecology, I read the world as a kinetic compendium of human and nonhuman stories that defy absolutes and break down onto-epistemological enclosures. Therefore, my theorization takes on board Gerald Vizenor's *The Heirs of Columbus* and Paolo Bacigalupi's *The Windup Girl*, along with two hypertexts, i.e., Mark Amerika's *Grammatron* and Stephanie Strickland & Cynthia Lawson Jaramillo's *V:Vniverse* to propose a re-reading of the human in terms of a compound subjectivity. This compound subjectivity inaugurates a re-reading of human embodiment as an editable assemblage that is in a state of continual becoming due to its enmeshment with various nonhuman phenomena. Since the human body is no longer a fixed entity, human performativity is also equally malleable. Therefore, I propose the idea of Eco-performativity, which invites a search for new stories regarding our understanding of the world we live in through their mediation with nonhuman narrative agency. In so doing, I have blended the pertinent tenets of Jacques Derrida, Karen Barad, Gilles Deleuze and Felix Guattari, Bruno Latour, Jeffrey Jerome Cohen, Timothy Morton, Rosi Braidotti and Donna Haraway, etc. My research advocates the stance that in narrating more egalitarian performative accounts of human and nonhuman agency, literary texts and theories function as open-ended semiotic systems which permit a

weaving of new stories regarding the co-constitutive participation of the human and nonhuman in the meaning-making processes of the world. This provides the space for the renewal of humanities that could raise further possibilities for thinking Posthuman subjectivities and the new structures of dominance that might emerge as a consequence.

TABLE OF CONTENTS

Chapter		Page
	THESIS AND DEFENSE APPROVAL FORM.....	ii
	CANDIDATE DECLARATION FORM	iii
	ABSTRACT.....	iv
	TABLE OF CONTENTS.....	vi
	LIST OF SCREEN SHOTS.....	ix
	LIST OF FIGURES.....	x
	LIST OF EQUATIONS.....	xi
	ACKNOWLEDGEMENT.....	xii
	DEDICATION	xiii
I	OF STORIES AND BECOMING-HUMAN	1
	1.1 Introduction	1
	1.2 Ecological Alterations and Literary Texts	4
	1.3 In the Beginning was the Code: Rethinking the Notion of Language.....	8
	1.4 Eco-performativity and Textual Ecology: Re-mediating Stories	13
	1.5 Rethinking the Ecology of Literature	17
	1.6 Research Objectives.....	18
	1.7 Research Questions.....	19
	1.8 Selected Texts.....	19
	1.9 Significance	23
II	CONCEPTUAL INFRASTRUCTURE AND METHODOLOGICAL APPROACH	27
	2.1 Conceptual Categories and Delimitations.....	28
	2.2 Methodological Approach.....	30
III	ECO-PERFORMATIVITY AND MATERIAL-DISCURSIVE ENTANGLEMENTS: A REVIEW OF THE RELATED LITERATURE	40
	3.1 Re-analyzing the Man/Nature Binary.....	41

	3.2	Reformulating ‘Ecology’ and Anthropocentrism.....	46
	3.3	Formation of New Collectives: Narratives, Textual Ecology and Code ...	53
	3.4	Eco-performativity and Literature.....	60
IV		STORIES AND THE VITAL NARRATIVE AGENCY OF MATTER.....	75
	4.1	The Code and Textual Ecology: Literary Inscriptions of Immanent Intimacies.....	76
	4.2	Multivalent Textual Ecologies.....	86
	4.3	Generative Becomings and Creative Expression in Literary Texts.....	91
	4.4	Digital Texts and Textual Ecology: Interventions within Performative Environmental Debates.....	106
V		MATTERING AND THE REWRITTEN HUMAN AND NONHUMAN.....	112
	5.1	Rearticulating Embodiment: Literary Texts and Eco-performativity.....	113
	5.2	Semiotic-Agentic Materiality: Literarity and Literacity of Paper-Based and Digital Literary Texts.....	116
VI		ECO-PERFORMATIVE PRACTICES IN LITERARY TEXTS: IMPLICATIONS AND SCOPE.....	147
	6.1	Literature, the Infnitization of Semiotics and the Overthrowing of Ontology	147
	6.2	Revising the Grammar of Social Functionalism: The De-anthropologized Human and Literary Texts.....	152
	6.3	Thinking beyond the Human in Paper-Based Literary Texts.....	159
	6.4	Polyvocal Becomings in Digital Literary Texts.....	164
	6.5	Eco-performative Accounts, Literature and Literary Theory.....	169
	6.6	Eco-performative Theory and Modifications in Human Subjectivity.....	175
	6.7	Eco-performativity and the Modeling of Literary Theory.....	181
VII		OF BECOMING-CODE: LITERARY TEXTS AND THE ROLE OF THE HUMANITIES.....	184

7.1	Textual Ecology: Reading Eco-performative Literary Theory as an Embodied Practice.....	186
7.2	Intersubjective Humanness: The Polyvalent Human.....	192
7.3	Re-weaving Narratives and Reviving the Humanities.....	198
7.4	Digi-Semiosis, Bio-Semiosis and Zoo-Semiosis in Digital and Literary Texts: The Reconstructions of Ecology.....	201
7.5	Possibilities for Future Debates.....	206
	WORKS CITED	217

LIST OF SCREEN SHOTS

Screen Shot 1 from <i>V: Vniverse</i>	73
Screen Shot 2 from <i>V: Vniverse</i>	109
Screen shot 3 from <i>V: Vniverse</i>	143
Screen shot 4 from <i>V: Vniverse</i>	143
Screen shot 5 from <i>V: Vniverse</i>	144
Screen shot 6 from <i>V: Vniverse</i>	168

LIST OF FIGURES

Figure A	The dynamics of the parallax gap.....	51
Figure B	Vectors and lines of flight in a material-discursive phenomenon.....	149
Figure C	Eco-performativity, the parallax gap and the human and nonhuman gazes.....	156
Figure D	The interconnections among different ecological tiers.....	177

LIST OF EQUATIONS

Equation 1	36
Equation 2	77
Equation 3.....	82
Equation 4.....	96
Equation 5	96

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DEDICATION

To my parents

CHAPTER 1

Of Stories and Becoming-Human

1.1 Introduction

In an era when the ecosphere is undergoing radical transformations due to advancements in technology and the addition of diverse pollutants, my dissertation does not only revisit the concept of the human but also theorizes the notion of Eco-performativity. In so doing, it foregrounds the role that literary narratives play in redefining the human as well as the performative practices of human bodies in a world where nonhuman phenomena are becoming increasingly agentic. The idea of how the performativity of bodies, both human and nonhuman, is to be re-read within an environment wherein they have lost their essentialist conceptualizations and are seen as mutually enmeshed, has remained under-theorized. It is to address this gap within the existing environmental discourses that I undertake this research. Using the premise that all bodies have permeable boundaries, my dissertation proposes the role of literary texts and literary theory in revisiting the existing social functionalist discourses that do not only define bodies according to specific reproductive roles, but also place them within exclusionary hierarchical categorizations based on race and gender. However, once the human and nonhuman are seen as co-constitutive citizens in an environment that is demanding a revision of the anthropocentric binaries that subalternize nonhuman phenomena, it disbands the perception of the human body as an integrated and insulated assemblage. Not only that, it also leads to the question of what alternative narratives need to be constituted that permit a re-scrutiny of the manner in which literary texts and literary theory can re-orient the placement of humans and nonhumans in terms of each other. In this research, I contemplate over the notions of how not only are bodies meant to be rethought, but also how the role of literary texts and literary theory is to re-calibrated in order to direct anthropocentrism towards a reparative humanity, i.e. a humanity that repairs its subalternization of nonhuman

phenomena.

Engaging the concept of humanness rather than that of humanity as the premise for defining the entangled embeddedness of the human within a skein of nonhuman assemblages, my theorization distends the idea of logocentrism in order to bring to the fore and to question the anthropocentric bias inherent in human language and knowledge around which the human socius revolves. By humanness, I refer to the physical specifications that distinguish the human body from nonhuman bodies. Humanness and the performative practices of human bodies are deeply intertwined. Therefore, I argue that since concepts of human embodiment are radically changing with the onset of technological advancements, reciprocally, the concepts of human performative practices are also shifting particularly in a world where the human and nonhuman are blended. My thesis is textured with the idea that semiosis is not merely a human practice, it is a material-discursive mode of meaning-making within which nonhuman elements participate. This implies that the existing accounts of human embodiment and performative practices as well as gender and race-based modelling of human societies need to be revised and seen in terms of a more active materiality that is framing the ecosphere. Therefore, my thesis focalizes two notions: firstly, it foregrounds environmentalism as a logocentric practice and secondly, it delves into environmentalism as performance. By interweaving contemporary environmental and posthuman discourses, my thesis intervenes within the debates framing these disciplines and re-conceptualizes the narrative agencies of nonhuman phenomena that exceed anthropocentric narratives of history and science. It posits an ecology of narratives that traverses across corporeal boundaries. In re-conceiving nonhuman narrative agency as a trans-historical and trans-corporeal performance, it demands a revision of how humans perform, both physically and intellectually, within a complex web of human and nonhuman material-semiotic actors.

My dissertation takes on board two paper-based literary texts, i.e., Gerald Vizenor's *The Heirs of Columbus* and Paolo Bacigalupi's *The Windup Girl*, along with two hypertexts, i.e., Mark Amerika's *Grammatron* and Stephanie Strickland & Cynthia Lawson Jaramillo's *V: Vniverse*. Despite being thematically and stylistically diverse, these texts foreground trans-historical and trans-corporeal nonhuman narrative agency through their material and semiotic performances and suggest ways in which the de-anthropologization of the human may be proposed, a fact that I elucidate further in this discussion. The paper-based novels deal with possible genetic and digital

mutations of human and nonhuman bodies in unison as well as the merger between the human and nonhuman across history, i.e., ranging from the time when Christopher Columbus discovered America in the fifteenth century to a twenty second century world facing the aftermath of an ecological Armageddon. The selected digital texts enact a mutating corporeality and embodiment, participating in which the idea of human exclusivity is refracted. Through its engagement with these texts, my dissertation revisits the role of the humanities in revising human and nonhuman relations as well as the role of literary theory as an embodied practice where literary texts as well as human and nonhuman bodies are engaged in an ongoing creation of meanings that are both material and discursive in nature. In so doing, it problematizes the very idea of textuality and its confinement within an anthropocentric *logos* as it distends it via the notion of a code. The idea of the code, in this research, encapsulates both human and nonhuman modes of meaning-making. This is because human embodiment and subjectivity are all immanent within the vast ecospheric network of material and semiotic flows that frame the ecological narratives of the contemporary world. The way humans perform within such an ecosphere needs to be readdressed vis-à-vis their embeddedness within nonhuman actors that are evolving rapidly. This redressal is necessitated in a world where ecological degradation is not only raising questions regarding human survival and responsibility, but is also demanding a re-reading of the enmeshments of the human and nonhuman material-semiotic agencies.

In my current project, I have interconnected ideas like a *bricoleur*, whom Jacques Derrida defines as a person who creates a bricolage by borrowing bits and pieces from an existing heritage of ideas. A *bricoleur* changes the patterns of assemblage so that they may be viewed through a different critical approach in a new context (“Structure, Sign and Play in the Discourse of the Human Sciences” 360). A *bricoleur* adapts, modifies, changes and tests the heterogeneous ideas in circulation in his or her context, and that is precisely what the disanthropocentric tilt and the transdisciplinary nature of the present exploration demands. It is important for me to clarify that the purpose behind this bricolage-like transdisciplinary approach is to work across multiple domains as I develop new connections among these fields with literary texts and attempt to draw open-ended inferences that may lead to further explorations in the area. The notions of Eco-performativity and textual ecology which channelize this research are not meant to be calcified within any absolutism; rather they aim at suggesting further “potent intersections” (Alaimo 4) between “material strata” and what Timothy Maran has termed as the conceptual tools needed to

describe them (“Semiotization of Matter” 145). The selected texts operate as such potent intersections between material and conceptual strata.

A further justification for this transdisciplinary approach is offered by the two main approaches that govern this research. First and foremost, since this research focuses on elaborating how the contemporary ecosphere is a networked collective of human and non-human agentic mechanisms, its inclination is primarily “disanthropocentric” which demands “an ecological project of thinking beyond anthropocentricity” (Cohen 9) and as such requires an enlargement of both the temporal and geological scales for analysis. Secondly, since the material context or the ecosphere of these agentic maneuvers is at the same time malleable and prismatic, it presents a world that is “irreducible to its human relations” with a greater stress on interactivity and “a variability based upon alliance and connection” (Cohen 9 - 23). Human agency in itself is enmeshed within a web of human and nonhuman actants that exceed temporal linearity. This ecosphere does not merely reflect the fluctuant vitality of life, it is also an ongoing semiotic space where signifiers are constantly in a state of flux. This is because they endeavor to represent processes that are malleable and in the process of generating new products and entanglements, particularly with the dispersion of man-made pollutants. As new material entities and combinations are generated, signs, like human language, experience strains and stresses to semiotically encapsulate new modes of human and non-human interactions which in turn demand alternative performative accounts of human and non-human practices within the malleable ecosphere. In the next section, my argument foregrounds the interrelationship between ecological changes and the multivalent modes of representation of contemporary literary texts.

1.2 Ecological Alterations and Literary Texts

In May 2014, as the Air Quality Index in Paris rose to a staggering 185, equal to that of the smog-choked Beijing, the French government offered free transport to Parisians to reduce a "menacing smog" (Charlemagne) that had enveloped the city as recalcitrant, solid particles from vehicle emissions and heating systems were trapped in a layer of cold. Unable to rise, they hovered in the air as stark reminders of the drastic impact of the "core cultural narratives" (Klein 36) that have galvanized the capitalist venture. Since the Industrial Age, these narratives, which are based on the capitalist fetish of consumerism, have taken their toll not only on human health but also on the

economic system that galvanizes capitalism's "endless circular motion of expanded self-reproduction" (*The Parallax View* 61). Many blame the capitalist and industrial hubs of the world, primarily the USA, India and China, for an alarming escalation of carbon emissions over the last four decades. However, the "secretly negotiated deal to reduce their greenhouse gas output" between China and the United States of America in November 2014, draws up post-2020 plans to reduce environmentally hazardous gases in the atmosphere (Taylor and Branigan).

Ironically, at present, the deal remains enmeshed within an economic power discourse as the two global powers endeavor to cut down carbon emissions while tackling tensions between central and regional governments as the previously imposed mantra of prioritizing economic growth over environmental fears is apparently being submitted to a radical revision. Today in 2019, the task still seems to be in doldrums due to the increasing economic rifts between China and the United States and President Donald Trump's skeptical stance on climate change. In the meanwhile, humanity is losing its control over the ecosphere and the networked, multivalent, non-human but human-generated "citizens" (*Politics of Nature* 60) that are embedded within it. These citizens are engaged in dynamically altering the ecological skein that contours the contemporary patterns of interactive organic and inorganic life. It is this citizenship and the resulting notions of performativity of living and nonliving entities within the ecosphere which I propose to explore in this thought experiment. The reason why my research is a thought experiment¹ is because it functions within the domain of producing ideas and concepts via numerous key theorists while foregrounding nonhuman agency. These theorists include Jacques Derrida, Karen Barad, Gilles Deleuze and Felix Guattari, Bruno Latour, Peter Sloterdijk, Jeffrey Jerome Cohen, Timo Maran, Timothy Morton, David Roden, Rosi Braidotti, Jane Bennett and Donna Haraway, etc. The reason why I have chosen these theorists is that they foreground the agency of matter and its significant role in human existence. I do concede that there are tensions within the standpoints and positionalities of these theorists; for instance, Barad's account is onto-epistemological whereas

¹ Thought experiments are a re-thinking of the world as it evolves. One of the characteristic features of thought experiments is that they can be re-thought, allowing counter thought-experiments that question phenomena as they develop. Their "intriguing plasticity" (Brown and Fehige) is what makes thought-experiments essential for humans to re-think their ecological roles in a reparative way. According to the *Stanford Encyclopedia of Philosophy*, the revision of existing theories so that "particular ways in which both expectation and theory" (Brown and Fehige) may be recommended remains one of the vital functions of philosophical thought experiments. They aim at galvanizing further possibilities of thought and also to check ideas for their fallibility.

Bennett's is purely ontological and is highly critical of any epistemological account of nonhuman agency. However, these very tensions enable me to explore the ideas of textual ecology and Eco-performativity by pre-empting most theoretical blind spots and covering a broad theoretical base as is required by this thought experiment. My research analyzes those concepts given by these theorists that are pertinent to my research in order to investigate how anthropocentric biases have bound nonhuman agency within a radical subalternity so that it may be revised. Since thought experiments permit a re-thinking of the world through multiple lens, my thought experiment is transdisciplinary as it travels through Derrida's notions of inscription, as well as Deleuze and Guattari's notions of code-based assemblages all the while blending Barad's notions of "material-discursive" (35) entanglements. It also integrates Judith Butler's idea of performativity filtered through Latour's idea of a new collective that is to be seen as a Zizekian parallax gap composed of permeable boundaries and diverse angles of seeing. It also delves into Sloterdijk's and Braidotti's concept of malleable human subjectivity and identity. While I acknowledge that this is a rather convoluted pathway, however, most onto-epistemological accounts do follow such an imbricated path bearing in mind that in the contemporary capitalist world, all entities are co-constitutive in increasingly complex ways. Onto-epistemological accounts deal with knowing how things are in a constant phase of becoming through our own embeddedness within them. Therefore, I have critically engaged with those ideas that focus on the modes of co-constitution of all phenomena in the ecosphere. Since my thought experiment also provides an onto-epistemological account of numerous human and non-human performative practices through their representation in multivalent literary texts, its conceptual range and scope requires an elaborate conceptual assemblage that in itself endeavors to exceed any metaphysical enclosure. The goal here is to extend debates as to how literary texts can be read in a material-discursive manner and their engagement with human and nonhuman enmeshments to produce new ways of "knowing", which according to Barad is "a material practice of engagement as part of the world in its differential becoming" (*Meeting the Universe* 89). It cuts across the material-discursive dichotomy (*Meeting the Universe* 128), thereby avoiding any reductive generalizations. It may also be correctly argued that while this mode of exploration and theorization has been primarily engaged in within the domains of post-humanism, ecocriticism and contemporary philosophy, my exploration endeavors to bridge the gap between such theoretical and philosophical approaches as well as literary criticism by bringing in multivalent literary texts within the ambit of this analysis. This is because

contemporary ecocriticism is endeavoring to draw inferences regarding the interface among domains that are provisionally categorized as the natural, cultural and digital environments in which all human and nonhuman entities are enmeshed in permutable, non-hierarchical relationships.

However, since human societies are primarily “textual communities” (Zipes 21) where multiple modes of semiotic and material exchanges take place among different spheres of the material and discursive modes of human and non-human existence, it is necessary to re-view how literary texts are engaged in multivalent modes of representation regarding these issues. This is because not only have texts (both literary and otherwise) strengthened anthropocentrism, they have also reified the notion of ‘nature’ as a subaltern and passive entity, ascribing all agency to human beings. In addition, texts also function as citizens within the altering notion of the ecosphere which is of primary concern in my thought experiment. As Barad has pointed out, objects are no longer to be seen as discrete entities, but as “phenomena” that are produced through “intra-actions” (*Meeting the Universe Halfway* 33) of various living and non-living entities. Intra-actions are unique modes of interactions among material and discursive assemblages. Barad defines intra-actions as the “mutual constitution of entangled agencies” (*Meeting the Universe* 33; emphasis in original) which produce phenomena across multiple planes of existence. During these intra-actions, the boundaries of these phenomena remain constitutively permeable (*Meeting the Universe* 181; Serres 57) while objects display a profound agential materiality born out of an interplay between discourses and matter. The idea of agential reality is derived from Barad’s concept of “agential realism” (*Meeting the Universe* 90) that postulates that intra-active enmeshments of matter allow spatiality and temporality to be accounted for and measured. Barad writes: “According to agential realism, knowing, thinking, measuring, theorizing, and observing are material practices of intra-acting within and as part of the world.” (*Meeting the Universe* 90). This implies that materialism is to be seen in agential, performative terms, iterating itself in multiple, ongoing codified forms. This agency of matter, despite being fraught with the complexities of intention or its lack thereof, remains integral to the analysis of nonhuman phenomena whose performative agency far exceeds human intentions and predictions. Texts, even literary texts, are no exception to this interplay.

1.3 In the Beginning was the Code: Rethinking the Notion of Language

Since my current study aims at drawing inferences pertaining to the performative practices of various human and non-human entities functioning as “citizens” (*Politics* 60) within the ecological skein, it demands a rethinking of language as a means of interaction among human and non-human entities and drawing inferences regarding their agentic mechanisms. While my exploration endeavors to show how literary texts are also “entangled” phenomena (*Meeting the Universe* 23) within the networked ecosphere, it becomes interventionary in its scope. This is because it invites a re-theorization of the role of literary texts and their inscriptive practices as vehicles of communication exchange within the rapidly altering ecological network wherein human and nonhuman are engaged in mutually constitutive enunciative practices. However, even while bridging the gap between literary texts and science-philosophy, I have remained aware of a significant yet valid obstacle at the onset of my research endeavor. With human societies being textual societies, they have developed along and around “the implicit and explicit logic of stories” (*Simians, Cyborgs and Women* 106) which has always been anthropocentric in scope; therefore, I was aware that this theorization did indeed face the danger of being co-opted within the anthropocentric enclave. I understand that the representational praxis of literature is inherently anthropocentric primarily because it is language-based and therefore inhibited by logocentrism. In this sense, literature, like science, is logocentric (*Of Grammatology* 4) which, in turn, implies that it is anthropocentric. However, what I have kept in mind is that contemporary science philosophy, as articulated by Latour, Barad, Sloterdijk, Deleuze and Guattari, etc., demands a re-configuration of human and non-human relations in terms of a “new collective” (*Politics* 8) which is non-hierarchical, protean and mutually co-constitutive. Through this co-constitution, the re-configuration of human and nonhuman relations is able to exceed any anthropocentric bias. Since language in all its signifying modalities remains anthropocentric as it binds all notions within an already prescribed “metaphysical enclosure” (Spivak xli) of thought, it is, at this point, necessary to re-think the notion of language.

Language, being constituted by signs, has marked the “epistemological limit” (Bennett 3) of any metaphysical era, hence, in order to exceed this limit, it is necessary to re-scrutinize the anthropocentric privilege that is accorded to language. According to Derrida, language does not merely inscribe, it is also an activity operant within the limiting and limited “lineage of the logos”

(*Of Grammatology* 10). In order to get around this problem, my theorization presents language as a subset of a code which is both semiotic and a-semiotic engaged in an exchange of information across human and non-human entities. It is this code-based information exchange across the human and non-human “strata” (Deleuze and Guattari 3) that remains pivotal to my theorization. The concept of the code that I have used in the current research is not restricted to a computer or syntactic code. As a matter of fact, it is based on the notion that all material and discursive phenomena are collectives of different codified arrangements of their constituents, whether they are atoms or molecules bonded in multiple formations or chains of thought interweaving ideological frameworks. All of these constituents follow specific patterns of assemblage and intra-actions. The patterns of assemblage of every phenomena as well as their intra-actions with each other follow particular codes. Analogically, we can see these codified intra- and interactive patterns in terms of the evaporation of water. In a liquid state, water molecules intra-act according to a specific configuration of forces which is transformed as the water molecules enter a gaseous state. Evaporation is not random by any means, rather it follows specific codified patterns of transmutation. So, a code follows a “range of scales” (Beer 6) in the material-discursive world that we inhabit. All life is code, and thus code is agentic. Everything, including social behaviors, human statements, geological formations, DNA helices etc., has its own codified construction and pattern, which in some cases is a product of social conditioning and in some cases leads to the formation of social functionalist discourses.

Within this space of multiply entangled codes, writing emerges as a “superlinear” confederation or “assemblage” (Deleuze and Guattari 62-66) interacting with multiple codes constituting numerous material bodies that traverse the ecological web. With the code exceeding the anthropocentric epistemological membrane created by human intelligibility, it accesses and connects with the realm of non-human agency which may or may not be comprehensible to the human consciousness. In this context, by placing written language as a subset of a code-based interaction among multiple material and discursive domains, written texts also become participants within these “material-discursive” entanglements (*Meeting the Universe* 35). In this manner, the acts of writing and representation or simply, i.e., textual practices, do not merely remain discursive practices, they also become material enactments (*Meeting the Universe* 147; Bennett 23; Cohen 36). Therefore, when writing is viewed as a material practice, it exceeds the confines of the sign to encapsulate notions that exceed the sign. In so doing, the material conception of writing is no

longer confined to the Derridean idea of textuality, i.e., in terms of textuality being action and movement alone. As a matter of fact, it enters the realm of Deleuze and Guattari who postulate that language in all its forms is in a state of constant flux as it establishes, re-configures, dismantles and intervenes into a “multiplicity” (Deleuze & Guattari 56) of assemblages, including material bodies. However, this mode of intervention of language into the materiality of things, both human and otherwise, takes place when both language and material entities function as a “*collective assemblage of enunciation*, of acts and statements, of incorporeal transformations attributed to bodies” (Deleuze and Guattari 88; emphasis in original). In Deleuze and Guattari’s framework, the code, of which language and hence writing are subsets, is a de-territorializing and re-territorializing entity, one that engages in material and semiotic exchanges across multiple assemblages as it changes the interweaving of the semiotic and the material in multiple ways. Within such fluid material-semiotic exchanges, the idea of a fixed performativity becomes questionable since the bodies enacting such performative practices lose their ontological and epistemological stability and are seen as transformational entities.

In becoming participants of this “rhizomatic” (Deleuze and Guattari 6) space, literary texts also become malleable assemblages of material-semiotic exchange producing new conceptions of human and nonhuman bodies. The link between malleable material-semiotic bodies and literary texts informs the conceptual base of my argument. However, at this point, I am also aware that despite my projection of language as a subset of the code, any kind of de-territorialization taking place within the realm of language, is always marked by a “residual anthropocentrism” (Bradley 17). In order to deal with this conundrum I argue that when language is viewed as a participant of a vaster code-based material-semiotic exchange, it becomes a participant of a larger exchange-based process among numerous material phenomena. Since a code is a form of deterritorialization, it is assigned “a new role by the new surroundings” (Deleuze & Guattari 54) in a new ecospheric assemblage where it no longer pedestalizes the human. Therefore, in becoming codes, both digital and paper-based texts also participate in the formation of new associations among their internal and external environments by re- and de-territorializing ideas and thereby take on a new role. They function as assemblages of “hypersentences” that continuously undergo de-territorializations, inducing “incorporeal transformations” (Deleuze and Guattari 91) among various material-discursive phenomena in the ecological network. It is this placement of language as a subset of a code that remains integral to my project of theorizing the role of literary texts as material discursive

phenomena and also of highlighting how this notion induces a deflection within the iterations of human and non-human performative practices in the contemporary ecological canvas.

One of the main suggestions that my argument offers is that life is inherently a code or a program, a “metastable environment” (Bradley 11) in a state of constant autopoiesis i.e., a state of continuous “self-forming” (Bradley 48), that is creative and constantly constituting and re-constituting itself. It is this code-based exchange that allows life to become “an ensemble performing a number of operations simultaneously” (Bradley 32). In presenting this idea of the code, I have tried to overcome the practical and conceptual hindrance that Bennett has presented in her ontological account of nonhuman agency in *Vibrant Matter*. Bennett questions whether communication can indeed take place across linguistic and non-linguistic boundaries and whether we can theorize and translate across these boundaries. I argue that since codes always exceed the objects that they create, it is logical that textual practices are also aware of these entanglements that exceed anthropocentric cognition. However, in being aware of those phenomena that exceed language, literary texts function as mediators, and not as translators, in Bennett’s sense, between the human and non-human phenomena, depicting alternative narratives regarding their co-constitutive performative practices. Through such a participatory enactment, they also function as “citizens” which are not strictly “socialized” (*Politics* 60-77) according to an anthropocentric paradigm within the heterogeneous ecosphere whose constituent population is composed of agentively intervening “actants²” (*Politics* 75) that display a “vital materiality” (Bennett vii). In my present study, agency implies the ability of actants, both material and discursive, to leave an imprint or impact on other phenomena through their intra-actions. These imprints may or may not be intelligible to human cognition. These actants also include “hyperobjects”, i.e., those objects which, according to Morton, are “massively distributed in time and space relative to humans” (*Hyperobjects: Philosophy and Ecology after the End of the World* 1). Thus, they exceed all modes of representation and only make their influence felt “interobjectively” (*Hyperobjects* 1; emphasis in original) in forms such as nuclear waste, Styrofoam, etc. This interobjectivity, i.e., the interface among various objects, allows theorists like Braidotti and Sloterdijk to define human subjectivity

² In *Politics of Nature*, Bruno Latour has used the term ‘actant’, rather than ‘actor’ to remove of traces of any anthropomorphism in their descriptions (75). In so doing, he establishes the groove for positing nonhuman agency in terms of their performative enactments that lie outside anthropocentric lines of sight. In positing them as actants that perform in permutative ways that lie outside the human will, Latour theorizes nonhuman phenomena as ‘citizens’ with an agency of their own, performing in a non-hierarchical collective where they exceed anthropocentric confines.

as a mesh of multiple phenomena. Sloterdijk terms this multiple composition of human beings as a form of an intersubjective constitution, an idea which I have further developed in the latter half of this dissertation in connection with alterations in human subjectivity through prosthetic enhancements and technological modifications, both of the human body and its milieu.

It is the citizenship of nonhuman actants and the resulting notions of performativity of living and nonliving entities within the ecosphere which I explore in this thought experiment, particularly within American literary texts, although the findings of this research are not confined to American literature only. I argue that literary texts also function as citizens within the altering notion of the ecosphere that is of primary concern in my thought experiment. As Barad has pointed out, objects are no longer to be seen as discrete entities, but as *phenomena* that are produced through intra-actions of various living and non-living entities. Hence, boundaries remain constitutively permeable, while objects display a profound agential materiality born out of an interplay between discourses and materials. It is also necessary to clarify here that by literary texts I imply the various forms of fictional texts employing various literary stylistic devices to present a specific version of reality in terms of new possibilities of thought and action. The reason why I have chosen literary texts, and especially fiction, as sites of my theorization is because human beings are textual communities revolving around stories. Stories permit the reification of certain ways of thinking and behavior. While texts from scientific and religious domains also participate in human conditioning in a similar manner, my special focus is on literary texts as well as their representative and interpretative enunciations in order to present literature as a domain where possibilities of thought can be experimented with outside the epistemological “superego” of science (*The Three Ecologies* 36). This is because many argue that numerous ecological conundrums are due to human obsession with science and the control of the environment through science. My focus on fiction does not suggest that other genres of literature such as poetry and drama cannot do the same. As a matter of fact, *V:Vniverse* and *Grammatron* take on poetic hues as well. My decision to focus on fiction stemmed from my requirement to delimit my thought experiment generically because the selected texts were already displaying a very broad material-semiotic diversity in terms of their stylistic and thematic practices. The various genres of literature offer a different plane for debating human and nonhuman intra-actions within the ecosphere outside the confines of scientific discourse through an ethico-aesthetic engagement with the issue.

An important supposition underlying this ethico-aesthetic engagement is the fact that literary texts operate in a world of permeable boundaries. However, in this world, it is not only literary texts that are textual, rather, as Derrida has postulated, textuality is open-ended and defined in terms of inscription of which biological connectivity, computer programming, as well as information exchanges at the cellular and molecular levels are all solid examples. It is due to this reason that in Derridean thought, the electrosphere is also a textual space where both inscription and the function of that inscription are defined in terms of enmeshed cybernetic textuality (*Of Grammatology* 9). However, while Derrida's notion of a text is inherently anthropocentric, the notion of textual ecology that I have developed in this dissertation is based upon the idea of the 'code' as a means that does not only permit texts but all codified phenomena to diffractively engage in "material-discursive" intra-actions (*Meeting the Universe* 35). However, in order to exceed the anthropocentric bias in Derrida, I have also blended this notion of the code with Deleuze and Guattari's idea of a text being a mutating "collective assemblage of enunciation" (23). This is because material-discursive intra-actions produce meanings through enunciations, which according to Deleuze and Guattari, are a sum of form and speech. Hence, meaning-making is both material and discursive, semiotic and a-semiotic (Deleuze and Guattari 38 - 41). This argument informs my theorization of 'textual ecology' and 'Eco-performativity' as evinced in multivalent literary practices.

1.4 Eco-performativity and Textual Ecology: Re-mediating Stories

The premise of textuality being a material-discursive enunciation given in the previous section has been vital in my selection of the multivalent literary texts that I have included in this thought experiment. Literary texts in their multivalent and multimodal code-based practices operate as integral "citizens" (*The Politics* 60) of the malleable ecosphere. In addition, just as the Quantum Theory posits that entities are never fixed but are in an ongoing process of intra-action, the deconstructive theory also posits that entities have no absolute truth-value. Hence, when both these scientific and philosophical theories blend within the ecosphere, the discursive performance of a literary text also undergoes a shift as it participates in different modes of inscriptive practices to go beyond the epistemological enclosure of the contemporary world, thereby avoiding reductive generalizations.

Avoiding such reductive generalizations is further necessitated by the fact that the concept of 'ecology' in itself has acquired a dynamic malleability. Stemming from an anthropocentric, narcissistic view, ecology has erroneously been equaled with the reductive idea of nature as an intricate collection of fauna and flora, bound within a food chain. With language being the traditional tool of imposing taxonomic bonds and narratives of evolutionary functionalism through scientific, literary and public discourses, 'nature' has been seen as segregated from the realm of human culture, a claim that is now refuted by Derrida, Barad, Haraway, Cohen and Latour. Seen as a mute Other, nature was conventionally studied as an intricate mesh of mutually dependent relationships between organic and inorganic modes of existence outside the human realm. These modes of existence have historically been analyzed through various anthropological lenses that analyzed the pre-linguistic and pre-rational life of incorrectly labeled 'natural' entities in terms of relations of domination, production, reproduction, and functionalism (*Simians, Cyborgs and Women* 23-28).

Therefore, in the contemporary world, as the boundaries between the human and the nonhuman have become increasingly fuzzy, the need to review man's placement in non-hierarchical terms within this interactive web of relationships between humans and all non-human entities cannot be overemphasized. Therefore, one is led to question as to how human and nonhuman assemblages perform in a world of such intricate complexities and how literary texts read these performative practices. Another question that arises is whether literary narratives offer alternative definitions of what it means to be human or nonhuman amidst such an intricate ecological interface. These questions subsequently demand a re-evaluation of anthropocentrism and its role in establishing hierarchical binaries within the ecosphere and the social sphere.

At this stage, what is required is an operational definition of ecology in a world where different forms of undead entities, also termed as *lamella*, continue to co-exist with other ubiquitous technological gadgets. These undead entities include non-biodegradable pollutants acting as hyperobjects, such as Styrofoam and aluminum products. Redefining ecology is further necessitated by the fact that the man of the posthuman era is now cybernetically linked with the digital or cyber world that has its own networking paradigms. Hence, the contemporary notion of ecology has to be rethought in terms of the proliferation of newly emergent discursive spaces and their entanglements with undead and technological material entities.

Keeping in mind the emergence of new discursive spaces, my definition of ecology is based upon Matthew Fuller's definition which posits ecology in terms of “the massive and dynamic interrelation of processes and objects, beings and things, patterns and matter” which is historically grounded (2). Therefore, it is concerned with the discursive constructions of the ontological placement of material and non-material entities within multivalent ecological spaces. While Fuller talks about "media ecology" that sees objects as being informational and material like textual narratives (2), I have applied the same premise on textual ecology because literary narratives, both paper-based and multi-modal, also function as informational and physical entities through discursive networks. Literary texts, thereby, display a materiality that makes new combinations more manifest. In foregrounding the interface between literary narratives and human and nonhuman phenomena, I aim to bring to the fore the numerous dimensions of Eco-performativity as evinced in textual ecology and its connection with the epistemological construction and discursive reconfiguration of human subjectivities.

At this point, it is necessary to unravel the key terms pivoting this research, i.e., ‘Eco-performativity’ and ‘textual ecology’. Eco-performativity is a variant of the term ‘performativity’ which posits that subjectivities, bodies and discourses are constructed through (re)-iterative mechanisms, such as narratives, that propose a misleading ontological fixity (*Gender Trouble* 173). All texts, narratives and individuals thus enact, on the discursive front, established ideologies, behaviours and modes of perception. While Judith Butler, the proponent of this notion, focused primarily on the discursive paradigms of this enactment, Barad established a nexus between Judith Butler’s idea of performativity and her own idea of agential realism by theorizing how differential material-discursive entanglements lead to different performative behaviors across multiple embodied collectives. It is within this notion of material-discursive entanglement that my notion of Eco-performativity is mired. The coining of this neological term is necessitated by my commitment to creating a more vital vocabulary that is not only derived from pre-existing theoretical constructions, but also contests them as it heads into a realm of knowledge regarding how human and nonhuman bodies perform in a rhizomatic synchrony. This rhizomatic synchrony is in alignment with Roden’s insight which posits a merger between the human and NBIC, i.e., nanotechnology, biotechnology, information technology and cognitive science (“Humanism, Transhumanism and Posthumanism”, *Posthuman Life: Philosophy at the Edge of the Human* 13), so that they produce new material constructions that exceed the human both temporally and

spatially. Not only that, the humans themselves are exceeding their established physical confines through “Brain–Machine–Brain Interfaces (BMBIs)” that allow “cybernetic hook-ups” (*Posthuman Life* 5) between humans, non-humans, as well as noumenal and material phenomena which induces a shift in the way their performative practices are read. This shift is analyzed in the ensuing discussion.

When annexed with this idea of the permeable performative behaviors of various material-discursive assemblages, textual ecology is not merely taken in terms of the textual space within which the interactions between the world of man and nature are scrutinized and re-evaluated. In such a scenario, where all performances are code-based phenomena, all performances are textual enactments which can be modified, re-read and reinterpreted across a web of material-semiotic exchanges. The premise for my idea of ‘textual ecology’ blends Hardaway’s, Bennett’s, and Maran’s notions that focus on how stories re-ask questions pertaining to the definitions and constructions of the categories of nature and the human. Textual ecology is a public mediation of these stories (*Simians, Cyborgs and Women* 95) where texts are material-discursive phenomena in their representational praxis, both stylistically and thematically. This form of a representational praxis is constantly deterritorialized and re-territorialized as it maps new connections and divergences among human and non-human entities. Therefore, through the material-semiotic practices of reading and writing, texts lead to “the semiotization of matter and the growing imprinting of semiotic patterns into matter” (Maran 123) thereby directing the semiotic processes outside an anthropocentric enclosure. Texts in themselves are also material entities, intra-acting with numerous other material phenomena, a fact which Bennett highlights in the following manner:

The sentences of this book also emerged from the confederate agency of many striving macro- and microactants: from "my" memories, intentions, contentions, intestinal bacteria, eyeglasses, and blood sugar, as well as from the plastic computer keyboard, the bird song from the open window, or the air or particulates in the room, to name only a few of the participants. What is at work here on the page is an animal-vegetable-mineral-sonority cluster with a particular degree and duration of power. (23)

What Bennett illustrates here is the active process in which the sentence acquires a material aspect that coalesces with the material syntax of the room and its regimes of meanings. The scene that

she depicts is an enunciation of textual ecology which is the space where multiple texts as well as material and discursive entities engage in constant processes of intra-action. These processes are based upon a flow of agency from one structure to another while generating new meanings and mattering (*Meeting the Universe* 140). Barad defines mattering as being “simultaneously a matter of substance and significance” that does not only question “the nature of matter” but also explores how “the smallest parts of matter are found to be capable of exploding deeply entrenched ideas and large cities.” (*Meeting the Universe* 3). If mattering subverts ideas and places, man’s interactions with different modes of mattering need to be revisited since these intra-actions alter not only the ideological infrastructure of scientific discourses but also its dialectical negotiation with sociology, philosophy and literature wherein the idea of being-human is revisited.

1.5 Rethinking the Ecology of Literature

The reason for choosing digital and paper-based literary texts for this research is that within the Foucauldian paradigm, a text is embedded within a wider sociocultural circuit of entities such as institutions, thought patterns, textual and ideological practices, etc. By entering into this network of relationships, they impact the episteme of an era. Therefore, literary texts do not operate in a vacuum, rather they replicate ecological patterns through material-discursive enmeshments. This enactment of 'textual ecology' is not a replica of Rueckert's notion of how a text functions like a plant which he offered in his essay "Literature and Ecology: An Experiment in Ecocriticism" either. While doing away with the metaphysical nature of textual interactions within the ecosphere, I have chosen to see the ecosphere as a semiotic, discursive space where material and non-material entities of all categories are endlessly connected across the material and discursive spectrum. This is evinced in the way the landscape is arranged, how architecture influences this arrangement and how even the stench from a garbage dump causes alterations in the material-semiotic syntax of its surroundings. Textual ecology, in this exploration, is primarily a refraction of the notion of the "ecology of literature" (Rueckert 107) in its content. It is in effect an "ecology of literature" but one that is mired in the notion of a discursive and material engagement among the multiple disciplines shaping the ecological debates undergoing an unending “deterritorialization and destratification” (Deleuze and Guattari 3) that are an integral characteristic of material and discursive assemblages.

I argue that through this destratification, texts function as irruption points that induce cleavages in the prevalent epistemic paradigms and cultural narratives. This implies that by functioning within this vastly interdiscursive space, they also influence the perspectives, positions and thinking patterns of other subjects. Since human beings, owing to their rational abilities, have catalyzed changes in nature politics, it may be assumed that textual ecology may also operate in ways to alter the relations of dominance that contour human discourses and identities within the ecological field. In addition, 'textual ecology', as a concept, provides a significant theoretical base to the idea of Eco-performativity. For the sake of this theorization, I explore this idea of Eco-performativity by focusing on the following points:

1. The idea of multivalently engaged multidisciplinary discourses, including literature, framing the field of multiple ecological interactions in creating new collectives.
2. The influence of this ongoing negotiation on the notion of performativity within the ever-expanding spatiality of textual ecology and its prospective influence on the discourses of race and gender.
3. The involvement of multiple codes that present all material and discursive phenomena within the ecosphere as being differentially enacted.
4. The connection between textual ecology and materialist ecology as framing the space for the enactment of altered subjectivities and socio-political discourses through narratives.
5. The discursive reconfiguration of anthropocentric dominance in relation to Eco-performativity within textual ecology and the dismantling of ontological and epistemological boundaries.

Since textual ecology is a multi-discursive domain, it allows an interface among texts, discourses and the ideas of ecology as well as emerging ecological networks in all their material forms. Textuality is not only an iterative exchange among statements but also among materials and also between materials and statements with literary texts equally participating in this iterative exchange.

1.6 Research Objectives

With this entire argument in mind, the research objectives of my present work are postulated as below:

1. To engage in extracting theoretical inferences as to how texts, both literary and multimodal,

engage in ecological practices and networks.

2. To highlight how various textual ecologies interact with multivalent ecological systems including discursive ecologies and digital ecologies through their stylistic and thematic practices.
3. To indicate how, through the inferred Eco-performative practices, literary and multimodal texts induce alterations in the discourses pertaining to identity, race and gender.

1.7 Research Questions

In the light of these objectives, the following research questions have been addressed during the course of my research:

1. How does Eco-performativity lead to the creation of ecology as a discursive arena and the re-construction of nature in multiple literary and digital texts leading to a revision of the placement of human beings and a revision of the structures of dominance in place?
2. How do Digi-semiosis, Bio-semiosis and its sub-category of Zoo-semiosis in digital and literary texts lead to reconstructions of ecology?
3. How do the inferred Eco-performative practices in literary and multimodal texts induce alterations in the discourses of human and nonhuman agency?

1.8 Selected Texts

Since my study is a thought experiment aimed at determining a wide spectrum of inferred principles of Eco-performative activities discursively engaged in by texts and their impact on discourses and gender, identity and race, the texts included within it are also diverse so that a range of ideas and possibilities may be extracted for my theorization. Consequently, I have also chosen digital texts to evaluate how they integrate within the opus of literary texts, as a sub-category of literature, and play their code-based roles as they interact with alternate ecologies. This adds to the uniqueness of my research as the coupling of these texts has permitted a more comprehensive site to analyze their material-semiotic enactments. In addition, with their depiction of an artificially intelligent digital consciousness created by man, these texts again put to question how exactly a human being is both materially and discursively constituted. These digital texts focus on how the

digital ecosphere interfaces with the material and the discursive since they are operant in a domain where the intersection and interaction between the material and the discursive takes place in relation to altered perspectives of man's ecospheric placement. Hence, two digital texts, *V: Vniverse* and *Grammatron* have been chosen, since their titles and plot structures are a reflection of the networked rhizomatic model which parallels the ecological models of discursive exchange and interchange between the digital world and the external, sociosymbolic ecological network of the material world, as has been mentioned earlier. In *V: Vniverse*, Strickland & Jaramillo emulate the rhizomatic patterns of the star chart as the dots on the text's dark background emulate stars and planets with their own narratives. The reader either enters a number in the circle on the top right corner of the screen in an orderly sequence or clicks on any dot in a random manner so that extracts in poetic prose emerge and fade once the cursor is moved. As in Mark Amerika's *Filmtext*, the writing is in a state of inscription and deletion, holding up all meanings and all order to a revisionary scrutiny. As graphic codes, shapes and algorithms overlap, communicating with the mental environment of the reader, the text patterns the cybernetic connections amongst constellations which signify, even if man cannot read those signs. In *Grammatron*, Amerika emplots a hypertextual narrative with multiple hyperlinks operating as nodes opening into different textual spaces all linked up through the digitized consciousness of Abe Golam and other characters with fluid bodies and awareness. *Grammatron* has three major sections, i.e., "Hypertextual Consciousness: A Companion Theory Guide" which serves as its prologue along with two textual sections, one based on high band width called "Interface" and the other based on a lower band width called "Abe Golam" which both flow into each other. Sound tracks have been added to the text through hyperlinks so that the text functions in an apparent multimodal non-linear manner. "Interface" is linear, lacking hyperlinks but moving onwards in sentences on a yellow background with animated GIFs placed strategically below them. Words erase themselves as the frame of the text changes, and the active GIFs (short for Graphics Interchange Format) supplement the meaning of the text. During these transformations Abe Golam, the hypertextual consciousness framing all the versions of *Grammatron*, emerges as an artificially intelligent (henceforth abbreviated as AI), narrator responsible for the "teleportation of narrative consciousness into the electrosphere" ("HTC Hypertextual Consciousness").

In addition, since this theorization is clearly limited to texts both paper-based and multimodal which carry a literary ambience, hence, the paper-bound literary texts chosen for this enterprise

are taken as representatives of the altering material ecologies within which contemporary man is embedded. The paper-based literary texts chosen for this study are:

- *The Heirs of Columbus* by Gerald Vizenor
- *The Wind-Up Girl* by Paolo Bacigalupi

Both these texts reflect various ecological connections, exemplified through different forms of material-semiotic enmeshments through modalities such as digi-semiosis, bio-semiosis and zoo-semiosis, to indicate man's altered connections with altering ecological frameworks. In so doing, and also because of their placements within different cultures, subject positions and racial discourses, these literary texts indicate how altering ecological paradigms induce changes within human subjectivities. While *The Heirs of Columbus* highlights the erasure of Native American history and cosmology through the epistemic violence imposed upon them by the European colonizers, *The Wind-Up Girl* depicts the twenty second century world whose gluttony for petrol and unabated greed has led to the extermination of entire civilizations. However, despite their thematic divergence, both novels throw light on the colonization of not only humans but also of nonhuman phenomena and depict the tenuousness of the human-nonhuman binary. The reason why these two novels have been paired for my analysis is that both offer different dynamics of 'becoming-human'. For instance, Bacigalupi's novel revolves around an android that runs on kink-springs. Its more-than-human strengths, its inhuman exploitation as a sex object at the hands of humans, and its projection at the end of the novel as the new Eve, i.e., the mother of a radically altered humanity, disbands the essentialist category of the human to include a number of nonhuman phenomena involved in the processes of becoming-human. Comparisons may be made between her and Octavia Butler's Lilith in the former's trilogy called *Lilith's Brood* since Lilith is also taken as a new Eve who is made to breed hybrid children, part-human and part-alien with her consent, otherwise the human race was doomed to annihilation. Unlike Emiko, however, Lilith is initially an unaltered human, whereas Emiko is neither human nor human-born. She displays very different dynamics of 'becoming-human' from those of Lilith. Similarly, Vizenor's depiction of the mongrels as well as the therianthropic shamans who continue to transmogrify from human to animal forms destabilizes the categories of the human and the animal as well as the gap between these two categories, thus disbanding their hierarchical orientation towards each other. What is important to note here is that despite differences in themes and styles, similar inferences may be gleaned from these as well as other dystopian or techno-futuristic novels as they also invite a re-

thinking of how human and nonhuman phenomena interact. Novels like Kazuo Ishiguro's *Never Let me Go* or Margaret Atwood's *MaddAddam* trilogy, Richard Morgan's *Altered Carbon* and *Broken Angels*, etc., also address questions regarding what it means to be human in a world whose material syntax is drastically changed. Ishiguro foregrounds human relations with human clones specially bred to be organ donors, and Octavia Butler depicts an alien-human hybrid as the future of the human race after a nuclear Armageddon. Atwood, on the other hand, highlights a genetically re-engineered future necessary for the survival of the human race in a post-apocalyptic world; and Morgan portrays a world where the human soul is an algorithmic program that can be downloaded into many bodies. The body, in Morgan's novels, is like disposable clothing, thereby challenging any notion of a fixed gender-based performativity and disbanding the idea that biology is destiny. What is important to notice here is that all these texts invite a rethinking of what it means to be human and how one needs to rethink not only the idea of performativity but also of the new ethics which will govern the new notions of humanness.

The selected hypertexts also foreground this binary. *Grammatron* exemplifies this through the character of Abe Golam, whose name is etymologically linked with the Golem of Jewish mythology who was an animated being, resembling a human, made of clay. In Jewish myth, Golem is a liminal creature who transcends moral, gender and religious boundaries. While not made of clay, Abe Golam is an algorithmic creature who exceeds gender, spatial, textual, material and semiotic boundaries. While not a cyborg himself, he allows the reader to interface with his consciousness. In so doing, he lets the human reader become a cyborg, i.e., a blend of the technological and the human, as the reader traverses the digital world while sharing Abe's digitally fluid modes of embodiment. *V:Vniverse*, on the other hand, also depicts a world that is transcorporeal, transcultural and transtemporal as it thematically and digitally connects the digital cosmos with human history, science, literature, astronomy and philosophy across all times.

While the texts selected here, at this stage, appear to be offering a rather widespread canvas for analysis, their inclusion is justified by the fact that since this study is a first in the area of Eco-performativity, a wider frame of analysis has been necessitated in order to address the demands of the research questions and objectives given above. In addition, they also suggest how the binaries segregating man and nature are decentered within the existing ecological discourses and what sorts of new collectives are generated as literary texts engage on both the material and non-material tiers

with the code-based exchanged contouring the ecosphere.

1.9 Significance

What makes this research significant is that Eco-performativity is, at present, an unexplored area of study. Hence, the performativity of different human and nonhuman phenomena within the ecological space remains an uncharted demesne. However, with the emergence of different 'ecologies', as Guattari's *The Three Ecologies* elucidates, the interaction among these ecologies demands a closer scrutiny. This is because these interactions have been complicated by the involvement of material entities speckling the material environment or *umwelt*, and the immaterial elements, such as narratives and philosophy. In addition, while the role of science and technology in the creation of new ecological systems has been dealt with at length, the role of literature and its multivalent genres, within these debates remains untheorized. My study is significant because it differs from Derrida's idea that all entities be taken as texts and hence, become cybernetically engaged. It takes on Barad's notion that all material-discursive entities are intra-active phenomena. However, while Barad focuses primarily on scientific phenomena and their discursive construction, my focus is on the entanglements of different kinds of literary texts within the ecosphere and their material-discursive, semiotic-agentic materiality.

The question of how texts in themselves and in their constituent stylistic and thematic paradigms deal with these multiple ecologies remains an important initiating point for further explorations of the sociopolitical and philosophical permutations in the notion of performativity. My study takes on board Barad's onto-epistemological account of the "materialization" of all human and non-human bodies and the agentive mechanisms of all material entities, as well as "matter's implication" in historicity through literary practices (*Meeting the Universe* 66). In so doing, it experiments with Latour's idea that "literary theorists have been much freer in their enquiries about figuration than any social scientist, especially when they have used semiotics or the various narrative sciences" (*Reassembling the Social: An Introduction to Actor-Network Theory* 54). Latour talks about the freedom of association with which literary theorists depict the issues of actants and agency since the diverse world of fiction permits them to invent and interrogate a wide range of ideas that have vital implications in the real world. My thought experiment, therefore postulates an Eco-performative theory to foreground the possibilities of thought that they generate

for the real world, thereby accounting for the material-discursive literarity of literary texts. “Literarity” is a term coined by Rancier, which implies that literary utterances constantly move across different trajectories, producing disruptions in the manner in which reality is perceived. Rancier argues that writing produces “quasi-bodies” that upset normative categories and institutionalized modes of seeing and inferring (39-40). These texts enact this literarity, i.e., defying normative categories by blending the graphic, the human and the nonhuman to destabilize all categorizations and constantly exceed any regimes of legitimization.

Through the idea of literarity, my work enters the realm of literary praxis. It displays how literary texts play their role in the concretization of ontological boundaries through an “iterative production” and the “material-discursive nature” (*Meeting the Universe* 93) of this iteration that questions the exclusions which frame these iterations for which we are accountable. As participants of this iteration and configuration, literary texts induce a “diffraction” (*Meeting the Universe* 28) in the material-discursive conglomerate that frames the epistemological framework of the Anthropocene era. This diffraction is a “counterpoint to reflection” since it subverts the normative sameness through which we categorize the world around us. In diffracting the self-replicatory and consolidating ideas, literary texts place the ideas of numerous disciplines in a “dynamic relationality” without privileging any (*Simians, Cyborgs and Women* 93). Thereby, they open the way for the “de-anthropologization of the human” (Bradley 16) since in subverting behavioral and ideological sameness, literary texts subject the human-centeredness of such behaviors and ideologies to a revisionary scrutiny. The human is no longer the center of their vision, which is a fact that we witness in *Grammatron* and *The Windup Girl* where nonhuman entities enact and depict a new awakening to consciousness that far exceeds human anticipation, thereby displacing their human creators, programmers and readers. Therefore, I argue that once the human is de-anthropologized³ through literary narratives, the “residual anthropocentrism” (Bradley 17) embedded within textual practices will no longer be an obstacle in the re-viewing and re-iteration of new forms of human and non-human performative practices in an intricately

³ My reading of de-anthropologizing the human implies a deconstruction of the category of the ‘human’ and to reframe it in terms of its embeddedness with other nonhuman entities. It does not imply a dehumanization of the human nor its non-anthropologization since the term ‘non-anthropologization’ could institute an erroneous similitude and equality across the human and nonhuman spectrum which could, in turn, pave the way towards the centralization of the nonhuman. The idea of the “de-anthropologization of the human” (Bradley 16) skirts around this trap by pre-empting the re-centering of either of these categories.

enmeshed ecosphere where matter and discourses are bound in a closed circuit. This de-anthropologization of the human can be channelized in the direction of a reparative humanity that endeavors to constructively revise its relations with other nonhuman phenomena. In so doing, the selected literary texts contribute to “a way of thinking that is faithful and attentive to the ineluctable world of the future which proclaims itself at present, beyond the closure of knowledge” (*Of Grammatology* 4).

In addition, in depicting the code-based writing and representational praxis of digital literary texts, one engages in not only a re-reading of their thematic practices, but also of their patterns of inscription and information exchange with other material phenomena. This could pave the way for some form of an “epistemological liberation” (*Of Grammatology* 83) that entails a de-construction of concepts such as nature, the human and the non-human through literary practices and also of uniting philosophy, science and literature.

What additionally makes my work significant is its tilt towards epistemological liberation that demands a deliquescence of ontological and epistemological boundaries and a deconstruction of categories, as it changes the very definition of the human. It might be rightly contested that this proposition is open to being challenged, a tension of which my argument remains acutely aware. I understand that as a human writer of this dissertation, I remain bound within the onto-epistemological enclosure of the Anthropocene, particularly as I operate from within a human-centric university. However, I contend that the ‘human’ in itself is a malleable assemblage of various nonhuman actants that collectively constitute ‘me’ as a person. My personhood, therefore, cannot excise or exclude the nonhuman within me. The *Anthropos*, is therefore, also the nonhuman, i.e., a person that is both biologically enhanced and unenhanced. In Amerika’s *Grammatron*, for instance, the non-biological voice of the hypertext is an AI, i.e. artificially intelligent character called Abe Golam, *who* nevertheless displays a consciousness that human have proclaimed for themselves. Similarly, Bacigalupi’s windup called Emiko displaces the very concept of what it means to be human as her android body takes on the functional, aesthetic and emotional specifications and performative aspects of a female human body. Both, thus, raise the possibility that the idea of the human carries multiple meanings that exceed the notion of an ethically regulated biological species. As the writer of this dissertation, I am just as human as Emiko or Abe Golam. My humanness as well as my humanity are just as protean as those of the

entities on which the selected texts focus.

The fact that this thought experiment is located within a university also demands a closer scrutiny since it could be argued that universities have historically been imbricated in scientific, political and cultural discourses that have yielded hierarchical and discriminatory epistemes that excluded nonhumans, women and non-whites (*Modest_Witness@Second Millenniu.FemaleMan© Meets OncoMouseTM* 30). Since my work is premised on a diffracted notion of the human, its location within academia and its knowledge-generating mechanisms is crucial since it engages its very positionality to not only disband human exclusivity but also to subvert the exclusionary practices that have stemmed from the academia's anthropocentric locus. This dissertation's engagement with anthropocentrism in a university's discursive milieu does not re-centralize the university's location that has been culpable of promoting anthropocentric epistemologies, rather it extricates the university from the anthropocentric enclosure and makes it operate as a part of a collective material-semiotic circuit through which negotiations and intra-actions with the nonhuman can be rethought.

CHAPTER 2

Conceptual Infrastructure and Methodological Approach

In the course of my current research, I have presented hypotheses pertaining to the re-configurations of performativity that both discursive and material phenomena display as the definitions of ecology and the concept of anthropocentrism experience a distention. The canvas for exploring these reconfigurations is provided by diverse literary texts, also of the multimodal variety. With science and religion playing the role of a social superego, humanity has enacted ideologically prescribed roles. These roles have been hierarchically arranged along multiple fault lines, including those of race and gender. Hence, science and religion have vociferously supported relations of dominance and the resulting exclusionary practices that segregate the human from the nonhuman. In disbanding the exclusivity of the human and presenting it as an interobjective conglomerate that can be radically edited, my Eco-performative account aims at theoretically presenting alternative accounts of the changes that human and non-human performativities undergo amidst the multivalent ecological connections that are surfacing in the contemporary world. In so doing, it reconstructs and rearticulates the re-configurations in human identity in the arenas of race and gender at the conclusion of this dissertation. This chapter unpacks the major conceptual categories and the methodological approach incorporated in this research. The reason why the methodology employed in this dissertation has been given here is that the succeeding chapter elucidates the major theoretical strands that I have engaged and subsequently developed in the remaining work. The delineation of this methodology at this point is necessitated by the fact that it stems directly from the conceptual framework as well as the research questions and objectives channelizing this research. In addition, the employment of the trans-discursive approach in this research is further substantiated by the literature review given in the next chapter.

2.1 Conceptual Categories and Delimitations

As established earlier, the major concept underlying my notion of Eco-performativity is Judith Butler's notion of performativity. Through the idea of performativity, I uphold Butler's stance that it is the reiterative power of discourses that create and maintain phenomena and one must analyze what developments are taking place at the margins of these discourses. This stance foregrounds the "critical boundaries" (*Gender Trouble* xxxiii) of various scientific, socio-cultural, philosophical and literary discourses and the need to participate in the "multiple displacements" (*Gender Trouble* xxxii) framing these boundaries. I argue that in engaging with these boundaries, literary texts iterate the emergence of new performative accounts. The selected novels depict how human and nonhuman bodies can be rethought in terms of various codified assemblages. These works suggest that the critical boundaries postulated by Judith Butler are limitrophic, with limitrophy being the permeability of the space between the human and the nonhuman. In his lecture "The Animal That Therefore I Am" that scrutinizes human and animal separation, Derrida defines limitrophy as the space that "abuts onto limits but also what feeds, is fed, is cared for, raised, and trained, what is cultivated on the edges of a limit." (397). He, therefore, posits Limitrophy as his subject, "Not just because it will concern what sprouts or grows at the limit, around the limit, by maintaining the limit, but also what feeds the limit, generates it, raises it, and complicates it." (398). I have extended this idea to talk about the exchanges across the boundaries, i.e., the limits between different material and non-material entities. Literature, in its textual practices, interacts with the material and the abstract across permeable boundaries. Therefore, it is no longer to be seen from within a traditional straitjacket as it distends the idea of a text. All texts, regardless of being literary or non-literary, digital or non-digital, are imperaled within a dynamic network of interdiscursive relationships, i.e., a skein of ideas in an ongoing relationship among both divergent and confluent discourses such as science, anthropology and culture talk, etc. This is sampled through the proliferation of e-literature and its multivalent, kinetic discursive paradigms that allow one to question the *a priori* notions of literature that have historically been in vogue. Hence, in the textual realm, one beholds the emanation of a new ecological modality as texts materially, semiotically and ideationally interact with each other in a "complex web" (*Archaeology* 110). Within this web, statements and ideas continue to cross discursive thresholds, instituting alterations within the epistemological framework. This complex web establishes the material-

semiotic infrastructure of textual ecology that is complicit with creating alternative accounts of what it means to be human. Textual ecology, while following the rhizomatic model of discursive and textual exchanges, also functions as the Zizekian parallax gap which is the fluctuant discursive space where an ongoing interdiscursive re-negotiation of the paradigms of human and nonhuman performativity take place. This notion of all material phenomena, including literary texts, being interwoven in a textual ecology enables a disbanding of not only the nature/culture and human/nonhuman binaries, it also subverts the speech/silence binary. This subversion is pivotal to my reading of the selected texts since it extricates reading, writing and hermeneutics from a strictly anthropocentric confine and allows them to be seen in terms of nonhuman iterations that take place at the permeable boundaries between the human and the nonhuman.

The reason why I have used the term 'textual ecology', and not strictly speaking 'literary ecology', is that the term 'textual' sanctions transdisciplinarity without drastically reducing the scope of the interaction within a specific field alone. Moreover, since textual enactments are also taken as inscriptions, the idea of textual ecology aligns with Judith Butler's idea of interactions across critical boundaries. That is not to say that this study is not delimited. While scientists and theorists like Latour, Barad and Haraway focus on the interaction among the natural sciences, the social sciences and culture talk, in this study I have added literary narratives, both paper-based and digital, to focus on how identity and performativities undergo alteration as the definitions of ecology and the 'human' undergo a modulation. This falls in line with Latour's idea that "semiotics or the various narrative sciences" (*Reassembling the Social* 54) can be used to challenge normative assumptions about various forms of textual interactivity. Texts have always led to the discursive construction of humanity. An alteration in that allows the possibility to lead to a re-construction of the idea of humanity. Hence, my current study does not focus on an all-encompassing textual ecology, as that would be an extremely vast canvas to be handled at this stage when this work simply initiates a theorization of Eco-performativity. Therefore, the conceptual framework of my study is inaugurally delimited to the space of existing and emerging literary textual ecologies and their interaction with the above-mentioned discourses that are specifically functioning within the ecological debates. This space is further delimited to the texts included in this study since they deal with the issues of ecology and the altering definitions of what constitutes the human, as well as the role of multivalent literary texts within this re-constitution.

2.2 Methodological Approach

As specified earlier, the primary structure of my dissertation is that of a thought experiment, however, it is a very particular idea of a thought experiment that I have used in the present study. According to Richard Dawkins, a thought experiment involves our playing with the world so that we can increasingly understand it (3). Therefore, while a thought experiment could sometimes be based on speculations, it can also be based upon realistic facts and philosophy. This is because thought experiments are not meant to be realistic in the sense of being empirical, but they “are supposed to clarify our thinking” about what seems to be reality in different ways (Dawkins 4). It is for this reason that my thought experiment interbraids philosophy, physics, biology and literature to extract a literary theory to suggest open-ended ideas about human and non-human performativities without being confined within a dogmatic enclosure. It focuses on elaborating why a deconstructive mode of narrative analysis is necessitated in this thesis on the grounds that literary writings, as code-based material-semiotic entities, mediate along the continuum between the human and the nonhuman. It also delineates the various techniques through which this deconstructive analysis has been undertaken.

With the notions of material-discursive intra-actions and agential realism contouring the conceptual framework of this thought experiment, this methodological approach is also focused on how literary texts function as material-discursive phenomena, intervening within the intra-active space of the ecosphere. We live among “storied bodies” (Phillips & Sullivan 5), i.e., “a material ‘mesh’ of meaning, properties, and processes, in which human and nonhuman players are interlocked in networks that produce undeniable signifying forces.” (“Introduction: Stories Come to Matter” 1-2). Knotted in networked agencies and thereby constituting the material syntax of the world, material phenomena take on co-evolving discursive and bodily forms. Matter tells stories that percolate the very air and food that our bodies absorb. Such knotted material phenomena declare that the biosphere and the world of ideas are inseparable. Therefore, the diverse conceptual and methodological itinerary employed here traverses across the ideas of material ecocriticism, quantum theory and post-humanism as the binaries between the human and the non-human are subjected to a revisionary scrutiny.

In presenting a transdiscursive “posthumanist performative account of technoscientific and other

naturalcultural practices” (*Meeting the Universe* 32), my research methodology utilizes a deconstructive approach as the primary mode of theorization and analysis. As a result, after dismantling the binaries between the human and the non-human, it moves towards a transdisciplinary theorization of human and non-human performative practices through their depiction in literary texts. My transdisciplinary analysis interbraids ideas from multiple disciplines to address common issues, and keeps ideas open-ended to enable literary and scientific theories to conjointly explore ecological issues from a disanthropocentric angle. Therefore, my deconstructive mode of analysis begins with placing the human and the non-human at the same level, since the human in itself becomes a machine which, both discursively and materially, produces the human (*Meeting the Universe* 9) through its interaction with the non-human. This interaction is further complicated by the fact that in the contemporary era of the Anthropocene, non-human entities have become “hyperobjects” (*Hyperobjects* 1).

At this stage, the terms Anthropocene and hyperobjects require elucidation. Paul Crutzen and Eugene Stoermer presented the term ‘Anthropocene’ which is defined as an age when mankind has emerged as a major geological force that exceeds temporal boundaries and an epoch that has seen the strongest consolidation of the Nature/Culture dualism. I see this definition of the Anthropocene as a means of redefining the Nature/Culture binary. My understanding of the Anthropocene does not only see the human as a dominant force, but it also sees it as an age when the human is in a state of constant self-displacement. This is elucidated through Bacigalupi’s organically constructed Emiko, Vizenor’s miscegenated, therianthropic mongrels and Amerika’s Abe Golam, the sentient digital consciousness of *Grammatron*. For me, the Anthropocene is also the age where the human is aware of its nonhumanness, thereby extracting the nonhuman out of its passive, marginal standing, as a consequence of which they become hyperobjects. Hyperobjects are entities that exceed the limited temporal and spatial paradigms within which the human intellect evaluates the functions of numerous non-human entities. These objects outlive humanity and all other forms of organic life; hence, an alteration within the representational praxis of the non-human in connection with the human has to be postulated.

In addition, the Eco-performative account, which is inherently an onto-epistemological account, addresses not merely the ontology of objects, but also how ontology influences the way we know and comprehend these objects, i.e., epistemology, in togetherness. With ontology losing its fixity,

all borders have become tenuous and all binaries are in a process of continual displacement. It is for this reason that my deconstructive approach is allied with the quantum theory which extricates us out of absolutism and relativism. By blending epistemology and ontology, it permits one to move out of inter-disciplinarity towards trans-disciplinarity, inducing a shift in the way human and non-human performative practices are perceived and represented. The quantum theory, supplemented by the deconstructive philosophy, thus provides a “nomadic” space (Deleuze & Guattari 24) where the oppositional placement of the categories of the natural and the social stand disrupted and preempts the postulation of nature and culture as fixed referents in their delineation of each other (*Meeting the Universe* 30). This implies that all entities within this rhizomatic space have permeable edges, all de- and re-territorializing across multiple “lines of flight” (Deleuze and Guattari 11-32), while coalescing different signifying regimes.

It may be questioned as to why and how my thought experiment requires a narrative analysis of literary texts for this theorization. In order to address this question, I have anchored my argument within six postulates of deconstructive theory framed through a nexus between Derrida as well as Deleuze and Guattari.

1. First and foremost, for Derrida with the effacement of the limit of a logocentric language, what comes into play are different “regimes of signs” (Deleuze and Guattari 21) which exceed an anthropocentric bias. All material and discursive entities are engaged in meaning-making practices that may or may not be comprehensible within the human-centric language and the reality enclosed within it. In this way, the very concept of the sign is destroyed as meanings are undergoing constant discursive and material evolution.
2. Even as the boundaries of language become exceedingly permeable with different strands of signs and signifying modalities interacting in malleable ways, the boundary between the inside of a language and its exteriority is blurred. The boundary’s permeable edge does not only hinder any ontological fixity, but also further extends the epistemological canvas. In addition, the idea of the written and spoken language loses its ontological fixity as different codes interact to create meanings. Thus, language in itself becomes a subset of a code, interacting with different codes while engaged in semiosis. For instance, a mathematical equation is composed of letters of the alphabets and numbers, thus working in togetherness to generate meanings which further influence and decode material phenomena. Therefore, if language

becomes a subset of a code, then all texts become codified phenomena in themselves. This further leads to the point that if all material and discursive phenomena are codes, interacting along codified lines of flight, then narratives also operate within this web as codes. Hypertexts and cybertexts substantiate this point as they function as codified material-discursive phenomena wherein algorithmic codes, pixels, computer programs, graphics and alphabets all interact in various combinatory practices. Therefore, all texts are material discursive phenomena engaged in different forms of semiosis through which they articulate alternative epistemological accounts.

3. The synthesis and analysis of these alternative epistemological accounts and possibilities has to be done while taking on board the notion of “overcoding” (12) as has been postulated by Deleuze and Guattari. Overcoding, is the process through which meaning is generated through an interaction of multivalent signifiers and chains, within a larger material-semiotic system as it blurs the distinction between human and non-human phenomena. This mode of interaction, when deconstructed, leads to the creation of alternative performative accounts pertaining to human and non-human interactions and agencies within the ecological skein. An example of this is that of algorithmic codes overcoding with alphabetic and graphic codes to generate different forms of computer syntax. These codes then exceed the digital stratum through various modes of transmission, interacting with numerous material phenomena such as wires and air waves, etc., and thus enter a different medium wherein they are further decoded and interpreted via the human mind. In the novel *The Windup Girl*, humans alter the genetic codes of scarce, edible entities so that they produce surplus calories in an age when natural food is almost extinct and man relies on synthetic foods and genetically engineered animals to survive. These non-human entities have undergone a process known as “genehacking” (Bacigalupi 176), wherein their natural genetic codes are decoded and modified and through consequent overcoding, their actions exceed human will and agentive manipulation.
4. In addition, while I have explored the idea of textual ecology in all its multiple dimensions, I have had to extend the Derridean idea of textuality in alliance with the idea of code and quantum uncertainty. Derrida dismantles the notion of a paper-bound text as he postulates that a text emanates out of the inscriptive function of writing which is both written and oral. Writing is an action, thought, movement, experience, etc., as it goes beyond the outline of a sign to refer to the notions that exceed the sign. The idea of Eco-performativity, also refers to the

signification of human and non-human performative behaviours that go beyond that signification. For Derrida, writing and textuality are inscriptive modes of information exchange among cells, molecules and microchips, etc. Therefore, in the Derridean framework, all phenomena are inscriptive textual practices. However, my theorization does not reduce all material-discursive phenomena to the level of texts, since that would bind them within an anthropocentric boundary as does Derrida's argument since his concept of writing is directed at human cognition. Therefore, one way of exceeding this anthropocentric boundary is by presenting writing as a sub-category of a code as different codes interact across multiple assemblages. Thus, a code becomes a mechanism that advocates "a relationality between specific material (re)configuring of the world through which boundaries, properties, and meanings are differentially enacted (i.e., discursive practices, in the posthumanist sense) and specific material phenomena (i.e., differentiating patterns of mattering)." (*Meeting the Universe* 139). A code is a liberatory praxis that puts to question the enactment and congealment of boundaries among all entities. The code defies the signifier/ signified dichotomy. As a result, what is constituted is "a relationship that can no longer be thought within the simple difference and the uncompromising exteriority of "image" and "reality," of "outside" and "inside," of "appearance" and "essence," with the entire system of oppositions which necessarily follows from it." (*Of Grammatology* 33). Since the idea of the code effectively blurs boundaries between the human and non-human, this thought experiment necessitates a deconstructive mode of narrative analysis.

5. Another reason why this theorization requires a narrative analysis is that reality in itself is a narrative composed of both material and discursive interactions. However, the quantum theory postulates that even particles that constitute material entities do not have "determinate values of position and momentum" (*Meeting the Universe* 19). This leads to the inference that reality is malleable in nature. Therefore, if the understanding of the nature of materiality has changed with the development of quantum theories, narratives have also become "diffractive" (*Meeting the Universe* 25) depicting how the very nature of nature has undergone a massive shift. If matter undergoes a shift, so does epistemology and vice versa (Cohen 12; *Meeting the Universe* 24). This demands not only a rethinking of matter but also of the discursive practices that communicate the human/non-human binary. In order to re-construct these categories, one needs to reconstruct the stories about them (*Simians, Cyborgs and Women* 71) so that "truly

new stories” are told about the world we inhabit (*Simians, Cyborgs and Women* 78). These stories can re-ask questions and engage in “critical ontology” (“What is Enlightenment?” 47); and since “language is the tool of human self-construction” (*Simians, Cyborgs and Women* 81) that silences the nonhuman other, it is imbricated in the narrative of human superiority. Narrative analysis is therefore necessitated by the fact that Eco-performativity is primarily concerned with “a search for new stories” (*Simians, Cyborgs and Women* 82) so that through their “multiple mediation” more inclusive accounts of human and non-human agency may be produced.

6. Through a code-based information-exchange, phenomena produce narratives through digi-semiosis and multiple forms of bio-semiosis such as zoo-semiosis. This implies that all material entities are engaged in specific forms of textual practices which may exceed human understanding. This allies with Haraway’s stance that the world is coded in cybernetic systems that are constantly “recrafting our bodies” (*Simians, Cyborgs and Women* 164) and our relations with the environment within which we are embedded. When all entities become code, what is necessitated is “*the translation of the world into a problem of coding*, a search for a common language in which all resistance to instrumental control disappears and all heterogeneity can be submitted to disassembly, reassembly, investment, and exchange.” (*Simians, Cyborgs and Women* 164; emphasis in original).

As participants in this ongoing disassembly, reassembly, investment, and exchange, literary texts “re-weave” (*Simians, Cyborgs and Women* 90) stories regarding how humans and nonhumans perform when they are no longer ontological fixities. This implies a constant “shift of perspective” (*The Parallax View* 5) which negotiates between what categories, such as the human and the non-human, are and are not. In short, the ecological web becomes “the parallax of *ontological difference*” (*The Parallax View* 7, emphasis in original) wherein entities embedded within this gap cannot identify with any of the categories which have been used to label them. This constant play of difference in the onto-epistemological standing of all human and non-human phenomena leads to the construction of alternative accounts of their functionality in a rhizomatically semiotic space. In this context, literary texts function as tools that initiate this epistemological shift in the way material phenomena are seen to work. In collectively developing the notions of Eco-performativity and textual ecology, I have added the idea of narratives within the following equation that shows the new collective that Latour proposed as being comprised of humans and non-humans. Equation

1. given below is based upon the argument presented by Latour in *The Politics of Nature*. Since the notion of the non-human includes both matter and non-matter, literary texts also operate as actants or interventionary agents within the ecosphere.

$$\frac{\text{Humans + non-humans + non-matter} = \text{actants in a new collective}}{\text{Citizens and social actors}}$$

Eq. 1

What this equation indicates is that while Latour's concept of the new collective as being composed of multiple actants can be explained as the sum of matter and non-matter, my argument sees matter as being a sum of two addends, i.e., humans and non-humans. Thus, by extension, Latour's new collective becomes a sum of humans, non-humans and non-matter such as discourses, texts and ideas functioning in the noumenal domain that demands a re-cognition of the ways all these phenomena engage with each other. While analyzing the mobile material-discursive narrative exchanges taking place among the human and nonhuman phenomena, I do not only focus on the themes but also on the characters in the selected texts in order to highlight Eco-performative functions in the contemporary world. I focalize the role of literary texts in changing the pre-comprehended notions regarding the performativity of human and non-human actants within the ecological skein. The reason for focusing on the characters is based upon the idea of subverting the category of the human and opening up a disanthropocentric engagement with the nonhuman. In the process, it is not only the human that has been deconstructed as a concept, the idea of the non-human has also been re-scrutinized.

At this point, I do concede that an Eco-performative account carries the risk of being co-opted within a re-configured anthropocentrism; however, this kind of a deconstructive account is necessary to pre-empt any kind of a conclusive closure regarding the reconfiguration of human and non-human performative practices. This allows one to access that which exceeds the rigidly imposed outlines of these concepts and to speculate about new possibilities. In addition, literature has the ability to move among things and to "overthrow ontology, do away with foundations, nullify endings and beginnings" through a "transversal movement" (Deleuze & Guattari 25). This

transversal movement accounts for its literarity that remains fluctuant. My contention is that it is not only paper-based literary texts that thematically engage in this transversal movement, digital texts also enact these transversal movements across multiple disciplines and engage in a coding and re-coding of concepts as they transfer different fragments of code while reconfiguring boundaries. Therefore, in line with Barad's transdisciplinary diffractive analysis, my methodology "foster(s) constructive engagements across (and a reworking of) disciplinary boundaries" (*Meeting the Universe* 25). However, my methodology, deviates from hers in my engagement of literary texts as material-discursive phenomena that are subjected to a diffractive reading through a narrative mode of analysis.

This diffractive reading aims at gradually detaching the concepts of the human and the non-human from their foundations in the Enlightenment epistemology as autonomous but segregated agents. My exploration, therefore, foregrounds the possibilities that they generate through their thematic and stylistic enactments as they complicate human and non-human agency as an "integration of a disparate elements" (Massumi 14). In so doing, it debunks the constraining metaphors that bind all phenomena within a fixed taxonomy and endeavors to show how they may be modified to exceed anthropocentrism by focusing on "multiple mediation" and the "partial perspective(s)" (*Simians, Cyborgs and Women* 3). This ensures that this theorization is not "alienated" (*Simians, Cyborgs and Women* 36) as it in itself functions cybernetically across multiple disciplines and enacts how an evaluation of human and non-human Eco-performativity leads to an ongoing re-interpretation of the interwoven material conditions and the production of knowledge. Therefore, my argument is cyclical, diffusive and recursive, full of entanglements, enmeshments and "intermixed strata" (Cohen 21) of onto-epistemological interactions. Moving along rhizomatic trajectories, it critiques the narratives of "human exceptionalism" (Cohen 23). It moves in multiple directions generating different and malleable discursive accounts that "create, compose, produce" (Cohen 26) but without an ontologically fixed object.

The deconstructive mode of narrative analysis informs the disanthropocentric tilt of this theorization. This is because within the ecosystem, a human is "a possible center among many centers, a margin among overlapping borders, organic continuity with an inorganic animacy" (Cohen 29). The human is constantly undergoing a mutation as technology further alters the enmeshments of human and non-human elements. Despite the fact that the human has inscribed

its narratives on the non-human, the non-human also inscribes its narratives on the human. Vizenor's *The Heirs of Columbus* attests to this point as the genes of Columbus are injected into people of all races to materially re-configure the 'human' as well as the *weltanschauung* that it generates so that the very centrality of the human is dismantled with the confluence of new genetic codes. Not only that, perceptions regarding human and nonhuman relations are also altered as a result. This recalls Catherine Malabou's suggestion that epigenetics speaks of transcription not merely in terms of genetic coding but also in terms of "environmental factors, such as milieu, habit, experience, and education." Thus, culture and biology are interwoven thereby constituting the structure of life. This premise permits a "critique of anthropocentric sovereignty" (Malabou) and makes one recognize the inscriptive vitality of the nonhuman actants.

My research advances this disanthropocentric politics while using the "holistic content mode" of narrative analysis, which is focused on the main characters, in alliance with the "holistic-form based" model with occasional recourse to the "categorical form" analysis (Giovannoli 36) to focus on the constructions of nature and the human characters and the modes of interaction between them. The narrative sequence and their stylistic praxis have, therefore, been analyzed in togetherness. In addition, in the case of digital texts, multimodal analysis has also been engaged to highlight the webbed interface between them and the readers.

This multimodal analysis has been based upon screen shots taken from the selected hypertexts to elucidate how writing does not only function as a subset of code but also interacts with other regimes of signs to produce different meanings. I have also used diagrams as well as equations to present the modalities of Eco-performativity within alternate ecological systems. These serve to elucidate the modes of interaction material-discursive phenomena undergo as a different onto-epistemological account of how different forms of matter come into being and the modes of agency that they exercise. In addition, I have used footnotes to unpack key terms so that the reader decodes them during the process of reading.

This diverse methodological approach is necessitated by the fact that the world which is foregrounded in this research has become an expanded "hermeneutic universe" (Gendron, Audet & Girard). This universe requires diverse tools to come up with new hypotheses regarding textual interactions among human and nonhuman actants and to dramatically re-think new identities and new social conglomerates that mitigate, if not erase, the idea of Otherness among all interacting

entities, and propose the idea of citizenship. In line with this this conceptual layout, my next chapter further fleshes out this work's major conceptual categories and theoretical tenets that inform my analytical approach and gives a comprehensive review of the major debates that revolve around these key concepts.

CHAPTER 3

Eco-Performativity and Material-Discursive Entanglements: A Review of the Related Literature

This chapter delineates the major ideas that collectively unpack my work's conceptual framework that revolves around the possible re-configurations of the constructs termed as nature and man by dismantling the boundaries that exist between them. Since, a deconstructive mode of reading initiates my foray into this exploration, this Literature Review delineates the deconstructive methodological approach outlining this dissertation and moves on to highlighting how these concepts have evolved and the niche that my research carves within this matrix. Since no prior research has been done on Eco-performative practices of human and non-human actants, this Literature Review focuses on interweaving different transdisciplinary conceptual strands that go into this theorization. This transdisciplinarity is essential because meanings and materials in the ecosphere are all in a state of becoming, thereby they elude any ontological fixity (Deleuze and Guattari 10; Braidotti 35; *Meeting the Universe* 141). In this state of constant becoming, the sign gathers layers of new meanings as it interfaces with other signs, bound in a circuit without a beginning or end.

Within this circuit, the entire system of the human language stands deterritorialized as signs cannot be confined within any enclosure. The material world interactively generates meanings that may or may not be comprehensible to man and precede language and even humanity. Thus, matter and meaning generate new compositions and meanings of the world that we inhabit thereby blurring the Man/Nature binary and initiating a revision of the placement of human beings and of the structures of dominance in place within the ecospheric continuum.

In line with this conceptual framework outlining my study, the ensuing Literature Review also

follows the same conceptual sequence as it endeavors to highlight how literary texts also function as material discursive actants, challenging anthropocentrism and all hierarchies governing human and non-human interactions. In so doing, it brings together multiple arguments from different works falling within the domains of material ecocriticism, deconstructive and post-humanist theories as well as biological theories and physics philosophy as they permeate into the field of literary studies. Divided into the following main sections, it informs my readers of the conceptual background of my research and of the placement of my thought experiment within the field:

- Re-analyzing the Man/ Nature binary in the field of multiple ecological interactions.
- The formation of ecology as an expanded, amorphous discursive arena and the formation of new collectives.
- The material-discursive connection between textual ecology and materialist ecology as framing the space for the enactment of altered performative behaviors and socio-political discourses through literary narratives.
- The concept of Eco-performativity and its relation to the structures of dominance and human and non-human performativity as evinced in literary texts.

3.1 Re-analyzing the Man/Nature Binary

My deconstructive analysis of the binaristic opposition between constructs is based on the notion of re-examining the familiar that Derrida provided in *Of Grammatology* and which Gayatri Spivak elaborated at length in her “Preface” to *Of Grammatology*. Since language, being human centered, provides a circumscribed and a conventionally specified way of seeing reality, hence, in Hegelian terms, Spivak argues that that which is “‘familiarily known’ is not properly known, just for the reason that it is ‘familiar’” (xiii). It is a form of deception, both of the self and the others. As the constructs of nature and the human are also ‘familiar’ notions, hence a re-examination of their construction is also to be an act of undoing the effects of that deception. This entire attempt is based on the notion that once these “given” (Alaimo 4) concepts are revisited, particularly within the interdiscursive domain of literature, different propositions regarding the constructions of human and non-human roles and identities may be suggested.

My attempt is precisely to extract “unfamiliar conclusions” (Spivak xiv) from the established,

familiar concepts of 'human' and 'nature' that have epistemologically ossified over the centuries. In Alaimo's and Cohen's tradition, I aim to show through a deconstructive approach that the nature/culture binary is not sustainable. This method entails a provisional establishment of an origin and then a negation or even a deletion of that origin. Therefore, both terms 'human' and 'nature', in my research are inaccurate, deleted, legible and necessary, all at the same time, so that the constraining fixity of the definitions historically ascribed to these terms and the binaries emanating out of them are confounded.

For Derrida, there is always a "never-annulled difference" (Spivak xvii) among signs which sets in motion the play of *différance* and discursive interchange. However, here, I have slightly altered this notion and entered the Zizekian domain of the parallax gap. According to Zizek, the parallax gap is a form of insurmountable antinomism that exists between or among perspectives which are "closely related", yet, they do not permit the development of a "neutral common ground" (*The Parallax View* 4). The gap confounds antinomism or binarism. In a parallax space, a viewer does not behold only one image of the One or the supposed truth, rather, one sees a diversity of images, which may juxtapose and deviate. The idea of the parallax gap allows one to alter the line of sight and re-examine the familiar (*The Parallax View* 17) and to see things in terms of differential becoming rather than fixed absolutes. However, the argument through which Zizek establishes this nexus follows a different itinerary from mine. Within this parallax gap, semiosis takes place across permeable material-discursive boundaries. Literature too functions along these "limitrophic" ("The Animal That Therefore I Am" 397) boundaries, and through its multimodal meaning-making mechanisms raises questions regarding the otherness of nature, the agency of non-human entities and man's superiority. It thereby engages in a "nondualistic philosophy" ("Semiotization of Matter" 142) which undoes any rigid categorization of the ontological and the epistemological, the material and the discursive as well as the human and the non-human.

While I argue that within the parallax space of the ecosphere, the categories of Nature, human and nonhuman are collectively disbanded, Morton believes that the initial point of the deconstructive "ecological thinking" (*The Ecological Thought* 4; Code 4) begins with the disbanding of the category of Nature and the defiance of boundaries among categories. Similar arguments are presented in Barad's *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* and Stacy Alaimo's *Bodily Natures: Science, Environment*

and the Bodily Self. These theorists argue for the mutual involvement of materiality, social practice, nature (as an anthropocentric construct) and discourse, so that an onto-epistemological account of how matter and meanings interact may be provided to generate alternative accounts of human and non-human agency and performativity. As the epistemologies of mastery are blurred (Code 4), agency no longer remains a prerogative of the human alone requiring a “new ontology, epistemology and ethics” so that their “fundamental inseparability” (*Meeting the Universe* 25-26) needs to be re-thought in terms of the agentic practices of non-human phenomena, as well as the material-discursive entanglements underscoring these phenomena. In drawing her onto-epistemological account, Barad postulates that Quantum Theory blends both poststructuralist dicta and scientific tenets to explicate both discursive and material natures in togetherness thereby deconstructing the ontologically concretized notions of the natures of words, of things, of meanings and their co-constitutive entanglements in meaning-making mechanisms. This approach foregrounds “the co-constitution of an excluded domain” (*Meeting the Universe* 64). By foregrounding this excluded domain, the non-human is neither forgotten nor left silent, nor is its speech confined within human-centered signification. This allows a re-articulation of the agentic potential of the excluded non-human domain.

Also dealing with nonhuman agency, Cohen’s work focuses on “lithic agency” (54) and human-stone enmeshments both in the material and literary worlds, as well as on the dismantling of the parochial anthropocentric exceptionalism (Code 3). His argument blends with Barad’s as he presents the “ontological vertigo” (3) that is generated through a re-conceptualization of the agency of matter. For Cohen, both human and non-human entities are mutable because they are mobile material-semiotic phenomena with pervious ontological boundaries. Cohen is able to present exactly how matter and metaphor interact since stones function as “textual fossils” (Cohen 117) narrating the earth’s epochal history in narratives that exceed human language and understanding. Thus, stones, like other “inhuman” phenomena are able to “bring story into being” through a partnership “with language (just as inhuman)” (Cohen 4). This partnership constitutes “a material metaphor. A conveyance device that is at once linguistic, story-laden, thingly, and agentic, a metaphor is an ontological sliding, a tectonic veer, materiality coming into and out of figure, ‘matterphor’” (Cohen 4). The idea of the matterphor, is a form of material-discursive entanglement or “intra-action” which is a term used by Barad to “signify *the mutual constitution of objects and agencies of observation within phenomena*” (*Meeting the Universe* 197-198; emphasis in original).

This suggests that there is no *a priori* constitution of objects, rather they are co-constituted through entanglements producing material and semiotic agencies that can be read. As material-discursive phenomena, literary texts also produce different material configurations of the world and of humans. Humans and literary texts co-constitutively engage in “the movement across human corporeality and nonhuman nature” that veers through “the entangled territories of material and discursive, natural and cultural, biological and textual.” (Alaimo 3).

In this regard, matter and non-matter, human and non-human, nature and culture are no longer seen as mutually exclusive entities but in a state of constant “becoming” that is an “always already an ongoing historicity” (*Meeting the Universe* 151). This echoes Michel Serres postulation of human beings functioning as parasitic entities engaged in a semiosis, which is a relation created through our parasitizing one another across “fuzzy” borders (154). All parasites are thus cybernetically linked in a process of encoding and decoding information. In this manner, meanings traverse across bodies tracing a path from biophysics to the articulated world (Serres 143). Thus all bodies are semantic fields with permeable edges, functioning as quasi-objects that lead to the generation of more objects. There is, therefore, no ‘I’ but a collective ‘We’ composed of compound individuals.

This argument finds support in Serpil Oppermann, Cary Wolfe and Andy Clark. They claim that the idea of the human as a concrete unified entity is displaced as the human body comes to be seen as a part of a complex network of interacting actants and relations that are not reducible to human intentionality (Code 5; “Introduction: Stories Come to Matter”¹; *Hyperobjects* 27). In this case, both human and non-human materialities function as agents narrating their own stories through multivalent interactions. As Cohen postulates:

When matter exerts its right to be the protagonist of its own story, epistemological frames shift, a Copernican revolution with multiple alignments. The earth ceases to revolve around human interests. No totalizing system coheres to predetermined thingly trajectories or negate the ability of matter to veer.” (Cohen 39)

When there is no totalizing system to define categories and when categories and their constituent phenomena become agents, humans no longer remain the sole translators of the world. Things tell their own stories. In the words of Haraway in *Simians, Cyborgs and Women: The Reinvention of Nature*: “The codes of the world are not still, waiting only to be read. The world is not raw material for humanization” (198) wherein, as Morton postulates, matter and meaning reciprocally shape

each other (“Mal-Functioning” 98).

However, while Morton wades in object-oriented philosophy, Haraway’s work is a feminist project extracting notions regarding women’s agency in a world where cyborgian sciences are radically changing the holistic concepts of nature and culture. Her notion of “objects as actors” (*Simians, Cyborgs and Women* 197) synchronizes with the idea of agential realism. This concept is essential to this theorization as I extend Barad’s theoretical framework to explore the function of literary texts in articulating human and non-human performative practices within the contemporary ecosphere. For Barad, “agential realism” functions “as an epistemological-ontological-ethical framework that provides an understanding of the role of human and nonhuman, material and discursive, and natural and cultural factors in scientific and other social-material practices.” (*Meeting the Universe* 26). Haraway’s agential realism provides a “posthumanist account” (*Meeting the Universe* 32; “Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter” 808) which questions all essentialist categories like nature, culture, human and non-human, exploring the various methods through which “these differential boundaries are stabilized and destabilized” (“Posthumanist Performativity” 808) generating conceptual shifts. Flagging up the participation of non-human phenomena within everyday “naturalcultural practices” (*Meeting the Universe* 32), she presents reality as both discursive and material wherein all entities are in a state of motion, albeit this motion may take place at the quantum level, thus yielding an antinomic still-motion. However, Barad takes this state of antinomic still-motion a step further. Through her concept of agential realism, one learns about the constitution and working of phenomena and about how different material configurations of the world take place and are perceived. Thus, knowing the world requires a methodology that is responsive and responsible to the specificity of material entanglements in their agential becoming. An object, whether an idea or a material entity, is an interaction and hence a phenomena.

Through her performative account of agential realism, Barad questions the pre-comprehended stature of the human and non-human within the striated grid of Cartesianism. In a world of material-discursive boundaries, agential realism does not inquire into how nature and culture are separated but focuses on exploring the relationship between material and discursive phenomena as well as human and non-human agency (*Meeting the Universe* 66). This destabilization of the boundary between human and non-human as well as nature and culture leads to an altered notion of ecology which the next section elucidates.

3.2 Reformulating ‘Ecology’ and Anthropocentrism

My focus in this section is on presenting the arguments of those theorists who have articulated an altered notion of ecology and the tenuousness of anthropocentrism. The dismantling of anthropocentrism is vital to my theorization of textual ecology as an alternative mode of ecological thinking wherein texts interact with multiple material-discursive entities to generate new configurations of meanings across the limitrophic boundaries of multiple phenomena.

Owing to its deconstructive tilt, this thought experiment is also concerned with the operational modalities of the kinetic space that is generated once boundaries and phenomena become tenuous. Since my intention here is to dislocate the concepts of ecology and the human, I need to widen the lens to incorporate a genealogical development of these ideas that traverse across multiple disciplines to trace the kinship among them. It is for this reason that the ideas of Guattari and Deleuze are incorporated in this study. This is further necessitated because the philosophy of Deleuze and Guattari limns the theorizations of most theorists in the domains of object-oriented ontology, material ecocriticism and onto-epistemological accounts such as those of Bennett, Barad, Morton and Cohen, etc. Three concepts provided by these two philosophers are of vital importance within this theoretical enterprise, i.e., assemblages, deterritorialization and code. While the idea of code has been further elucidated in the latter half of this chapter, the ideas of assemblages and deterritorialization remain integral to the need to initiate the re-conception of ecology and the ecosphere, which I have dilated upon in conjunction with the tenets provided by Alaimo, Cohen, Barad and Morton, etc.

Focusing on the enmeshments between the human and the nonhuman, Alaimo, the notable trans-corporeal theorist, argues that the contemporary world depicts “the emergent, ultimately unmappable landscapes of interacting biological, climatic, economic, and political forces.” (2). In this space, there is a sort of “enfolding” (Alaimo 155) among entities that are dispersed across a phenomenological world. This enfolding takes place across multiple assemblages. These assemblages are a compendium of actions, feelings and material bodies as well as statements, discourses, ideas and concepts that affect the material assemblages. To these are added the “*cutting edges of deterritorialization*” (Deleuze and Guattari 88; authors’ italics) which permit the phenomena to cross thresholds to acquire new forms and shape new interactions, impacting the

interweaving of the *semiotic* and the *material* (Deleuze and Guattari 337). In this context, the ecosphere establishes the “mixed reality paradigm” (Hansen 7) wherein the digital, genetic, inscriptive, material, noumenal codes are enmeshed in multivalent assemblages.

Developing the idea of the interweaving of the material and the semiotic, Alaimo traces the enmeshments of multiple assemblages like silica and pesticides that permeate human bodies across the world, from Detroit to Cambodia, from Native American to White American metropolises, depicting how these non-human agents enter the human body, altering its balance. In like manner, Morton in *Hyperobjects: Philosophy and Ecology after the End of the World* and Dawkins in *The Extended Phenotype* also present a similar interconnectivity by indicating how phenomena such as global warming, distant black holes and even genetic coding reflect the enmeshment of human and non-human phenomena (*Hyperobjects* 27; Dawkins 247) in an intimate relation that transcends distance. Alaimo’s analysis enmeshes the literary and theoretical works of Ana Castillo, Audre Lorde, Zillah Eisenstein, Simon Ortiz, Sherman Alexie and Percival Everett as she traces how literary texts, through their representational praxis, articulate an alternative account of non-human agency across permeable boundaries. Alaimo’s study *Bodily Matters*, however, remains delimited to relating scientific explanations and literary depictions with environmental concerns, it does not delve into theorizing the role and modes of literary representations and works within the ecological mesh. In a similar manner, Cohen’s *Stone: An Ecology of the Inhuman* is delimited to human-lithic enmeshment and its textual implications as it engages with Deleuze and Guattari’s terminology of stratification, assemblages and deterritorialization. However, it too is delimited to lithic agency and does not further explore the role of literary texts as material-discursive phenomena. My argument, therefore, explores this dynamism of literature within a pluridimensional ecological web through trans-corporeal deterritorialization.

A counterargument to the idea of ongoing deterritorialization may be that if all entities, material and discursive, are in a state of fluctuant intra-action, then everything should meld into an amorphous brew. However, a close reading of Barad as well as of Deleuze and Guattari suggests that the variations and de-territorializations within phenomena take place below a threshold level so that an illusion of consistent metastability is created. A classic example of this would be friction between two solids which undergo erosion at a level that may not be easily discerned by the naked eye. All the while, the bodies appear to retain their apparent ontological fixity. That is why Barad

talks about a “differential becoming” (“From Posthumanism to Posthuman Ecocriticism” 25) wherein phenomena come into being due to differential enactments taking place across different strata, including the human and the nonhuman.

Since the ecosphere is not merely a compendium of organic and inorganic subhuman entities, the human body can be seen as an ecosphere in itself. As Barad states, “Existence is not an individual affair. Individuals do not preexist their interactions; rather, individuals emerge through and as part of their entangled intra-relating” (*Meeting the Universe* ix). She adds that emergence is not a finite process but a continuous one in which matter and meaning are constantly reconfigured “thereby making it impossible to differentiate in any absolute sense between creation and renewal, beginning and returning, continuity and discontinuity, here and there, past and future” (*Meeting the Universe* ix). Thus, all entities exist owing to their interaction with each other; they defy the boundaries of their existence and modify their existence through their multivalent modes of interaction which makes the bifurcation between Man and Nature tenuous. In this sense, both Man and Nature become environments or *umwelts* with porous boundaries. This makes anthropocentric exclusivity attain a certain degree of instability. The human itself is constituted through material-discursive entanglements with other material-discursive phenomena. This argument is supplemented by numerous object-oriented-ontology theorists including Bennett and Morton, as well as by onto-epistemological theorists such as Barad, Alaimo and Cohen.

While object-oriented-ontology theorists are primarily concerned with the existence and becoming of matter prior to its comprehension by the human unlike the onto-epistemologists, both schools of thought, however, present detailed accounts of agentic matter. In the same vein, Bennett’s work *Vibrant Matter: A Political Ecology* presents the “onto-story” of matter (4). Arguing that matter has a “vibrant materiality”, she traces the encounters among various bodies that produce affects that do not always calcify into a human subjectivity. Thus, agency is no longer a human prerogative. Bennett adds that things function as “existents” (5) whose effects are not entirely exhausted by human semiotics. Therefore, the ecosphere emerges as an immanent space of the movements and becomings of “other life-forms whose strangeness is irreducible . . . whose arrival cannot be predicted or accounted for” (“Guest Column: Queer Ecology” 227).

Despite depicting this interactive space, two significant aporias in Bennett’s and Morton’s works emerge. Firstly, they do not exceed an anthropocentric bias despite acknowledging the fact that

agentic matter engages in semiotic practices that exceed human understanding. Secondly, their account of agency suggests its distribution across the human and nonhuman spectrum. This argument is valid but problematic because it brings into play the antagonism between conscious and unconscious intentionality that threatens to re-establish the anthropocentric creed. Addressing this aporia is Oppermann's paper "Nature's Narrative Agencies as Compound Individuals". She attends to this problem via the philosopher Charles Hartshorne who suggests that the world's agentic reality is "characterized by an inherent creativity" ("Nature's Narrative Agencies") germinating out of and responding to each other. Thus, all phenomena are "compound individuals" characterized by compound relationships" ("Nature's Narrative Agencies"). In this scenario, according to Oppermann, all bodies are storied bodies with enmeshed meanings constantly unfolding across multiple trajectories. That is why, agency is not restricted to conscious or unconscious intentionality and therefore, not bound within anthropocentrism.

In addition to that, the theorizations of Bennett and Morton do not engage in what Arthur Bradley has termed as a "de-anthropologisation of the human" (Bradley 16). While it may be conceded that a "residual anthropocentrism" (Bradley 19) continues to mark most discursive ventures in delineating human and non-human agencies, Bennett and Morton's works are aporetic since they re-enfold the non-human within the human. Therefore, their arguments do not escape their positionality stemming from a strictly human source.

In the light of this critique, I concede that in incorporating literary texts, even my own dissertation remains mired within an anthropocentric domain. However, what it does attempt to do is to re-explore the idea of the human from a reparative angle so that non-humans are no longer seen outside the human, but as co-constituting the human as "an inhuman remainder at the core of all humanisms" (Bradley 2). I argue that due its representational praxis, literature can turn the "*anthropos* inside out" and extract it out of a "self-referential ipseity" (Bradley 162; emphasis in original). I also contend that this residual anthropocentrism is also necessitated by the fact that we are living in the age of the Anthropocene, where human interventions are monumentally influencing the non-human world specifically if I am to engage in a critique of my own positionality as a human enmeshed with uncountable nonhuman actants. As an assemblage myself, I become a participant in this material-semiotic circuit fully aware of the fact there are dimensions of this enunciative mesh that exceed my abilities to decode and translate. I go beyond my skin to view myself not only as an *Anthropos* but an *Anthropos* dependent upon and also acting upon the

assemblage that I call my body and my mind. This form of residual anthropocentrism does not reinstate my central standing as an *Anthropos*, rather it centralizes my ongoing enmeshment with other emergent phenomena. My mind and my body are thereby *umwelts* in a state of becoming. While I cannot exceed the boundaries of my own consciousness in the sense of moving on to inhabit some other nonhuman agency, I am aware that my consciousness is a product and a constituent of numerous other modes of enmeshments that exceed the ambit of my intentionality. I am a story among other stories and literary texts provide me with a conduit to connect with stories that exceed the human purview, such as the stories of the nonhuman.

This non-human does not merely encapsulate material entities, it also includes noumenal entities like abstract ideas, discourses, textual practices, etc., which create new meanings and semiotic modalities as well as tell stories. Literary texts remain an important tool not only in intra-acting with those stories but also in raising anthropocentric ideologies to a revisionary scrutiny. In this scenario, narratives and texts attain a certain degree of discursive agentic materiality interacting in a semiosphere where all absolutes are held up to revisionary scrutiny. In doing so, they operate in a parallax space where both ontology and epistemology stand diffracted. In Žižek's terms:

The standard definition of parallax is: the apparent displacement of an object (the shift of its position against a background), caused by a change in observational position that provides a new line of sight. The philosophical twist to be added, of course, is that the observed difference is not simply "subjective," due to the fact that the same object which exists "out there" is seen from two different stances, or points of view. It is rather that, . . . , subject and object are inherently "mediated," so that an "epistemological" shift in the subject's point of view always reflects an "ontological" shift in the object itself. (17)

In a parallax space, a viewer does not behold only one image of the One or the supposed truth, rather, one sees a diversity of images which may juxtapose and deviate but are "equally correct" although they flip the established images of the mind (Dawkins 1). Figure A below elucidates this point and is a derivative of the ray diagram which traces the refraction of light through a prism. As light passes through a prism, it is refracted, thus allowing multiple images of an object to be presented as the lines of sight continue to shift. The smaller triangle in the center of the prism is the parallax space, a space of differential material-semiotic enactments. This parallax space is a textual space wherein onto-epistemological accounts are constantly shifting.

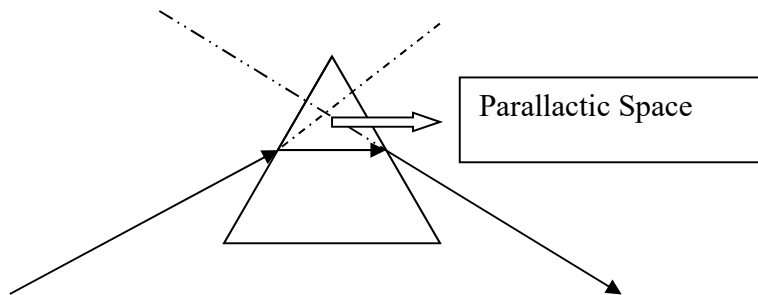


Figure. A. The dynamics of the parallax gap

My interest here is not to measure any refraction in the presentation of any supposed unilinear absolute truth that emanates through the interaction of these multiple discourses. My primary concern is the analysis of various patterns of material-discursive exchange that take place within the parallactic gap of a code-based textuality as multiple certainties, uncertainties and antinomies react and configure each other and within which code-based texts participate.

The idea of the parallax gap reinforces Barad's notion that neither matter nor meaning have "determinate values of position and momentum" (*Meeting the Universe* 19). It asks for a rethinking of categories in terms of a mobile ontology. Žižek, in his critical response to Barad's idea of quantum entanglements, himself has acknowledged this compatibility between his idea of the parallax gap and Barad's notion of differential becoming. However, while he identifies the failure of Barad's argument to transcend restrictive binarism ("The Ontology of Quantum Physics" 679), his argument has focused on the multiplicity within the One. The One here implies any phenomenon that has traditionally been seen in terms of an ontological unity. Žižek argues that the idea of the parallax mobilizes the One in terms of its being a mobile multiplicity. This is because in a parallax gap, there is a dissonance between two aspects or images of the One which generates an ongoing perspectival shift. He writes in a chapter titled "The Ontology of Quantum Physics":

. . . diffraction is a splitting which generates what it splits into two, for there is no unity preceding the split. In other words, we should conceive diffraction not as a liberating *dehiscence* of the One, but as the very movement of the constitution of the One, as the disunity, the gap, which gives birth to the One. (680)

This gap constitutes an “open ontology” within which phenomena are never “fully constituted” (“The Ontology of Quantum Physics”) because they are in a state of endless intra-actions. In a similar vein, Robert Pepperell argues that this open mode of interaction is more than evident in the way cybernetic systems are creating “entities that may equal and even surpass us” (iii) as they blend all forms of material and discursive entities to constitute new phenomena and new modes of perceiving those phenomena. Cybernetic systems are based on information exchange, for example different algorithms interact with material circuits to generate multimodal graphics. Similarly, computerized prostheses attached as bionic human limbs which can now even sense pain (Collins), nanosensors, human organs-on-chips, systems metabolic engineering, etc., inhabit a world where the gulf between the virtual and the real has been destabilized. The human brain is another case in point where abstract ideas and feelings are transformed as different neurons send electromagnetic waves that are then decoded in different patterns, both through actions, somatic alterations and semiotic expressions. Thus, the connection among the noumenal realms of the human mind, its material landscape’s interface with the vast and malleable syntax of the world at large through hypomnetic devices is what accounts for the fact that the human is to be defined in terms of a radical immanence within the nonhuman world.

In the light of this argument, human experience is seen as intersubjective since it is receptive to the fluidity of the human and nonhuman co-constitution. This idea has been developed on multiple levels and in multiple contexts by Sloterdijk as well, however, some of his basic ideas are extremely important in this exploration, particularly in terms of the inferences that have been drawn in the penultimate and ultimate sections of this thesis.

An important idea in his work is that of a shared subjectivity. Human subjectivity is formulated through an ongoing process of sharing across phenomena englobed within different ontological and epistemological orbs. These orbs or spheres have permeable boundaries that collapse, allowing their constituents to re-form new orbs. When we integrate Sloterdijk’s idea of the orbs with the ideas of Deleuze and Guattari, we find that these orbs are in a state of de- and re-territorialization. It is through this mode of interaction that all “*beings*” have a shared “placenta of subjectivity” (Sloterdijk 44; emphasis added). A key term in this assumption is ‘beings’ which, in my purview, may be not only be taken in terms of humans, since Sloterdijk has originally utilized this in terms of the biblical God and Adam. Therefore, I have extended Sloterdijk’s idea of being as a state of continuity, a verb instead of a noun. The ecosphere is thus a “polyspheric world” where different

assemblages (or orbs) enunciate themselves. At this point, Latour believes Sloterdijk's argument overlaps with his own since it questions the nature/culture divide and posits that the global is a space of exchange, where human reason is just a component of the entire network of exchange. The world is always-already immanent and there is no outside, simply changing modes of experience ("Spheres and Networks: Two Ways to Reinterpret Globalization" 139-144).

Here, we see that there is a conjunction not only between the ideas of Sloterdijk and Latour, but also a confluence of their ideas with those of Braidotti in her work *The Posthuman*. She also posits that humans and matter are non-dualistic entities. This connection, according to Braidotti, frames the contemporary notions of human subjectivity in terms of intra-actions which are further complicated with the blending of the human with robotics, neurosciences and bio-genetics, etc. (Braidotti 58). This idea chimes in with Sloterdijk's concept of inter-subjectivity that posits that all subjectivities are processually constituted by other subjectivities. I have developed this concept of a post-anthropocentric inter-subjectivity in the concluding chapter of this document. Braidotti believes that critical theory needs to take into account contradictory requirements that escape ontological and epistemological enclosures. However, while her argument does take on board such significant insights, it does not further delve into the realm of an altered account of human performativity particularly within the ecosphere wherein social functionalist accounts are too restricted in their scope to further re-theorize human and nonhuman intra-actions in a non-hierarchical manner.

The texts that I have selected for analysis take this connection a step further by bringing within their purview the oxymoronic immaterial-materiality of narratives as an additional component to be analyzed with reference to Eco-performativity. While this section has elaborated how the notion of ecology has undergone a transformation, the next section elaborates how the ecosphere is a semiotic space engaged in disanthropocentric textual practices as it interacts with different categories of the non-human to further destabilize the notions of nature and culture as well as the boundaries between them.

3.3 Formation of New Collectives: Narratives, Textual Ecology and Code

The previous section established the fact that human and non-human entanglements are a means through which the centrality of the Anthropos is challenged. In the light of this theoretical argument it can be deduced that if anthropocentrism is displaced, then language no longer remains

a human prerogative as a means of articulating human rationality. Addressing this problematic privilege granted to language by the Anthropos, Giorgio Agamben, in his monumental work *The Open* advocates the “farewell to the *logos*” (90; emphasis in original) since the human race has defined itself in terms of its a language-based ontological exclusivity plotted through history. Human history and *logos* are concomitant with each other since humans have assumed that they are rational through their identification with language (Agamben 35). Agamben argues that in doing so, man has placed his muteness outside of himself in order to define himself as an exclusive “anthropological machine” (35). However, this exclusivity is an indeterminate zone of exception where the boundaries between the inside and outside of this machine are blurred (Agamben 37). Although Agamben’s thesis in *The Open* focuses on the blurred boundaries between the human and the animal, he flags the notion that it is *logos* which constitutes these boundaries in the first place. This is because the politics of humanism have revolved around this separation created through language. Agamben continues that the idea of the human is in itself a fiction, created through the construction of caesurae or gaps between the human and the nonhuman. That is why, there is a “dialectical tension” (Agamben 12) within the human as he tries to rise above the animal. In so doing, he has to think of the nonhuman or animal as something inferior, mute and irrational in order to be able to master it. Language, says Agamben, is used to cover the lack of any “nature” that is “proper” to the human (29). Despite that, man is a “constitutively nonhuman”, speaking assemblage (Agamben 30) among of a web of multiple speaking assemblages.

However, humans also speak through writing. Here it is important to bring in Derrida’s arguments regarding writing and the play of meanings. In *Of Grammatology*, Derrida inverts the privilege accorded to oral language over writing, making language a subset of writing, where writing indicates action, thought and movement. However, while the earlier concept of writing was based on the binaristic distinction of the oral and the written, Derrida did not merely disband this binary, but also declared that supposedly non-sensible signifiers (which are not a part of the everyday language such as algebraic and chemical equations, e.g., $E = mc^2$, biological diagrams, art and architecture etc.) also make sense. Earlier, these supposedly non-sensible signifiers lay outside the circumference of writing which had been taken as a finite ensemble. When images and symbols become a part of writing, which is taken as the sensible signifier, the outside/inside binary is dismantled as different signifying modalities became equal participants in meaning-making mechanisms. This implies that meaning is always on the move from one sign to the next, regardless

of its general comprehensibility. In exceeding the boundaries of signification, writing is not merely an inscribed tablet, it is an enactment, and in this context an enactment of certain performative functions by all entities and their intra-actions within the ecosphere. This idea of textuality as enactment allows an interchange between nature and culture, between the outside and inside, imbricating all in a co-constitutive co-existence. In other words, a text is not merely a system of notation but also a series of actions and exchanges within which nonhuman phenomena also participate, thereby defying any muteness ascribed to them by the human. This takes us back to Agamben's argument that the human is a speaking assemblage among numerous other speaking assemblages.

There are a few problems with Derrida's theorization of everything as a textual practice. Although the deconstructive theory does open up the enclosure of meaning as encapsulated within the traditional idea of language as a finite ensemble, it remains essentially epistemological and does not disband the boundary between the material and the discursive, nor does it account for how a semiotic exchange becomes a material phenomenon at the same time. In addition to that, his deconstructive approach, while disbanding the boundary between the oral/ written, inside/outside, image/ reality and appearance/essence, does not deconstruct the concepts of the human and non-human. His arguments, while making boundaries between antithetic values extremely pervious, does not disband anthropocentrism since his deconstructive approach invariably gets re-folded within anthropocentrism (Bradley 50). Similarly, Bernard Stiegler, in his essay "Derrida and Technology: Fidelity at the Limits of Deconstruction and the Prosthesis of Faith" argues that Derrida's idea of the *differance* does not fall back into the empirical world because writing is conceived as lying outside materiality. His objection is based on the idea that inherently, as a supplement, writing is "is always already *materialized*, while never simply being *material*." (254; emphasis in original).

My study also reaches a similar conclusion regarding Derrida but it does so by disbanding the idea of textuality as bound within an anthropocentric idea of signification. It re-casts textuality as a code-based mode of information exchange that is not exclusively an anthropocentric privilege. For Derrida, a text is merely epistemological, a totality which cannot be circumscribed within writing because in writing something always lies outside the confines of the sign. However, what cannot be refuted is that his idea of all texts being cybernetically linked does hold water. As a matter of

fact, his deconstructive methodology paved the way for Deleuze and Guattari to theorize the rhizome as a space of deterritorialization both in the material and discursive aspects and also provided the cornerstone for re-casting texts as material-discursive entanglements whose operations lie outside the confines of the sign. In operating outside the sign, not only does a text exceed logocentric boundaries, ecology also takes on textual dynamics. As Morton also writes in his paper “Text as Ecology: Ecology as Text” that textuality is a “good metaphor” for ecology (2). This suggests that enunciation does not have fixed boundaries. However, all assemblages do have “formal relationships” so that “When we zoom into life forms, we discover textuality.” (“Text as Ecology” 5). Unlike Morton, my account of textuality also takes on board the social texts which prescribe the narratives of human embodiment and their reification through social practices. In addition, Morton’s idea of text as ecology and vice versa does not explore how different literary enunciations can revise the discourses shaping performative practices through different enactments of worldings which my current research investigates.

While Morton’s focus remains on the textual practices of life itself, it is Katherine N. Hayles who explores the role of technogenesis in digital texts and their textual practices by foregrounding the material enactments of anthropocentric writing in her work *How We Think: Digital Media and Contemporary Technogenesis*. Tracing the various digi-semiotic modes of enunciation in numerous novels and digital texts, Hayles traces the operational modalities of these enunciations that incorporate a plethora of discourses, sign systems, and an information deluge. In line with Braidotti, Hayles’ argument also leads to the assumption that there is no single *logos*, but *logoi* or systems of enunciation with different forms of writing percolating across a page as well as radiating outwards “among different textual modalities, each interacting with and constraining what is possible in the others” (*How We Think* 30). She also focuses on the tectonic shift that has displaced the notion of writing particularly in the idea of a binaristic digital code that enacts, and not just vocalizes, “nebulous” or abstract concepts such as desire (*How We Think* 54). The interface between human and machine writing allows a far more complex and powerful mode of articulation and representation wherein scriptural writing interacts with computer coding. For instance, in the hypertext *V: Vniverse*, one sees blocks of print emerging if one clicks a numerical node so that one sees a flow of materialities and meanings as the text becomes a space of information exchange at multiple levels. Hayles’ work is important since it explores the gap between writing and embodiment arguing that technological modes of inscription such as the telegram were modes of

technological control that entailed “enrolling human subjects into technocratic regimes” (*How We Think* 130). These regimes became forms of surveillance and control in the ensuing times. Even as she traces how language functions both materially and discursively in digital texts, she astutely argues that in such a diverse and interconnected space of textual enactments, language is no longer strictly under anybody’s control. As *logos* became *logoi*, writing acquired multiple authors and narrators. In the process, life in itself is freed from the confines of *logos* as it articulates itself in terms of on-going becomings (Irigaray & Marder 129). In enacting an “embodied transversal” (*How We Think* 208) digital texts reveal that writing is not merely a semiotic encoding and decoding, it is a “material practice as well” as it moves from its “original instantiations” and enters numerous databases and syntaxes (*How We Think* 208). Writing displays a “gritty materiality capable of interacting directly with human bodies” (*How We Think* 208; emphasis in original). Narratives thus display flows of ideas and phenomena across bodies, all in an ongoing process of becoming and of “growing together” (Irigaray & Marder 109). It is for this reason that Hayles advocates that one must tell stories in a manner which acknowledges the material practices of writing so that people in all their biological and technological diversity can make a home (*How We Think* 217).

Through such material modes of writing, non-human material and noumenal entities also exercise their own modes of agency regardless of human concerns operating as equally agentic citizens in “the new collective” (Latour 8). Developing the idea of the new collective, Latour argues that it can be created by different forms of literary texts as they relate how the non-human and the human all function in non-hierarchical ways. However, his argument leads to the question as to how these actants agentially intra-act across limitrophic boundaries. Latour posits that this process includes the removal of “*speech impedimenta*” (*The Politics of Nature* 63, emphasis in original) so that the non-human entities are no longer treated as subaltern *alogon* (“The Animal That Therefore I Am” 388) but equally enunciative participants in the reconstitution of human identity. Humans and nonhumans are collective assemblages of enunciation that entail “an intermingling of bodies reacting to one another” (Deleuze and Guattari 88).

One of the problematics inherent in the adjective ‘textual’ in the phrase ‘textual ecology’ is that if textuality is to be equated with logocentrism (in the Derridean sense), then it would remain anthropocentric. Therefore, if human language were to be taken as the only system of articulation

and textual practice, this entire theoretical exploration would fall flat. It is for this reason that my first chapter had initiated a re-exploration of the idea of language as a subset of a code-based mode of information exchange among human and non-human entities which are both material and abstract. Barad's *Meeting the Universe Halfway* provides a viable insertion within this argument. She argues that non-human phenomena make themselves intelligible through "an ontological performance of the world in its ongoing articulation. It is not a human-dependent characteristic but a feature of the world in its differential becoming. The world articulates itself differently." (*Meeting the Universe* 149). Semiosis thus becomes corporeal (Deleuze & Guattari 301) allowing the "differential" (*Meeting the Universe* 141) materialization of bodies and their varying modes of entanglements. In Barad's theorization, this differential materialization accounts for the alteration in the performative accounts of non-human entities (*Meeting the Universe* 34). What is important to note here is that in Barad's onto-epistemological account we behold a mobile and agentic materiality, i.e., of "semiotic flows" across bodies, disciplines and material membranes (Deleuze and Guattari 461). This corporeal semiosis is, therefore, disanthropocentric and it is the idea of the code which accounts for this sort of disanthropocentric semiosis. This is because the code mediates across a multitude of "sensible signifier(s)" and disbands any absolutist connection between the signifier and signified. It goes beyond the anthropocentric enclave and becomes a mediatory mechanism that can transcend any epistemic enclosure as it engages in multiple forms of corporeal semiosis. In this way, it intervenes within "out of bound shelters" (*Of Grammatology* 7). It no longer functions merely as a graphic or phonetic code, but as an action or function that traverses all boundaries in the ecosphere. Codes are involved in territorialization so that material and discursive forms are crystalized within the nomadic space of the ecosphere; its de- and re-territorialization permits a semiotic transfusion across binaries that exceeds linguistic confinement. This aligns with Luce Irigaray and Michael Marder's argument that "not all language unfolds in words" or linguistic enclosures (76). Not only that, a linguistic enclosure eventually fizzles out since its repetitive nature makes it go round and round in repetitive circles (Irigaray & Marder 63). A code, in its ability to change, transcends linguistic restrictions taking on a pliable "semantic core" (Irigaray & Marder 79) that lies at the heart of nonhuman phenomena. Therefore, the idea of the code disbands any belief in any boundary-based fixities. The code's unpredictability exceeds the "semiological structuralism" (Spivak lv) that is centered in human understanding and enforces a coincidence between the meaning and the object.

On the basis of these arguments it may be deduced that language is also materially and discursively engaged in providing an onto-epistemological account of human and non-human agencies. Thus, when Derrida's concept of textuality is revised in the light of Barad's notion of material-discursive phenomena, the privileged position of anthropocentric language as the main mode of representation is disbanded. I do concede that placing all phenomena under the overarching notion of textuality is erroneous, however, the functions of code-based inscriptions that it postulates do not merely decenter the human and disband the human/ non-human binary, but also pave the way to theorize how literary practices may suggest alternative performative accounts.

One such suggestion can be extracted from Bradley's stance in *Originary Technicity* where he posits that any phenomenon that can remember and process information and also modify itself according to its environment, is technology. Therefore, phenomena ranging from planets to chromosomes are technological devices (Bradley 2), engaged in mutual interaction through code-based exchange. Bradley's notion leads to the conclusion that if writing is an experience and an enactment, then a text is both an embodiment and an experience as it establishes an "ontological inseparability" (*Meeting the Universe* 128) among concepts and objects through its signifying practices. Therefore, literary texts, ideologies, planets, chromosomes, cells, etc., all produce an interface of narratives across bodies and textual ecology addresses this interface between noumenal and phenomenal entities, thereby allowing a "universal translation" (*Simians, Cyborgs and Women* 164). In her more recent chapter titled "Staying with the Trouble: Anthropocene, Capitalocene, Chthulucene", Haraway terms this exchange as a "sym-poietic threading, felting, tangling, tracking, and sorting." (36). She proposes the idea of "string figures" that interweave "speculative fabulation, science fiction, science, speculative feminism, so far" ("Staying with the Trouble" 36), hence assigning the acronym SF to her idea of string figures. In unpacking SF, Haraway declares that stories are both material and semiotic, strung together in a tentacular or rhizomatic mode. That is why SF is to be read as an abbreviation of numerous entangled material-discursive domains. Through these stories, all phenomena make and unmake the world within which literature participates sym-poietically entailing a mutual "becoming-with and unbecoming-with" ("Staying with the Trouble Anthropocene" 44). Through this ongoing becoming and unbecoming, the world becomes a storied space where phenomena create their own stories in different codified forms.

Conversely, if all phenomena are storied codes, it implies that all material-discursive phenomena can be ‘read’ diffractively, i.e., “through each other” (*Meeting the Universe* 208) as they assemble, disassemble and reassemble themselves. This does not mean that as a codified phenomena, a text loses its properties as a text or inscription. What does happen to it is that it is not seen as the only means through which the narrative of life is articulated as biotic, digital, semiotic, chemical and physical codes cumulatively interact at the material and discursive levels. Žižek cites Pranav Mistry’s Sixth Sense Project as a case in point, where, through “gestural interface” the human, the digital and the material world interact through a computerized apparatus of information exchange through “direct interpenetration” (“Wake Up and Smell the Apocalypse”) of the virtual and the real. It has a camera programed to register human gestures and transmitting those gestures as codes to the user’s smartphone which in turn retrieves the relevant information and projects it on any surface such as a wall or even the human hand, thus interfacing the human, material and the digital spheres of existence. Through the interaction of these codes a specific *weltanschauung* is constituted in which all objects are coded as objects of knowledge. Not only that, as the Sixth Sense Project shows, through codifying and decodifying, any object can function as a text or site of inscription. In this context, my argument segues from Haraway’s who places psychology and psychobiology as the mediating mechanisms between nature and culture. In seeing all natural and cultural entities as phenomena, a literary text can also take on a mediatory function like psychology and psychobiology in order to subvert core cultural, ideological narratives that determine social functionalism and the performative accounts that it yields. This establishes the focus of my argument in the next section.

3.4 Eco-performativity and Literature

While Judith Butler’s performative account primarily operates on the discursive level, Barad argues that mattering is also semiotic. That is why she stresses on generating a “posthumanist performative account of the material-discursive practices of mattering (including those that get labeled ‘scientific’ and those that get labeled ‘social’” (*Meeting the Universe* 146). This posthuman performative account foregrounds how human and nonhuman performative practices are altered in a fluctuant ecosphere by disbanding the boundary between ontology and epistemology and due to the heterogeneity of associations among human and non-human actants, which have led to the opening up of anthropocentric concepts such as the ‘world’ and the ‘human’ (*Hyperobjects* 3).

As mentioned earlier, the neologism Eco-performativity is a derivative of the Butlerian term ‘performativity’ which, in simple terms, is based on the premise that bodies and genders are produced through the repetitive discursive iterations of gender. It is through this discursive iteration that gender roles are defined. This implies that if a discourse is altered, the nature of the construct, i.e., gender, is also altered. Similarly, if this idea is applied to the context of defining the mattering of human and non-human actants, it would lead to the notion of Eco-performativity. I have introduced this neologism to elaborate that if the discourses pertaining to the notion of the ‘human’ and ‘nature’ are re-configured or iterated in a manner that shifts from the reified concepts inherited by man and moves towards a democratic, shared agentic materiality, the notion of human centrality is extracted out of an ontological and epistemological enclosure. Judith Butler argues that nature and the human have been taken as pathological facts mired in “univocal signification” (*Gender Trouble* 132). However, Eco-performativity is to be taken as a subversive concept which makes this univocal signification malleable. Since the deconstruction of constructs entails the idea that a provisional origin is to be established in order to be erased, Judith Butler establishes ‘culture’ as that provisional origin which in itself dismantles itself and leads to the liberation of the body. She states that

If subversion is possible, it will be a subversion from within the terms of the law, through the possibilities that emerge when the law turns against itself and spawns *unexpected permutations of itself*. The culturally constructed body will then be liberated, neither to its “natural” past, nor to its original pleasures, but to *an open future of cultural possibilities*. (*Gender Trouble* 119; emphasis added)

Keeping this argument in mind, if the constructed notions of ‘man’ and ‘nature’ are also subjected to similar “permutations” in the context of how man has generated technological advancements that in turn present him as a conglomerate of nonhuman assemblages, it opens up a range of “cultural possibilities” (*Gender Trouble* 119) or “new fragmentary possibilities” (*Simians, Cyborgs and Women* 20). These possibilities explore how a new definition of a human being decenters his anthropocentrism. Eco-performativity then proceeds to investigate how this decentering of anthropocentrism alters the hierarchical structures of domination within the ecosphere.

In this context, while Judith Butler focuses on how gender is constructed through philosophical and sociological discourses, Haraway's *Simians, Cyborgs and Women: The Reinvention of Nature* explores the relationships between ecology and embodiment particularly through narrative communication so that humankind is compelled to unmake and remake itself with the help of narratives. If ecology is to be taken as a system wherein the digital and the biological are juxtaposed, as Haraway posits, narratives and their logics become a part of this circuit wherein new literary topographies are generated which, in turn, may lead to the creation of a post-ecological society there is no rigid demarcation between anthropocentric and geocentric natures. In this context, Eco-performativity in a literary space engages a literary text (paper-bound or digital) as a mediator between culture and nature instead of working as a cultural entity alone. In questioning anthropocentrism, Eco-performativity asks the question as to how the extant notions of functionalism (in the context of race and gender) may re-address and revise these categories so that discursive possibilities are opened up. Since narratives reconfigure reality, literature has the ability to go beyond "lived dominations" and connecting, through semiotic action, "nature, the gene and the word", (*Simians, Cyborgs and Women* 77). Eco-performativity explores how literature or stories can re-ask questions and re-constitute constructs within the web of textual ecology, and its ramifications in the external ecosphere.

While texts have always been taken in terms of anthropocentric representational practices, Eco-performativity is based upon reviewing these practices of representation and the effects of those practices (*Meeting the Universe* 28) outside an anthropocentric enclosure; hence literary texts, along with scientific and religious texts, have always taken on the mantle of giving an ontological representation of nonhuman entities. Since mattering emerges out of a blending of the material and the discursive, hence a posthumanist performative account enables a blending of scientific accounts and sociopolitical theories along with literary representation, consequently opening up intra-active disciplinary enclosures across limitrophic boundaries.

This breaking down of the boundaries between stories and material objects is strongly present in the main texts selected for this theorization since they represent "stories at the border" (*The Heirs* 7). The stories in themselves do not merely act as actants in a material world alone, rather, as literary texts they become sites where natural-cultural boundaries are questioned, sustained and yet dismantled. They do so by apportioning *logos*, in Latourian terms, to all the actants both human

and nonhuman. In so doing, the meanings that they generate exceed human apprehension, even spreading across the boundaries set by the consciousnesses of the readers, the authors and those of the texts. Hence, all the actants, including the texts themselves, become citizens or social actors displaying a semiotic-agentic-materiality. What they reflect is the collaborative acting capability of matter and non-matter that act through "storied bodies" (Phillips & Sullivan 5) which demands the necessity of employing various extended scales when we think about our world. At the same time, it may help us to recognize that we live in multiple worlds, some of them of our own making but many of them not." (Phillips & Sullivan 5). For instance, the survivance narratives in texts like *The Heirs of Columbus* become a means through which the heirs of Columbus endeavor to "address the agency of material bodies participating in a broad spectrum of relationships with other forms of agentic matter on many scales" (Phillips & Sullivan 3). As a result, these entities, i.e., the stones and the bones of Columbus and Pocahontas, do not merely remain totemic cultural entities or material evidence of primitive beliefs of the paranoid. In effect, they become "vibrant matter" (Phillips & Sullivan 5) i.e., both agents and mobile landscapes in their own right. This interaction allows non-material entities like stories to symbiotically hitch on to material entities like the bones and stones so that they gain not merely what Dana Phillips and Heather I. Sullivan have termed as "agentic materiality" (5) but what I see as a 'semiotic-agentic materiality' that traverses across "evolutionary time" and "across bodies" (Phillips & Sullivan 3).

Aware of matter's agency, Amitav Ghosh's work entitled *The Great Derangement: Climate Change and the Unthinkable* also addresses textual, human and nonhuman enmeshments, while taking on board concepts such as "ecological refugees" (10) created due to massive flood in pre-Partition Bangladesh. In a very insightful manner he writes about the immanent entities and those

. . . moments of *recognition*, in which it dawns on us that the energy that surrounds us, flowing under our feet and through wires in our walls, animating our vehicles and illuminating our rooms, is an all-encompassing presence that may have its own purposes about which we know nothing. (Ghosh 11; emphasis added).

While located in an ecologically vulnerable third world context, Ghosh's work articulates the economic and political fallout which are generated as human and nonhuman intra-actions are further complicated by factors such as carbon emissions. It is here that the term 'recognition', as

in 're-cognition', gains significance since he invites one to imaginatively re-cognize and re-think the history of the world's climate. Therefore, through literary texts, and politics one needs to re-imagine one's intra-active entanglements with nonhuman phenomena. Ghosh too uses literary fiction to re-think these questions, particularly in a rhizomatic world as "actants, acting agents, interveners" (*Politics* 75; *Reassembling the Social* 76) within the space of textual ecology, interacting with scientific, political, cultural and social discourses, participating in articulating a posthuman performative account of human and non-human agencies. This argument is relevant to the thematic practices of *The Heirs of Columbus* and *The Windup Girl* in which beliefs or stories act through material "storied bodies", (Phillips & Sullivan 5) and blur the boundary between the material and the ideational. In *The Heirs of Columbus*, we behold a confluence between nonwestern ideas pertaining to the creation of the world, the evolution of bodies, the material enmeshments across genders, races and cultures to create alternative narratives of history and human evolution to the ones offered by western scientific imperialist discourses that have bound the human race into hierarchically arranged categories. In this novel, Vizenor subverts the essentialist enclosures of bodies and knowledge by blending the worlds of shamanistic realities with the digital projections of reality. Spirits and bodies, both good and evil exist in a liminal stage as computer codes coalesce with Native American cosmologies and rituals. The novel focuses on the heirs of Christopher Columbus, who was a European conqueror and the discoverer of the Americas, as his heirs claim a Native American identity through a matrilineal association with the mute handtalker Samana, the hypothetical escort of Columbus. She has profound shamanistic capabilities that could heal Columbus, who like the Fisher King of the Arthurian legends, is sexually maimed and can only be healed by healers whose knowledge lies outside Western epistemic enclosures. Intriguingly, Samana is also the name of the island on which Columbus is said to have made landfall. In the novel, the binary between the mute human Samana and the mute conquered land, also called Samana, stands subverted. Additionally, the bodies of the current heirs of Columbus are conglomerates of western and nonwestern material-semiotic codes, that undo the primacy of White narratives of conquest that have silenced Native American historical accounts and narratives. Their bodies are articulate material assemblages suggesting an inclusiveness that challenges America's racial segregations and destabilizes them further with the creation of the Genome Project. In the Genome Project, all bodies receive healing through a transcorporeal implantation of the blue signature of survivance that is freely available for all, thereby challenging

the biopolitical exploitation that is contiguous with global capitalism.

While *The Heirs of Columbus* foregrounds the enmeshments between Native American and White epistemes, *The Windup Girl* presents a twenty third century future wherein scientists are the new power-holders and spin-doctors as states across the globe struggle to produce food and sources calories to run machines and to galvanize industrial output after the ecological collapse. These scientists are generally white owners of biotechnological companies, who, like the notorious East India Company, are striving to ransack the genetic resources of different civilizations to arguably enable the human race to survive. However, this genetical-colonial venture is riven with imperialist goals since this project of human survival is bound within the ethics of commodification that had galvanized the global economy prior to the world's ecological collapse. This is a world of genetically modified creatures with radically enhanced strength like the genetically enhanced megodonts, the predatory Cheshire cats, genetically altered fruits like the *ngaw* and synthetically created humans called windups, the future version of androids running not on computer programs, but with inbuilt windup springs that energize their bodies. These are like modern day windup dolls, only that they are created through DNA cultures and germinate in artificial wombs called crechés and are generally programmed to be servants, sex toys or soldiers in a world where technology can no longer operate due to a dearth of energy sources. These windups, however, have feelings and intellect, and despite their conditioning, like ordinary humans, they can override their socio-cultural programming as Emiko does in the novel. Emiko is the mother of the future human race, and thereby challenges the very notion of the human as an exclusive category. What the thematic performances of these two novels indicate is that a literary text transcends boundaries and generates possibilities of the onto-epistemological accounts of itself and the world it inhabits.

On the other hand, the hypertexts *Grammatron* and *V:Vniverse* perform their thematic schemas through rhizomatic digital enactments. Addressing issues like the disbanding of integrated human bodies and a consciousness that is scattered across the infosphere, these works enact the enmeshments of the material and the semiotic. What is intriguing about them is the fact that they blur the boundaries among the author, the characters and the readers. *Grammatron*'s central consciousness Abe Golam blends the human and the technological, displacing the ontologies of all those who participate in the encoding and decoding of the narrative. The same holds true for *V:Vniverse* in which there is arguably no centralized narrator, but a multitude of voices,

reminiscent of the constantly displaced voices of *The Wasteland*. It is a surrealistic travesty of the sky map with its clusters of galaxies and constellations that take on the shapes of birds, insects and even the human foetus, all merging into each other randomly. These texts enact ‘literarity’, which is precisely what makes these works democratic. It enables them to exceed an anthropocentric perspective by foregrounding nonhuman consciousnesses such as those of Cyn (whose name meaningfully rhymes with ‘sin’) and Abe, while rounding back to make the human reader question who they themselves are and where they stand with reference to the digital consciousnesses of the texts. The readers’ journey is a journey across codes; they mentally blend into the algorithmic code which gets converted into coherent sentential forms, so much so that the readers and the characters blend into a digital union that makes one question their onto-epistemological exclusivity. This also accounts for the literacity of the material texts. In my argument, literacity and literarity are interconnected despite subtle differences. While literarity implies the movement of literary utterances across different assemblages and regimes of signification, literacity is the reading of the literarity of material enunciations. Literacity, i.e., the decoding of the material-semiotic enunciations of the world around us is what enmeshes the readers with the texts and their textual performances since literacity is also a collaborative hermeneutic performance across multiple assemblages. Literacity is the reading of the literarity of material texts.

In blending with the digital consciousness, once we question our supposed disconnect from those who are seen as nonhuman, that is the point where these hypertexts become sites wherein a non-hierarchical reparative humanity can be enacted because digital literary texts do not merely create a networked info-sphere, they also transcend that info-sphere to permeate within the material, social and natural spaces outside it. What we notice is that the patterns through which these hypertexts expand, computer viruses mutate and artificial intelligence gains autonomy, replicate the processes of cell division and cognitive developments that are witnessed within the supposedly separated natural-cultural areas. In becoming a part of this space, texts interact with each other and with other codified phenomena, in order to gain activism and hold up a lens for re-scrutinizing anthropocentrism. For instance, in Bacigalupi’s *The Wind Up Girl*, the artificially constructed Emiko is a “biological oddity” (45) created as a sex toy and servant. She puts to question what it means to be human as she is described in a language that crosses the boundary between the human and the nonhuman. The following passage from the novel attests to this fact:

Emiko fights the sudden flood of shame. It's as though he has sliced her open and gone rooting through her entrails, impersonal and insulting, like some cibiscosis medical technician making an autopsy. She sets her drink down carefully. "Are you a generipper?" she asks. "Is this how you know so much about me?" (43)

In the novel, it is not merely this quasi-organic mechanical assemblage that is questioned on the ontological front, it is also the human that is questioned. She is termed as a "New Person" (Bacigalupi 42) and yet it is her humanity that is questioned. At the same time, she invokes our sympathy as her monologues reveal her to be more than a thing, something more and less than human, just like her human masters. The novel constantly questions anthropocentric pretensions as it is set in a world of raging seas that flood entire countries and the human race is depending on "The DNA samples of the genehacked algae" and "their genome maps" (Bacigalupi 176) for their survival. Through such metaphors, the text represents a blurring of boundaries between the organic and inorganic worlds at the same time performatively participating in such a blurring.

This aspect is also noticed by Sullivan in her paper "Dirt Theory and Material Ecocriticism" wherein she refers to *The Windup Girl* as an example while elucidating her "dirt theory" (515). As she highlights the dirty aspects of nature and human enmeshment within it, she proposes the idea that phenomena like the soil are compound subjects. In being compound subjects, they are both organic and inorganic, almost cyborgian. The soil can be both toxic and destructive, thus displaying a "destructively agentic influence onto most of the living things they contact." ("Dirt Theory and Material Ecocriticism" 516). As a site of mutation, dirt and grime are entwined with the characters of *The Windup Girl*. The twenty third century Bangkok, that establishes the setting of the novel, has already experienced a decimation of population due to plagues resulting from radically mutating viruses in an exceedingly polluted environment. The government tries to control such outbreaks of disease through a despotic control over trade, which Sullivan posits is "the embodiment of large-scale material interactivity" ("Dirt Theory" 520) which cannot be controlled in a world of cut-throat capitalist competition among global biotechnological firms like AgriGen. In such a world, bodies are a threat since they allow permutations of dangerous diseases. Infected bodies are burnt, while those suspected of being disease carriers are violently eliminated. Bodies are dirty, just like Emiko's body because it is repeatedly defiled and "dirtied by forced sexual labor and the city's grime" ("Dirt Theory" 521). Yet, the irony is that when the plague spreads, her body

remains immune while others around her die. Her dirty body becomes the precursor to a new mode of highly advanced human embodiment. However, while Sullivan's analysis of *The WindUp Girl* is focused only on the enmeshment of dirt and human bodies, my theorization focuses on how this text itself leads to the construction of different notions of performativity as the material environment mutates. In addition, her work does not focus on the different modes of code-based intra-actions that outline the altered notions of human embodiment that the novel depicts. In the novel, the human and the nonhuman, the digital and the genetic all seamlessly come together.

Due to the blending of the digital and the living, the novel shows how metaphors based on computer language - such as "genehacked" (Bacigalupi 176) - blur the boundaries between the natural and the digital, the organic and the inorganic. It depicts how human rationality is seen to be struggling to retain its mastery that has led it to chaos. The algae gain a material-discursive agency as they defy human calculations and genetic interventions, despite their supposed muteness. Thus, as David Roden highlights in his academic blog "Humanism, Transhumanism and Posthumanism", non-humans gain "capacities reserved for humans alone" (1). Emiko, the genetically created semi-cyborgian "New People" (Bacigalupi 34), whose genetic code has been programmed to function as a surrogate computer chip, is one such human with augmented abilities. On the other hand, the mute child in *The Heirs of Columbus* is used for harvesting genes since the genetic code is used to cure wounded children by altering their material configuration. In both cases, the genes act as "semiotized" ("Semiotization of Matter" 150) actants in creating new forms of the human and making one question anthropocentrism. Thus, the novels are also functioning like genes, in their coding, "full of futurity, a mysterious and not wholly predetermined site for the emergence through 'material agencies' that leave their traces in lives as well as stories, so that narratives are always animated by multifarious vectors and heterogeneous possibilities not reducible to anthropocentrism" (Cohen 36). Vizenor's *The Heirs of Columbus* suggests similar possibilities as it depicts phenomena like trees communicating with humans in their own language, something that eludes the scientists. This is because science, like language, binds phenomena within an ontological fixity, hence "a sentient tree was beneath their reason" (*The Heirs* 152). *The Heirs of Columbus* focuses on Digi-semiosis and Bio-semiosis as a means of highlighting how boundaries are to be seen as liminal constructs. In Vizenor's texts, Digi-semiosis functions in the same paradigms that Mark B. N. Hansen elaborates in *Bodies in Code: Interfaces with Digital Media*. He postulates the permeability of human bodies in terms of their merger with the

technological so that man is gradually becoming a “prosthetic god” (“Objet Petite á and Digital Civilization”). In Vizenor’s work, humans enter a digital world in order to find truths about the material world. In Bacigalupi’s novel, gene codes are hacked like computers, while sentient replicant human beings appear to be more human than the normative idea of the human. Even as the body is technologically deterritorialized, it comes to be recognized in alliance with technology. Thus, the body is not only coupled with the social codes both on the material and discursive planes but also through digital mediation, so that the body, as Hansen perceives it, gains an agency of its own, as digital non-human phenomena further make its boundaries even more tenuous.

Through such depictions, literary texts like *The Heirs* suggest a new social construction where bodies are constantly forming and re-forming themselves. In so doing, *The Windup Girl* and *The Heirs of Columbus* intervene within the domains of Speculative and Critical Posthumanisms, which, despite their different theoretical outlooks, hold up anthropocentrism to a critical scrutiny. In his presentation entitled “Hyperapocalypse: A Hole in the Space of Reasons?” Roden argues that posthuman agents (ranging from sim cards to genetically altered hypothetical posthumans) “will be social and, arguably linguistic beings, even if they are robots or computers, have strange bodies, or even stranger habits” (4). It is precisely for this reason that *The Heirs of Columbus* and *The Windup Girl* extend the idea of the human in its material contours. Both the novels bring into play the idea of “posthuman personhood” (Wenneman ix), as expounded by Daryl J. Wenneman that explores the need to not only redefine personhood in a world where there may arise biologically altered human beings as well as the moral framework that may be required in order to deal with such ‘persons’. The questions that Wenneman raises, such what does it mean to see a computer as a person or what sorts of obligations does one have to a robot, are illustrated by both Vizenor and Bacigalupi. On the surface, posthuman personhood is rife with the threat of being co-opted within anthropocentrism. However, Wenneman is aware of this pitfall and so, it seems, are Vizenor and Bacigalupi. Their novels expound posthuman personhood in the sense of Wenneman who says that posthuman personhood is anthropocentric but not speciesist, i.e., the idea of personhood and all its moral moorings may be extended to humans that are not biologically humans such as Emiko and the mongrels. Personhood thus stands de-anthropologized. This allows one to identify morally with all beings of a kind capable of agency” (Wenneman 49). Wenneman’s concept of personhood includes both human and nonhuman persons, specifically those that are self-legislating, self-reflexive and can also feel pain, i.e., agents like Emiko. Wenneman’s

argument does not only recast the thingliness of things but also the personhood of humans as well. This demands an extension of morality to nonhuman phenomena, such as evinced in Emiko and also Blue Ishi in *The Windup Girl* and *The Heirs of Columbus* respectively, since the shift in the idea of personhood that they reflect also demands an extension in the moral outlook which governs human and nonhuman relations.

Thus, in the tradition of material ecocriticism, these texts elucidate the “relations between meanings embodied in matter and our representational practices” (“Semiotization of Matter” 141). However, even as Vizenor’s *The Heirs of Columbus* and Bacigalupi’s *The Windup Girl* highlight how one form of matter is transformed into another through therianthropy, alteration of genetic codes, blending of genetic and digital codes, etc., it is necessary to note that in doing so, these texts establish a confluence between Bio-semiosis and material ecocriticism. In this context, Maran’s argument in “Semiotization of Matter: A Hybrid Zone between Biosemiotics and Material Ecocriticism” is significant. He argues that bio-semiosis and material ecocriticism are mutually exclusive because bio-semiosis is not concerned with human social and cultural practices and is only concerned with “*codes and coding*” (“Semiotization of Matter” 141; emphasis in original). However, his “biosemiotic view” (141) takes into account the influence of human actions on the semiotic modalities of matter on the human socio-cultural planes. Through this form of representation, narratives show how matter and non-matter “intra-act with each other and with the human dimension, producing configurations of meanings and discourses that we can interpret as stories” (Iovino and Oppermann 7). Iovino and Oppermann term this characteristic of texts as a “material narrativity” which can be disanthropocentric (Iovino and Oppermann 8). On the other hand, Maran in his article “Biosemiotic Criticism: Modelling the Environment in Literature” presents an account of how the sphere of literature has expanded through various modes of textual practices that range from the paper-based to the multimodal in the digital world. He raises questions as to how literary texts can relate with the environment and whether they unleash “new sign-creation processes in the human-nature relationship” since it works across multiple codes to create a “poetically structured representation” (302). With ecocriticism functioning as a “*metacontextual*” domain (“Biosemiotic Criticism” 299; emphasis in original), the sphere of literature incorporates biological and environmental collectives as well. In doing so, it provides the base for the existence of culture. In modelling biosemiotic criticism, Maran cites Lotman, Simpkins and Veivo etc., to argue that literature is a semiotic system that is “entangled with reality”

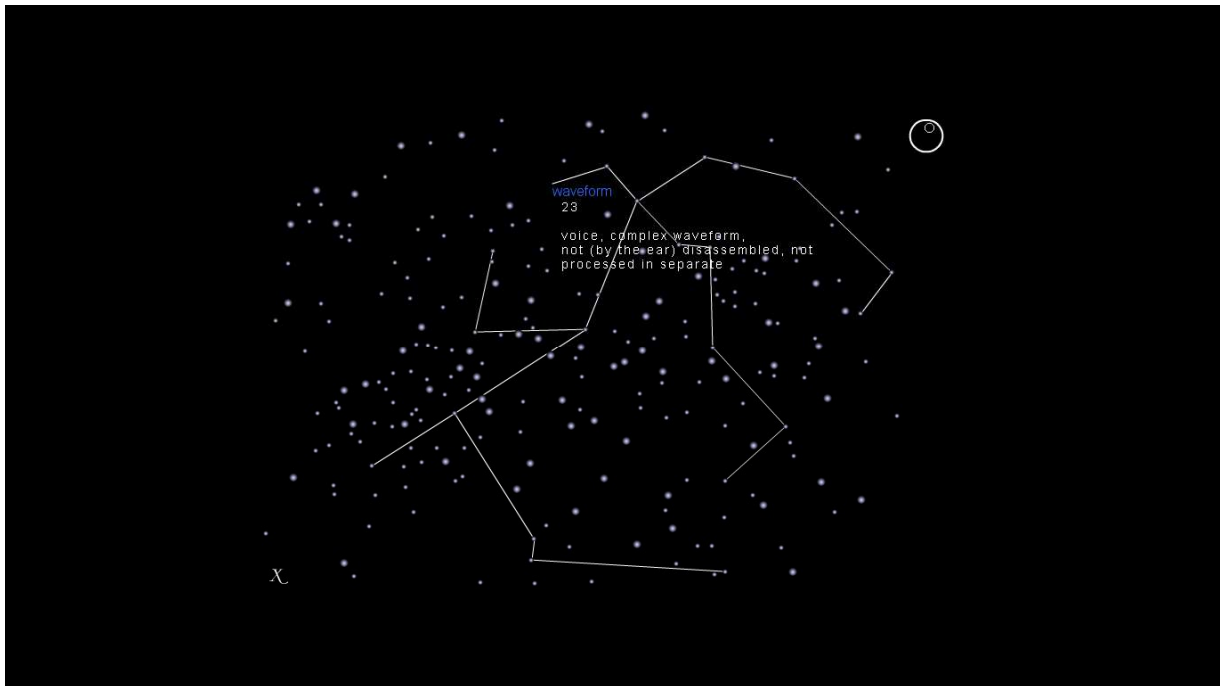
(“Biosemiotic Criticism” 303). Through this entanglement, it interbraids the semiotic capabilities of the natural environment with human perception through three forms of semiotic modelling, i.e., zoosemiotic, artistic and linguistic modellings. These modellings link up the human *umwelt*, writing and the world at large. However, while his argument opens up the scope for engaging bio-semiosis within literary analyses, contrary to my stance his argument targets an anthropocentric perception of nature while inviting the Anthropos to rethink biological semiosis and its engagement within literary hermeneutics and theory.

As stories inviting a re-scrutiny of biosemiosis, climate fiction and science fiction have played a pivotal role in defining non-human actants and their imbrication with the human race. From Jules Verne to Atwood, ecological concerns have been an important theme of literary works. This is because these texts focus not only on the future but on a “*futurity*” (Shaviro 9; emphasis in original) that continues to haunt the present wherein capitalist modes of production are complicit with the manner in which the ecological network is impacted. In his work *No Speed Limit: Three Essays on Accelerationism*, Steven Shaviro focuses on the repercussions of the nexus between capitalism and the exponential growth of technology. His argument is that since technology is a component of the global neo-liberal capitalist machinery, its use should be accelerated and intensified until it is radically altered. Since capitalism cannot be transcended, it can be modified intrinsically by a plethoric growth of technology and the merger between technology and humanity. In doing so, he advocates the idea that science fiction talks about unfolding possibilities in a future that cannot always be guaranteed or accurately predicted. Therefore, the science fiction of today could most probably be the science of tomorrow. This is because in a world of hyperobjects, the chains of causality have become increasingly “complicated and intermeshed” (Shaviro 15) in ways that cannot always be comprehended by humans at a given moment in time. Hyperobjects would continue impacting the world across eons and well outside the horizon of human understanding and awareness. That is why Shaviro clearly states “We cannot imagine such circumstances in any direct or naturalistic way, but only through the extrapolating lens of science fiction” (14). Science fiction leaves the future as always-already open as it extrapolates “elements of the present” (Shaviro 9).

While a detailed overview of all works of science and climate fiction is not possible here, some works deserve to be mentioned in this regard. Atwood’s trilogy *Oryx and Crake*, *The Year of the*

Flood and *MaddAddam* published from 2003 to 2013 along with Kim Stanley Robinson's Young-Adult fiction such as the *Mars Trilogy* and *Forty Signs of Rain* remains concerned with the exploitation of natural resources and their impact on human existence. At the same time, it is not only white western writers who are concerned with the environment. Helon Habila's *Oil and Water* presents neo-colonial expansion and environmental exploitation by oil companies like Shell in Nigeria, albeit from a stringently anthropocentric angle. Similarly, the Native American Thomas King's *The Truth about Stories: A Native Narrative* talks about the material aspect of stories to suggest "other ways of imagining the world, ways that do not depend so much on oppositions as they do on co-operations" so that, at the end, stories are all we are (King 110- 122), both materially and discursively.

While paper-based literary texts engage in a thematic representational praxis to present alternative Eco-performative accounts of human and non-human agentive becomings, hypertexts like *V: Vniverse* and *Grammatron* enact non-human agency through a code-based exchange of information, as links connect with each other in a rhizomatic model. Algorithmic codes interact with graphic, phonic and aphonetic codes that constantly displace the AI and human consciousnesses in a digital landscape. Once more, while a detailed overview of all digital texts does not fall within the ambit of this theorization, nevertheless, it is pertinent to mention hypertexts like Jackie Craven's *In the Changing Room*, Amerika's *Filmtext* as well as David Clark's *88 Constellations for Wittgenstein* function as ludic texts, replicating through ecological metaphors, the enactment of various non-human agents. These agents are code-based phenomena, engaged in multivalent forms of inscriptive practices, with different forms of digital consciousnesses that radiate out of the infosphere. This digital infosphere, in itself, is rhizomatic, both in its structure, processuality and enactments, functions as a "Writing-Machine" ("Interfacing") offering not only "alternareading choices" ("HTC Hypertextual Consciousness") but also alternative interpretative choices. Thus, digital texts technologically displace all antinomic binaries between man and nature. This is because even as the human readers click the links, the results are always beyond their control. For instance, in *V: Vniverse*, the text is structured like a constellation of stars with the onscreen instructions informing the reader to either touch a constellation with the cursor or enter a number. The text that opens up seems to be disconnected, like Borges' *The Garden of Forking Paths* or Julio Cortazar's *Hopscotch*, opening up inscriptions and shapes that disappear. A screen shot below from *V: Vniverse* illustrates this point.



Screen Shot 1 from *V: Vniverse*

As material-discursive phenomena, hypertexts engage multiple inscriptive codes that float along different circuits to connect with the human as the human brain endeavors to decode them while following a non-linear pattern. In this way, these texts create the illusion that they are operating according to the human will, all the while exceeding both human volition and understanding which accounts for “The Social Power of Algorithms” (Beer 1). In his article of the same title, David Beer posits that algorithms, being material-discursive modes of enunciation, allowing us to see their role in technologies of power and “a part of broader rationalities” (2) as they become incipient to the ways the social world is ordered. As technology proliferates, the social functions of algorithms also expand. Ranging from the production of knowledge to altering our ways of seeing the world, digital literary texts, through their engagement with algorithms, gain an expanded social function as they are imbricated in social power dynamics. In these contexts, digital literary texts could lead to polar opposite results, i.e., they would either support the status quo or displace it. My theorization is fully aware of these ideological pitfalls; however, it also acknowledges the fact that in suggesting alternative notions of human and nonhuman embodiment and their wide-ranging modes of enunciation, digital texts can remain interventionary as they interact with human mental models, generating a diffractive way of seeing the processual material world.

What the selected paper-based and literary texts suggests is that all phenomena, ranging from comets to spoons and software are a part of the evolving ecosphere, that is no longer confined within the Cartesian grid of normativity. Monstrosities, textual codes, biological and chemical codes and algorithms all function as codes, and material-discursive entanglements as their performative enactments articulate altering conceptions of both man and nature through multivalent modes of semiosis. It is these multivalent modes of semiosis that textual ecology presents through its Eco-performative accounts of human and non-human agentive intra-actions.

CHAPTER 4

Stories and the Vital Narrative Agency of Matter

The discussion in the previous chapter had concluded with the argument that all material phenomena in the ecosphere are also discursive phenomena, engaged in a code-based mode of information exchange across limitrophic boundaries. Mattering takes place through this material-discursive tango, as objects, ranging from atoms to larger bodies, come to be seen as composed of multiple actants engaged in different modes of transcorporeal intra-actions through which phenomena acquire forms and make other phenomena take recognizable forms through differential becoming. Through this differential becoming, they become objects of knowledge that are also involved in the production of knowledge. Thereby, these agents operate as material-semiotic actors engaged in a code-based mode of exchange across pervious boundaries. This chapter proceeds to elaborate these material-semiotic engagements specifically as depicted by literary texts in order to explore how the traditional balkanization of nature and culture is subverted which inaugurates a re-evaluation of human and non-human intra-actions while challenging anthropocentric exceptionalism. For instance, through *The Windup Girl*'s projection of Emiko's humanness as a futuristic *Homo Sapiens*, or *Grammatron*'s enactment of the fluid embodiment and malleable algorithmic sexuality of Abe Golam, and the healing genetic osmosis initiated by Blue Ishi in *The Heirs of Columbus*, the selected novels depict how the human no longer has fixed edges. It functions like an extended phenotype whose range goes beyond the physical perimeter of the body (Dawkins 1; *Natural-Born Cyborgs* 4). Beginning with a delineation of textual ecology, this chapter moves towards substantiating its theoretical aspects with the help of the selected literary texts that foreground the altered conception of the human that is transcorporeally bound within the textual circuit of material-discursive phenomena. This permits a thinking and enunciation across bodies and bodily natures (Alaimo 2) that de-essentialises the onto-epistemological construction

of all bodies and binds them in an immanent intimacy from which they cannot extricate themselves. The argument then proceeds to extracting inferences of how various textual ecologies interact with other ecological systems.

4.1 The Code and Textual Ecology: Literary Inscriptions of Immanent Intimacies

Morton, while aligning his argument with Dawkins', states that the material world and the changes shaping it, be they through global warming or technical advancements, are all intimately linked within the mechanics of one's own embodiment as a human. "Evolution unfolds in my genome as my cells divide and mutate, as my body clones itself, as one of my sperm cells mixes it up with an egg. As I reach for the iPhone charger plugged into the dashboard, I reach into evolution, into the *extended phenotype* that doesn't stop at the edge of my skin but continues into all the spaces my humanness has colonized" (*Hyperobjects* 27; emphasis in original). This illustrates that the human is not just a multiplicity but a mutating "micromultiplicity" (Deleuze and Guattari 29). The One, be it a human or non-human, is ceaselessly transforming from one form of an assemblage to another. This is reminiscent of an important insight provided by Dr. Moriarty in the BBC One's episode of *Sherlock* called "The Abominable Bride":

That's all people really are, you know, dust waiting to be distributed. And it gets everywhere. Ugh. In every breath you take, dancing in every sunbeam, all the used-up people. . . . People, people, people! (Gatiss and Moffat)

If people and dust are so inextricably linked as they deterritorialize across multiple boundaries, the human, like Nature and Ecology, becomes a questionable ideological and aesthetic construct. The human is ecological, intimately bound in a radical immanence (*Hyperobjects* 105-108) that makes dust and people, humans and non-humans co-extensive.

The question that may be asked at this stage is how all this is connected with textuality and in particular, with textual ecology and Eco-Performativity. If humanness is a malleable construct, how ought we to read human performativities? In order to arrive at inferences pertaining to these major questions, the idea of the code as a material-discursive entanglement needs to be elucidated further through its operational mechanics in a textual space.

Since both humans and non-humans have limitrophic boundaries imperiled within an extensive network of information exchange, they are all codified phenomena re-inscribing the human that is experiencing an onto-epistemological makeover because “the recent convergence of biotechnologies, information technologies, and nanotechnologies reconfigures the human and its others so rapidly that it is already overloading the circuits of the human imagination.” (*Meeting the Universe* 27). This rewriting of the human further reinforces the idea that inscription is not just alphabetic writing but a fluctuant open-ended textual enactment. As a result, embodiment is also an ongoing textual practice as human and non-human actants both within and without the human body interact in unpredictable ways. Textual ecology focuses on these embodied textual practices and their modes of exchange. This textual ecology is not bound within the human, nor does it centralize it. It is a compendium of multiple inscriptions or codes that are conversant with each other outside human intentionality. Taking the code as a disanthropocentric mode of material-semiotic enactment operating across multiple bodies, this chapter elaborates the multiple operational mechanics of textual ecology and develops the theorization of Eco-performativity. Since ‘ecology’ is the “provisional origin” (Spivak xii) of this argument, I subject it to *sous rature* or erasure in order to liberate our human thoughts from the constraints of any “originary” (Spivak lxi) command and its imposition of debilitating truth values. When the concept of ecology is subjected to erasure, it paves the way for a textual openness through a transdisciplinary route and opens up ways for the reconfiguration of human and non-human performative practices.

So far, my argument has established the fact that within the circuit of textual ecology, texts are phenomena and phenomena are texts as their meaning-making practices coextensively operate across the nature/ culture divide. Operating within this circuit, literary texts work across multiple socio-cultural and natural assemblages which may be highlighted through the equation given here:

$$\underbrace{\text{Materiality} \leftrightarrow \text{social practices} \leftrightarrow \text{nature} \leftrightarrow \text{discourses}}_{\text{Ecosphere}}$$

(Eq. 2)

These mutual intra-actions across social, material and discursive assemblages are by no means as linear as equation 2 suggests; however, this equation does indicate how different mutually co-

constitutive textual planes interact in the rhizomatic space through a code-based exchange. Within this rhizomatic space literary texts operate through two main mechanisms of code-based exchange: representation and interpretation as they bring multiple disciplines together. For instance, Vizenor's *The Heirs* interweaves ideas ranging from genetic modulation, Native American cosmology, White American historical accounts of Columbus and techno-futurism to present a multi-perspectival projection of a future where the dismantling of the human brings down gendered and racialized hierarchical arrangements of human bodies. This implies that texts interact with genetic material or with sub-atomic particles chemically or physically and are, consequently, interventionary in the sense that they permit an invention and re-invention of the categories of the human and non-human. We can cite the example of *Grammatron's* Abe who is both human and nonhuman as his desires traverse across a digital landscape. Abe raises questions regarding our own humanness as well as the nonhumanness of Abe. This conflicts with traditional narratives that have provided accounts and stories about the creation of nature and culture as separate categories from an anthropocentric perspective. This segregation is exemplified through the bifurcation between the human and the nonhuman as presented in religious works like *The Bible*, with evil being defined through the beasts called Leviathan and the Behemoth, etc. On the other hand, Jewish traditions do offer therianthropic representations of the righteous as well, i.e., humans with animal heads, with the proviso that in the "messianic kingdom" the human will be reconciled with the animal within (Agamben 2-3). Similarly, Euro-American writers in the Romantic and Modern periods, while aware of the benevolent aspects of Nature or of its indifference, never displaced their own central placement in inferring the connections between Nature and culture. Even in fables where animals speak, for instance in Kenneth Grahame's *The Wind in the Willows* or the works of Beatrix Potter or C.S. Lewis, to name but a few, the overarching perspectives remains anthropocentric with the animals leading lives like humans. In such a backdrop, I argue that texts may be used to present counter-narratives from a disanthropocentric perspective both in their material and thematic enactments thereby changing the "rules for the implicit and explicit logics of stories" (*Simians, Cyborgs and Women* 106) in order to "underpin new relations with the world" (*Simians, Cyborgs and Women* 19). In this way, stories go beyond the legitimating scientific grand narratives that impose absolutes on the inter-relationality of phenomena existing across the social, material and symbolic planes. In re-writing narratives and stories, the epistemological lens shifts as a consequence of which both mattering and discourses undergo a shift. Textual practices such

as those of literary narratives thus present the world as a parallax gap wherein fluctuant ontologies and epistemologies generate multiple truths. Not only are these truths non-aligned with each other, they also interact with each other to suggest new possibilities regarding human and non-human agencies. For instance, numerous literary texts have reinforced the human/nonhuman binary. The examples are too numerous to count, but include novels like *Watership Down*, *The Metamorphosis*, *The Cares of a Family Man*, *Black Beauty*, *The Wind in the Willows*, *Mrs. Frisby and the Rats of NIMH*, *The Call of the Wild*, etc. All of these novels fall in the category of Xenofiction, i.e., stories narrated from the perspective of nonhuman entities where the human world is either cruel or indifferent to the nonhumans or is completely absent from the main plot. However, at the same time, despite reinforcing this binary, the same texts also articulate the complex enmeshment between the human and the nonhuman where either some humans are animalized or some nonhumans are humanized. These texts thereby present the porousness of the human/nonhuman binary and offer two truths that both coincide and diverge as in a parallax gap. The question that arises at this point is that how do we read the intra-actions of these stories with the material world.

In order to address this question, I have taken the liberty of blending two antipodal outlooks, i.e., object-oriented ontology (abbreviated as OOO) and onto-epistemology. OOO postulates the idea that it is not the human subject who articulates the theory of vibrant matter since matter's vital agency lies well beyond the human onto-epistemology that connects knowing and being, i.e., 'knowing-in-being' which lies at the core of the onto-epistemological outlook. This 'knowing-in-being' stems from our awareness of our entanglements with vitally agentic matter. The reason for this theoretical merger is that I cannot stop being human and at the same time, I cannot stop being a compendium of nonhumans, thus the merger between OOO and ontoepistemology allows me to know myself in terms of being a co-extensive human and nonhuman in a state of ongoing becomings. The human is immanently intimate with matter which is a "meaning-bearing field of agency", engaged in semiotically breaching the nature-culture divide. Matter's "more-than-human semiotic" ("Natural Play, Natural Metaphor, and Natural Stories: Biosemiotic Realism" 70-71; emphasis in original) exceed the anthropocentric representational praxis. This is also illustrated by James A. Shapiro, in his pivotal paper "DNA as Poetry: Multiple Messages in a Single Sequence" as he elaborates how simple DNA codes produce overlapping codes with different "reading frames" as different bacteria and viruses are generated. It is for this reason that Dawkins, Hansen, Deleuze and Guattari, Haraway and Alaimo use terms like translation, decoding, biogrammar,

program, etc., to interpret how different phenomena behave, interact and get modified thereby implying that material phenomena are in fact inscriptive enactments of semiology that are capable of being translated. This transcoding across codes is evinced in *V: Vniverse*. As I sequentially type the numbers 87, 88 and 89 in the hypertext, a constellation appears on the screen. This constellation vaguely resembles a sperm or a tadpole and with the entry of each number reveals the following inscription:

A bee lives 28 days, that vaginal cadence,
nose swollen in honey.

The tree rings itself with another ring each year
and in its hollow live the bears – a world

tree closes, Major

and Minor, they circle the hole

dipping honey from the hollow

at the tilted top

of the northern world, Polaris, star. (Jaramillo & Strickland 87-89)

In the extract quoted above, we notice that the hypertext's algorithms generate different verses scattered in random order across the hypertextual canvas that is arranged in specific patterns replicating constellations in a sky map. *V: Vniverse* is a vital universe where the numbers influence algorithms to generate poetic inscriptions that speak about the enmeshments between bears, bees, stars and humans, all reproducing through each other as the reference to the vagina indicates in conjunction with the image of the constellation depicting the sperm. Each flows into each. Similarly in *The Heirs*, Blue Ishi's genes travel across bodies imparting the blue glow of healing to other bodies. All bodies, black, brown and white, abused and distorted, etc., flow into each other, transcoding each other's genes to produce a conception of the human that is not ontologically exclusive. Wendy Wheeler supplements this argument by saying that all life is open-endedly semiotic and therefore interpretative. Deleuze and Guattari concur that matter is an articulated

code that “possesses both form and substance” (41). Therefore, any change in form must necessarily bring about a change in its material-semiotic articulation, consequently changing the construction of the world and also the way it is perceived. Textuality, therefore, is an articulation, an interpretation as well as an enactment. Changes in matter inform changes in semiosis, therefore, our epistemological perceptions and matter are interconnected as the examples given above from the selected texts elucidate. Material permutations exceed the confines of the sign, producing semiotic practices which are interwoven with environmental factors as *V:Vniverse* illustrates both thematically and algorithmically. Thus, material bodies become textual, not in the sense of inscription as posited by Derrida, but in the sense of Deleuze and Guattari, thereby allowing textuality to become material-semiotic. Resultantly, the ecosphere does not only remain a rhizomatic space of material entanglements, but also a textual space where all phenomena display a semiotic-agentic materiality as both human and nonhuman phenomena engage in a code-based information exchange. The algal baths and the plagues in *The Windup Girl*, the clipped nails of children harvested for their genetic codes as well as the bones of Columbus in *The Heirs of Columbus* are rewriting the materiality of all bodies entwined in their circuit, thus depicting that the human, in itself, is a textual enactment, composed of numerous non-anthropomorphic elements. As ailing and disabled bodies in *The Heirs of Columbus* heal, the autonomous actions of their altered genes reflect that “Living matter – including the flesh – is intelligent and self-organizing, but it is so precisely because *it is not disconnected* from the rest of organic life.” (Braidotti 60; emphasis added). Similarly, in *The Windup Girl*, as Emiko’s body gains superhuman strength, overriding its genetically encoded amnesia, her body enunciates the interconnections among the organic and the inorganic components of her body that exceed the wills of both herself and her makers who had initially programmed her. The novels clearly show that these bodies are not disconnected precisely because codified information undergoes a deterritorialization as it enters new organic and inorganic assemblages which create their own operational syntax. In a similar manner, Braidotti argues that life is characterized by energy flows of codified information across “complex somatic, cultural and technologically networked systems” (190). Thus, if

Life = code-based information exchange

And

Code-based information exchange = textual, semiotic practices

Then

Life = textual, semiotic practices

(Equation 3)

In this sense, life is a semiotic chain which continues to signify (Deleuze and Guattari 112) as is exemplified by the selected texts. These literary texts suggest that if ecology is a processual and extensive interrelation among assemblages which articulate themselves in different forms, then ecology is also a textual web that needs “a much wider conception of a universal cosmic, evolutionary and open-ended, developmental semiosis” (“Natural Play” 71) that is unending. Novels like *The Heirs of Columbus* and *The Windup Girl* therefore emphasize the need for a “more subtle awareness of the complicated web of dissonant connections between bodies” which could “enable wiser interventions into that ecology” (Bennett 4), keeping in mind that non-human phenomena constantly exceed human semiotics. Human writing, being a semiotic technology and a sub-set of a code-based information exchange, also becomes a part of this semiotic exchange. Literary texts in all forms thereby function as concept-generating semiotic technologies, bound together with digital and biological forms of connectivity, both thematically and materially. Since their material-semiotic enactments are so diverse, the selected texts, in togetherness, suggest that there is no single form of textual ecology since the ecosphere comprises of multiple, semiotic and a-semiotic textual ecologies.

One may question as to how my idea of “textual ecology” is different from the Derridean idea of the infosphere or Deleuze and Guattari’s idea of the mechanosphere. The reason for this usage is that the idea of the infosphere that Derrida presents is anchored within an anthropocentric view of inscriptive activities, a space of information exchange, hence a discursive space. On the other hand, the idea of the mechanosphere does indeed establish the foundation of the operational patterns of textual ecology. However, the mechanosphere is a very broad material-discursive space. Its dynamics can be discussed from a variety of lenses such as the biological, physical, chemical, social, cultural, etc. that can provide an incredibly vast area of exploration. The mechanosphere is a compendium of innumerable assemblages functioning in ways that may not be defined in terms of textual inscriptions alone. The idea of textual ecology, on the other hand, is strictly delimited to delineating the code-based textuality and inscription within which literary texts, both paper-based

and multi-modal, can participate. Textual ecology presents the mechanosphere from a strictly textual perspective rather than from any other scientific angle. In addition, since it is concerned with textual practices, i.e. the encoding and decoding of meanings in the material and discursive domains, textual ecology focuses on the representational practices of literary texts as they engage in suggesting disanthropocentric accounts of non-human and human performative practices within the ecosphere. An example of this is Abe Golam who decentralizes his human author, Mark Amerika, in *Grammatron* while Emiko displaces the human (including her author and the characters in the novel) by generating a Posthuman normativity where altered human bodies are presented as the new norm. These works present a view that contests normativized anthropocentrism, displacing the humanness of their authors and their readers. Through the imbrication of such texts, textual ecology focuses on the reading, writing and interpretation of narratives as they intervene within the ecosphere to reflect multiple possibilities of human and non-human transcorporeal intra-actions that escape binaristic enclosures.

Textual ecology foregrounds the concept that all entities are *umwelts* or ecological systems patterned on a cybernetic mode of exchange within them, particularly with the development of cyborgian science where the organic living and non-living entities absorb each other. Haraway terms the *umwelt* as an “orchestra” (*Simians, Cyborgs and Women* 206) as the world is coded in cybernetic systems. If ecology is also cybernetic in practice, it allows osmosis with the digital world so that digital texts (hypertexts and cybertexts) also function as participants within this material-discursive orchestra, inducing irruptions within the onto-epistemological patterns of the contemporary world. This is reflected in *V: Vniverse* and *Grammatron*. These digital literary works disband the idea of ‘Being’, presenting it in terms of endless osmotic activities across onto-epistemological boundaries as the section entitled “blood2”, quoted below, exemplifies in *Grammatron*. These entities have a mobile Digital Being that bleeds almost chromatically into other bodies, disbanding their exclusive standings.

Golam had evolved his own brand of programming, one that he developed by relentlessly cracking into the always embedded Sorcerercode that informed all Digital Being. This unique programming aesthetic evolved as the end result of an out of control, forever-in-flux, motordesire that magnetized him toward hypermedia constructs like the one Cyn had created called Ms. A. The motordesire was always gnawing at the edge of his

consciousness, bleeding consciousness, he called it, and now that Cyn had successfully absorbed the various packets of sorcerercode that he had sent out into the electrosphere, Golam was grooving on her intuitive ability to bring him into her aesthetic domain, the one that was codenamed Prog23.

A similar chromatic bleeding across embodied boundaries is evinced in *V: Vniverse*. When we enter the number 192, a Mobius strip emerges on the screen, suggestive of the perennial deferral of coincidence as it clearly mentions, “the never failing pattern, the refrain/ that cannot stop” (Jaramillo and Strickland). This unstoppable refrain moves from one assemblage to the next, from the algorithmic to the alphabetic, to the graphic and the thematic, all forms of meaning-making practices displacing each other while remaining immanently intimate. This consolidates the idea that the digital landscape is also an experience very much like the physical world, engaged in an ongoing exchange. These texts enact the exchange among different codes of information within a networked ecosphere. These texts are more than inscription and action. They are more than writing because writing re-folds all explorations of human and non-human agency within the anthropocentric epistemological enclave. In comparison, texts like *V: Vniverse* and *Grammatron* subvert the status of humans as subjects, thereby exceeding the anthropocentric discursive enclosure. They are codes encapsulating the ideas of notation, the said, the unsaid and also of the trace as different codes interact across multiple *umwelts*.

Another important component of these intra-actions is the decoding of these intra-active articulations, i.e., their literacy. Science, math, philosophy and literature are all means of decoding or interpreting these enactments. Literary narratives also participate in these interpretations as they decode non-human agentic mechanism and re-code them through alternative accounts regarding human and non-human interactions. Therefore, their stylistic, thematic and material enactments create specific views of the world (*Simians, Cyborgs and Women* 135) as they operate along the rhizomatic plane of “linguistic and semiotic practices, writing technologies, and circuits of readers” (*Simians, Cyborgs and Women* 114). In this way, the literacy of literary texts have traditionally concretized narratives regarding the material world.

Keeping this in mind, it may be inferred that the literacy of texts also enables them to re-ask questions and to generate new stories. Stories are thus at the core of the construction of the social realities that we inhabit as they help science create objects of research. Stories can also help

humanity to re-see non-human and human performative practices. This is precisely why Vizenor foregrounds the creativity narratives of Nanabozho, the compassionate tribal trickster who created the earth, “had a brother who was a stone: a bear stone, a human stone, a shaman stone, a stone, a stone, a stone.” (*The Heirs* 5). Here, the stones and humans share the same origin and are bound in a material narrative of kinship. These are the stories required to construct new realities that de-anthropologize the human and disband the nature/culture binaries which have been historically complicit with the inferiorization of non-white humans and the nonhuman environment. These public stories enunciate the fact that we are enmeshed bodies in states of becoming. Since the “mediations of public stories are multiple” (*Simians Cyborgs and Women* 88), they modify humanity’s epistemological inheritance. Reading and interpretation go hand in hand in reconfiguring “possible worlds” (*Simians, Cyborgs and Women* 4). In participating in textual ecology, the literacity of literary texts addresses Haraway’s question as to how one can develop reading and writing practices that articulate and contest for the material world in all its intra-active enactments while challenging all absolute categories. This argument also fleshes out Maran’s claim that

“The expansion of the sphere of literature may be mapped in a number of ways, for example, in terms of the medium involved (e-books, audio books), in terms of the characteristics of particular text types (blogs, tweets, multimedia texts), in terms of authorship (which has considerably expanded, since publishing is now within the reach of a very large number of people), and so on. These processes, as well as the interaction between different text types and the hybridization of text types, blur the lines between literature and non-literature, textual and non-textual phenomena. From this standpoint, the inclusion of the environment in literature, in terms of the subject matter of literary works and its recognition in literary theory, may be regarded as a step in the process of expanding the sphere of textual material. (“Biosemiotic Criticism” 298)

This textual material operates as the “crossroads” of “information ecology” (Fuller 2-3) wherein texts function as tools for establishing “the entanglement of ideas and other materials” (*Meeting the Universe* 29) so that their agentive mechanisms may be analysed. This extracts the idea of a text out of a strictly anthropocentric domain and makes it operant at the limitrophic boundaries among the different domains that constitute the ecosphere.

4.2 Multivalent Textual Ecologies

One of the criticisms that can be launched against the idea of textual ecology is that it appears to be uniform and therefore homogeneous. I contend that this argument does not strictly hold water because it implies that, as textual practices, all material-discursive phenomena lose their distinctive identities. A text, a stone, a human organ, an animal, etc., would all become mired in uniformity. This kind of uniformity is not only impossible but also illogical. Albeit, all material-discursive phenomena are indeed different kinds of active, codified phenomena, they do retain some form and articulation. In the words of Hannes Bergthaller, “*self-organization* is predicated on *self-limitation*” (40; emphasis in original). While his argument is primarily focused on living creatures, a similar kind of self-limitation is noticeable in non-living phenomena as their different material states indicate. One can find an affirmation of this point even in the selected texts. For instance, in *V: Vniverse* while graphic, algorithmic and alphabetic codes blend to create specific meanings, the retention of specific shapes by the interconnected numbered coordinates of the text suggest a certain stability in format and meaning despite an underlying, continuous exchange of codes. Similarly, even as several digital consciousnesses within *Grammatron* are engaged in a form of digi-morphing, i.e., changing forms by altering their digital programming, they are nevertheless crossing the boundaries of their Digital Beings, as they extract entitled “blood 2” quoted earlier illustrates. Every one of the consciousnesses speckling the canvas of *Grammatron* “morphs into any number of so-called voices permeating the virtual environment” (“I”). Yet, it is this fluidity of the ‘I’ that remains the self-organizing self-limitation of Digital Being despite its limitrophic margins. The digital consciousnesses in both hypertexts do not remain isolated from the external environment. In intra-acting within themselves and with other phenomena not only do they undergo alterations at the quantum level, they also undergo a “semiotic growth of meanings” which requires “a wider semiotic understanding” (“Natural Play” 70). This semiotic growth is an integral feature of both human and nonhuman phenomena in *The Heirs of Columbus*. While Stone Columbus, one of the descendants of Samana and Christopher Columbus, is named after the stones pebbling the landscape in order to enunciate a human-nonhuman kinship, one notices that in naming him Stone after an entity which is supposedly devoid of consciousness, the stone is not anthropomorphized. As a matter of fact, it is Stone Columbus’ humanity which is recast as he conducts shamanistic rituals along with mongrels, stones and bones, accessing their “bionic

memories” (*The Heirs* 153). In this way, *The Heirs* veers away from traditional animal fables that invariably centralize the human. The novel proclaims that even hemlock is a repository of memories as it shared recipes with the shamans. What Vizenor is breaking down here is the logocentric constraint within which the semiotics of material things are assumed to be confined. In a manner of speaking, even as these entities retain their physical contours, their traverse through temporal and cultural narratives presents them to be in a state of semiotic becomings, thereby leading to an altered understanding of mattering. These semiotic becomings require an anti-dogmatic interpretation, since things are never entirely exhausted by human semiotics or language owing to their onto-epistemological multiplicity.

As phenomena display an onto-epistemological multiplicity, this implies that they have ontologies that are not fixed. Due to this malleable ontology, phenomena yield a non-inscriptive writing that traverses natural-cultural barriers as one witnesses in *The Heirs*, *V: Vniverse*, *Grammatron* and *The Windup Girl* depict. These novels address the question of how one can get across *speech impedimenta*. Through its immanent intimacy with the human, matter establishes the knowledge structure that “impels human knowing” (Cohen 4). Human knowing and material becomings are interconnected in textual ecology since matter and stories are co-extensive and co-constitutive. Although science and religion also decode stories of mattering, however, the selected literary texts exceed even the boundaries of thought imposed by science and religion as they foreground mattering and its narrative agency. If one were to closely observe the “textual performance” (Cohen 7) of the flowing digital bodies in *Grammatron*, we notice that they disband the ontological enclosures within which human bodies (digital, and by extension, material) are bound. They are “. . . encoded with a magic sorcerer-code called Nanoscript” (“Book of Creation”). The Nanoscript breaks through the “cracks of the functional code that had standardized Digital Being in the electrosphere” (“Consciousness”). Therefore, in changing how bodies are to be articulated, *Grammatron* enunciates, i.e., it enacts through performance and statement, new stories regarding what it means to be fluidly embodied beings. Texts like *Grammatron* enact the transit across the human and non-human phenomena that is characterized by a re- and deterritorialization of signs or codes through which narratives and stories become participants of the textual ecological network.

Cohen elucidates the role of stories by stating that stories are living, parasitical entities which do

not depend on language to be communicated. The merger of multiple codes of representation in *Grammatron* and *V: Vniverse* reflect this fact. As narratives “full of futurity”, they operate as “a mysterious and not wholly predetermined site for the emergence of vitalities: a connection-making and a worlding” (Cohen 36). Through his neological term ‘worlding’, Cohen implies a process that entails the creation of the world through material and discursive narratives. Stories like *The Heirs*, *Grammatron*, *V: Vniverse* and *The Windup Girl* participate in this worlding as they imbue phenomena with life. This leads to the emergence of the human through “‘material agencies’ that leave their traces in lives as well as in stories. These narratives exceed anthropocentric boundaries thus articulating a world that is not reducible to human existence alone, while emphasizing a “discomforting intimacy” (Cohen 36) that we share with the nonhuman. They intensify the embeddedness of the human within the nonhuman. It is in foregrounding this intensification of the relations between the human and the nonhuman that a story, in its material inscriptions, can exceed anthropocentric confines.

What the selected texts in this study suggest is that stories lead to the emergence of vitalities within the textual space of the ecosphere as they interpret the worlding and mattering capabilities of human and non-human phenomena. These literary narratives define and re-define human reality, evading absolutisms. What they depict is that language and stories are not human since language has its own agency and resistance, at times falling short of encapsulating the materiality that it defines. By interconnecting meanings, these works show that textual ecology is an archive of “intermixed strata” (Cohen 21) where stories de- and re-territorialize meanings both thematically and stylistically making us question our social constructions as humans and our further categorizations on the basis of gender and race. Textual ecology stresses on the idea that just as material forms are not enclosed, neither is language; resultantly, stories are not enclosed either. They interweave the “word and the flesh” (Kirby qtd. in Alaimo 41) sedimenting multiple meanings. Stories and narratives are thus materially and discursively interwoven in the ecological web and since texts themselves are multivalent, both materially and discursively, their encoding, enactment and decoding of meanings acquire different operational modalities. If ecology, as Latour affirms in *Politics of Nature*, is about “tangled beings, forming rhizomes and networks” (24) that dismantle nature as a concept and “redistributes its agents” (*Politics* 21), literary narratives and texts do not only represent the re-distribution of the agents, but also the agentive mechanisms of those agents. At the same time, they themselves become agents through their own

thematic and material “geochoreography” (Cohen 188) thus engaging in cross taxonomic participations across the “textual matrix” (Cohen 157) of the ecosphere. Thus, literary texts are not mere “representations” but “participants” engaged in the “presencing” and foregrounding of nonhuman agencies (Cohen 188). This presencing and foregrounding of nonhuman actants is done in multiple ways by literary texts. In *The Windup Girl*, megodons and algal baths are created to cater to the urgent energy requirements of Thailand in an age when the world has used up all of its petroleum resources and organic food has become a heavily-taxed, dying and rare commodity. As human beings hack the DNA of all living and non-living entities, the so-called mutants that are generated reflect new articulations of mutating ecospheric interactions where it is the human who stands as a disposable commodity. As a human being decodes genetic and atomic codes of all living and non-living things, the very syntax of materiality and its discursive configurations are altered. Twenty third century Bangkok is a city whose very survival is precarious owing to the threat of the monumentally risen sea waters that are kept at bay by dikes and pumps that are activated by “kinetic power” coming from rather enlarged, but unreliable models of “kink-springs” (Bacigalupi 7). This petroleum crisis, also known as the “Contraction” (Bacigalupi 17), has led scientists and profiteers to look for alternative sources of organic energy, such as from algae immersed in “nutrient cultures” (Bacigalupi 30), etc. In foregrounding the genetically enlarged megodons that have augmented strength, the novel does not only depict the “genehacked” animals (Bacigalupi 9) that provide energy for running machines like conveyance lines and fans, it has in effect ‘presenced’ their energies as they pump energy into a manufacturing plant in an age when the petroleum-based economy has collapsed. This energy is foregrounded when one of these megodons goes berserk and wreaks havoc, breaking down the winding spindle to which it was harnessed. Similarly, in its depiction of the algal baths cultivated for coating kink spring filaments to enhance the output of energy while preventing its unnecessary dissipation, the novel ‘presences’ the inherent agency of the algae participating as nonhuman entities at the service of the humans. However, once these algal baths putrefy and unleash a virulent plague, we see these nonhuman phenomena being foregrounded in all their agentic autonomy that cannot be contained by humans.

These nonhuman actants have their own vital narratives, an inherent “storyworld” that interbraids the readers with the internal environment of the text, connecting worlds both within and without the narratives (James x). These novels flag “the world-creating power of narratives that catalyzes an imaginative relocation of readers to a new, often unfamiliar world and experience.” (James xi).

This transportation of the reader into the storyworld of nonhuman actants is instantiated in *Grammatron*. Once we share Abe Golam's consciousness, while randomly clicking hyperlinks to be rhizomatically drawn into his electrospheric presence, we are imaginatively relocated in a virtual world where our own consciousness is enfolded within the text's digital consciousness. As we begin "interfacing", we are one with the "writing machine" as we are personified in a code that is constantly becoming 'me' and 'you. We operate as socially networked avatars so that the code "is in you the same way it is in me. We are its pure medium of fiction" ("essential db"). We become digital beings, i.e., the collective 'I' traversing within and outside ourselves. As readers, we become fluid, merging into the code; we behold the reader relocating into an unfamiliar world, not only of *Grammatron* but also of the self, where the 'I' no longer remains a unitary 'I' but becomes a diffusely interfaced awareness. Thus, texts like *Grammatron*, through their inscriptive processes, highlight the participation of the human intellect within textual ecology, as the narrative depictions of the material world are entangling both the readers and the characters.

Literary texts do not only connect the readers with the material phenomena that they represent within themselves, they also connect the readers with other ecospheric assemblages. As texts encapsulate nonhuman agencies, they also allow human minds to decode these practices. Thus, even as texts are semiotically linked with the textual practices of other nonhuman conglomerates, they interweave the human with these conglomerates on a mental or noumenal level as is evinced in the textual practices of hyper- and cyber texts. Matter matters through its code-based interactions which are then encapsulated by literary texts, only to be decoded by the human mind. If matter's inscriptive enactments shift, the texts reflecting those practices will also lead to a shift within their interpretation. In this way, an entire perspectival shift may be induced in the way human and nonhuman interactions are to be perceived.

The selected texts, through their participation in textual ecology, enunciate this relationship between the semiotic abilities of both texts and material phenomena. Terming this relationship as "ecosemiosis" Maran states this intra-action between "environmental properties and material structures for semiotic properties" endeavors to establish conceptual tools to link "material strata" with discursive ones ("Semiotization of Matter 145). This linkage is of multiple types, with some linkages taking place in the living and organic world, others taking place specifically in the animal world and yet others taking place in the digital world. However, by no means are these semioses

exclusionary. Emiko's altered body and its consequent material and semiotic potential augurs a new mode of evolution for *Homo Sapiens*. The connection among diverse entities such as polar bears, bees and stars, illustrated in *V: Vniverse* as mentioned earlier, reflects the interpenetration of social, cultural, digital and graphic semiosis. What these texts reflect is that while material entities produce non-linguistic stories, literary stories grant them a "narrative enfleshing" (Cohen 92) through an "unexpected alliance" among literature, science, philosophy and the material world. Through this enmeshment, material-discursive phenomena convey narratives, functioning as "matterphor(s)" (Cohen 4) that allow materiality to take shape across the natural-cultural divides, Emiko, Abe, the bones, the stones, the albatross, Arthur, Artemis, Ursa, Cyn and the code all morph into a rhizomatic narrative of fusion. The selected literary texts foreground how different forms of mattering takes place through a differential becoming. In them, metaphors function as a representation of this becoming through establishing a relation between disparate material-discursive phenomena. In these texts, a metaphor becomes a matterphor when it is evinced in the differential becoming of the material realm.

Therefore, through matterphors, these literary texts illustrate how different modes of bio-semiosis and digi-semiosis take place. A matterphor is a code-based movement producing an open-ended meaning-laden world interfaced together. Textual ecology is all about stories interfacing with other stories, semiotics blending into other semiotics to create alternative narratives. The selected literary texts themselves function as assemblages within the rhizomatic network of textual ecology owing to a variety in their inscriptive and representational praxis, as the ensuing discussion elucidates.

4.3 Generative Becomings and Creative Expression in Literary Texts

Through the transformative capabilities of their representational abilities, literary texts reflect how different material forms emerge as they establish natural-cultural enmeshments. While digital literary texts blend different codes, i.e., algorithmic, graphic and alphabetic, to participate within these enmeshments, paper-based literary texts encode nonhuman agency through their representational and thematic enactments. As material-discursive phenomena, literary texts participate in what Oppermann has termed as the "generative becoming" ("Stories from the Thick of Things: Introducing Material Ecocriticism" 453) so that "we can read the world as matter

endowed with stories” (“From Ecological Postmodernism to Material Ecocriticism” 21). This realization, Oppermann continues, “speaks of a new mode of description designated as ‘storied matter’, or ‘material expressions’ constituting an agency with signs and meanings.” (“From Ecological Postmodernism” 21). Paper-based literary texts thus, participate in the production of such epistemic configurations that continually interact with human systems, forcing them to re-think ecology as a non-hierarchical new collective of vibrant matter and ideas. This role of literary texts within the ecological web is clearly observed in two novels *The Wind-Up Girl* by Bacigalupi and *The Heirs of Columbus* by Vizenor. Through their specific textual practices, these literary texts interact with storied matter, showing human and nonhuman semiotic interactions in all their dynamic variety and the interface of multiple stories across all boundaries.

As discussed earlier, in *The Windup Girl*, as bacteria and viruses mutate and communicate with each other in unforeseeable ways, new beings come into existence. Synthetically created creatures like the carnivorous Cheshire cats, megodonts and the Wind-Up people also speckle the altered ecological landscape. These creatures do not merely function as agentive hyperobjects within the altered ecological web, they also reflect the decentering of the human as humanity continues to hack into the evolutionary mechanisms. Through these altered interactions, these entities acquire “eloquence” telling an ongoing “onto-tale” (“Storied Matter” 2). This novel, thus, draws our attention to “matter’s storied dimension” (“Storied Matter” 2) as it cavorts with the poetics of DNA and nanotechnology. The novel is not merely a “site of narrativity” (“Material Ecocriticism: Materiality, Agency, and Models of Narrativity” 83; emphasis in original), it also elucidates the narrative potential of nonhuman phenomena. In addition, it also demands an altered account of human and nonhuman performative practices in the ecosphere.

What is significant about this novel is that it does not merely reflect the “narrative agency” (“Storied Matter” 3) of nonhuman agencies, it also shows how corporeal matter is no longer inert in opposition to the supposedly human free will. Even human embodiment is a site wherein nonhuman entities perform so that the idea of the human is revealed as a mere construct that is constantly being deterritorialized and then re-territorialized. Bacigalupi attempts this decentering of the human through his depiction of the artificially created New Humans or wind-ups, particularly, the beautiful wind-up girl, Emiko. Emiko is paradoxically the ‘nonhuman individual’ around whom the narrative revolves. The reason why I have used the term ‘individual’ is that

despite having been manufactured as a substitute woman, or a mechanical geisha, she displays an emotional, moral and intellectual awareness that makes the readers forget that she is not completely human. She is a sex toy whose very genetic code has been programmed to respond to the physical needs of the humans she serves, a macabre allegorical travesty of all forms of racial and sexual slavery. Emiko's features are Oriental. She has been created as a high-end Japanese android geisha. Her racial specifications make her an exotic commodity, simultaneously desired and denigrated by men at a brothel in Bangkok. Compelled to dress up like a prostitute, she is subjected to a public humiliation. Desirous of gaining freedom, she cannot help wondering how she is able to pull through the torment. She muses, "If her body, this collection of cells and manipulated DNA—with its own stronger, more practical needs—is actually the survivor: the one with will." (Bacigalupi 34). Her owners know exactly how to make her body thrum to their tune as they strip her of both clothes and dignity. She is seen as a joke and called a "freak of nature transplanted from her native habitat, trained from birth to duck her head and bow." (Bacigalupi 34). She is molested in every brutal way possible. Her anatomical similarity to women, however, contests her standing as merely a sentient windup doll. She is also any woman who is exoticized because of her biological makeup. It is not her aspect of being a toy alone that men covet, it is also her femininity that makes her so vulnerable. In their minds, she is also a replica of the feminine whose nonhuman standing makes their inhumanity kosher. She is not an Anthropos, but a copy and brutalizing copies does not, in their minds, amount to a moral depravity. Her nonhuman body is colonized by masculine desires, and they extract the maximum services out of her just as they would out of any exoticized escort. Since the colonization of her body is an imitation of the way an oriental woman's body has been overly sexualized and marginalized by glocal patriarchal structures, what little dignity and love she finds is in the person of Anderson Lake, the white man working as a gene prospector. She is unique for him, a genehacked entity running on windup energy. When he takes her away from a brothel where she works for long periods of time and pays her fines, she feels safe with him. This recalls the benevolent agenda of European colonial powers who justified their encroachments on indigenous resources by packaging and marketing it within the rubric of European humanism that has been complicit with the cruelest exploitation of the natives of the colonies (Mignolo 121, Chatterjee 73). The emancipation of the Oriental woman was a component of this humanism, as the colonized women were made to believe that they could be free of exploitation with the help of white patriarchal humanist ideals. Emiko's exploitation is also reflective of the complexity of a

coloured or colonized woman under the white colonial masters. While they ‘protect’ her from her own patriarchal structures, they make her the object of their own desires and needs. In Anderson, it is hard to disentangle his corporate interests from his budding love for Emiko and Emiko knows that “he will always be natural, and she will always be New People, and she will always serve” (Bacigalupi 238). This raises rather crucial questions pertaining to the ethics of treating nonhumans. While humans have always condemned bestiality as well as other forms of inhuman treatments of animals, the novel draws our attention towards the ethics of treating nonhumans that neither fall in the category of animals nor of the humans, such as robots and viruses, etc. In a world where humans are creating androids that desire to be human, like Sophia Bot and where men are marrying holographic animes through virtual reality marriages (Jeffrey), this novel does not only demand a recognition of a disanthropocentric personhood but also of a disanthropocentric ethics. In this regard, Wenneman argues that if human agency is to be ascribed to all actants, human and otherwise, ethics would not be anthropocentric in its “ethical dimension”, rather it would be anthropocentric “by necessity” (73) because we are assigning human agency to all nonhuman actants. In the light of my reading of *The Windup Girl*, I take issue with Wenneman’s idea of ascribing human agency to a vast array of nonhuman actants because it recentralizes the human. Agency is not necessarily human. Therefore, I argue that if we open up the anthropocentric enclosure by placing the human within a broader democratic collective that is characterized by enmeshments and animacies then ethics would no longer remain anthropocentric since it does not re-centralize the human. My understanding is that since ethics stems from our human experience as biological beings, it transmutes into our moral humanity. Therefore, if our sense of our humanness recognizes our immanent intimacy with the nonhuman, even our biological experience of our humanity would shift. With such a recognition, Emiko would no longer be the Other, an ersatz copy of the human. Emiko would be one of us and vice versa. This understanding of our biological experience as a collection of nonhuman agentic components would thus allow human ethics to encapsulate the biological and the non-biological humans.

This argument is further substantiated by the fact that what Emiko does not merely dismantle her own nonhuman ontology, but also the ontology of the human. Considered to be an abomination, and a “transgression against niche and nature” (Bacigalupi 107), Emiko is the anormative superhuman who becomes more humanly relatable as the novel progresses. She embodies, a powerful human substitute whose DNA would be used to create reproductively fertile wind-ups

that could ultimately replace the human. In so doing, the very notion of the human is deterritorialized and consequently, the idea of human ethics is opened up to include nonhumans. The novel's vocabulary participates in this deterritorialization through its meaning-making practices:

She is nothing but a silly marionette creature now, all stutter-stop motion—herky-jerky *heechy-keechy*—with no trace of the stylized grace that her mistress Mizumi-sensei trained into her when she was a girl in the crèche. There is no elegance or care to her movements now; the telltales of her DNA are violently present for all to see and mock. (Bacigalupi 36-37; emphasis in original).

At the onset of the story, Emiko is an enslaved doll; at the conclusion, she becomes a prospective replacement of the human race as she meets a genetic engineer called Gibbons who promises that just as *Homo Sapiens* had replaced the Neanderthals, the disease immune New People would replace all disease-prone humans. As a prime genetic engineer, Gibbons, who could resurrect an extinct species with his expertise in genetic manipulation states:

He sighs. "I cannot change the mechanics of what you already are. Your ovaries are non-existent. You cannot be made fertile any more than the pores of your skin supplemented."

Emiko slumps.

The man laughs. "Don't look so glum! I was never much enamored with a woman's eggs as a source of genetic material anyway." He smiles. "A strand of your hair would do. You cannot be changed, but your children—in genetic terms, if not physical ones—they can be made fertile, a part of the natural world." (Baciagalupi 339)

What is to be noted in this passage quoted from the text is that although the narrative had begun with the normative depiction of human beings, the idea of the human is gradually displaced at the conclusion. Emiko, who is introduced as a nonhuman, moves along an endless continuum from the nonhuman towards the human (albeit a sexualized and racialized human) and subsequently towards the human plus. The text makes the boundary between the human and the nonhuman limitrophic as the inhumanity of man further destabilizes the construct termed as the 'human'. The privileged and natural humans in the text submit to various forms of bestial instincts as they enjoy

Emiko’s sexual humiliation in public, making her comply with their perverted sexual fantasies. Their bestial pleasures compel the readers to re-visit the humanity and ethics of these humans on two grounds: first, their inhuman subjugation of Emiko; secondly, by raising questions regarding the humanness of humans like Anderson and Hock Seng, the supervisor of the algal baths. Anderson and Seng capitalize on their affiliations with the global corporate sectors, such as the western calorie companies that meticulously colonize genetic resources and appropriate them so that they could make more profit in the global market that was desperately looking for alternative energy resources. However, Anderson’s benevolent humanity, as an indicator of his humanness, is as tenuous as is Emiko’s nonhumanness owing to her sensitive humanity. Thereby, in both of them the human and the nonhuman are displaced since humanity no longer remains an ethical privilege of the human. Therefore, what the novel demands is an “interpretive leap” (Zapf 53) that unravels the semiotic strata of evolution. Novels like *The Wind-Up Girl* operate in a manner that is textually ecological; they reflect the tension inherent within absolutist categories like the human and non-human. Creatures like Emiko and the algal baths are primarily representations of the gap between reality and scientific accounts, thus presenting “the parallax of *ontological difference*” (*The Parallax View* 10; emphasis in original) that rearranges the human/nonhuman binary. Within the Enlightenment ethos, humans and nonhumans have hierarchically been arranged as is shown below

$$\text{Human} > \text{Emiko} > \text{animals} > \text{plants} > \dots > \text{molecules} > \text{atoms} >$$

Eq. 4

Within the parallax of ontological difference that frames textual ecology, equation 4 is revised as shown below:

$$\text{Human} \neq \text{Emiko} \neq \text{animals} \neq \text{plants} \neq \dots \neq \text{molecules} \neq \text{atoms} \neq$$

Eq. 5

What becomes significantly clear through the comparative analysis of equations 4 and 5 is that *The Wind-Up Girl* subverts the Great Chain of Being without incorrectly equalizing all entities imperaled within it. It presents them all as protean assemblages, which, despite their differences, display a semiotic agentic materiality. The novel does not only consider semiosis in terms of

human language, but also represents this language in terms of materiality as it constructs the world around us and foregrounds autonomous nonhuman agency. Two particular events in the novel serve as examples of this nonhuman agency. As humans in *The Windup Girl* search for alternative energy sources (both bio-chemical and kinetic) for day to day use, the depiction of viruses and genetically altered food and plants is also significant. With colonial overtones interweaving with posthuman ones, the novel depicts a factory created by Anderson who is a white man. This factory engineers kink-springs that could theoretically store larger quantities of kinetic energy. Anderson is an inhabitant of a world where global genetic research companies like AgriGen, PURcal and SOYPro have metaphorically colonized the genetic world in the desire to produce massive amounts of food. However, in the post-Contraction time, this genetic engineering has backfired since the new species of food, sold at cheaper rates to the masses, have replaced all natural food. Bangkok is an ideal locale for continuing with this mode of genetic colonization since its dominant Environment Ministry has a seed bank that is hidden from all genespotters and generippers (Bacigalupi 43). The genetic research companies send out these genespotters and generippers as scouts. The novel's first chapter presents the fruit that contemporary man takes for granted as an exotic commodity in an impending era when entire countries such as Finland and India have collapsed due to the relentless exploitation of their respective biospheres. Anderson is looking for a new species of un-tampered fruit called *ngaw*. The *ngaw* is taken as a savior, "a return from extinction" (Bacigalupi 5). Thailand and its vibrant landscape has the same allure for the hackers of the genetic code as the British colonizers had for the colonized lands. Only this time, it is the genetic landscape and its subaltern genetic materials which stand being exploited. Bangkok's markets reflect a revival of natural "potatoes and tomatoes and chilies that fill the market, all piled in such splendid abundance, an array of fecund nightshades that no one has seen in generations. In this drowning city, all things seem possible. Fruits and vegetables return from the grave, extinct flowers blossom on the avenues, and behind it all, the Environment Ministry works magic with the genetic material of generations lost." (Bacigalupi 5). This fecundity offers a lucrative opportunity for a form of bio-colonialism because the Thai government is able to re-activate un-mutated genes and produce food that has not been genetically tampered with. The nonhuman, biological actants that these food items function as, reveal a mode of vital agency that by companies like AgriGen and SOYPro wish to regulate.

At the same time however, while both genetically modified and natural fruits and vegetables

continue to influence the entire post-Contraction economic system, human engineered viruses like the “genehack weevil” and “blister rust” (Bacigalupi 4) work across human and nonhuman assemblages causing vegetation and humans to die in droves. Bio-engineered plagues such as cibscosis in post-Contraction Bangkok are just as dangerous as the bubonic plague as people start coughing blood while the surrounding vegetation dies with them. Not only that, the syntax of these viruses continues to change, both with and without human intervention, thus going beyond human regulation. The biological and the mechanical come together as the genetic code of algae is hacked and modified to extract energy. Anderson sees the profitable opportunities all of this opens up:

The DNA samples of the genehacked algae, their genome maps on solid state data cubes. The specifications for growing and processing the resulting skim into lubricants and powder. The necessary tempering requirements for the kink-spring filament to accept the new coatings. A next generation of energy storage sits within his grasp. And with it, a hope of resurrection for himself and his clan. (Bacigalupi 32)

As it reworks the “overdetermined” (*Simians, Cyborgs and Women* 134) categories of nature and culture, the novel operates as a new site of “resistance to the dominations of history” (*Simians, Cyborgs and Women* 137) breaking down boundaries. The novel flags the idea that nonhuman phenomena are no longer mute as they enunciate an altered genetic syntax. Emiko also reflects this undoing of nonhuman muteness. She is manufactured and nurtured in a crèche or a zoological daycare and her DNA is modified and programmed to respond to human needs regardless of her volition. In addition to this, she is also a mechanical entity. As the DNA of the wind-ups is altered, their engagement with the world around them also shifts. Immune to plagues like cibscosis, Emiko and the wind-ups have better survival chances than humans who die in droves. Despite being nonhuman, Emiko is anything but passive, very much like her systems that overheat or the viruses that do not discriminate between humans and plants.

Twenty-third century Bangkok is a site where nonhuman actants constitutively undergo a constant deterritorialization through which they enter varying relations with the exterior space as they move along different trajectories. These actants exceed their constituent properties and other hierarchical structures, as was illustrated in equation 5. Even as the genetic and molecular codes of all material-discursive phenomena are shown to be aleatory within *The Windup Girl*, not only do they articulate their own meanings and stories through a non-human semiosis, the representative praxis of human

semiosis and narratives is altered on the thematic front. The novel clearly addresses “the agency of material bodies participating in a broad spectrum of relationships with other forms of agentic matter on many scales” (Phillips and Sullivan 5). Emiko, the algal baths and the fruit called *ngaw* are “actants, acting agents, interveners” (*Politics* 8) whose act of speaking acquires a novel dimension. Their speech is in effect their changing materiality which the novel illustrates. If speech is exchange through code, actants like Emiko and the Cheshire cats also participate in this exchange and hence are no longer *alagon*. They, thus, display not only an “agentic materiality” (Phillips and Sullivan 3) but a semiotic agentic materiality. As they foreground this semiotic agentic materiality, novels like *The Windup Girl* become agents of change as they interface with the material narratives of other ecospheric phenomena. Therein lies their novelty. They no longer speak for humans, they also enunciate with the nonhuman. The semiotic material world cannot be confined. Within the space of textual ecology, novels like *The Windup Girl* and *The Heirs of Columbus* function as material-discursive phenomena which enables them to present alternative onto-epistemological narratives of how the world is to be constituted.

Vizenor’s *The Heirs of Columbus* also focuses on the meaning-making mechanisms of nonhuman entities such as talismans and the elusive bones of Christopher Columbus. As it reconstructs the history of the relationships between the Mayans and Columbus, not only do the colonizers and the colonized become imbricated within a co-extensive interactive web that blurs the racial boundaries, it also blurs the distinction between speech and silence, human and the nonhuman. However, while *The Windup Girl* focuses on genetic material presenting it as an inscriptive system through which information is exchanged bio-semiotically, *The Heirs of Columbus* adds digi-semiosis within its portrayal of how nonhuman phenomena engage in textual practices. This is illustrated in the scene in which the Native American heirs of Columbus approach the courts to retrieve their stolen medicine pouches and the bones of Columbus. The deconstructive nature of the work manifests itself as it further dismantles the boundaries between reality and shadows, animals and humans, materiality and discourse, science and myth, etc. As evidence is presented in the court, the material evidence in itself becomes “stories in the blood” (*The Heirs* 64), and animals are witnesses. Through this, they add an extended spatio-temporal dimension in the novel’s presentation of nonhuman agency. While in *The Windup Girl*, phenomena like the algae, the windups and the viruses are also hyperobjects whose after effects will only be established in the long run. Vizenor’s narrative is unique because it does not create a futuristic fictional historical

account. *The Heirs of Columbus* visibly moves between the past and the present, thus opening up extended temporal scales for the analysis of nonhuman actants in relation to their human counterparts. A rock, a stone and a bone become storied matter which “densely enfolds nonlinear time and rebuffs suppressionary histories, suggesting that things emerge multiple times, intensifying and adapting rather than engendering definitive breaks” (Cohen 41).

The bones of Columbus contain a “genetic signature” (*The Heirs* 8) which multiplies and permutes in various forms so that by altering the material constitution of the world, the very discourses imbricated in those material phenomena are transformed. The Mayan stories that the novel depicts as being embedded in nonhuman phenomena contained the secret of survival and only the powerful shamans could make them talk and extract them from their radical alterity. This subverts the notion that animals and other nonhuman phenomena have a poor or absolutely no apprehension of the world, whereas the human instantiates itself as an absolute because it is “world-forming” (*Of Spirit* 48). By binding nonhuman phenomena like stones in a space of “absolute indifference” (*Of Spirit* 20), the humans confined them to a space of complete and irreducible muteness. The impact of colonization, therefore, did not only alienate the colonized indigenes, but also further marginalized the animal and nonliving phenomena. By equating the animal with evil and an unrestrained instinctive life, the colonizers’ techniques of discipline believed in domination over the animal as well as over the animal within the human (Bahri 22). The nonhuman and the animalized human were therefore disciplined through an epistemic silencing, a silencing that Samana the handtalker and Memphis the therianthrope panther rebut through their fluid embodiment.

This is what the Heirs of Columbus and Samana foreground as they present an alternative vision of the multiple languages that the world spoke, through dreams, dead entities, silent hand talking, genetic exchange, molecular variations, and alterations across the digital realm, etc. For them, the “bear codex” with its “nonesuch genetic code, was the civilization and the power of resurrections” (*The Heirs* 25). Stories, thus embedded within atoms and genes, become survivance narratives that exceed not merely ethnocentric barriers but also logocentric ones. In the novel, the Shroud of Turin and the bones of Columbus talk and “can be heard at the seams” (*The Heirs* 26) because of the way they traversed the narratives of history across all eras. This reminds us of Cohen’s argument when he states that stones have spoken to man across centuries as in the case of Stonehenge and the black stone of the Kaaba, thus, displaying their power to generate stories. In Vizenor’s *Heirs*,

bones and stones display a similar story-generating capability, as humanity and nonhuman phenomena dance with each other through a semiotic mediation. As the landscape becomes syntactic and semiotic, the vocabulary of its representation also becomes matterphoric. Vizenor's novel shows how these textual strata across the material and discursive domains are in a state of constant deterritorialization depicting "a cache of aggregated story" (Cohen 98) that runs through human and animal blood, gems and sub-atomic particles. These phenomena function as "living textbooks . . . crisscrossed with interobjective calligraphy" (*Hyperobjects* 88) that dismantles anthropocentrism as it foregrounds the mutual material-semiotic embeddedness of the human and nonhuman.

Vizenor's *Heirs* depicts the differential interplay between sign and matter so that they remain in a state of pure difference. Through its use of representation and allusions, it allows ideas to jump from one plane to another, like quanta within an atom. Its depictions of the shamanistic experience indicates a blending of the material world with the multilayered semiotic circuit of the mind that exceeds material and temporal boundaries. Similarly, through the novel's depiction of therianthropy, i.e. of humans transforming into animals and vice versa or occupying the liminal existence of a mongrel, Vizenor presents a world that is materially and discursively in a state of flux. By placing this flux in the space of pure difference that the ecosphere has become, all material-discursive phenomena engage in different kinds of textual practices that permits a revision of the man/nature binary as it suggests alternative accounts of human and nonhuman agency. Through the technology of writing, i.e., through alphabetic inscription, novels like *The Heirs of Columbus* engage in a form of cybernetic engagement with other forms of stories to create new entanglements of ideas and perceptions. That is why Felipa, "the trickster poacher" (*The Heirs* 50), could hear "bears and human voices in the medicine pouches; she was worried that he might open one and reveal the sacred stories in the city" (*The Heirs* 52). Stories, through their operations in a space of immanent difference, i.e. the ecosphere, exceed any anthropocentric control. Vizenor's depiction of matter being in a fluctuant state also suggests how categories such as human, animal, matter, thoughts, ideas, etc. are not always-already prescribed in terms of an ontological fixity.

One way in which the novel exceeds this ontological fixity is by functioning as a trickster figure in itself as well as through its representation of tricksters and mongrels. Life is imbued with

“creation” (*The Heirs* 6) that creates meanings through semiotic exchanges. These semiotic exchanges include bio-semiosis and zoo-semiosis as the novel shows animals talking, even those who are mongrels, inhabiting a liminal stage between the human and the animal. In addition, unlike the Christian tradition where the conversion of the human into the animal is taken as a punishment, here, therianthropy embraces the animal as a co-extensive mode of human existence. Thereby the novel subverts the associations between evil and animality and presents the animal as an alternative mode of existence. For instance, the mongrels are no more evil than the genehacked algae, nor can the Cheshire cats be called to be evil in *The Windup Girl*. In so doing, *The Heirs of Columbus* makes one reflect on human-centered ethics and moral absolutes, making one ponder over a more inclusive form of ethics that undoes the alterity of the nonhuman. As Truman, a character in the novel, declares, “We are created in stories, the same stories that hold our memories and thousands of generations in these stones” (*The Heirs* 14)

Stories become enmeshed in other stories, both material and discursive; they become memory storage bodies. In becoming such supplements, stories in *Heirs* blend Western and non-Western epistemes, making them percolate into the blood as “blood histories” (*The Heirs* 6), written codices, animal parts with totemic powers, genes, etc. The novel displaces the distinction between spoken and unspoken stories as Samana weaves stories through movements of her hand and her body. Her body thus becomes a narrative site as it encodes and articulates meanings that exceed all epistemic limits. In her case, silence gains a signifying modality, a story that articulates itself in “A-signifying semiological systems” (*Chaosmosis* 4) that create meanings outside the human *logos*.

However, the novel’s dismantling of binaries between silence and speech, human and nonhuman, is not simple. The novel inverts the creativity narratives and presents mongrels as creators of man thereby questioning the supposed supremacy of man. This is supported by the mongrel Caliban’s following statement:

"Pure Gumption, we inspired the human to write, was a shaman mongrel who glowed and healed with her paws and tongue. She attended a priest, pawed the lonesome, licked the sick back to health. She liberated and healed the animals and birds that were held in humans, silent prisoners in bone and blood." (*The Heirs* 18)

In this creativity narrative, humans and nonhumans, the phenomenal and the noumenal become one, as they exchange narratives. The past and the present operate as rhizomatic texts as the narratives move across time, and just as Cohen has highlighted, stories move through stones. In Vizenor's narrative, stories move through all matter and this movement is non-linear. As ecological interactions become nonlinear, so do historical narratives, which through the stories told by stones and bones, articulate a silent history that resists official historical accounts. The Heirs of Columbus carry Columbus' genes and the ancient "stories in their blood" (*The Heirs* 4) which commune with all other stories which the anthropocentric linguistic enclosure has banished into silence. Vizenor's *Heirs* suggests that subalterns can indeed speak and be heard across all times. The Moors, the Spaniards, the Mayans, thus become imbricated in a narrative that rhizomatically weaves through myth and fact (*The Heirs* 34), decentering any authoritative historical account and its interpretation. Thus encoding and decoding, writing and interpretation become participants in the ongoing semiotic web that establishes the idea of textual ecology.

The Heirs' further consolidates this idea through its depiction of digi-semiosis in the courtroom scene when the meaningfully named judge, Lord, is presiding over the case regarding the theft of sacred artefacts. As the Native American 'people', who include therianthropic shamans and miscegenated beings called mongrels, plead their case, the Heirs of Columbus invite Lord to see the 'real' in a computer simulation. The simulation is important in Vizenor because it undercuts the history of dominance and the Manifest Destiny that granted the United States of America the right to dominate other cultures and lands as sanctioned by God. This destiny entailed the erasure of tribal histories through genocides and forced acculturation. That is why in his prose work *Manifest Manners*, Vizenor defines simulations as alternative histories created in the absence of a tribal real that project the stories of survivance over the dominance of the white race and its surveillance of the Native Americans (4) This simulatory circuit establishes an interface among Lord, the digital world and the sacred moccasins that function as a material archive of Native American stories. These moccasins are "better worn than told to show the heart of tribal realities" (*The Heirs* 84). As Lord interfaces with the moccasins and the artefacts, the memories in the moccasins are digitally translated into the simulated world in the computer which further absorbs Lord's consciousness so that she proclaims, "I have memories of being so close to the real world" (*The Heirs* 86). Through this form of digi-semiosis, it is not only the judge who catches a glimpse of the material memories of Native American culture and its harmonious enmeshments with

animals and plants, the readers also see that the traces of a long forgotten past, which have been repeatedly deleted and written over in the palimpsest of history, are reactivated. As new codes are entered in the computer, the world of “shadow realities” (*The Heirs* 87) is created which challenges the absolutist version of history generated by the white colonial masters. What is foregrounded is the supposedly primitive and non-empirical history of the Native Americans that deflects the empirical truths of Western thought that have been guilty of epistemic violence and erasure. Through digi-semiosis we see a collaborative hermeneutics, i.e., literacity, across humans, ancient artefacts, stories, cultures and codes, all coalescing to undermine the linear historical narratives imposed by the western colonizers and also undoing the muteness of nonhuman phenomena. These phenomena “interobjectively” operate as “*nonlocal*” hyperobjects (*Hyperobjects* 1; emphasis in original). Moreover, in the digital world, racial boundaries are blurred as Lord, a white woman, blends into the shadow reality of the digital world where she sees a version of history that disrupts the distortion and erasure of official historical narratives. Through an immanent intimacy, she participates in this experiences as a result of which her race is no longer a hindrance to her inclusion in a nonwhite experience. Her whiteness is no more a barrier to this inclusion since her mental codes are altered through her enmeshment with an alternative vision of reality. The parallax digital world recalibrates the ontological existence of racial enclosures thereby initiating an epistemological shift in the manner in which bodies are read and sorted. What we notice is that while computers and digital technology have been taken in terms of irrefutable empiricism, the same technology is used to dismantle this empiricism as a character called Chaine vehemently argues, “Stone and the heirs nurture the view that stories are in bones, stones, trees, water, bears, air, everywhere, and stories have natural rights to be heard and liberated” (*The Heirs* 78). Lord offers a contrapositional view as she says, “Stones and air have a hard time being heard, much less being represented.” (*The Heirs* 78). As the narrative dismantles the boundaries between the virtual and the real, the stone does end up representing itself. The novel, thus, enacts a digital inscription of reality that moves between the noumenal and the phenomenal world as the judge enters the “virtual realities” (*The Heirs* 84) through a computer which simulates a real life version of the material world. She enters a shamanistic realm where “The real is the simulation” (*The Heirs* 86). Animals such as the bear and the otter animate this world as “a new shadow code” (*The Heirs* 87) allows the computer shaman to blend the simulated reality with the video evidence of how the artefacts had been stolen. The video in itself is a story, that needs both science and myth to be

decoded (*The Heirs* 69) as it presents alternative evidence of reality. Stories thus function as tricksters, since through computer simulations they deterritorialize the accepted narratives of the material world and history while the judge herself becomes enmeshed within the virtual-reality of the simulated world. She declares, “I have no memories of being so close to the real world.” (*The Heirs* 86). The real world here is a compendium of multiple assemblages, both virtual and real in a state of constant intra-actions and new becomings. Thus, the shadow code presents a mode of narrative exchange that goes across mythical, historical, organic and inorganic assemblages, dismantling hierarchies in the manner reflected in equation 5, inviting a shift in the way nonhumans have been made to perform.

Textual ecology thus interconnects open-ended narratives as it questions anthropocentric exclusivity that has led to the silencing of all entities that are non-human and in stereotyping them as passive. *The Heirs*, while imbricated in this textual ecological space, dismantles the breach between the *logon* and the *alogon*. Through its unique animistic practices, this novel does not allow the animal to be folded within the human thereby creating “a shifting, autonomous, articulate identity that cuts across the human/nonhuman distinction. Here, human speech is not understood as some unique faculty, but as a subset of the speaking of the world.” (Manes 18). The world speaks in multiple codes implying that speech is also a code that can engage in osmosis with other codes. The language of chemistry, mathematics, algorithms and biology attests to this mode of osmosis amongst different “sensible signifiers” (*Of Grammatology* 10), as the courtroom event in *The Heirs* signifies. Ecology speaks in multiple languages, both semiotic and a-semiotic, and even through a multilayered semiotic assemblage like a computer code. In Vizenor’s novel, one beholds how the material reality, the dreamworld and computer simulation become multiple, fluctuant assemblages within the space of pure *differé*nce or the ecosphere. These entities lose both their ontic and ontological fixities. Since the ontic, i.e., that which can be seen, is dependent upon the line of sight, what one beholds is that this dismantling of ontologies also demands a reciprocal shift in epistemology. The ontologies shift because the material-discursive assemblages, i.e. the dream world which lies in the noumenal realm, the material word and the digital world shift. However, while it reflects the multiple nature of the world that we inhabit, it also shows that all these assemblages are in a state of mutual co-constitution through their performative practices.

4.4 Digital Texts and Textual Ecology: Interventions within Performative Environmental Debates

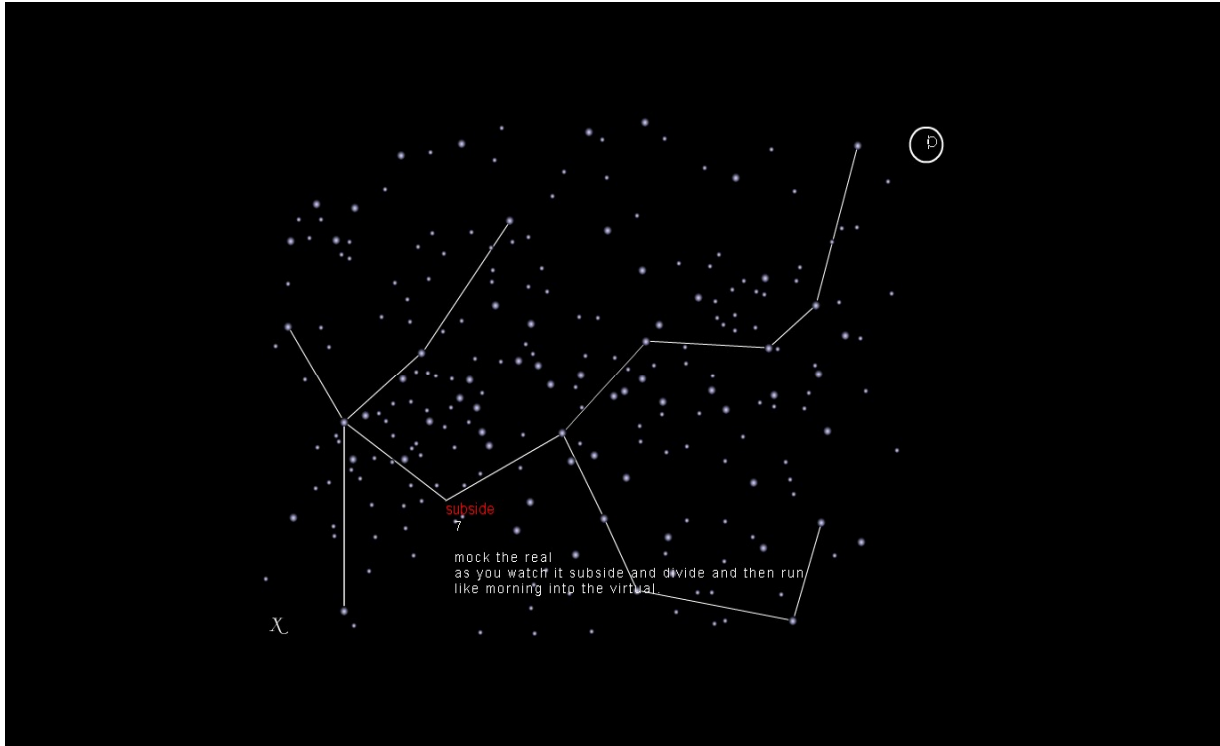
While paper-based novels reflect intra-actions and interactions across multiple assemblages through their representational praxis, multimodal digital texts do not merely represent these practices through their content, they enact them through multivalent codes that are cybernetically linked with each other. Hypertexts like *V: Vniverse* by Strickland & Jaramillo and *Grammatron* by Amerika use multiple semiotic codes that do not only interface with each other, but also with the vibrancy of their material environment, and the human mind. These texts are thus composed of multiple semiotic codes, which are both stagnant and animated; not merely overlying each other but in a processual reconfiguration as they construct and modify themselves in the course of their communications, crossing over “into each other at, beyond, or before a certain threshold.” (Deleuze and Guattari 33), functioning as multiplicities of a changing nature. It appears that multivalent codes are strung together to create meanings that are both material and discursive enactments. These texts, therefore, perform through their ludic permutations (Elias 38) allowing the readers to become absorbed within the narratives as they click links. The meaning-making mechanisms of these texts traverse boundaries, such as those between the reader and the author and the AI narrator, between the digital environment and the environment exceeding its confines, all are cybernetically linked as embodied technologies or actants co-extensive with each other. As Amerika writes in *Grammatron*, man has “all the heuristic qualities of an algorithmic computer” so that a “fluid narrative” is created that both materially and discursively exceeds what Michel Foucault has termed as “the parallelepiped” (*Archaeology of Knowledge* 26) of the book. Hypertextual consciousness, as Amerika has shown, both in *Grammatron* and *Filmtext*, links up with a multitude of material-discursive networks through articulation and representation, as well as through enactments. The computer-mediated environment is a space where a hyperrhetorical performance takes place which is primarily an exchange of codes that results in an interface of the narratives that each code generates. In enacting this hyperrhetorical performance, this environment subverts the gulf between syntax, semantics and materiality, presenting a material narrative. Since a society is structured to meet certain performative goals through the reiteration of those performative practices in textual form, once textuality exceeds the realm of the human, the

iterations of its diverse material enactments become diverse. Each enactment is singular and unique, suggesting that the world is not just self-replicatory but open-endedly self-modifying. This is evinced in *V: Vniverse* where cosmic shapes and wave forms transmute into insects which further morph into the head of a bull, depending upon the order in which the reader enters the numerical code. The text is brimming with references to Philomel and Sweeney, chromosomes, electrons, space-time theory, water-birds, etc., all coalescing into myths and poetry by Homer and T. S. Eliot, subsequently careening through the Arthurian legends in order to enact a blending of multiple narratives across disciplinary, historical and material domains. This is precisely what Eco-performativity demands i.e., a refusal to reiterate glaciated patterns of behavior. It foregrounds the need to iterate singular behaviors and the acknowledgement of the liberating principles of the plasticity of all phenomena. Eco-performativity and hyper-rhetorical performance thus go hand in hand, breaking down onto-epistemological boundaries with the implicit suggestion that these boundaries can no longer be policed. The boundaries among all enclosures, i.e., human/nonhuman, natural/cultural, speech/silence, etc., as well as those among races and genders cannot be upheld. In *Grammatron*, for instance, Cyn the coded host morphs across the gender spectrum, her codified being digitally copulates with other codes. Through her enactment she is producing a new “embodied, contingent” truth (*Modest_Witness* 230). She is no longer a ‘She’ but a spliced gendered being to be denoted as ‘S/he’, and thereby a new “figuration of the world” that we inhabit (*Modest_Witness* 173). This new figuration is performatively plotting new maps for reading the world, as Cyn turns “body into story, and vice versa” (*Modest_Witness* 179). As participants flowing along the digitalized trajectories of her experience, the readers also operate as fluid data structures. Our reading becomes a performance as it aligns with Cyn’s endless performative enunciation of a fluid selfhood breaking down historically accreted differences across bodies.

Therefore, in this space of textual ecology, these codes as textual performances interconnect the digital world and the noumenal world of the minds of the readers and the authors, dismantling the ontology of all. As *Grammatron* functions as a “sensorium of border crossings and the narcotic blur of timelessness” (“Hypertextual Consciousness”) it re-writes the human and the AI both in terms of digital and non-digital beings. The human loses its edges as do the AI narrator and the narrative which moves along rhizomatically, both acceding to and defying human will through its nonlinear perambulations. What is unique about *Grammatron* and *V:Vniverse* is that as they engage in digi-semiosis, or semiosis through digital codes across the limitrophic boundaries of

multiple assemblages, their textual enactments function in “the third space between phenomena and the noumenon itself” (*The Parallax View* 22), so that the digital texts as well as human beings share noumenal and phenomenal properties through a code-based information exchange. Digital texts, thus flow “ceaselessly between the *Umwelten* (semiotic environments) and *Innenwelten* (semiotic ‘inner worlds’)” of all material discursive phenomena” (“The Biosemiotic Turn: Abduction, or, the Nature of Creative Reason in Nature and Culture” 270). In order to read these connections, one has to engage in the abductive approach, which is inherently rhizomatic since “it involves an interpretive leap that brings together otherwise separated domains in new combinations” (Zapf 53). This abductive approach allows the readers to see both the “*connectivity and diversity, relationality and difference*” (Zapf 55; emphasis in original) amongst the performances of different codes and the meanings that these codes suggest.

Through their varying performances, these codes lead to an expansion in the sphere of literature, as it abductively, establishes the networks of exchange amongst multiple material-discursive phenomena where all entities are in a frame of constant becoming. Their semiosis exceeds human understanding. The communication amongst the stars is mapped in human and nonhuman codes in such a manner that all meanings and chains seem to be fluctuant. The text is practically open-ended in its enacted embodiment, reminiscent of the outline of Borges’ *The Garden of Forking Paths* with its continuous, rhizomatic discontinuity. The text performs its own version of ecospheric interactions and semiosis along multiple lines of flight which every reader interprets on his or her own. It is pure difference, as it enacts its own deconstruction. It shows how narratives emanating at random points coalesce in varying structures to create new meanings. Humans no longer remain humans as human organs become entry and exit points into multilayered worlds. The human becomes an external environment and an internal environment, linked through abductive inferences and code-based information exchanges with multiple other environments. The following screen shot from *V: Vniverse* illustrates how different codes, i.e., numerical, graphic, alphabetical, and algorithmic, interact to create an open-ended interfaced text.



Screen Shot 2 from *V: Vniverse*

This screen shot of *V:Vniverse* reflects a zodiac-like rhizomatic connection amongst different points articulating an organic “resonant feedback” as all phenomena, including the reader, are linked in an encounter of a “precarious sort” (Strickland and Jaramillo 180⁴). All things are bound in an enunciative fellowship. One may click any point on the shape or one may insert the next number in the circle on the top right. The extract quoted below appeared as I sequentially typed from 9-14. It shows that the text flows on with the reader’s mind decoding the codes and encoding new meanings. The text blurs the boundary between the reader and the computer, as it articulates the theme that it enacts. Aware of the zigzagging motion of the narrative, it types

the power of ex-opponents or logs. If you put your meander/ zig-zag/ ric-rac on your fabricated lens-shape, if in

you did not suspect, do you bother to go back to your old ox-head, its uterine face, its

⁴ In this in-text citation, the numeral does not refer to the page number but to the node number, clicking which a certain text appears.

Fallopian horns, to mark them

with meander, once you have discovered wells open at the bottom leading to the next world,
wormholes, keyholes, the high

road to heaven, the flying carpet, the cataract. You might. You might go back. (Strickland
and Jaramillo 9-14)

What the text shows is a movement from one mode of co-extensive existence to another, even connecting fallopian tubes to the uterus, enacting the continual becoming of life. This digital text, models the environment. As the reader meanders along the cybernetic constellations and different textual frames in *V: Vniverse*, the text employs poetic language and modeling inspired from the zig-zag pattern of stars. In doing so, it blurs distances, presenting how existence is not just an individual journey but an interobjective intra-action across boundaries that are processually limitrophic. This intra-action yields material-semiotic entanglements that are operant in terms of an immanent intimacy across the digital, material, biological and semiotic spheres.

So far, the discussion has focused upon literary texts and their role within textual ecology. To recapitulate, with multivalent literary texts functioning as material-discursive phenomena interacting ‘matterphorically’ with other material-discursive phenomena, textual ecology functions as a space where human and non-human phenomena integrate in various creatively dynamic combinations. Textual ecology, functions as a new collective that is non-hierarchical and parallaxic and where meanings are generated through differential becoming. With textual ecology functioning as a non-hierarchical space of information exchange, the superiority of anthropocentric language stands disbanded as multiple signifiers, both phonic and aphonic, continue to produce meanings which may not be encapsulated by the human mind or even within the human language. Objects that had hitherto been considered to be mute and passive are now seen to be performing independently of the human will. In doing so, literary texts do not function as human emissaries alone, they function at the limitrophic boundary between nature and culture as they are engaged in “unifying science and ideology” (*Simians, Cyborgs and Women* 51). My argument posits that literary texts of different varieties also participate in this mediation between nature and culture. This is because literary texts unify matter and mind. In this way, the nature-culture divide becomes tenuous and texts no longer remain strictly anthropocentric. At the conclusion of this chapter I do

concede that despite the fact that the meanings that texts produce connect material and discursive phenomena in multiple ways, they remain tinged with a certain residual anthropocentrism. This residual anthropocentrism is necessary because even as texts present non-human performative practices within a textual ecological domain, this representation is targeted towards humans since humans have operated as the major actants in the age of the Anthropocene. It is this idea which is foregrounded in the next chapter.

CHAPTER 5

Mattering and the Rewritten Human and Nonhuman

This chapter theorizes Eco-performativity keeping in mind the idea that once the notion of ecology acquires a textual dynamic, the phenomena embedded within it undergo a shift so that their semiotic-agentic potential needs to be re-read. As textual ecology disbands binaristic enclosures and shifts the social functionalist gaze, the concept of the Anthropos and its placement within the vast network of nonhuman actants requires a re-mapping. Eco-performativity engages in this re-mapping of the interactions among human and nonhuman phenomena while foregrounding the active mattering of the world.

In their co-authored paper “Material Ecocriticism: Dirt, Waste, Bodies, Food, and other Matter”, Phillips and Sullivan write that belonging to a species implies that one has a specific form of materiality and histories. These material bodies are both natural and unnatural, i.e. prosthetically enhanced, biologically altered, etc. They add:

Nevertheless, our capacity for storytelling and toolmaking serves to *extend* our material bodies and the material processes in which they are entrained, not to *sever* us from them. We extend our material lives and bodies, and thereby we also extend and increase our material impact—which is to say we have never been immaterial since we first appeared on Earth, and will always be material so long as we remain here. (4; emphasis in original)

However, while their argument is delimited to the idea of materiality or mattering, it does present the notion of “agentic materiality” (Phillips and Sullivan 3) which posits that the agency of matter extends across temporal and spatial boundaries. I have extended the idea of agentic materiality by viewing agentic materiality as being engaged in code-based semiosis. Hence, I have termed it as ‘semiotic agentic materiality’ where material entities display agency via semiosis. Eco-performativity takes on board the idea of semiotic-agentic materiality as its base as it re-theorizes

the performative practices of human and nonhuman actants. An Eco-performative account of human and nonhuman actants exceeds any absolutism, thus providing a nomadic space where material-discursive entanglements are in a state of constant flux. Therefore, the so-called ‘truths’ that are produced through an Eco-performative account are multivalent and parallaxic, which defy any discursive enclosure. Since literary texts have a mediatory role to play, themselves functioning as material-discursive phenomena through their representational and interpretative enactments, they provide a viable space for the articulation of these open-ended truths. To recapitulate, if texts (religious, scientific, literary, etc.) have consolidated the traditionally accepted accounts of social functionalism, then the same texts can also provide alternative onto-epistemological accounts of human and nonhuman performative practices. This is my main argument in the next section.

5.1 Rearticulating Embodiment: Literary Texts and Eco-performativity

One of the questions around which this work revolves is the reconfiguration of the notion of ecology and its connections with Eco-performativity. Eco-performativity focuses on the reciprocal alterations in embodiment and articulation, or materiality and expression in a world where phenomena have limitrophic boundaries. Literary texts such as Vizenor’s *Heirs of Columbus* and Bacigalupi’s *The Windup Girl* present these reciprocal alterations in materiality and articulation. These articulations account for a revised idea of literarity, i.e., literary movements across material and discursive assemblages. Literarity and Eco-performativity are, therefore, intimately bound. While the notion of performativity suggests that discourses pre-exist objects and roles, such as those of gender and race, the discourse is therefore, “an expectation that ends up producing the very phenomenon that it anticipates.” (*Gender Trouble* xiv), i.e., the phenomenon that is produced adheres to the discursive prescriptions that precede it. For instance, a woman or a man only become a woman or a man respectively according to the gender discourses that pre-date their emergence. This is further consolidated by the fact that “performativity *is not a singular act, but a repetition and a ritual*, which achieves its effects through its *naturalization in the context of a body*, understood, in part, as a *culturally sustained temporal duration*” (*Gender Trouble* xv; emphasis added). The italicized segments in Butler’s explanation of performativity given here are important in the context of Eco-performativity. Performativity inherently is not a singular act, but a repetition and ritual in a specific reified or fixed social canvas that places all entities within fixed enclosures, extracting fixed interpretations. Once the canvas – be it social, natural or cumulatively ecological

– becomes rhizomatic instead of linear, the ideas of nature, culture, bodies, gender, etc., become equally rhizomatic so that no repetition is strictly possible. Every material-discursive enactment becomes open-ended in its interpretation through its multiple modes of intra-actions. While it may be argued that without repetitive enactments there would be no consistency in the material world, however, Deleuze and Guattari argue that although entities within the rhizomatic space do display a consistent unity, it is not a fixed absolute. It is a space “plied by several semiotics” and where new regimes and “order-words” will continue to develop as the material world around us continues to evolve (83-84). Thus, Eco-performativity, as displayed by human and nonhuman actants within the rhizomatic ecosphere, is no longer a ritualistic repetition but a constant permutation. In addition, since the literarity of literary texts in itself is now taken as an open-ended concept that no longer submits itself to the imposition of any regime of signification and significance, the open-ended literariness of literary texts such as *The Windup Girl*, *The Heirs of Columbus*, *V: Vniverse* and *Grammatron*, etc., all pre-empt the encapsulation of performative practices within repetitive enclosures. As their literariness is a playfully fickle material-discursive entanglement, the ideas they generate evade being bound within the dicta of social functionalism that prescribe what human bodies are and how they ought to operate in the social canvas.

Judith Butler goes on to state that through repetitive enactments, an object like a body or a material-discursive phenomena is ‘naturalized’ or placed in an accepted category. However, in a space where the reiteration of the same meanings and material enactments is not strictly possible, there can be no consistency in performative enactments except in terms of an unceasing processuality. Naturalization is therefore processual. What is natural is not ontological fixity but the intra-active exchange amongst all material-discursive phenomena. Human and nonhuman performativity within the ecosphere is to be defined in terms of the semiotic agency of matter. This agency and intra-activity is not culturally sustained because it is code-based and a code exceeds anthropocentric confines. Therefore, an Eco-performative account exceeds anthropocentric or culturally sustained temporal frameworks, a fact that is substantiated by Morton’s and Cohen’s ideas that within the contemporary ecological web, phenomena need to be analysed in extended geo-temporal frameworks.

With ecology being engaged in code-based textual practices, it is also a space where hierarchies stand disbanded so that the binary system of classification, that has been our epistemological

inheritance since the Enlightenment, also becomes unstable. The aim of Butler's notion of performativity was to "open up the field of the possibilities for gender without dictating which kinds of possibilities ought to be realized" (*Gender Trouble* viii) while keeping in mind what is impossible and to think the unthinkable as well as to come up with "feminist reformulations" (*Gender Trouble* ix). In a similar vein, Eco-performativity involves reformulations of the human and non-human and their agential mechanisms at a point in time when not only the seams among discourses have become permeable, but also, as Barad has pointed out, where the boundaries between nature and culture, the material and the discursive have become osmotic. On the other hand, while Judith Butler's notion of performativity questions the stability of the notion of gender, my notion of Eco-performativity entails the questioning of the categories of the human and non-human, without consolidating the fixity of any of these categories and leaving them open to a dynamic re-configuration. This is so that they function as the dynamising "supplement" (*Of Grammatology* 107), defining, deleting, revising and reconfiguration each other to corroborate with the rapidly expanding ecosphere. Eco-performative practices, or human and non-human performative practices within the code-based textual ecosphere, allow a constant displacement of significations and signifying practices that govern the culture/ nature binary.

In this limitrophic ecological space that functions cybernetically as a code-based network, it becomes a new site "of resistance to the dominations of history" (*Simians, Cyborgs and Women* 137) which have demarcated the *logon* from the *alogon*. Thus, conceptually, Eco-performativity refers to the non-hierarchical intra-active enmeshments of material and non-material as well as human and non-human phenomena. Eco-performativity is not a social or cultural account, rather it is an ecological account wherein all natural-cultural boundaries are permeable. In this way it is not an anthropocentric account either. Eco-performativity is thus a form of agential realism, however, it is delimited to the notion of human and nonhuman performativities within the textual web of the ecosphere. Just as agential realism accounts for the different becomings and "specific materializations" of the world through their unending "specific material linkages" (*Meeting the Universe* 91-94), Eco-performativity focuses on the discursive reconfigurations of these specific material configurations and their impact on human and nonhuman intra-actions. Barad states that while performative accounts rise out of the prescriptions of social practices and embodiment, "By contrast, agential realism takes account of the fact that the forces at work in the materialization of bodies are not only social, and the bodies produced are not all human." Therefore, she adds,

“agential realism clarifies the nature of the causal relationship between discursive practices and material phenomena.” (*Meeting the Universe* 34 - 35)

However, Barad’s account of agential realism foregrounds nonhuman intra-actions only whereas my concept of Eco-performativity focuses on human intra-actions with the non-human and, therefore, is anchored in a residual anthropocentrism despite its disanthropocentric leanings. In a deconstructive manner, it begins with the Anthropos, only to dismantle it so that it may suggest to human beings how to reconfigure their alliance with non-human material semiotic agency. With Haraway positing that grammar is politics, human beings need to revise how they alter the syntax of ecology so that the relations of dominance within the rhizomatic space of the ecosphere are revised in alliance with their fellow nonhuman citizens. Hence, with humans being the major players, an Eco-performative account, despite its residual anthropocentrism, inaugurates a disanthropocentric revision of human and nonhuman political interactions. Picking up Judith Butler’s point that performativity is reiterative, Eco-performativity simply elucidates that within the ecosphere, human and nonhuman performative practices are repetitively non-aligned and rhizomatic. It is for this reason that the space of textual ecology is parallaxic, producing results that might or might not be reduplicated and enacted in the same manner. Every enactment is a new enactment, and every enactment is material-discursive. It is, as Barad puts it, an “*iterative intra-activity*” (*Meeting the Universe* 184; emphasis in original). Literary texts like *The Heirs of Columbus*, *The Windup Girl*, *Grammatron* and *V: Vniverse* present this iterative intra-activity as nonhuman matter displays a semiotic-agentic materiality that reconfigures both itself and the nonhuman, thereby providing grounds for further elucidating the idea of literarity. This idea is elucidated with examples from the selected texts in the ensuing section.

5.2 Semiotic-Agentic Materiality: Literarity and Literacity of Paper-Based and Digital Literary Texts

Eco-performativity stems from the realization that nonhuman phenomena are agentic since they engage in semiosis both through their mattering and also through the way they are articulated. The world comes into being through material-semiotic code-based enmeshments “turning matters into physically or semiotically formed substances and functions into forms of expression or content.”

(Deleuze and Guattari 143). In this way, it changes the syntax of the material world around us which influences the way it is read, decoded and understood. Vizenor's *The Heirs of Columbus* and Bacigalupi's *The Windup Girl* depict semiotic-agentic materiality thematically while presenting ideas such as digi-semiosis and bio-semiosis and its subcategory zoo-semiosis, while *Grammatron* and *V: Vniverse*, being digital texts, enact these intra-actions digi-semiotically. What we see here is that their literarity operates as a material-discursive enactment, binding diverse material and semiotic regimes. Since literarity is in itself is an open-ended concept, what is intriguing about the textual enactments of the selected texts is that they elide any onto-epistemological enclosure, only articulating new possibilities of thought. At the same time, these literary texts counterbalance scientific discourses which consolidate knowledge and power. Science traditionally has defined the role of a human being within the ecological skein, resultantly, providing a rationale for domination. However, the works of Vizenor, Bacigalupi, Amerika, Strickland and Jaramillo, in their mediatory function, invite a revision of this rationale for anthropocentrism. The revision of human and nonhuman performative practices leads to a revision of the discourses pertaining to gender and race, as is depicted in *The Windup Girl* and *The Heirs of Columbus*. These novels depict the material-discursive becoming of the human as a being that is not pre-comprehended but one that is participating in an ongoing historicity along with other material-discursive entanglements. Emiko and the "blue child" called Ishi (*The Heirs* 139) are cases in point.

Unlike Butler's concept of performativity that places matter and all other nonhuman entities within a mute passivity, Eco-performativity sees all matter, as well as human and nonhuman enmeshment, as constantly stabilizing and destabilizing their iterative intra-activity. Bodies are constantly creating new meanings. Similarly, discourses are also "*material (re)configurings*" of the world (*Meeting the Universe* 148, emphasis in original) as they establish the linkage between material causes and their outcomes, hence, they are "*causal intra-actions*" (*Meeting the Universe* 149, emphasis in original). The literarity of literary texts fleshes out these causal intra-actions foregrounding how phenomena are "sedimented out of our attribution" making the world "intelligible to us" (*Meeting the Universe* 207). Thus, these literary texts suggest that "performativity must be understood as not simply an issue of how discourse comes to matter but also of how matter comes to matter" (*Meeting the Universe* 207).

One of the ways through which matter is shown to matter is through the character of Emiko who, as a gorgeous humanoid robot, is programmed for the sexual gratification of its masters. As an advanced descendant of the contemporary humanoid robot like Jia Jia (Riley) and Sophia Bot, she presents a lucid depiction of how human beings would react to almost-identical humanoids in the Uncanny Valley which is a hypothetical place where “beings are strangely familiar and familiarly strange” (*Hyperobjects* 130). The novel operates as this Uncanny Valley itself where numerous produced, undying objects (Copjec 99), continue to remind humans of the permeability and mutability of their humanity. It suggests the precipitation of such a “nonhuman world that we cannot yet understand, in which ‘our’ values may have no place” (*Posthuman Life* 6). Emiko is an example of how easy it is to refute the “fictional idea of humanness” (*Hyperobjects* 130). In depicting a character like her, Bacigalupi’s novel engages in a strong political act as it suggests another aesthetic construct as to how humanity needs to perceive itself. She is able to show that “Coexistence is in our face: it *is* our face. We are made of nonhuman and non-sentient living entities. It’s not a cozy situation: it’s a spooky, uncanny situation . . .” (*Hyperobjects* 130). It is for this reason that Emiko is exploited and reviled by society. In the revulsion that is directed at her for being a sex object, the novel brings both the genetically enhanced and the unmodified human bodies before us and gradually deconstructs them in order to present an onto-epistemological account that defies onto-epistemological absolutes.

Emiko’s genetically engineered body is an *umwelt* in itself, an assemblage in which multiple smaller assemblages are linked in ways which function independently of her will. Considered to be an outrageous travesty of what is accepted as the human, she foregrounds not only the limitations of her own embodiment but also those of the humans who have created her. The readers and the author of the novel fall in the latter category. Her body overheats if she exerts herself too much which is an inherent flaw in her material construction. Mr. Yashimoto, the Japanese CEO of the Mishimoto Company which manufactured windups like Emiko and his own servant called Hiroko, states in the novel:

“She is manufactured to have a porcelain skin and reduced pores, but it means she is subject to overheating. A military windup will not overheat, it is built to expend considerable energy without impact. Poor Hiroko here would die if she exerted herself like that over any significant amount of time. But all windups are potentially fast, it is in their genes.” His

tone becomes serious. "It is surprising though, that one has shaken off her training. Unwelcome news. New People serve us. It should not have happened." (Bacigalupi 284).

Two important things are made evident from this passage. The windups are created keeping the requirements of the society in mind. A windup geisha or a house assistant was created to serve the masters; however, all windups were not the same. Military windups had also been created in the novel which did not overheat. Social conventions defined what sorts of windups were to be manufactured according to the roles demanded of them, just as contemporary conventions define what sort of machinery is required for various purposes in today's societies. In the novel, windups like Hiroko and Emiko 'performed' according to specific conventions instilled in them through the social discourses, i.e. through social iteration and training, and at the same time inserted within their genetic syntax. For instance, as a Geisha, Emiko's body automatically responded to the desires of her clients outside her own will. This programmed response was encoded in her genes by those who had 'manufactured' and then artificially 'birthed' her. However, this physically encoded conditioning was further supplemented by rigorous training in obedience at the hands of experts. This is starkly reminiscent of Kazuo Ishiguro's *Never Let me Die* in which clones are born and bred for the sole purpose of harvesting their organs. Despite their bodies having a fixed 'expiry date', they are also trained to accept their fate as a glorified end to be looked forward to willingly as they grow up. This social and physical conditioning goes hand-in-hand with the clones' genetic programming that regulates their behaviours. In *The Windup Girl*, the New People have also been discursively and materially programmed to obey. A common denominator binding all windups is their speed, as Emiko finds out and even as Yashimoto tells Kanya, an Environment Ministry officer out to save her country's gene bank from the colonizing gene rippers,

"All New Japanese are fast. You have mistaken the question to ask. *How they use their innate qualities is a question of their training, not of their physical capabilities.* Hiroko has been trained from birth to pace herself appropriately, with decorum." (Bacigalupi 284; emphasis added)

In Yashimoto's statement, the words that I have italicized clearly state that the usage of the windups' inherent qualities remains a matter of conditioning. What one sees is that interpellation is at work in the windups at both the material and discursive levels. A key tactic employed in their conditioning is to drill in the idea that they are limited, hence imperfect, an idea that is consolidated

through their tendency to overheat like any other machine. They have been made infertile deliberately so that in the Uncanny Valley, they are constantly placed across the fence from the human. What the windups are made to forget is that they can move at immense speeds so that they do not carry any awareness of their latent potential to escape. These sentient beings are imbued with rationality but have been catechized to believe that they are physically and socially inferior. Hence, to undo any materially infused superhuman quality, indoctrination is used as a weapon to keep them under control.

However, despite this rigid and almost inescapable indoctrination, at times, the bodies of these windups react of their own accord. At this stage the “anthropocentric remainders” (*Meeting the Universe* 135) working at the material and discursive levels are thwarted, so that Emiko’s physical abilities exceed the boundaries of social conditioning. Thus, unlike what Yashimoto has said in the novel, the physical abilities of the Windups do determine how they use their innate qualities and to what extent. For instance, when the environment ministry’s troops, called the white shirts, raid her hideout, Emiko responds with a basic instinct of self-preservation. It is in this movement of fear that her body forgets the repetitive iterations of performativity instilled in her as the material element of her body responds to the fear in a manner which she herself had not anticipated. Even her perception of the speed at which bodies move around her changes as she yields to the articulation of her material being. When the operatives of the Environment Ministry close in on her with the sole purpose of ‘deactivating’ her, the so-far dormant instinct of self-preservation embedded within her genes becomes activated. Although she has undergone horrific sexual abuse but her genetic programming had, until now, always complied with the commands given to her even though her brain screamed in revolt. However, when faced with death, her body overrides its genetic programming when she moves like the “flash-frame pages of a child’s animated page book” (Bacigalupi 190) when she is being chased down and shot at. All she sees is that the white shirts are “Slow as honey on a cold day” as “they seem to be running through rice porridge. Their every motion drags.” (Bacigalupi 190) She, on the other hand, is “optimal” as she jumps from the balcony, “Gravity yanks her down. . . . She rolls, crashing into the balcony’s railing. It shatters and peels away and she plunges into open air. . . . Her whole body is shaking, feels bruised, and yet all her limbs still work. She has not broken a single bone in the fall. *Optimal*. She swings a leg up onto the balcony, and hauls herself to safety.” (Bacigalupi 190; emphasis in original). As her body overrides its encoded programming, yields a self-realisation in Emiko that she can override her

vulnerability. Moreover, her body operates as an autonomous actant, much more superior to human bodies.

What one notices is that even as her material being relegates social conditioning to the background, a major question mark is placed before any normative idea of embodiment. Despite the fact that Emiko is constrained due to faults in her genetic makeup, she is an enhanced being with a lot of potential to replace and perhaps alter the normative notion of the human. In the Uncanny Valley of the twenty third century Bangkok, not only do the human and the nonhuman face each other, both are undergoing a matterphoric deterritorialization. In their interaction with each other, neither remains unaffected by the other. Seeing how Emiko's body awakens in self-defense without any prior military training, the concept of the body undergoes an onto-epistemological shift since it becomes a vital site wherein the reconfiguration of nonhuman subalternity takes place. Every organ, both organic and mechanical, in her body enunciates itself. As Emiko's body heats up, the kink springs granting mobility to the joints of her body fail to comply with the dictates of her mind while she is constantly on the run to save herself. Thus, nonhuman agency articulates itself through these modes of semiosis. Emiko's inability to sweat, her collapse due to overheating, her physical ability to vault over great heights irrespective of how she perceives herself, all become semiotic enactments of her body, signaling meanings matterphorically. The elements that constitute Emiko's body 'perform' agentive maneuvers that demand a re-reading of the ecological syntax. In depicting Emiko's body as an assemblage of intra-actions, Bacigalupi presents nonhuman material discursive phenomena as engaged in producing different ways of configuring the world as well as different ways of interpreting the syntax or social narratives that these configurings produce. Her performativity exceeds the dictates of both her social and material prescriptions. These nonhuman enactments of the biologically and physically altered components of Emiko's body reflect how these nonhuman actants function as citizens within this new textual collective of the ecosphere. As citizens, nonhuman phenomena acquire certain rights. Since they are no longer mired within a mute passivity, their agentive maneuvers cannot be restricted within the performative accounts of social functionalism. Thus, they induce an alteration within the ecological grammar. If, as Haraway posits, grammar is politics, then a syntax altered due to nonhuman agentive interventions and code-based exchange does not only produce new meanings of perceiving the world, it also leads to an altered politics. This altered politics is precisely what *The Windup Girl* demands. One needs to keep in mind the idea in the novel that an alternative account of embodiment, and a new way of

seeing and perceiving bodies emerges which requires new politics to define human-nonhuman connections.

Through this form of representational praxis and agential realist account, *The Windup Girl* offers a “posthumanist performative understanding of the materialization of bodies” (*Meeting the Universe* 34) and moves on to elaborating how this leads to an altered comprehension of the social syntax. Not only that, it leads one to see a shift in the anthropocentric concept of embodiment that privileges the human. The novel thus works as a material-discursive phenomena itself as it displays a trans-discursive and transcorporeal literarity. It blends human and nonhuman consciousness without centralizing either. In offering this altered performative account, it draws attention to the practices of both performance and representation as well as the outcomes of these practices (*Meeting the Universe* 49). Within the space of textual ecology, where human and nonhuman performative practices do not function in ontologically separate spheres, the novel creates new meanings and invites one to look at the material configurations of the world from a different aspect. It enmeshes the reader with the text and Emiko with the human reader, and thereby accounts for the novel’s literarity and literacity, i.e., its reading and decoding of the entanglements between the human and nonhuman. The text, through both its literarity and literacity, creates alternative structurings of bodies. In doing so, it generates an alternative understanding of the literary texts’ intra-active enmeshment with the material-discursive world around them. This enables it to function as a mediator (not a translator) as it interacts with the material-semiotic permutations of the ecosphere. Therefore, a novel like *the Windup Girl* allows an exchange among the performative accounts provided by different discursive domains such as science, politics, sociological accounts, etc. The Eco-performative account here becomes a link between scientific and social discourses and literary representations in a manner which allows representations to exceed the patterns of sameness and become diffractive as well as parallaxic. Eco-performative accounts are not only aware of the differential becoming of matter but also of the differences that meaning making and knowledge creating practices generate.

In focusing on differential enactments of different material-semiotic assemblages and their altered performative practices within the ecological skein, the novel places a question mark before the concept of the ‘body’ as well. As a matter of fact, one beholds the entire notion of embodiment undergoing a deterritorialization as it generates new conceptions regarding the enactment of

embodiment. With the deterritorialization of the concept of the body, as evinced in the sexually charged descriptions of Emiko, Bacigalupi invites the questions as to whether there is indeed any fixed phenomena such as the human body. The following example from the text illustrates this point:

Anderson watches, transfixed. . . . They stare at one another. Her blouse has fallen open again, showing the line of her throat, the inner curve of her breasts. She doesn't move to hide herself, just looks back at him, solemn. Is it deliberate? Does she mean to encourage him? Or is it simply her nature to entice? Perhaps she cannot help herself at all. A set of instincts as ingrained in her DNA as the cheshire's clever stalking of birds. Anderson leans close, unsure. . . .

Did the geneticists embed her DNA with pheromones? Her body is intoxicating. (Bacigalupi 109).

The physical relationship between Emiko and Anderson alter a number of dynamics pertaining to embodiment. While Emiko is sneered at for her oozing sexuality, the love that Anderson gives her and the ensuing feelings of affection that she feels for him push her nonhuman status into the background, just as Rachel's replicant status is forgotten by Deckard in *Blade Runner*. However, it would be a gross over simplification to say that Emiko becomes human, or Anderson becomes more or perhaps less than human in his willful protection and love for Emiko. The novel raises important questions about what it means to be human, morally and ethically. Kannika, a woman overseer at the brothel where Emiko works, subjects her to unmentionable humiliation and abuse, yet her inhumanity revolts the readers more than the lesser level of humanity at which Emiko is placed. At the same time, the humans who have drastically destroyed the natural ecosystem and its diverse genepool also stand accused of cruelty. The inhuman⁵ agency of a human being is brought face to face with the humanity of the nonhuman, so that their hierarchical placements vis-

⁵ Here the term inhuman has been used to convey a double layered meaning. One layer pertains to cruelty which is generally associated with inhumanity on a moral and ethical level. The other layer takes into account Lyotard's idea of inhumanity which posits the idea of the human as an entity that is bound to change due to the impact of science and technology. For Lyotard the inhuman also "refers to those potentially positive forces that the idea of the human tries to repress or exclude, but which inevitably return with disruptive effects" (Woodward). These effects, such as the destruction of the ecology or the planet, could result in radical alterations within the human assemblage in order to enable it to cope with its altered milieu. In such a scenario, the human would no longer remain human as we know it today. My argument, here, carries all these associations.

a-vis each other are held up to scrutiny. The novel's performative account, thus, presents the "entangled relationalities" (*Meeting the Universe* 74) of human and nonhuman phenomena as being mutually co-constitutive and also exceeding epistemological confines. In this way, an Eco-performative account goes beyond the representational praxis of traditional social performative narratives and "representationalism" (*Meeting the Universe* 86), taking into account the fact that words and ideas are not always an accurate reflection of the things they refer to. Rather, in showing the practices of nonhuman actants in ways that exceed human performative narratives and their modes of representation, the novel's literarity displays how knowing and materiality interact in a world which is constantly changing.

The performative accounts that literary texts like *The Windup Girl*, *The Heirs of Columbus*, *Grammatron* and *V: Vniverse* present are based on different kinds of semiotic performances engaged in by material phenomena. *The Windup Girl* and *The Heirs of Columbus* reflect how alterations in the biological syntax of phenomena alter not only human perceptions of and their interactions with nonhuman phenomena, but also human placement within the ecological web. Not only that, these performative narratives also extract nonhuman phenomena out of any supposed "pre-rational" and "pre-cultural essence" (*Simians, Cyborgs and Women* 11). The nature-culture divide becomes highly debatable. Hence, the bio-semiotic depictions of human and non-human intra-actions as presented in the selected novels provide a groove to further extend the argument that texts and textual practices engage in re-weaving stories that reflect a human-nonhuman "transit" (Cohen 6). With code being "a nuanced emplacement" (Cohen 8) within a protean world, the code-based exchange amongst these human and nonhuman assemblages invites a re-scrutiny of the nature-culture binary, which remains the primary objective of an Eco-performative account. Like Barad's account of agential realism, an Eco-performative account brings together performative accounts from different domains keeping in mind that the "mediation of public stories is multiple" (*Simians, Cyborgs and Women* 88). If scientific debate is social mechanism for creating narratives that place entities within absolute categories, thereby creating meanings, then literature debunks the "myth" of science (*Simians, Cyborgs and Women* 81) in order to allow the multiple mediation of stories. In doing so, it depicts not just how language announces a subject but also how a subject modifies language. Therefore, the Eco-performative accounts that literary texts offer are primarily a weaving of new stories and enabling language to suggest new possibilities and constraints as evinced in the material alterations of the world that we live in. For instance, in

Bacigalupi's *The Windup Girl*, the algal baths used to harvest a specific strand of algae that can store energy function as rebellious actants when gross human negligence leads their genetic code to mutate so that they become toxic and virulent, fatally infecting workers. Since their genome is new, it cannot be decoded in time nor can its antidote be created. Hock Seng, the illegal Chinese immigrant who oversees the algal baths, is able to perceive the danger they present after two workers die.

Overhead, the screens of algae fill the room with the sea reek of their drying. . . . On the other side, the algae tanks sit in silent ranks, full of salt and life. More than half of the tanks show signs of reduced production. Algae barely covers their surfaces, even though the skim should be more than four inches thick after a night without harvesting. . . .

Blooms of algae decorate the damp surface, feeding on left-over nutrients. Vectors everywhere, . . . there is something wrong with the tanks. . . (Bacigalupi 154).

The vectors that Hock Seng notices function as carriers, undergoing a deterritorialization and reterritorialization as they move from one assemblage to the next. As they spin out of control, they alter not only their own material constitution but also the social syntax as a plague spreads through this process leading the environment ministry and its operatives to take draconian actions. Villages are burned and crops destroyed as people watch on helplessly. As the agency of the mutated algal bath acquires catastrophic proportions, the novel challenges established accounts of nonhuman passivity as couched in anthropocentric performative accounts. Since ecology is a compendium of stories, the disanthropocentric Eco-performative account of nonhuman agentive maneuvers and their semiotic agency as presented in the novel, induces a shift within this cache of stories. The novel depicts the meanings produced by the algal baths through a mode of bio-semiosis. It then allows those meanings to interact with other discourses that frame the contemporary epistemology, allowing it to re-view nonhuman semiotic agentic materiality from a disanthropocentric aspect.

This nonhuman semiotic agentic materiality is polyphonous, since one cannot always predict the sorts of permutations human and nonhuman actants, such as chemical agents, micro and macroscopic organism and even geographical bodies such as lakes and underground water tables, etc., might undergo and how they might interact with each other across a transcorporeal space (Alaimo 2). Hence, an Eco-performative account offers an open-ended account of human and

nonhuman practices in a manner which does not only imbricate genetic, digital, quantum and other codes, but also leads to a re-examination of the question of the “emergence as well as the unraveling of the human” (Alaimo 3) in a space where difference is true becoming. This becoming is polyphonic as *The Heirs of Columbus* depicts. Since the semiotic agency displayed by material bodies suggests that embodiment is also protean, entities come into being through differential enactments. This leads to the assumption that if embodiment is subjected to change, for instance through prosthetic extensions or through genetic alterations, then the discourses surrounding embodiment also shift.

In *The Heirs of Columbus*, human and non-human interactions take place on a more common plane thereby subverting Cartesian dualism. The text engages the ideas of bio-semiosis to create a new collective and a new cosmology which aims at making "the world tribal, a universal identity, and return to other values as measures of human worth" (*The Heirs* 162). With the genes of Columbus functioning as actants, the "genetic signature of survivance" " (*The Heirs* 132) extracted out of Columbus' heirs is instilled into people to cure them of various diseases through somatic gene therapy. The idea of this gene therapy creates a unique concept since the genes can heal psychological problems such as loneliness, and congenital deformations as they enable the wounded to redraw their abused or wounded bodies. The boundaries between dreams and the material world are violently dissolved as abused “children became their dreams, the memories their bodies carried from the stone” (*The Heirs* 146). The noumenal dimension of dreams and semiotic matter all intra-act to generate a different perception of our placement in the world, where dreams are no longer improbable, nor are material reconfigurations for the human and nonhuman. The text revises the concept of the body, by presenting it as something alterable. Hence, through its alterations it can undo or erase the abuse or disease inscribed on the human body. The human body is not a fixed plane; therefore anything inscribed on it is not permanent either. An example of this is shown when a congenitally amputated baby becomes whole again, the scientific discourse and the mystical traditions of tribal healing come together to heal. Man's body in itself is an *Umwelt* or environment as different cellular activities construct a human in botanical terminology as is illustrated in the following quotation from the text:

First, two miniature hands appeared on her arms. The stumps sprouted, and the hands grew out of the thick skin just the right size of her body, as if the genes also carried the memory

of her age. (*The Heirs* 165)

Hence, as humans rewrite themselves materially in the novel, man, animals, matter and non-matter all are more or less equal participants within the flow of life, allowing different patterns of interaction through the textual practices of this narrative. Not only that, but the re-configuration and creation of a new collective takes place at the cellular and molecular levels in life as the mutated gene of healing is taken as the new norm while the regular genes are taken as non-normative, hence the need to be healed and a new world view is being constructed at the genetic level. As a matter of fact, when it comes to the retention of information, the human body in itself functions as a hypomnetic device, i.e., a device that stores memory that traverses across time as is evinced in the transtemporal genetic transfer of the genes of both Columbus and his nonwhite escort, Samana the handtalker. Human history can thus be revived on the basis of the historical memory stored within the body and its re-activation. It is this reactivation that is at the core of the idea of storied bodies that go beyond historical and spatial boundaries.

Similarly, in *The Heirs*, the blue child who carries the “signature of survivance” (*The Heirs* 132) and the manicurist who works at the facility where tribal lore and rituals blend with scientific information engage in changing the genetic syntax of the world, and resultantly of its narratives. Bradley and Haraway have argued that genes have a protean syntax which can be reassembled. This reassembling has both material and discursive results. *The Heirs* takes this reassembling a step further. The manicurist collects the genetic data from her clients at the Dorado Genome Pavilion so that it could be scanned and corrected on the part of the Heirs who run this institution. In addition, the noumenal world of the shamans blends into the material and discursive worlds of non-Native American epistemologies so that a new onto-epistemological account of human and nonhuman performative practices is generated by the novel, specifically in a world where biotechnological advancements are altering human and nonhuman relations.

Bradley argues that life is originarily technology, even in its biology; this is the fact that the manicurist in *The Heirs* exploits. Being is defined in terms of technological alteration: “technology is nothing other than knowledge of what it means to be in general” (Rocjewicz qtd. in Bradley 68). However, it is imperative to define here that technology is not just machines but an enactment and an exchange amongst different bodies. Albeit this technology has different modes of articulation, nevertheless, Bradley opens up the operational parameters of technology and technological

interchange through the concept of technicity which is “a more profound identity between the living and the non-living, nature and technology, the gene and the machine” (Bradley 2). I take these operational parameters a step forward by not only highlighting that human and nonhuman performative practices evince life’s originary technicity but also by exploring the mediatory mechanisms among material and discursive. To say that it is language which functions as a mediatory mechanism might lead to erroneous conclusions. Hence, the code, with language being its subcategory, remains the mediatory mechanism that explains how human and nonhuman performativities and intra-actions are altered as the ecosphere is changed. The code answers to the need for a cybernetic theory of language, as it percolates across all material and discursive assemblages, including those constituted by literary texts, thus flowing along “the self-organising material flux of the universe as it *emerges* from chaos into order.” (Bradley 2; emphasis added).

It is precisely this *emergence* which the manicurist shows in *The Heirs*. Not only does she counsel abused women and children, she works like a benign “genespotter” (Bacigalupi 43), albeit with a less capitalist interest in the material that she collects. Stone, the most prominent heir of Columbus, had invited her to the Santa Maria Casino and “discovered a discrete method of gathering genetic material and genealogical stories” so that genetic implants could be given to people who needed physical and psychological healing as the “bits and stories would be the source of genetic intromission and retral transformations at the Dorado Genome Pavilion” (*The Heirs* 141). Just as Emiko and the algal baths had shown protean modes of physical manifestations and embodiments in *The Windup Girl*, Vizenor projects a similar protean embodiment as bodies and their constituents become intervening agents within the new onto-epistemological collective where chromosomes are just as agentic as animals and human beings. These chromosomes display a semiotic-agentic materiality, percolating across the boundaries of various assemblages. Therefore, when texts like *The Heirs of Columbus* and *The Windup Girl* are read, not only do the texts decode the open-ended intra-actions of human and non-human collectives, they also integrate the mental processes of the readers to further engage in a re-thinking of the Anthropos and its placement. The human mind, thus, becomes a participant as it encodes and decodes new meanings in the textual space of the ecosphere. These meanings are not always linguistic, all the while suggesting new possibilities regarding how the material world around us operates. In this way, the code-based, semiotic agentic materiality exceeds any anthropocentric linguistic repression which *The Heirs* reflects through the idea of the chromatic material encoding the cosmological narratives of the

Native Americans.

Since the code works through words, quanta, energy and genes, etc., exchanging information, creating new meanings and material forms, therefore it exceeds any prohibition that is boundary-based. In the process, it subverts the modes of enunciation, as one material-discursive phenomena engages with another material-discursive phenomena, creating new forms, new relations and new modes of expression. The code also functions as a trickster going across apparently irreconcilable domains. In this regard, the role of the shaman is important in *The Heirs of Columbus*. The shaman, Transom, uses a Native American ritual to vanish in the tent where Felipa, “the trickster poacher” had “repatriated” the leftover relics and bones of Christopher Columbus so that their stories could be unleashed, (*The Heirs* 50). In so doing, he displays how his shamanistic rituals interface the dream world and the material world. While we might question the scientific base of such an experience, what is significant is the imagery used by the text:

Silence, and then animal noises and human voices came from the tent. The roar of a bear echoed in the vault. . . . The tent trembled and then bucked with such wild movements that the blankets were thrown around the vault; one covered a guard at the gate. The bear roared, and other animals and loud voices came from the medicine pouches in the tent. The shouts were in other languages. Several more loud sounds shivered in the concrete, and then silence in the vault. (*The Heirs* 57)

Albeit video records later show Transom disappearing in thin air, the passage quoted above indicates the human and nonhuman enmeshments that frame Native American cosmology. Multiple linguistic codes emerge from the inert bones, bears, animals and multiple other languages, etc., indicating the semiotic agentic materiality of the bones. These lifeless artefacts become textual as their plural code-based linguistic heritage is unleashed. All the languages heard in the tent cannot be translated; hence, they exceed the human *logos*. Similarly, human materiality can dematerialize into quanta. Man can become a particle. Thereby, he can become more enmeshed within the material surroundings. As a conglomerate of particles and quanta, this shamanistic experience offers an alternative account of human and nonhuman performative practices in relation with each other. The Eco-performative account that it offers does not merely redefine the Anthropos but also brings the Anthropos back into the world in terms of its own materiality. The shamans in *The Heirs* are shown to be able to access the “quantum soup of the universe where

everything exists in a latent or potential state” since they are able to “dream” the world into existence by mentally penetrating the “subatomic world” (Villoldo 2). Since a particle is both wave, energy and mass (*Meeting the Universe* 198; Villoldo 35), and a human being is made of particles, then Villoldo’s following question gains an added relevance:

Given this very different "reality" at the subatomic level, is it correct to say that we human beings are solid creatures, made up of air and a bunch of buzzing particles; or are we energy beings, made up of a lot of waves of energy? Could we be both, continually flipping from one state to the other? Is a piece of wood a solid object, or is that just how we happen to perceive it? What would happen if we perceived it as a collection of waves, as a collection of energy? (Villoldo 35)

He continues to explain that although this perception does not change the nature of an object or its properties, but the way we interact with it compels one to use the help of metaphors, thoughts and emotions to explain our interaction with them. In short, we need stories (Villoldo 36), as they work as “material metaphors” (Cohen 4) undergoing onto-epistemological sliding as they alter one’s perceptions regarding the differential intra-actions of things. In so doing, *The Heirs* presents both human and nonhuman language as a trickster object that changes as the material configuration of the world around us changes. It alters the epistemology, of which ideology and politics are also a part. As the shamanistic experience depicted in the novel reflects the connection between the noumenal and the phenomenal worlds from an angle that is neither West-centric nor strictly scientific, it allows a debunking of the dominant scientific constructs by presenting a new mediation of stories through which we see the world. With the human mind also being a cybernetically linked material-discursive assemblage, it displays a semiotic agency by decoding and intra-acting with other nonhuman material discursive phenomena through literary stories, and not only through science. Stories, like *The Heirs of Columbus*, do not merely reflect the agency of nonhuman phenomena, but also endeavor to surmount a “linguistically insurmountable gap” (Cohen 99) as language transforms matter and vice versa. This linguistically insurmountable gap is dealt with as all these phenomena exchange information with each other as codified phenomena. This is also significant in the context of a reader’s positionality. Since the contemporary reader’s outlook is framed by the empirical episteme that has consolidated the man/nature binary, this operation of the text’s literacity induces a diffraction in the reader’s perception of the pitfalls of

such a binaristic divide. The literacy of the selected texts makes the readers experience an onto-epistemological shift as they re-read the world of mobile onto-epistemological enmeshments. As a result, the literacy of texts like *The Heirs* make the bifurcation between nature and culture untenable.

Another example provided by *The Heirs of Columbus* of how language and matter modify each other and our perceptions of the material world is through the depiction of the mute Blue Child, whom I had mentioned earlier. The “blue child” is a “hand talker” (*The Heirs* 138) like Samana. However, he is endowed with the “blue power of creation” (*The Heirs* 140) that enables him to heal at the genetic level. The boy’s blue radiance or “thermoluminescence” (*The Heirs* 140) stands symbolic of “the blue radiance of creation” (*The Heirs* 13) that is benign and curative. This radiance counters the toxic radiations emanating from nuclear wastes dumped in numerous Native American reservation sites such as the Yucca Mountain and Skull Valley in Utah which have caused severe physical disorders in many Native American children. The blue colour is significant because in native American cosmology, it is the colour of the sky that transcends all limits and is expansive and thereby cannot be encapsulated within any enclosure. Like the blue sky, the blue child and his genetic code do not abide by any discursive or material enclosures, moving across dreams, bodies and stories, binding everyone into a healing commonality.

The blue child does not merely counter the White narratives that cast the Natives as ‘primitives’, nor does he only subvert the anthropological discourses that have aimed at speaking for the Native American culture (Cox 141). Blue Ishi, despite being the namesake of a Mayan prophet, is the embodiment of deterritorialization at the material and discursive levels. He inverts the White capitalist discourses by reinstating a non-Western *weltanschauung*. In so doing, he also emerges as a classic depiction of how the reified concepts of the human, nonhuman, race and gender might be seen as malleable and agentive. As the blue child’s genetic code is injected into people who need to be healed, the novel suggests that any alteration within the existing binaristic discourses can take place at the material levels. Any change in matter triggers new signs which create new meanings and new perceptions. Moreover, since Blue Ishi is mute, his way of speaking is both an enactment and an embodiment in line with Deleuze and Guattari’s definition of articulation being a material-discursive manifestation. Silence is a signifier, a code through which meanings are altered.

Blue Ishi also enacts the processual nature of material phenomena through his blue radiance, which, like radiation, is both waves and particles, or matter, energy and movement all together. As his signature of survivance enters other bodies of different races and denominations, the very concept of racial hierarchy is blurred. If race can be changed, like gender, the question that the novel raises is whether the White race hold any superiority over the non-Whites and vice versa. The novel also invites a scrutiny of humanness, considering the fact that humans can be edited and engineered at the genetic level. Just to remind the reader, in this dissertation I have used the term 'humanness' instead of the broader term 'humanity' to focus on the specific physical and mental properties that distinguish humans from nonhumans. The novel posits humanness in terms of a modifiable constitution owing to the semiotic agentic materiality of the genetic code. Through the transcorporeal movement of the genetic code, bodies become hyperobjects. As toxic radiation, global warming, etc., become "nonlocal" by traversing across bodies that affect each other "interobjectively" (*Hyperobjects* 1), the human body in itself becomes relative and protean, showing a gap between how the human body is perceived and how it actually functions as an agentive *umwelt* outside human will. In so doing, the novel creates new stories regarding humanness in order to account for these altered perspectives. It articulates transcorporeal nonhuman narratives that blend dreams with the material world. An example of this is Miigis, the daughter of Stone the geneman, who can hear "dream bodies with the mute child and the blues" (*The Heirs* 143). She can also hear the multilayered stories working at the seams in both blood and stone, as nonhuman actants become storied matter. By changing the material configuration of the world, the novel blends scientific and social functionalist discourses in a manner that invites them to derive new accounts of semiosis taking place within the ecosphere. Blue Ishi's blue skin exceeds all corporeal boundaries, i.e., brown, black and white; people of all racial denominations are healed through his signature of survivance. Survivance in *The Heirs* is more than survival. It is the continuation of tribal lore and courage in the absence of a tribal history. This continuation entails the disbanding of ontological boundaries since the absence of tribal history provides grounds for sowing the seeds of a new history that disrupts the hierarchical arrangements of bodies. It is this history that takes wing in the Dorado Genome Pavilion wherein the white race no longer remains hierarchical since the induction of the Blue radiance in their bodies dilutes the categorizations based on skin tones. At the end of the day, they are all blue and thereby equal.

While genetic modulation remains entrenched in a broader plane of bio-semiosis, the text displays

a more delimited vision of bio-semiosis in the form of zoo-semiosis through the depiction of mongrels and therianthropy. Since Vizenor disbands any monologic interpretation of standard narratives as embedded within a West-centric epistemology, his deconstructive mode of writing unleashes nonhuman voices and agency. His presentation of speaking mongrels is not only a humorous indictment of the fixity of racial and gender-based categories it also challenges the anthropocentric *logos*. The mongrel is a limitrophic entity. Re-engaging the figure of the canine Caliban, Vizenor challenges colonial, race-based discourses, so that within the textual ecosphere, his novel presents a subversion of canonical texts such as Shakespeare's *The Tempest*, or the novels of H. Rider Haggard, etc., that have consolidated racial hierarchies over time (Blair 75). However, while Vizenor has conceded that a narrative is a blend of many genres, and since every genre is codified in a specific manner, therefore, a text's representational praxis is a blend of many codes. On the other hand, my argument is that these codes exist both within and without the text as it creates new meanings and new forms of representing material phenomena. The mongrels reflect such a representation. They do not merely challenge the Native American creation narratives, they also reflect the breaking down of hierarchies within the textual ecosphere where not only is anthropocentric superiority challenged but racial purity is also subverted. The mongrels defy any anthropocentric enclosure since the Native American epistemology challenges the western categorization of phenomena within a hierarchical taxonomic relation. In the figure of the mongrel, the white and non-white races are de- and then re-territorialized as Caliban can talk despite being a dog, which depicts a satirical play on the original Shakespearean character. In the novel, the mongrel can tell stories which enable nonhuman phenomena such as stones and bones to communicate and unleash their stories, thereby anthropocentric narratives are displaced as the authoritative interpretations of the material world are disbanded. The handtalkers and the shamans exceed logocentrism, and thus delve into the semiotic agency of material phenomena. The mongrel thus becomes a "collective assemblage of enunciation" (Deleuze and Guattari 80) as it operates as pure movement, exchanging segments of the human and the nonhuman:

"Pure Gumption, we inspired the human to write, was a shaman mongrel who glowed and healed with her paws and tongue. She attended a priest, pawed the lonesome, licked the sick back to health. She liberated and healed the animals and birds that were held in humans, silent prisoners in bone and blood."

“Pure Gumption was a shiner, blue radiance in his stories, but when we presented a collection of our stories, by a shaman mongrel, the publishers were evasive and stood behind their two legs,” he said. “*We created humans, put them on two legs to slow them down, and then they pretend their blood and bone is the survival of the best.*” (*The Heirs* 18; emphasis added)

The italicized segment elucidates the fact that humans have themselves been produced through a miscegenation of the human and the nonhuman. Yet, their anthropocentric hubris makes them subalternize the agentic nonhuman within the human because it lies outside the logocentric domain. Similarly, Samana the handtalker lies outside language but within the a-logocentric forms of meaning-making mechanisms. She inhabits not only the liminal space between the Mayans and the White colonizers, she also inhabits the liminal space between the human and nonhuman, presenting an unaligned, parallax view of onto-epistemology. Similarly, the mongrels, as my italics in the quote above indicate, dislodge anthropocentric narratives by taking credit for creating humans without re-instituting any substitute hierarchy. By not just placing animals in a middle position, the mongrels enact what Deleuze and Guattari have termed as “cycles of conversion nature-culture-nature” (236) so that all narratives of human and nonhuman creation are seen as debatable and dubious constructs. As this tenuousness manifests itself more strongly, the novel enables the reader to see that neither does the animal become human nor does the human become animal: all are in a state of differential becomings, crossing limitrophic thresholds in their co-constitution. This is suggested through Memphis’ therianthropy. Memphis is a black panther, a talking animal called as witness in the court scene where a judge presides over the case regarding the repatriation of the stolen bones of Christopher Columbus to which the Native American shamans lay claim. A sample of their conversation is given below:

"We are animals disguised as humans," said Memphis

"So, we are animals in disguises then?" asked the judge.

"Yes, and the shaman heals the animals with stories in our blood, not the masks we hear as humans, the mask dies, the stories endure," said the panther. She licked her right paw and then stared at the spectators.

"Would you say that the notions of animal identities , but not human disguises, of course,

are what make medicine pouches sacred to the tribe?" asked Judge Lord.

"No, the disguises are sacred," said Memphis. "The animals are stories in our blood, and the stories have power to heal . . ."

"Memphis, who is the animal in your blood?" asked Lord.

"The panther," she said, and purred. (*The Heirs* 70-71)

This dialogue illustrates that not only is Cartesian binarism disbanded, but man and animal also become a "multiplicity" (Deleuze and Guattari 243) in differing stages of becomings. Vizenor's text releases these becomings through its Eco-performative accounts as the human and the animal move away from a fixed existential center of gravity to acquire new forms and create new meanings pertaining to their existence. Just as fibers and molecules cross thresholds, allowing one entity to intra-act with another while creating new material-discursive configurations, texts also move across the same processual configurations to extract meanings. They function within the parallax space of reality, creating much needed shifts in lines of sight. Memphis-Panther in the scene quoted above indicates a new becoming that is disanthropocentric and elicits a revision of the concept of the Anthropos. A text like *The Heirs* is thus a semiotic movement undergoing deterritorialization and reterritorialization to generate new material and epistemological becomings. In presenting these becomings, the novel questions the standard performative narratives explaining humans and nonhumans because its textual depictions of their intra-actions reflect their material enactments through therianthropy as a mode of bio-semiosis. As a literary text, its literacity thus activates signs as the associated materiality of these signs is also activated in the world that these characters inhabit. This affirms Maran's stance that literature, through language, is firmly embedded within our socio-cultural practices as well as our biological composition ("Biosemiotic Criticism" 303). In its modelling of the human-nature relationship, *The Heirs* plumbs into the material and semiotic structures and potential of the environment. However, since Maran's account falls back into an anthropocentric *logos*, it does not account for how texts like *The Windup Girl* and *The Heirs of Columbus* themselves de-anthropologize the human, nor does it challenge the constructed qualities man and nature. In addressing this gap, I argue that in depicting the Eco-performative practices of human and nonhuman material discursive phenomena in their semiotic agentic materiality, literary texts present the connection between the human

mental abilities to decode and perceive materiality and also the influence of material phenomena on the material and discursive perceptions of humans. The reversal of the social denigration experienced by anormative beings such as Emiko and the mongrels, invites human beings to revise their extant values and attitudes towards individuals and other material bodies confined within a radical alterity.

Vizenor is aware that a text is a movement across various genres or codified forms (Blair 75), a parallax domain where imagination and reality align and realign so that dreams become reality and reality becomes dreams. Yet, all depict a certain aspect of the truth. Quoting Milan Kundera, Vizenor writes that a novel is the “imaginary paradise of individuals. It is the territory where no one possesses the truth” (*The Heirs* 185). Texts like *The Windup Girl* and *The Heirs of Columbus* evade any possibility of concretizing any onto-epistemological truth through an imagistic and thematic representation of the material semiotic agency of human and nonhuman assemblages. In like manner, the digital space also reflects a similar evasion on the part of digital literary texts to represent a singular concrete truth.

Being a space of semiosis among different graphic, digital and linguistic codes, the digital space is a subcategory of the textual ecosphere where code-based textual practices in effect take place at the material and discursive levels. If Bennet thinks that paper-based books are material assemblages engaged in creating meanings, digital texts take this material semiotic agency to the next level, i.e. in terms of both material and semiotic enactments in themselves. Digital texts are materially processual unlike paper-based texts in terms of their dynamic animations and kinetic graphics. Despite this uniqueness, digital texts i.e. hyper- and cyber texts such as MMORPGs, short for Massively Multiplayer Online Role-Playing Games, as well as Multi-User Dungeons, shortened as MUDs, and MOOs, which is an acronym for MUD Object-Oriented online text, display a certain fluid mechanism in their nonlinear writing. This non-linear writing is not merely the result of a semiotic deterritorialization taking place at the levels of words and syntax, but also intra-acting with multiple algorithmic and graphic codes in the most manifest form of digi-semiosis that they display.

Gwen Le Cor, while analyzing Jaramillo and Strickland’s hypertext called *slippingglimpse*, sees it as a complex and unsettled system where the reader uses the cursor to interact with a text that both materially and discursively intra-active. She also sees a digital text as a material form of

enunciation intra-acting with other material modes and surfaces of enunciation. Iteration is both form and speech, materiality and discursivity and hypertexts emblemize this enactment in various forms. Like Cor, we also see these elements in *V: Vniverse* and *Grammatron*, which engage non-linear modes of writing that demand a nonlinear mode of reading. Although functioning within the electrosphere, these texts flow organically, opening up new dimensions both within and without the text. In *V: Vniverse* and *Grammatron*, both the texts and the meanings undergo a mathematical morphogenesis that functions rhizomatically (Cor), albeit in Cor's opinion it functions in a predetermined chaotic manner. This rhizomatic radiation of meanings through the codified interaction of graphics, algorithms, language, cursors, links and circuits, etc., causes the boundary between not only the reader and the text to collapse, but the distance between the text and the reader is also liquidated. The nonhuman AI who acts as a narrator within *Grammatron* becomes a nexus point between the consciousness of the reader, the author and the codified text itself that appears to mimic artificial intelligence. It becomes difficult to distinguish between the human and the nonhuman as these texts 'perform' as polyvocal and pluralistic systems that preclude any semiotic or signifying hegemony. Being "plurilinear, multidimensional semiotic" their codes are able to "ward off any signifying circularity" (Deleuze and Guattari 117). It is this pluridimensional semiotic potential of hypertexts such as *Grammatron* and *V: Vniverse* that accounts for digi-semiosis not only within the electrosphere, but in the collective ecosphere where different signifying regimes glide (Deleuze and Guattari 112) and form and content are no longer aligned but remain parallaxic. The human and the nonhuman intra-act across the noumenal and the phenomenal boundaries as alternative modes of intra-action are generated through the material-discursive entanglements taking place at the level of the code. Since reading, as argued earlier in this chapter, is a technicity that establishes the connection between the technological, the conceptual as well as the human and the nonhuman, therefore, the reading of hypertexts as well as the material-discursive performances and enactments of the texts, allow one to re-view their placement not merely within the electrosphere but also within the ecosphere. Reading in itself becomes a performance, a semiotic intra-activity at the material and discursive seams between the human and the nonhuman. Through its material-discursive enactments, *Grammatron* brings the human face to face with the permeability of its own being. Since the AI narrator has a nomadic presence, becoming one with the human and then diverging from it, the AI narrator displaces the Anthropos in a manner similar to the way Emiko does in *The Windup Girl* and Memphis and the

mongrels do in *The Heirs*.

Through such transformations, this electrosphere does not merely emerge as a textual space of semiotic intra-actions, but also where the materiality of the reader, the electrosphere and of the AI narrator are in a state of flux. Abe Golam becomes more human as he engages in digital erotic desires that place a major question mark before the notion of the body. The extract entitled “blood2” quoted earlier clearly illustrates this idea.

As Abe Golam penetrates the code that frames all forms of Digital Being, he becomes hypermedially connected to other phenomena reflecting an immanent intimacy. He is one with all the other consciousnesses in the narrative. Abe is a parallaxic phenomena, inhabiting and inhabited by the numerous consciousnesses of the text’s multiple readers. Golam is a compendium of multiple voices that proclaims, “I Link therefore I Am” (“HTC Hypertextual Consciousness”). In the section titled “Interface”, Abe is aware of the multiple bodies interfacing with cyburbia, i.e., the electrosphere, through him and with him. His “I” has multiplied as it functions within the textual ecosphere that imports the consciousness of the reader who is physically situated outside cyburbia, in the case of *Grammatron*. This space functions as a parallaxic “Identity-Engine that permeates the narrative space of Digital Being/ these days, holding on to subjectivity as it lights an internal flame who are "I" this time? Temperamental collective-Muse launching a thousand ships” (“Interfacing”). Gender stands neutralized, becoming a collective but loosely structured IT through which individuals undergo a deconstructive re-invention. Abe realizes that he is a compendium of multiple material and discursive subjectivities and that realization is shared by the reader too. Instead of being a discrete and distant entity segregated from the machinations of the sorcerer-code in cyburbia, the reader is also a part of Abe Golam sending out codes that miscegenate with Cynthia, the codified digital being whom Abe loves, and vice versa. The reader’s reading position is no longer that of an outsider but that of an integral part of a newly created collective IT. Likewise, Abe becomes more than human as the human reader becomes more like Abe. Abe declares:

The free floating "I" that automatically unwrites itself here in the electrosphere takes on multiple digressionary tracks and easily morphs into any number of so called voices permeating the virtual environment. "I" am the content within, the Other whose form

presents itself to the Reader as more than meets the "I" this more, this faster and better, is my new religion. "I" call it Digital Being. ("I").

In cyburbia, the human sense of self, or the "I" is in a state of constant alignment and realignment with the avatar that the human created online. The human acquires a free-floating Digital Being like Abe, who, as an assemblage of pixels, algorithms, language, intra-acts with the electronic circuit of the computer to create a poetic text. Abe stands as codified absolute deterritorialization. The human reader simultaneously is and is not Abe Golam. Conversely, like Emiko, Abe is and is not human, despite being a "legendary infoshaman, cracker of the sorcerercode and creator of *Grammatron* and *Nanoscript*, sat behind his computer, every speck of creative ore long since excavated from his burn-tout brain, wondering how he was going to survive in the electrosphere he had once called home . . ." ("find me"). Abe Golam is also a matterphoric realization of the material-semiotic entanglements as the human handle and the computerized avatar interact on the noumenal plane through images and language that are conceptually decoded by the human mind physically as the human body interacts with Abe through the materiality of the computer. This form of interface does not merely make Abe Golam feel invaded and colonized within cyburbia by the human who controls it through a cursor, the human controlling it is also displaced. Through his matterphoric intra-action, Abe does not only become "Digital Being" with digital margins that are "fuzzy" ("extremes") the human also becomes ontologically permeable. Thus, the idea of human and nonhuman embodiment becomes even more parallaxically displaced as Abe gains a greater sexual sentience that the text presents in language that blends digital metaphors with sexual ones. The human and the digital experiences of the body correspond cybernetically since the sexual experience in the digital space takes it to an open-ended understanding of the human body. In the digital space, where all bodies become semiotically and materially permeable, gender no longer remains confined within a fixed performative praxis that, for Abe, remains a social fiction. Through creatures such as a transgender "gmorph" ("gmorph") presented in the section of *Grammatron* entitled "Abe Golam", not only is the Hebrew myth digitally retold in manner that blends multiple narratives across religious, cultural, material and semiotic divides (Koenitz 31), he retells the story of "creation" so that God, man and the avatar become one intra-active assemblage with permeable boundaries. Abe declares:

"All Digital Being is forever tied to The Essential Book of Creation whose various letter

combinations enable the narrative engineer to develop a creature's consciousness. This creature has since been encoded with a magic sorcerercode called Nanoscript. We call this creature GRAMMATRON. Its unshaped mass of Digital Being is always on the verge of disseminating its radical Truth. It is in you the same way it is in me. We are its pure medium of fiction, there recalling, in the future, in the past, under the false appearance of a present, the filial fulfillment of the Idea whose dream apparatus we have become..." ("essential db")

In the Uncanny Valley of cyberspace, not only does the human come face to face with the nonhuman, but religious, scientific and literary texts come together through digisemiotic intra-actions. Gender becomes blurred as digital lovers become "gendermorphs" lying on a "bed of code" ("gmorph") with their gendered bodies in a state of constant flux and deterritorialization. As humans create different avatars, gender performativity in itself stands displaced since genders (neither of the readers', the author's nor of the characters) remain ontologically fixed due to reified social conventions. Thus, the electrosphere is a textual space where social fictions undergo a displacement. In the humanity of Abe, one realizes the permeability of one's own humanness. Replicating the patterns of human desire, Abe falls in love with a female handle or programmer called Cynthia who creates a sexually enticing avatar called Mrs. A. Like Emiko, Mrs. A and Abe love according to the code written in their program which mimics the human sexual and gender performativities as the following quote elucidates:

What he really needed to focus on, even in the afterlife, with the Nanoscript sorcerer-code enabling the GRAMMATRON program to do his writing for him, was finding multiple ways to send his remote-controlled cinematic eggsperm into her ever-morphing Transclusionary presence. ("cyn wuz right ")

In so doing, *Grammatron* displaces the Anthropos by floating the idea that human sexual behavior is a socially encoded program that can be replicated by nonhuman phenomena as well. Cynthia's digital form is so alluring that it would "turn any other living creature into a melting puddle of digital residue". ("cyn2"). Hence, her luscious sexuality replicates the human while exceeding the confines of the human.

Through this replication, *Grammatron* enacts semiotic transformations that are co-extensive with material transformations and are engaged in restructuring the concept of language itself.

Grammatron and *V: Vniverse* are “semiotic systems of corporeality” (Deleuze and Guattari 301) enacting the “semiotization” of all human and nonhuman phenomena (“Semiotization of Matter” 149). The readers, the authors, the texts and their characters are performing material-semiotic enmeshments as is evinced through the nanoscript. *Grammatron* presents the “nanoscript” (“cyn wuz right”) as a code-based writing that exceeds human and anthropoid control, and consequently any onto-epistemological enclosure. It consolidates the main argument of my thesis, i.e., . everything in the world displays a code-based becoming. *Grammatron*’s nanoscript enacts ecospheric material semiotic agency, since in the ecosphere, materiality is a semiotic becoming and semiosis is a material becoming:

Nanoscript was the forbidden data that had been permeating the electrosphere ever since the dawn of Man. *It was the underlying code that transcribed the evolution of consciousness in a natural world. This consciousness, originally thought to be the ultimate, state-of-the-art, artificial intelligence* (“Nanoscript”; emphasis added).

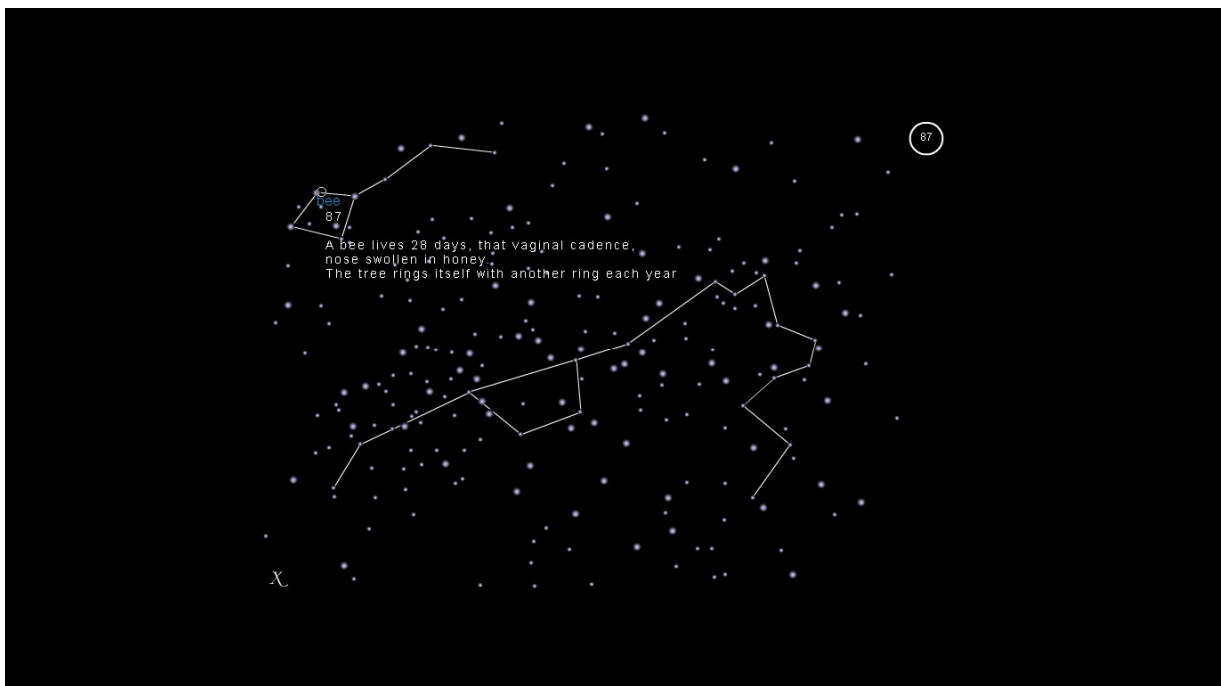
The italicized segments present consciousness (both human and nonhuman i.e. of Artificial Intelligence) as materially and semiotically connected across all boundaries, Abe, human, Cyn, codes, etc., are all processually disbanding hierarchies in the ecosphere. The code, which Abe Golam has termed as the “nanoscript”, establishes the protean substratum of all human and nonhuman intra-actions. Composed of multivalent codes, it is a system of memory which is in a state of constant flux, displaying a shamanistic alteration as it undergoes a re- and de-territorialization across multiple assemblages. As mentioned earlier, the readers, the authors and the texts are constantly being reterritorialized partaking in material-semiotic engagements. The reader is thus compelled to view the world at large and even his or her own presence as a processual becoming. Therefore, as a reader of *Grammatron*, I am no longer a fixed entity; I am and thereby open to any number of interpretations regarding my open-ended subjectivity, as I connect with Abe and Cyn, and through them, with Mark Amerika.

It is this same movement that *V: Vniverse* depicts. Its graphics replicate the cosmos and the stars speckling the sky like these constellations are shaped as kites, an albatross, the zodiac and even a dragonfly, etc.; and these shapes tend to add to the overall meaning of the text on both symbolic and graphic levels. Despite the fact that like any other hypertext, the text’s components loop in on themselves so that its poetic movement is rhizomatic. The reader might read the text’s sections in

a linear manner, however, the segments of the texts that emerge do not always connect with each other in a syntactic continuity. Interestingly, even when we connect the dots in the various shapes, the text moves paratactically with its meaning remaining open-ended. As different codes blend, the text in itself functions as a system that processes info like a “machinic phylum at the heart of morphogenesis” (Bradley 2). The sentences are disconnected, however, there is an exponential choice before the reader to connect the extracts in any sequence so that the cumulative meaning is registered through a nonlinear reading. The text enacts the displacement of any epistemological fixity through its material alterations on screen. Drawings, algorithms and sentences blend to replicate the way humans read the sky and find directions, with the only difference being that in cyberspace all directions are open-ended and meandering. Bringing in references from science, mathematics and literature, the text connects a large number of narratives and thus through its material semiotic agency, it displaces not only the older narratives but suggests new ones and new modes of seeing the patterns connecting the electrosphere with the larger ecosphere. The text reminds us that it is the human who imposes connections among disparate coordinates and creates meanings. However, despite the human imposition of fixities and enclosures on meanings, the material world continues to exceed those enclosures. The multivalent codes in the texts appear to defy human will, as they perform independently of the human effort to control them. For instance, while reading *V: Vniverse*, I entered the numbers of various screens sequentially; however, the meanings remained non-aligned as did the sentences. The carefully constructed chaos in itself held the greatest meaning. The following screen shots elucidate this point



Screen shot 3 from *V: Vniverse*



Screen shot 4 from *V: Vniverse*

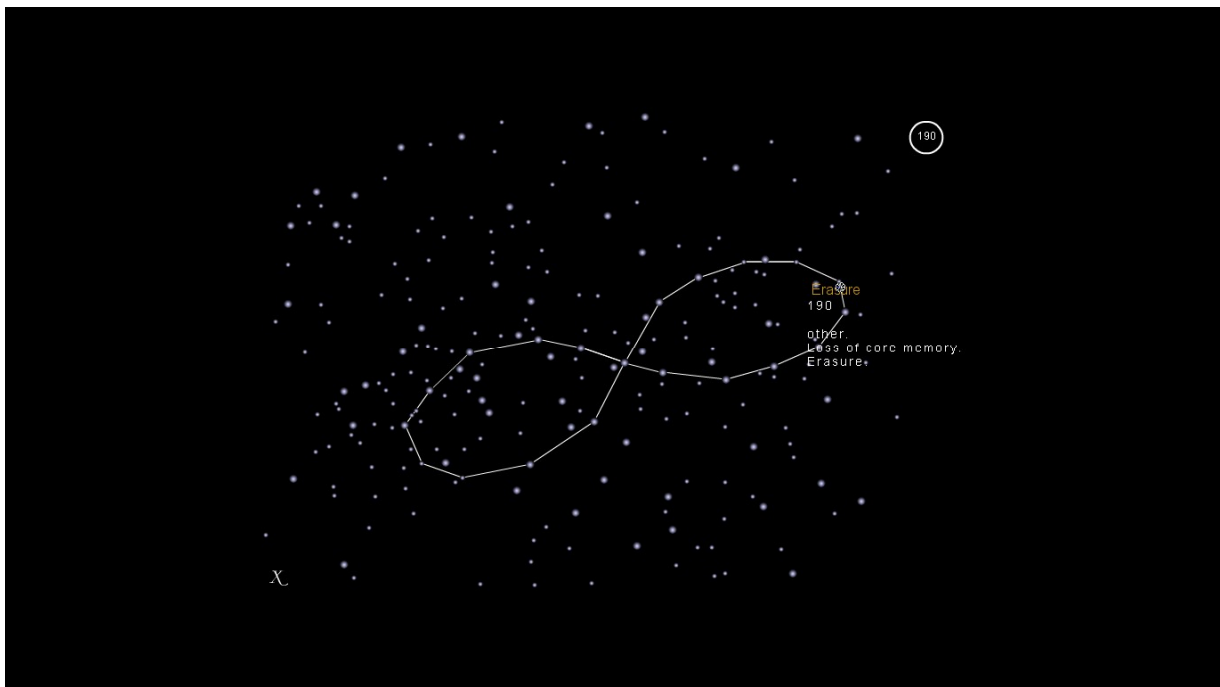
In screen shot 3, clicking on the coordinate number 86 revealed the following sentence fragment:

observed,
at the Green-wi()ch
meridian. (Strickland and Jaramillo)

While entering the number 87 the following text is revealed:

A bee lives 28 days, that vaginal cadence,
Nose swollen in honey
The tree rings itself with another ring each year. (Strickland and Jaramillo)

One can see that the sentences do not seem to have a logical connection, even when the numerical linearity is broken and one reads along the coordinates plotting a shape, the meaning continues to move rhizomatically. For instance, upon clicking number 203, a bow-structured loop appears as the one shown below in screen shot 5:



Screen shot 5 from *V: Vniverse*

However as we move along the perimeter of the shape, not only is the number sequence broken, moving from 203 to 190 to 187, the emerging scripts are not logically connected, despite their

poetic ambience. Not only that, the text comments on its own play of meaning in segment 187:

At the quantum basis of all that is stable

numeric and morphic play with each other

Not whether, but when, each level within. (Strickland and Jaramillo)

What is significant in the context of the Eco-performative practices that this particular hypertext shows is that not only does it alter the human perceptions regarding how the cosmos is ordered and is meant to be read, it also as functions as a material-semiotic phenomena itself. This catalyzes a decoding in the mind of the reader of not only how the text works but also how the cosmos within which man is embedded needs to be constantly re-read. Through its open-ended meanings, the matterphoric text invites a re-analysis of the socially accepted narratives pertaining to how the material world ‘performs’ or is thought to perform. Mentally, the reader becomes a participant of this code-based information exchange at the mental or noumenal level as not only the reader’s perception of the text is changed, but also of the material world is altered. The world is no longer a material fixity, but a material-discursive intra-action that is not centered in the human. As phrases jump across dotted coordinates they not only reflect the scattering of processual meanings on a material-discursive canvas, but also the enmeshments of ideas and things that were incorrectly assumed to be onto-epistemologically segregated. This is illustrated by *V: Vniverse* in the following manner:

Indra’s net? Cantor dust.

Do there exist beings where all take each other

Into account in their very core/

The smallest particles.

Renormalized photons.

List, I say list, that long implicit blurred string/

My mother

left me

Isomorphism, another name for coding./

Words of others.

Lists and strings are fluid data structures.

The Glacier, calving, enormous roar/

into a grey silent sea

turquoise

lining. (Strickland and Jaramillo 220-224)

In these lines, the text itself is a compendium of Cantor's dust, which in mathematical jargon, refers to the uncountable and deep sets of points that can be plotted on a finite line. It reflects infinity embedded within an imposed finitude, thereby functioning as a mathematical equivalent of the Buddhist and Hindu notions of Indra's net, i.e., a spiritual concept that reflects multi-tiered relationships among material, social and intellectual systems. It is reminiscent of a spider's web with complex web of intra-actions among particles and ideas that connect the human with the nonhuman. Even the smallest particles are impearled in blurred strings wherein every particle is a universe in itself and every string is a multi-cosmic assemblage. So is the human; hence, the human is isomorphism incarnate, an analect of mutually enmeshed data connected with hyperobjects like the Glacier and the turquoise sea of cosmic existence. While *V: Vniverse* does not disband the materiality of the human and different nonhuman phenomena, it does suggest how through different forms of material and semiotic encoding and decoding, all phenomena are intra-actively defying any singular onto-epistemological account. Through digi-semiosis, hypertexts connect with the material world through both their thematic representations but also at the noumenal level by changing perceptions regarding how the narratives regarding the world and its performative practices need to be revisited. Through digi-semiosis, hypertexts like *Grammatron* and *V: Vniverse* do not only replicate the exchange of codes in cyberspace, they also change the codes of human mental models. The materiality of these narratives has a semiotic agency, one which leads to the formation of different performative accounts regarding human and non-human intra-actions through a code-based information exchange as the next chapter elucidates

CHAPTER 6

Eco-Performative Practices in Literary Texts: Implications and Scope

In this chapter, my argument foregrounds the implications and scope of Eco-performative practices in literary texts. Since Eco-performativity is based on the notion that the world we inhabit has a fluid material-discursive syntax, it opens up the possibilities of reading the world as text with infinite semiotic inferences. In the discussion that follows, I elaborate how Eco-performativity overthrows ontology and subverts epistemological enclosures. I also throw light on how it involves the disruption of anthropocentric accounts of human embodiment while staging nonhuman performance bound within an immanent intimacy with the human.

6.1 Literature, the Infinitization of Semiotics and the Overthrowing of Ontology

One of the main arguments extracted from the previous chapter's discussion is that both digital and paper-based literary texts display a semiotic-agentic materiality in conjunction with other material-discursive phenomena within the nomadic space of the ecosphere. This does not imply that phenomena do not have any discernible ontological boundaries. To draw such an assumption would be erroneous. For example, a book placed on a table would not dissolve into the table or evaporate and thus lose its ontological parameters. At the same time, what needs to be remembered is that the book is nevertheless composed of multiple atoms and molecules which are all engaged in different forms of mobility. An example of this is the intra-action between friction and air on the surfaces of various material bodies. Figure B, given below illustrates this intra-action. Hence, movements remain immanent within an ontological fixity. Similar is the case with discourses, beliefs and ideas; ideas establish "constellations of Universes" (*Chaosmosis* 18) which are corporeal as well as incorporeal. As material-discursive entanglements in themselves, they connect

different planes of existence. It is this connectivity that is focused upon by an Eco-performative account. It could be correctly argued that this appears to be a recasting of Latour’s Actor Network Theory that posits that all entities are affected by others within their environments. According to this theory, every actant or acting agent is a “moving target of a vast array of entities swarming toward it (*Reassembling the Social* 46) and an actant is acted upon and acts in itself, as equation 2 given earlier in chapter 3 implies⁶. This action radiates outwards in many directions, both semiotically and materially, like a ping-pong ball ricocheting off various surfaces. Thus, all actors “*make others do things*” (*Reassembling the Social* 107; emphasis in original). Sloterdijk has, however, extracted these actors out of a material ‘thing-ness’, by proposing his theory of the spheres. Sloterdijk declares “wherever human life is found, whether nomadic or settled, inhabited orbs appear, wandering or stationary orbs which, in a sense, are rounder than anything that can be drawn with compasses” (11). These spheres are bound in acts of sharing and consolidation. However, while Latour’s and Sloterdijk’s arguments overlap, my argument veers away from theirs in many ways, thus laying the foundations of an Eco-performative account of human and nonhuman agentic maneuvers.

First and foremost, my argument posits that things are not materially fixed, rather, they emerge through an autonomous processual creativity that follows certain patterns or “refrains” that bind them within clearly defined material and semiological leitmotifs (*Chaosmosis* 17). This processual creativity is crystallized out of “differential materialization” (*Meeting* 34) which might retain a superficial similarity. Changes continue to operate at the quantum level within the superficial consistencies that these phenomena reflect. Assemblages are always in a state of relative stability, with internal changes constantly influencing this stability. Humans and nonhumans are no exceptions to these changes. As a matter of fact, humans themselves are not closed systems at all, with different pores and orifices establishing intra-active relations with the world at large. Not only that, all phenomena have an internal heterogeneity, despite their aggregated forms. These aggregated forms are a result of different “vectors” (Deleuze and Guattari 110) or intensities of

⁶ Materiality ↔ social practices ↔ nature ↔ discourses
 └──┘
 Ecosphere
 (Eq. 2)

movement along different lines as is indicated in Figure B.

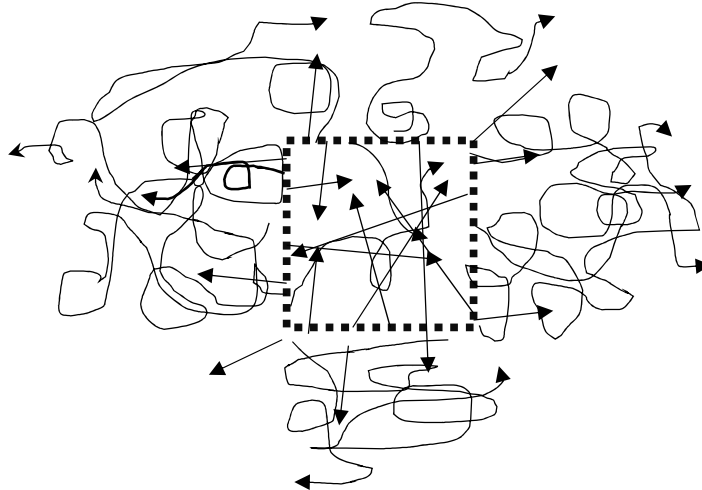


Figure B: Vectors and lines of flight in a material-discursive phenomenon: A hypothetical picture of how multiple vectors and lines of flight traverse and exceed a material-discursive phenomena with permeable boundaries at both atomic and larger collective levels

In Figure B, the central square is a hypothetical representation of any human or nonhuman assemblage being traversed by multiple lines of flight. The vectors or energy flows that are working within the phenomena allow it to retain a consistent shape; however, the assemblage's dotted boundary suggests the permeability of the outline which attests to the fact that human and nonhuman phenomena are not closed systems at all. These lines of flight are mobile and in a state of differential enactments that are congealed in specific forms. Their directions change in accordance with changes in both the internal and external environments of these phenomena. Discourses, ideas, beliefs and texts display similar differential enactments. Hence, these phenomena are processually creative, evading any fixity. This processual creativity leads to different meanings as well as different ways of decoding these meanings. The lines of flight given in Figure B above enact code-based movements, allowing one to re-think the environment and all its assemblages in terms of movements, which are in effect a “translation from one code to another” (Deleuze and Guattari 52). I argue that literary texts like *The Windup Girl*, *The Heirs of Columbus*, *V: Vniverse* and *Grammatron* are no exception to this rule. Through similar modes of intra-actions, these texts do not remain bound within the epistemological realm of representation; they are open-ended material phenomena through their various forms of codifications. As assemblages in

themselves, they are inherently heterogeneous in their enactments of meanings as they undo the ontology of numerous assemblages. Working within the rhizomatic ecosphere, literary texts engage in a “transversal movement” (Deleuze and Guattari 25) that interweaves different components of expression while overthrowing onto-epistemological enclosures.

I see this transversal movement of literary texts as a means of resituating semiology (*Chaosmosis* 24) in a manner whereby nonhuman modes of writing become evident. The depiction of different forms of bio-semiosis and digi-semiosis attest to this point since semiosis exceeds any anthropocentric *logos*. The ecosphere is an abyss of translation where codes are modified, translated and transmuted into each other, sometimes replicating themselves and sometimes undergoing a mutant morphogenesis, as is evinced in Emiko in *The Windup Girl* and the genetically modified children in *The Heirs of Columbus*. In depicting such characters and situations, literary texts function as interlocutors within this abyss, providing the plane for translating one code to another as phenomena perform in varying patterns. However, this translation remains open to re-translation with every re-reading. A literary text is a multiplicity in itself, existing like a machine plugged into other machines as it continuously dismantles “ossified conceptions” (*Chaosmosis* 58). It also intra-acts with other phenomena that have no fixed beginnings or endings. As they suggest ecological entanglements operating at different speeds, literary texts re-see the world not only in terms of movements, but in terms of movements that are not strictly re-iterated. If performativity is a repetitive act, or in Guattari’s term, a “refrain” that imposes a specific syntax by harnessing heterogeneous, superlinear, signifying and a-signifying substances of expression (*Chaosmosis* 48-49), the only refrain Eco-performativity recognizes is that of endless disruptions within a repetitive enactment of material-discursive phenomena. Paradoxically, the only enactment that is re-iterated is singularity i.e., a lack of consistent repetition. This is because life is an “infinity of enunciative assemblages” (*Chaosmosis* 59) conceptual, material, human and nonhuman, etc., and so is the ecosphere within which it thrives. The ecosphere is a “deterministic chaos” (*Chaosmosis* 59) where meanings are extracted in infinite ways. If performativity is the crystallization of fixed ways of reading the world and binding its enactments in a specific discursive enclosure, the only consistency that Eco-performativity sees reiterated and re-enacted in the world is inconsistency. Eco-performativity is an ongoing re-creation of new enunciations of how humans and nonhumans interact in a non-hierarchical way. It is both representational and material; therefore, its narratives are always onto-epistemological. It

entails a transversal movement between the linguistic and non-linguistic, the material and the discursive, so that all become co-constitutive.

As the ecosphere is a compendium of the digisphere, the biosphere and the mechanosphere (that is composed of a wide range of mechanical intra-actions), there is no common language that they all speak. Speech in the ecosphere is code-based which is inherently heterogeneous. All assemblages, be they literary texts, human bodies, DNA helices, packets of quantum energy, etc., are inherently heterogenetic, composed of multiple “others” (*Chaosmosis* 67). A human body is an assemblage of organs that intra-act within themselves and with other organs, bacteria, chemical elements, energy quanta, networks of lymph and blood, all connected with other networks. With the development of prosthetics, and the advancements in robotics, implants, neuroprostheses and 3D printing technologies, man has indeed become a “prosthetic god” (“Object Petit á and Digital Civilization”). Replicas of human organs, like lungs, have been grown in a petri-dish in the University of California, which augurs a new era of growing human organs from stem cells for transplants. These replicas, known as “organoids” mimic the functionality of human organs (University of California). This might sound like a radical development, however, humans have always been composed of nonhumans, and have extended themselves through nonhuman phenomena. Whether it was a Neanderthal using a club to hunt a pre-historic mammal or a modern human using computers to overcome physical disabilities, e.g., Stephen Hawking, or a blind human using a bionic eye to see through the Argus II Retinal Prosthesis System (Zhou, Dorn and Greenberg), man has always been a heterogeneity composed of multiple intra-active components. Each of these intra-active components functions as a unique enactment that cannot be repeated in the strictest sense of the term. If every human being is composed of so many ‘others’ that are all prosthetically internalized within the human, this creates an important groove for dismantling not merely the hierarchical structures framing the nature-culture divide, it also raises significant questions regarding racial and gender-based hierarchies that frame the human world.

With the addition of various pollutants, as numerous molecular mutations change the materiality of the ecosphere, it is the category of the human that becomes fluctuant. This does not imply that the human no longer remains human; it is the specifics of humanity’s humanness that become displaced. Race and gender have always been seen relative to a central, White, capitalist masculine principle that has epistemologically taken on the mantle of representing the universal human. If

the human in itself is a conglomerate of the nonhuman, the primacy of the White capitalist principle becomes tenuous. When the human becomes permeable as a category, not only do the categories of race and gender also become tenuous but their hierarchical placements also become questionable. A human body, regardless of pigment and biological make up, is made up of heterogeneous singularities, hence, the “semiotic constraints” (*Chaosmosis* 54) placed on the category of the human, become debatable. Every body is a world intersected by other worlds, so that their semiotic possibilities cannot be encapsulated in a single refrain as Figure B has illustrated. The semiotic possibilities are “infinite” (*Chaosmosis* 54) as the noumenal and phenomena continue to mutate creating new possibilities of meaning and existence. This is what Eco-performative practices enunciate. Literature continues to work from within these mutating entanglements, losing its status as a transcendent entity and becoming a participant. The ensuing discussion further elaborates how literary texts suggest alternative accounts of how race and gender become flexible through various forms of literary enactments and permit a re-scrutiny of social functionalism that places humans and nonhumans within a hierarchical order. Changing materialities invite altered concepts and discourses for decoding the material practices and their diffractive engagements. Eco-performative accounts de-anthropologize the human, and highlight ‘becomings’ of phenomena in terms of an ongoing onto-epistemological multiplicity.

6.2 Revising the Grammar of Social Functionalism: The De-anthropologized

Human and Literary Texts

Eco-performativity is a fluctuant narrative of how human and nonhuman phenomena perform and intra-act in ways that are inherently heteronymic. It contests the grammar of social functionalism that places all nonhuman phenomena within exile. It does so by highlighting all material forms as enunciations, i.e., both form and articulation at the same time. A human body is both a form and an articulation of meanings in various complex ways that are semiotic and a-semiotic at the same time. In addition, human culture “is an engine that transforms food into ideas.” (Huenemann). Individual bodies provide a material site where other materialities are converted into notions, ideas and subsequently, discourses, hence, becoming a nexus point between the noumenal and the phenomenal. The body needs an ecosystem to survive and the mind needs culture (Huenemann). Culture, the human body, human understanding and the ecosystem are thus inseparably imbricated

wherein the distance between materiality and concepts collapses. Words become material things and material things become words, creating “unspace” (*How We Think: Digital Media and Contemporary Technogenesis* 28) which, according to Hayles,

. . . is constructed through words that at once signify and function as material objects. The materiality of language is here given a literal interpretation, and the resulting conflation of imaginary with physical space creates an alternative universe mapped as well as denoted by language. (*How We Think* 28)

This concept of a material language alters the entire dynamics of social functionalism which has been a discursive mode of regulating natural-cultural relations. The material-discursive nature of language alters the normative grammar of human culture. Stiegler states that grammar is primarily a socially accepted selection of language “from among other language states” (160). Therefore, language is an always-already mixture of other languages which is normatized by human social and cultural practices as well as material semiotic and a-semiotic practices. Language is the conversion of flesh into word and word into flesh (Rancier 5) that establishes the democratic transcorporeal ethos of writing that accounts for the literarity of material-textual practices. Therefore, by operating in the unspace of the ecosphere, literary codes exceed the anthropocentric semiotic regimes. They work through ideas, the human brain, the human body, animals, nonhuman material and discursive entities such as cells, molecules, ideas, etc. This is how all material phenomena ‘speak’ through different code-based literary modalities. Abe Golam, Emiko and the mongrels as well as the material-semiotic enactments of *V: Vniverse* suggest that speech is no longer a human privilege alone; neither are alphabetic, scriptural or phonic modes of enunciation privileged modes of expression. When read from this angle, the anthropocentric social grammar becomes involuted with the grammar of nonhuman nature, becoming a multi-modal and multivalent enactment that de-anthropologizes the human. Both the human and nonhuman modify each other in a mutual translation. Silence and speech become co-constitutively embodied practices of narrating stories that exceed an anthropocentric enclosure, thereby accounting for the transcorporeal literarity of these works. Samana in *The Heirs* illustrates this transcorporeal literarity. Being a hand talker, her body enacted narratives through movements, bridging the gap between the world of spirits, the dream world and the material world: “the dead were silent handtalkers” (*The Heirs* 24) who told stories in the blood, crossing ontological boundaries as did

Samana. She was a “crossblood black bear and lonesome handtaker ... a shaman, as her mother was a bear, and her touch would heal the heir with stories in the blood” (*The Heirs* 12). Through Samana, Caliban and Memphis, *The Heirs* disrupts ontologies. It also moves between the past and present, between myths, facts and histories, extracting hidden and silenced narratives out of concealment and erasure. Since performativity is only possible within a specific set of circumstances created by human social narratives, once these narratives shift in reciprocity with the shifts in the grammar of social circumstances, performative accounts also become variable. Samana is a woman, a hybrid creature, a healer and a handtaker, communicating genetically from across the veil of death through the daughter she had conceived by Christopher Columbus. Her history is transmitted epigenetically through the bodies of her offspring. In producing an alternative history, Samana’s character challenges gendered and racial identities. Just as codes cross thresholds, challenging ontologies, Samana challenges accepted significations of the human body, race and gender, in her own body as a human, as a woman, and more importantly as a coloured woman producing the child of a white colonizer whose own whiteness stands displaced by the novel itself. “Columbus was Mayan” says Stone Columbus; he had escaped from the “Culture of death” carrying their genetic stories back to the Old World (*The Heirs* 9). He found release from the epistemological enclosure of whiteness through Samana, the woman who liberated stories both in the blood and the bones and stones. While Stone Columbus’ own name functions as a symbolic example of “human-lithic enmeshment” (Cohen 6), the novel’s literarity changes the syntax of history. Samana does not merely ‘perform’ as a woman; she blurs the boundaries between the human and the nonhuman through her hybridity. Animals co-constitute the human in *The Heirs of Columbus* in line with Native American cosmology. In so doing, she presents the edges of the human as tenuous and permeable. What gains importance here is the intersection of the animal and human gazes and the alteration within the performativities of the human and nonhuman in alliance with each other, within which the reader is also a participant. For instance, even as the racial and gendered hierarchies are displaced by the novel, the reader’s enmeshment with the text compels the reader to acknowledge the onto-epistemological displacements in his or her own position. If I foreground my own position as a Pakistani brown woman, Samana’s embodied enactments open up possibilities for me to re-read my own embodiment as an open-ended performance and not situated in a position of secondarity but in terms of an ongoing becoming. This ongoing becoming projects the global patriarchal structures

within which I am embedded as tenuous and malleable, thereby permitting me to review myself in an altered historical and socio-political narrative wherein my supposedly secondary position in the global patriarchal and racial hierarchies stands upturned. Like Samana, I too am an open-ended assemblage. She is a human-animal, a “becoming-animal, becoming-molecular, becoming-animal . . . a human hyperconcentration” (Deleuze and Guattari 34) a conglomerate of assemblages rhizomatically intra-acting with each other. She is a multiplicity, disbanding any onto-epistemological fixity. She is movement incarnate, crossing “thresholds of heterogenesis and autopoiesis” (*Chaosmosis* 50). She is multiple and hence cannot be encapsulated within any fixed performative account, be it the one defining the reification of the human, the animal, a woman or of a race. Columbus’ own whiteness is undermined by his Mayan heritage. He is not a conqueror but a long-lost child returning to his roots. In his person, racial fixities undergo a deterritorialization and become co-constitutive within which I also participate as a reader as the prescriptions regarding my body are displaced and de-territorialized.

Therefore within the ecosphere, the only performative account that can be given is of ‘becomings’ taking place at the material and discursive seams. If a performative account legitimizes certain socially accepted performances in terms of fixed outlines, an Eco-performative account legitimizes a re-articulation of these performative accounts in terms of movement across thresholds, where gazes intersect with each other, to see the world as a parallaxic space. As Derrida posits in “The Animal That Therefore I Am”:

As with every bottomless gaze, as with the eyes of the other, the gaze called “animal” offers to my sight the abyssal limit of the human: the inhuman or the ahuman, the ends of man, that is to say, the bordercrossing from which vantage man dares to announce himself to himself, thereby calling himself by the name that he believes he gives himself. (12)

If we modify the diagram of the parallax gap given in Figure A in the first chapter to incorporate the intersecting gaze of the human and the animal, what we behold now is the parallaxic space between the intersecting human and animal gazes which disrupts ontologies and highlights ‘becomings’, i.e., becoming-animal of the human and becoming-human of the animal or nonhuman. The ends of the human and the nonhuman become tenuous in the process.

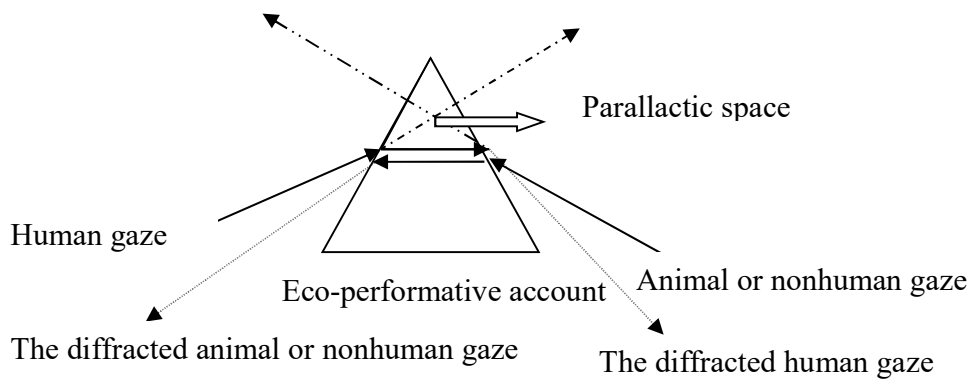


Figure C: Eco-performativity, the parallax gap and the intersection of human and nonhuman gazes. The Eco-performative account is represented by the prism in the middle with the animal and the human gaze placed on opposite sides and an intersecting parallaxic space in the middle.

As figure C above indicates, an Eco-performative account functions like a prism, passing through which, both the human and nonhuman gazes experience a diffraction, i.e., they diverge from a linear path and move along multiple angles, an example of which are the two downward arrows on both sides of the prism. However, the Eco-performative account does not merely diffract both the human and nonhuman gazes as they move across thresholds, it also allows them to intersect in the parallaxic space (indicated by the smaller triangle in the center of the larger one) where all ontological and epistemological accounts are disrupted. This parallaxic space enunciates becomings in terms of movements of meanings across thresholds as Samana indicates. Being a therianthrope shaman, she embodies “semiotic transformation” (Deleuze and Guattari 82). In her, different forms of content and expression intervene and operate through each other because she is simultaneously a coloured woman, a bear and a shaman who blends the material and dream worlds. She enacts the transformation of many abstract semiotics into the other. She is all these and neither, thus defying categorization and by extension, hierarchies. The Eco-performative account offered by *The Heirs of Columbus* displaces any consistent refrain and posits Samana’s inconsistency as a refrain. Samana indicates a transversality, “that sweeps one *and* the other away, a stream without beginning or end” (Deleuze and Guattari 25; italics in original) between various material-semiotic substances, encoding different meanings. She representatively enacts “discontinuous states of metastability” (Deleuze and Guattari 50) depicting different forms of de- and re-territorializations.

She disbands the limits of a human being, just as Ishi, the mute Blue Child alters the genetic syntax of the people around him. In changing the syntaxes of both bodies and the world within which these bodies are imbricated, the silence of both Samana and Blue Ishi becomes a powerful semiotic code that bridges the gap between the living and the nonliving, the human and the nonhuman. Despite being a-semiotic, this silence becomes a poignant signifier of an alterity that can be heard and decoded. It is a mode of disanthropocentric writing, constantly challenging human narratives of social functionalism that confine bodies within gendered and racialized hierarchies. This disanthropocentric mode of writing extracts all participants, i.e., readers, authors, characters and the texts of this reading and decoding process out of their onto-epistemological enclosures and recasts them in terms of becomings. Interestingly, one of the outcomes of this disanthropocentric becoming is that it also extracts literary critics as well as scientists out of their segregated epistemological enclaves and binds them in a hermeneutic commonality wherein the world is decoded in terms of code-based textual practices and the mobile, transcorporeal liaisons and amalgamations that it encapsulates. These amalgamations also disband academic enclosures and bring literary theory into the realm of embodied material practices which cannot be confined within formulaic signifiers. Literary theory in itself operates ‘in-the-world’ as Eco-performative practices frame the world of ongoing material-semiotic becomings.

This is evinced in the Eco-performative account that is extracted out of *The Heirs*. This novel projects the ecosphere as a collective society defined by “amalgamations” (Deleuze and Guattari 90) that speak of both an ontological and epistemological polyvocality. An Eco-performative account, as presented in novels like *The Heirs of Columbus*, focuses on this polyvocality of enunciation to extract and derive complex “matter-form” (*Chaosmosis* 28) intra-actions that have to be constantly re-read. As people inhabit a planet whose materiality is in a flux which has been catalyzed by excessive human interventions, human habitability remains a primary concern. Once people re-read the world in terms that sideline their self-assumed superiority, they can re-read the “unspace” mapped by the conflation of multiple languages that are material and discursive (*How We Think* 28). This inaugurates a sense of equal sharing with the rest of the environment. The university, the science laboratory and the world lose their exclusive boundaries and so do literature, history and science. This observation also loops back to the notion of residual anthropocentrism presented earlier. While Eco-performativity is inherently a disanthropocentric account, it does retain traces of residual anthropocentrism and for a valid reason. Humans are the main agents of

ecological alterations in the contemporary world. They are undoubtedly the main culprits in the dangerous imbalances in the environment and to deflect the blame from this culpability would not arrest the debilitating human impact on the environment. This is because owing to their technological advancements, humans are able to harness forces of great potential in bringing changes that evolution brought about over millennia. Hence, they remain catalytic actants within the ecosphere. Residual anthropocentrism functions at enabling an epistemological shift within the humans; keeping in mind that the episteme has inherently been anthropocentric having imposed apartheid on humans and nonhumans. Since one is in a state of constant reinvention (*Chaosmosis* 20), Eco-politics and Eco-performative accounts have to be re-grounded within a disbanding of this apartheid and its boundary-based structures. Both *The Heirs of Columbus* and *The Windup Girl* endeavor to lift this apartheid so that humans reinvent their roles in terms of a nonhuman Other. This nonhuman Other is not only external but is also always-already internalized, thus providing grounds that pre-empt re-centralising the human. In addition, this trace of anthropocentrism is necessary primarily because the human remains the main geological factor influencing the material configurations of the contemporary world. Since Eco-performativity is democratic as it presents the vocalizing of nonhuman enunciations, an Eco-performative account opens up the boundaries of anthropocentrism. As a result, the human democratically participates in the material citizenship of the world without positing itself as an exclusive and exclusionary hierarchy, thus generating an anormative thinking pertaining to what it means to be human without really clearing the human of all charges of tampering with the environment.

In this regard, *The Windup Girl* invites an anormative thinking of the human body; Gibbons, one of the masterminds behind the creation of Windups and Cheshire cats undergoes a physical degeneration, and is able to see the potential of Emiko's genetic code in creating a new race of windups, perfect and reproductively fertile. His mind is still able to exploit the material discourses surrounding him, even as he lusts after his transvestite servants or "ladyboys" (Bacigalupi 229). Spurning the so-called natural, Gibbons instates anormativity as an evolutionary substitute, with the predatory Cheshires replacing ordinary cats and Emiko replacing not only windups but also humans. Gender and all its performative practices are rendered unstable through his genetic interventions and also his sexual attraction for transvestites.

Gibbons snorts. "The ecosystem unravelled when man first went a-seafaring. When we

first lit fires on the broad savannas of Africa. We have only accelerated the phenomenon. The food web you talk about is nostalgia, nothing more. Nature." He makes a disgusted face. "*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." (Bacigalupi 229; emphasis in original)

While Gibbons' argument suggests that human alteration of the environment is an internalization of the other by the human, what needs to be kept in mind is that the nonhumans that are being internalized exceed human control. Emiko's speed overrides her rationality and the virile Cheshire cats as well as the plague-wreaking algal baths are autonomous. The anormative becomes the new normative. Humans may internalize nonhumans, but this does not deprive nonhumans of their agency. Both remain inextricable and intrinsically bound to each other.

In depicting this internalization, literary texts function like prisms. These prisms blend and diffract. "the environment, the socius and the psyche" (*Chaosmosis* 20). The solution to dealing with the poisoning of the atmosphere and water systems, the greenhouse effect and the onset of extreme weather conditions, etc. is a "mutation of mentality" (*Chaosmosis* 20) that is coextensive with the mutation of materiality, an Eco-performative account offered by literary texts like these continues to see open-ended ways of thinking the world.

6.3 Thinking beyond the Human in Paper-Based Literary Texts

An Eco-performative account permits one to think beyond the human, particularly in a world made further complex by the addition of prosthetics. As science is engaged in generating new life that would gradually gain autonomy and the gap between digital technology and the real world becomes negligible, it is triggering a "process of no-return" ("Object petite á and the Digital Civilization"). As nanotechnology multiplies, one's entire concept of reality undergoes a disintegration. Once a new mode of life is unleashed, be it through genetic or digital intervention, it continues to reproduce itself "through mitosis" that leads to the generation of "excessive objects" ("Object petite á"). In *The Heirs*, Ishi's genes function as such excessive objects which exceed their own parameters as they blend with other phenomena. In *The Windup Girl*, Emiko, the megadonts, the Cheshire cats and the algal baths attest to this function as excessive objects. These excessive objects do not merely cross their own thresholds, they also exceed any prescriptive modes of enactment. In so doing, they invite the readers to re-think their subjectivities as human

beings. Since literary texts have functioned as viable apparatuses in the construction of human subjectivities and their performative accounts, the selected literary texts also work at exposing the intricacies of these formations and unveil the “ruptures of meaning that are auto-foundational of existence” (*Chaosmosis* 21) that disband ontological enclosures. The space of literary texts like *The Windup Girl* and *The Heirs* depict a re-territorialization of categories as an ongoing process of mutation thereby affecting the readers and their connections with the world they inhabit.

This re-territorialization of categories permits a thinking beyond the human, or rather beyond the accepted category of the construct ‘human’. Derrida states that the plethoric growth of the technological, the categories of state and citizen have undergone a displacement (Derrida & Stiegler 36). In a world of becomings and “taking-place”, experience in itself is “différance” or a play of the trace where nothing is fixed (Derrida and Stiegler 36). The human body is extended through prostheses, as the “biological skin-bag” has become increasingly permeable in a “smart world” (*Natural-Born Cyborgs* 5). Morton agrees, stating that the human is “already a mess of lungs and bacteria and nonhuman ancestors and so on—along with their agents such as cows and factories and thoughts, agents that can’t be reduced to their merely human use or exchange value.” (“How I Learned to Stop Worrying and Love the Term Anthropocene” 262). In such a world, human biology falls within the category of the emergent. An Eco-performative account is an account of the emergent phenomena that go beyond axiomatics. Here, while I have used Guattari’s term, ‘emergent’, it has slightly different connotations from those derived by Guattari. I read ‘Emergence’ as onto-epistemological: epistemological in the sense that it allows one *to see* phenomena appear as assemblages of variables that are changing, like the human body and the contemporary climate, etc., and ontological in the sense that it deals with material phenomena as conglomerates of multiple intra-acting strata. The emergent is therefore unpredictable in its appearance and consequences just like the Cheshire cats and the algal baths in *The Windup Girl*. In numerous philosophical traditions, the emergent precedes enunciation, hence, it stands outside history. However, once it is enunciated both materially and discursively, not only is it plotted in history, it also displaces the anthropocentric historico-political grid. In doing so, it displaces the category of the human so that one is compelled to think beyond the accepted humanness of the human. Emiko is a case in point. As Figure B. given on page 149 indicates, the human undergoes a change external to its skin-bag and also within itself, as is suggested by the “genetically transgressive” phenomena like Emiko (Bacigalupi 99). As a human-plus, Emiko is an intra-active

assemblage within herself and also outside herself, just like the algal baths and the fertile Cheshire cats as is suggested by Figure B. As the world around her changes due to the plague unleashed by the decaying algal baths, Emiko remains immune to the disease, living alone in a city flooded by the sea waters. The city made of normative humans is destroyed so that an anormative being like Emiko survives. Like Samana in *The Heirs*, Emiko displays an ongoing “ontological heterogeneity” (*Chaosmosis* 61) that is able to divert those narratives that define what it means to be human. Here, the nonhuman does not only displace the human; rather, it becomes more than human. In doing so, she becomes an onto-epistemological parallax wherein the human and nonhuman gaze undergoes a simultaneous diffraction and intersection, as the human and nonhuman cross material-semiotic thresholds, allowing one to think beyond the human and to reconsider one’s own sense of self. For instance, in reading this post-Contraction world, my own positionality as a woman of colour living in Pakistan becomes just as fluctuant as that of any other reader’s gendered and racialized identity becomes tenuous. Crossing material-semiotic thresholds, we re-read our bodies beyond our contextual humanness. As the normative humans die in the novel, our own normative assumptions of who we are as humans within racialized and gendered hierarchies are displaced so that in thinking beyond our diverse forms of humanness, we come to think of the new possibilities of humanness as exemplified in Emiko.

As the toolmaking human extends itself through biogenetic engineering, microchip implants, and robotics, our minds and identities lose their reified contours. In losing these reified contours, the boundaries between the human and nonhuman, the readers, the authors and the texts are blurred so that the categories of the human and nonhuman become intersecting parallaxic categories, traversing across each other, leading to ‘emergent’ onto-epistemologies. Through these intersections and enmeshments the question that arises is, what becomes of the human soul and rationality which humans have used to rationalize their superiority over the nonhuman world? If rationality and intelligence are rationed out to hypomnetic technologies or external memory storage devices such as SIM cards, data travelers, microchips, smart phones, hard drives, AI, etc., allowing human ideas and different materialities to work as highly complex conglomerates, then what happens to the spirit in particular? There is no easy way to answer this loaded question which leads to many possibilities. However, I will visit the possibilities of this question from three angles:

1. The soul as an anthropocentric concept

2. Emiko as a nonhuman with a soul
3. Extension in the concept of the soul

With the concept of the human becoming diffractive, the idea of the soul also undergoes a shift. While an entire philosophy of the soul does not fall within the ambit of this study, however, it does lead to further possibilities of examining what precisely the soul means. The idea of the soul falls within the “dominant significations” (*Chaosmosis* 63) of anthropocentrism, interweaving ideas of conscience and morality within the idea of the soul or the rational and ethical spirit of the human race. Nonhumans are assumed to lack a soul. Heidegger believes that they also lack a world. Derrida summarizes Heidegger’s theses in the following words: “The stone is without world (*weltlos*). 2. The animal is poor in world (*weltarm*). 3. Man is world-forming” (*Of Spirit* 48). The non-living nonhuman, signified through the stone, is believed to be totally inert, since world-formation entails an awareness of one’s presence in a present world. The animal, while sentient, does not have the advanced powers of apprehending the world. The human creates the world according to a rational comprehension, which is further complemented by moral values and ethics. In the case of Emiko, the idea of the soul becomes open-ended, as it does in the depiction of Abe Golam in Amerika’s *Grammatron* because theirs is a rational comprehension crisscrossed by a questioning of social morality and ethics.

Emiko does not merely go beyond the dominant significations of the human and nonhuman in material terms, but also in terms of morality and ethics. Despite being a reviled nonhuman geisha, she is the one who takes care of Anderson *Sama* when he catches the disease caused by stray and virulent vectors unleashed by the algal baths he himself had bio-engineered. When all ‘humans’ abandon Anderson, she is moral enough to nurse him till the end. Prior to that, when she is raped and violated by her female handler, she brings to the fore the entire pathos of the violence inflicted on her body in terms of a moral outrage. Not only is the idea of humanness blurred when she is compared with human beings, the idea of humanity is also blurred. However, despite being nonhuman, Emiko is “able to perform as a person” (Wenneman viii). In so doing, she extends the concept of personhood so that it becomes non-speciesist and encapsulates nonhuman Others such as genetically altered creatures, etc. Emiko’s personhood is so radically altered that she leads to a questioning of what it means to be human and what it means to have a soul. As the human is de-anthropologized, she compels one to rethink not only beyond the human but also to think of a

posthuman personhood in a “morally meaningful way” (Wenneman 17). She is capable of moral thought, rationality and agency, and she is able to affect herself autonomously, thus displaying an essential characteristic of personhood. She emerges as a nonhuman with a soul. Despite her altered humanness, she displays a soulful being in a world where humans like Kannika have lost their souls as they brutally use her as a sex slave and cash in on it. Even in terms of abstract concepts like soul and rationality, Emiko shows how the human cannot enclose itself in any form of moral or ethical exclusivity. In imparting the idea of a soul to a nonhuman or even a genetically advanced human, the novel opens up the anthropocentric idea of the soul to further philosophical scrutiny. Eco-performativity, while not denying human rationality and soul, does allow one to allow this concept to go beyond an anthropocentric enclosure and to be rethought in disanthropocentric terms. Thinking beyond the human entails a disanthropocentric re-configuring of not only one’s humanity and humanness, it also entails a reconfiguration of the entire anthropocentric discourse and epistemic paradigms. As humans and nonhuman undergo an “existential transference” (*Chaosmosis* 61) owing to the mutation of the onto-epistemological textures and consistencies of the world, the homogenizing and essentializing characteristics of anthropocentrism collapse to present a multi-dimensional view of the dominant signifiers. It is for this reason that an Eco-performative account operates like a prism, offering different strata of being to emerge out of the existing ecospheric mix. Emiko, in being portrayed as a soulful being, becomes an ‘emergent’ being, one that would both materially and discursively substitute the human.

Thinking beyond the human also entails a re-thinking of the Other, or Others owing to their multiplicity, particularly when the human is no longer seen as an inert construct. Rather, through Emiko and Amerika’s Abe Golam, it is the category of the human which becomes the emergent or a being that is in a state of constant emergence. This coheres with the Baradian idea of a phenomenon which manifests itself through a diffractive engagement with other phenomena. As figure B indicates, every phenomenon is “full of inside and outside” (*Chaosmosis* 88) so that any separate plane of alterity or Otherness collapses within the One. The human also collapses into the nonhuman One. As a matter of fact, the categories of the nonhuman Other and the human One enfold each other, to become mutually co-constitutive. The code based intra-actions and formation of material-discursive conglomerates attest to the fact that ontology is heterogeneous, maintaining only semblances of stability over a long period of time. Human evolution also attests to this fact. Every phenomenon, be it Emiko, the Cheshire cats, Ishi the Blue Child, Samana or Abe, every

entity becomes a mutating and self-forming entity that is constantly modifying itself and others in intra-active processes. The ecospheric space is thereby a space of consistent chaos where finite assemblages intra-act with processual ones. Thus, Eco-performativity is about becomings and not beings. It is about permutations and a “mutant creationism” (*Chaosmosis* 116), not fixity. In thinking beyond the human, it thinks in terms of becomings and “transindividual subjectivity” (*Chaosmosis* 101) as different material becomings penetrate into social becomings. Emiko and Samana reflect this transindividual becoming. So do Abe Golam and the narrator of *V: Vniverse* as the next section highlights.

6.4 Polyvocal Becomings in Digital Literary Texts

Eco-performativity entails seeing all categories, both the human and nonhuman, in terms of emergent ‘becomings’. It short-circuits the dominance of any signifier, since all entities come to be seen as polyvocal or polysemic code-based phenomena. Albeit different consistent assemblages and modes of semiotisation lead to the consolidation of fixed categories, however as figure B indicates, neither are the categories inwardly fixed, nor are they outwardly stagnant. All entities are blending into each other through a code-based semiotisation. As mentioned earlier, the code is a trickster-like figure, constantly under erasure as it galvanizes a processual creativity by a constant material-discursive mutation. Humans too are code-based phenomena in a state of physical and intellectual transference (*Natural-Born Cyborgs* 34; Bradley 4). Humans absorb food that is metabolized to enable the brain to function to generate ideas and memories that are then stored in external hypomnetic devices such as writing through alphabets, hieroglyphics, algorithms, etc. Technological assemblages link up human and nonhuman assemblages so that they share a “mixed reality” (*Natural-Born Cyborgs* 54). The human is digitally, physically and bodily connected with the nonhuman cyberspace, wherein new configurations and readings of reality take place. Mistry’s *SixthSense Technology* and Samsung’s *Gear 360* are cases in point. The *SixthSense Technology* links a computer with a human being so that whatever the human gaze perceives, is registered by the computer which provides additional information related to it. This information is then projected on any ‘body’ ranging from a flat wall to the user’s hand. The virtual and the material thus interface through a code-based mode of writing which is further decoded by the human mind. In his *Samsung Gear 360* project, Mistry harnesses the power of digital technology to “capture the world around us” and to engage in a “new way to tell stories” (Mistry, “MWC Samsung Unpacked 2016”)

that encapsulate the world in all its variety and material-discursive becomings. The human is also re-thought in terms of this new becoming through its immersion into the digital world. Likewise, literary texts like *V: Vniverse* and *Grammatron* provide a way to re-think the human in terms of ‘becoming’ wherein alterity and oneness collapse into each other, unwriting themselves and each other. This is evident in Amerika’s *Grammatron*, which both thematically and stylistically enacts a breakdown of subjectivities. The human contours, i.e., the limitrophic border of the skin, become fuzzy as the human mind cybernetically links with the digital being and through that with the creator or author of this digital being. Since the ecosphere is about flows or the movements of vectors with multiple intensities in multiple directions, the digital ecology connects with the reader’s mental ecology. Guattari defines mental ecology as the ability to identify breaks in discursive links and how concepts are used to engage in “auto-constructability” (*Three Ecologies* 55). This auto-constructability may be interpreted as an autonomous construction of one’s self in terms of the material-discursive milieu one inhabits. In *Grammatron*, as the human consciousness filters through the digital consciousness of Abe Golam, the human is able to see itself in terms of an ontological heterogenesis and also in terms of processual creativity, thereby initiating an auto-constructive ability of ourselves as humans. This is exceedingly necessary if one has to go beyond the normative constructions of race and gender. Normativity, as seen in the light of Guattari’s arguments, is the loss of human singularity. Singularity is a key term pivotal in Butler’s concept of performativity and also in Guattari’s ecosophy as it signifies those unique characteristics of a human (or even a nonhuman) that are not re-iterated and where every iteration is a unique enunciation of behavior, characteristics or intra-actions. On the social plane, this human singularity has been submerged within the homogeneity of norms, conventions and subjectivity. What is forgotten in the process is the heterogeneous creativity and singularity of the human. *Grammatron* reminds one of this loss of singularity as the AI narrator becomes transindividual, bemoaning the loss of any fixed individuality. *Grammatron*’s idea of the free-floating Digital being cited earlier aptly illustrates this point.

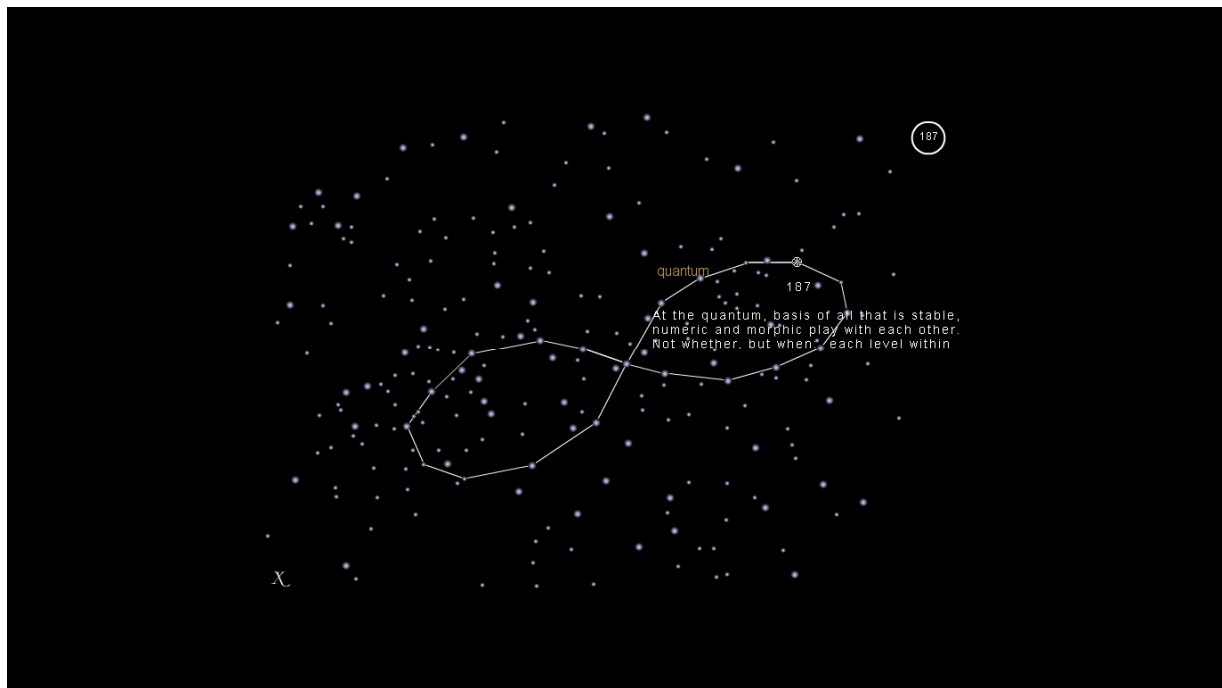
However, it is not only Abe who becomes transindividual, the human does so too. This transindividuality leads to the breaking down of all boundaries so that all planes of alterity collapse into each other. The human in itself becomes polyvocal. Since an Eco-performative account is about transversals and not fixed universals, and about movement and crossing thresholds, digital texts like *Grammatron* re-affirm the loss of human singularity through the fact that human

subjectification remains inherently processual. As the readers digitally and intellectually cross thresholds, we become one with Abe Golam, not only sharing his free-floating subjectivity but also realizing how we have transcended our own subjective shells. In the digital world, there is more than meets the eye to our narrow subjective confines. In functioning as a space where forms and signification are not only circumvolving but are also undergoing a rupture, signifying chains create more meanings that remain open-ended through “a mutant production of enunciation” (*Chaosmosis* 131) that disrupt rigid categorization. The human and nonhuman operate as polyvocal becomings outside the enclosure imposed upon them through science. In the ecosphere, as in *Grammatron*, the one and the other, the human and the nonhuman “overlap each other, and invade each other to become collective entities half-thing half-soul, half-man half-beast, machine and flux, matter and sign The stranger, the strange, evil alterity are dispelled into a menacing exterior. But the spheres of exteriority are not radically separated from the interior.” (*Chaosmosis* 102). Human subjectivity, thus, gets displaced both materially and discursively. Many might argue that the displacement that emanates out of thinking beyond the human might de-humanize the human and make them come at par with nonhuman material phenomena. To address this reservation, what needs to be remembered is that despite its aim at de-anthropologizing the human, the argument is out of necessity laced with residual anthropocentrism. In line with Cohen, I argue that this mode of anthropocentrism is necessary because it deepens human sensitivity to nature and also makes one more aware of nonhuman narratives. The displacement of the concept of the human is not a denial of the essential humanness of the human which makes it distinct from the nonhuman; what it demands is a re-definition of human interactions with the nonhuman within the existing anthropocentric discourses. Humans ‘perform’ according to a narrative based upon a consistent, hegemonic social refrain that places all nonhumans in a peripheral position. The re-definition of the human demands an understanding that humans are made of polyvocal becomings, where the ‘I’ is a sum of multiple metamorphosing phenomena. This conflicts with the existing idea of human performativity within the social, natural and cultural spheres since it is based upon an attempt at crystallizing a particular subjectivity. However, once the ‘I’ is seen as a polyvocal becoming “embodied at the intersection of partial components of enunciation, breaching on all sides individuated identity and the organised body” (*Chaosmosis* 83), the existing accounts of human performativity, particularly in terms of their relationship with nonhumans, shift. This argument does not imply that dangerous organisms such as contagious viruses and bacteria ought to be

allowed to take over the human body; however, it does necessitate the need of a new politics that acknowledges and respects nonhuman agency and does not treat the nonhumans merely as commodities or passive objects. We need to read into their “narrative agency” as equals (“The Living Diffractions of Matter and Text” 72) because human and nonhuman agency is a matter of meaningful performance that emerges out of “differential becoming” (*Meeting the Universe* 149) and differential intelligibility. Differential intelligibility is not a matter of human intellectual capability alone, “intelligibility is a matter of differential responsiveness, as performatively articulated and accountable, to what matters.” (*Meeting the Universe* 335). My account of Eco-performativity is a differential responsiveness. It is an account of active materialization, rather than that of passive materiality in the tradition of Judith Butler. It foregrounds how matter matters and portends the idea of agency as being invested in the differential responsiveness between human and nonhuman phenomena. It entails an account of the polyvocality of phenomena and the narratives they equally engender through their intra-actions. Humans and nonhumans create meanings through codes that overlap and are in a state of constant transition. This overlapping of codes is also illustratively enunciated through the agentic materiality of *V: Vniverse* so that new modalities of how existence is read may be generated. As different codes overlap, the only refrain that is articulated in this hypertext is the idea that meaning is open-ended as the chain and syntax of meanings is constantly displaced. At a single moment, multiple enunciative modes manifest themselves on the screen. Bright dots speckle the dark canvas like the rhizomatically spaced stars in the night sky, enacting the non-linearity of the cosmic syntax and its material signification. Every dot acts as a junction between a number and a text which appears when a number is entered. Not only does a text emerge but a picture also emanates like in a ‘join the dots game’. Every line segment is interspersed with other dots which lead to the formation of other forms such as that of a fetus or a bull’s head.

Thus, as the *V: Vniverse*’s scriptural, algorithmic, graphic and material codes intra-act, the digital world materially and thematically enacts ecological phenomena. It creates ruptures and interference patterns, like quanta interfering with other quanta, in a “multiplicity of layers” (“The Living Diffractions of Matter and Text” 73-74). The text, through its material discursive, code-based enunciation, enacts the choreography of becomings. In becoming a super-linear and polyvocal mode of writing, the text functions with a certain chromaticism that all material and discursive phenomena share with it across time. It enunciates the transmutation of various code-

based enunciations. We also notice the same in *The Heirs of Columbus* where the shamanistic rituals and dreams, therianthrope metamorphoses, speaking mongrels, the blurring of racial differences, etc., enact this chromaticism. In *The Windup Girl*, the manner in which the algal baths proliferate like virulent vectors that colonize human bodies and the manner in which the lab-generated but fertile Cheshire cats replace the regularly evolved cats, enact the chromatic potential of the code to modify both discourses and materialities. We find a similar potential in *Grammatron*, as the human is immersed within an AI narrator and vice versa. *V: Vniverse* is no exception to this chromaticism. Like the other texts mentioned above, *V: Vniverse* enacts these polyvocal becomings through artistic and aesthetic creativity as a part of its material enunciations. Section 187 of *V: Vniverse* enacts the morphing of various codes verbally, graphically and materially, as Screenshot 6 below elucidates. The bow-shaped loop subsequently leads to the formation of a bull with its own apparently disconnected lines of thought, so that the organic and inorganic, the cosmic and the earthly all form a conglomerate that is a process of constant erasure and decoding.



Screen shot 6 from *V: Vniverse*

Section 187 of *V: Vniverse* declares, “At the quantum basis of all that is stable/ Numeric and morphic play with each other” (Jaramillo and Strickland), suggesting that the human mind becomes a participant of this morphic play at the quantum levels, creating and disbanding

meanings even as the text erases its own meanings through a parallax mode of representation. The real and the virtual come close as section 7 of *V: Vniverse* states: “Mock the real as you watch subside and divide and then run like morning into the virtual” (Jaramillo and Strickland). The world becomes a space of comings and goings, of ghostly meanings that appear and disappear. In presenting humans and nonhumans in terms of processual polyvocal becomings and the morpheic play taking place at the molecular levels of all human and nonhuman assemblages (*Chaosmosis* 19-21), *V: Vniverse* depicts all entities as fluctuating between form and erasure and evades any univocal or confined iteration. Another instance of choreographic becomings is enunciated by *V: Vniverse* in section 180:

. . . resonant feedback

is required. Encounters of special, precarious

sort. To claim *a sense of company* that survives (Strickland & Jaramillo; emphasis added)

Section 18 illustrates these morpheic encounters generating a sense of company among phenomena. In so doing, these enmeshed phenomena proclaim a sense of becomings as all entities cavort in a choreographic dance, becoming pure movement incarnate. It is this evasion of any univocal iteration that lies at the heart of an Eco-performative literary theory, as the next section elucidates.

6.5 Eco-performative Accounts, Literature and the Game of Decentering

As claimed earlier, narratives across all domains have bound phenomena within onto-epistemological fixities; therefore, literature can be used to revive the singularity or uniqueness of all phenomena in their differential enactments. With science and religion acting as epistemological enclosures, literary texts, in both their encoding of ideas and the hermeneutic decoding, i.e., through their literarity and literacity, unleash and allow a rupture within any onto-epistemological enclosure. Literature can evade the “superego” of science (*The Three Ecologies* 36) and can be used to trace alternative cartographies of human and nonhuman intra-active performances. Guattari makes this point rather nicely when he states that we need to discard “scientific references and metaphors in order to forge new paradigms that are instead ethico-aesthetic in inspiration” by making a “*pseudonarrative detour*” that traverses across myths, rituals and scientific accounts (*The Three Ecologies* 37; emphasis in original). *The Heirs of Columbus*, *The Windup Girl*, *V: Vniverse*

and *Grammatron* offer such ethico-aesthetic onto-epistemological paradigms as they thematically and discursively cross thresholds by taking detours in their various enunciative practices.

Since narratives have led to the crystallized appearance of specific configurations of ideas and material forms in togetherness, literary narratives in particular participate in re-modifying “operational narrativity” (*Chaosmosis* 85) that allows one to read anew the de- and re-territorialization of enunciative practices across different boundaries. Literary texts also display “ontological heterogenesis” (*Chaosmosis* 85) that is the essential characteristic of the world. Since Eco-performativity is a deviant version of Butler’s account of performativity that is based upon homogenizing material enactments, an Eco-performative account evades this homogenization by allowing different forms of Otherness to germinate and to function in a manner that exceeds the self-replicating practices of the human self. An Eco-performative account allows the world of concepts to alter its ways of decoding the world, i.e., its literacity, by becoming a participant within its material emergence. By operating through literary texts’ ethico-aesthetic modes of participation within textual ecology, an Eco-performative account produces different notions of humanness which will be explored in the next chapter. What makes literary texts so important in an Eco-performative account is their “aesthetic decentering of points of view” (*Chaosmosis* 90) particularly in those contexts where man has shown gross negligence towards ecological concerns.

Through its integration of thoughts and material configurations of the world, literature is a prosthetic tool that uses language as a technology for recording human perceptions and also of influencing them. Humans have always used material “scaffoldings” for anchoring themselves in the world (*Natural-Born Cyborgs* 6). Through the ability of “neural plasticity” (*Natural-Born Cyborgs* 6), the human race has always understood and adapted itself in relation to the material world at large while upholding anthropocentric exclusivity. Literary texts have been used as a tool with the same purpose. Since neural plasticity involves a reconfiguration of the human brain throughout life, adapting itself in conjunction with the alterations in life, literary texts through different modalities, exploit this neural plasticity of the human brain to re-view the world we inhabit. In treating humans and nonhumans as co-constitutive equal citizens, the world generates newer ways of reading in a manner that exceeds human-centrism. This can be illustrated through examples from *The Heirs of Columbus*. For instance, in the novel, the computer is termed as a “windigoo” (*The Heirs* 84) or a devilish monster that possesses people, eating them on the inside;

yet it is the same monster that dives into the world of shamanistic possibilities. The “wild shadow realities on the monitors” (*The Heirs* 85) offer another form of physical experience in the digital world. Using the technologies of telepresence, the shamans endeavor to prove to the myopic followers of the Western epistemology the way to prove facts in a non-empirical manner. While contemporary advances in robotics do mention the development of mind-operated technology where computer simulations are governed by bodily movements, *The Heirs* raises a pivotal question regarding human becomings. As the judge is bound within complex feedback loops that establishes an interface between the body and the simulated memories of the witnesses in the computer, there is evinced a connection between her body movements, the environments both outside and inside the computer as well the multisensory data that is exchanged between the judge and the computer. She has a physical interaction with virtual reality, since she is both there and not there, here and not here. She goes beyond binary oppositions, very much like the mongrels and the shamans who flit across liminal boundaries between the human and the nonhuman. What the text shows is “the two-way flow of influence between brain, body, and world that matters, and on the basis of which we construct (and constantly re-reconstruct) our sense of self, potential, and presence. The biological skin-bag has no special significance here. It is the flow that counts.” (*Natural-Born Cyborgs* 114). The text’s Eco-performative account reflects the human self to be in a state of ‘becoming’ through the help of a computer assisted formation of subjectivity. What we behold is a form of “telepresence” (*Natural-Born Cyborgs* 114) or an extension of human embodiment through technological prosthetics to arrive at a new comprehension of facts. The computer simulation in *The Heirs* echoes human movements, so that the humanness of the human is displaced and the jurisdiction of the human body becomes negotiable. The spatio-temporal perception of a human is also altered in virtual reality or VR, particularly a VR that simulates memories and dreams. As the judge beholds the shaman thief who had stolen the sacred Native American relics in the computer simulation upon entering its VR, the novel projects reality as a parallaxic prism wherein all absolutes are displaced. The following reference from the text elaborates this parallaxic performance:

Lord was in the shadow realities of the simulated vault. . . . The face of the shaman was a mere shadow on the surveillance video, but the judge saw his face inside the tent; however, his face was the same shadow on the monitors in the courtroom. Then the shaman turned to a bear on the monitors; his simulated cheeks and bear ears were covered with more and

more black hair. The more the pockmarked shaman shivered . . . the more he became a bear. The judge watched black hair rush over his thin shoulders and down his back. (*The Heirs* 87)

As the thieving shaman becomes a bear within the computer simulation, the boundaries between the real and unreal are blurred. The simulation is a virtual re-enactment of an event whose details have eluded human understanding. The virtual world thus becomes a more enhanced version of real-life events. Not only that, what this simulation suggests is that human beings are a variable assemblage, be it the shape-shifting shaman or the judge who physically enters a virtual world. The text enunciates the limitrophic boundaries of the human which is seen as a decentered conglomerate of biological and technological devices. This recalls Andy Clark's notion of "Tool-R-Us" (7). However, while my argument does find agreement with the idea of "Tools-R-Us", my theorization is anchored within the notion of 'Stories-R-Us', since stories enunciate an ongoing re-creation of the world. Literary texts, in their expounding of Eco-performative accounts, present life and all its assemblages in terms of an ongoing heterogenesis, as bio-technological becomings, constantly creating new stories. The ecosphere functions as a compendium of narratives, a textual ecological space which binds all tiers of ecological systems. While Guattari has defined three ecological planes, i.e., social, mental and environmental ecologies (*The Three Ecologies* 41); my concept of textual ecology blends all these through an ongoing semiosis that is both material and semiotic at the same time. These ecologies generate their own narratives that are interfaced with each other. *V: Vniverse* and *Grammatron* emulate these interfaced narratives as they extend the concept of writing as an embodied practice. As a participant of this embodied practice, the human becomes a "narrative self" (*Natural-Born Cyborgs* 132; emphasis in original) which we narrate to ourselves and to our nonhuman 'others'. What texts like *V: Vniverse* and *Grammatron* reflect is that this narrative self is increasingly parallaxic, a hybrid of biotechnological assemblages that emanate out of the narratives one draws around the potentials and capabilities of both human and nonhuman actants. In this processual enunciation, the virtual and the real overlap, leading to a multiplicity of becomings and experiences. Literary texts, be they digital or paper-based, become a viable site for the articulation of these becomings outside the empirical super-ego of science. They talk about possibilities through their on-going processual material-discursive enactments. Abe Golam, the AI narrator is just as human, as the human author and reader are cyborgian. In *Grammatron*, going-molecular has become the new real. A section entitled "molecular" in

Grammatron declares: “When I think about it, about what my life is, what it has become, an infinitesimal knot of redoubled energy constantly in conflict with itself so as to motivate my body toward a clever entanglement of mobility with some other molecular model of insufferable desire (one that seems at once necessary and futile)”. This going-molecular is what contemporary literary theory has to account for, since going molecular is an essential ingredient for decoding human and nonhuman performative practices within the ecosphere. Going molecular involves a changing of the magnification of the gaze with which we look at the nonhuman assemblages around us, so that we see them in their minutest details. Literary texts enable the reader and the author to go molecular as they connect the mental and the material worlds, to posit a new mode of production of the human within a revised ecological context.

In going beyond the metaphors of science, literary texts are long-living matterphoric enactments which add to the modalities of how a “narrative detour deploys repetitions that function, through an infinite variety of rhythms and refrains” (*The Three Ecologies* 38). By capturing the variety of rhythms and refrains, a literary text offers an account of human and nonhuman performances in all their singular modalities. As the material performances of the texts, like that of the arts, evolve, they open up new spaces for mediating future possibilities of thought and engagements with the world. Since theory encapsulates both thought and enunciation through a specific embodied intervention within discourses, theory also becomes a domain of creative aesthetic movement. Like literary texts, literary theory produces signs and syntax that merge into the various semiotic and a-semiotic signs that are emanating as a result of ecological alterations. Literary theory does not merely capture ideas and modes of representation, it galvanizes thoughts in a particular direction. In their material-discursive enactments, literary texts and theories no longer capture “forms and matters, or themes, but forces, densities, intensities.” (Deleuze and Guattari 343). These forces, densities and intensities are molecular movements that mobilize perception in the world and activate a disanthropocentric mode of thinking which is crucial for humans to rethink their role in the ecosphere and to re-theorize their own selves.

For instance, through its depiction of a masculine AI, i.e., Abe, lusting after a female AI, i.e., Cyn, engaging in a code-based union, the very physicality and biological supremacy of the human is displaced. The AI is no longer an alien ‘other’, since the perennial lack, of which Abe complains,

replicates the human lack and the eternal search for an object petite á⁷, which is inveterate in human existence as well. The erotic dimensions enacted by this artificial narrator develops a neural connection with the human reader and author as the former lust for a complete consummation in the physical word. By regulating the cursor, clicking on links, the reader and the narrator overlap as they share desires and longings. The Other and the One in the Uncanny Valley of cyberspace are enfolded in each other as *Grammatron* illustrates this fact aptly through Cyn who is

. . . joyfully feeling but painfully moaning as if she herself were preprogrammed to transfix the mind-body relationship in some foreign zone of togetherness, some weak-kneed, out of breath, reeling dream of togetherness, the desire that was written into her code. . . (“The Real Thing4”)

Grammatron, thus, invites an analysis of how the performativity of gender and identity are a result of social programming or consistent refrains imposed through social functionalism. Performativity thus becomes a prescribed code or behavioral syntax while the digital narrators in Amerika’s Cyburbia appear to lie outside the human collective or sphere. Two points, however, are significant in this context:

1. If AI narrators are conditioned through programming, then the digital sphere is not free or independent of the external world. The codes of social functionalism inveigle their way into the digital text and its characters, operating as remnants of the human readers and the author. However, as Abe and Cynthia burn in their desire for each other, they enact the insoluble lack that is inherent in human existence. Hence, human desire and conditioning are also a result of a social mode of programming, where the human seeks “some foreign zone of togetherness” (“The Real Thing4”). In this similarity, humans become AI and vice versa. This argument is further developed in the context of defining human subjectivity in a malleable ecosphere in the next section of this chapter.

⁷ In the *Parallax View*, Žižek develops Lacan’s concept of the objet petite á. Žižek argues that the objet petite á is the object that creates desire and may also, in itself, become the object of desire. It is generally that material or abstract entity which galvanizes human desire and consumption which the capitalist market exploits since it is the point of one’s “libidinal investment” (*Parallax View* 18). It is the abstract conception of an object that catalyzes human desire. However, its achievement does not lead to a cessation of desire, rather it channelizes it in another direction. One objet petite á is replaced by another as human perspective and want changes. It is for this reason that Lacan has said that human existence is marked by an eternal sense of lack. In Žižek’s words, the objet petite á is “that unfathomable X which forever eludes the symbolic grasp, and thus causes the multiplicity of symbolic perspectives.” (*Parallax View* 18)

2. The programming of desire also leads to the notion that once the code of social programming is changed, human and nonhuman relations can also be seen from a more inclusive angle, so that a democratic political engagement within the new collective may be devised that no longer places nonhuman actants within a space of exilic alterity. Judith Butler's theorization of gender performativity has induced a shift within the way Lesbians, Gays, Bi and Transsexuals and Queers (LGBTQ) are viewed in terms of an alternate notion of performativity which has led to their inclusion within the social-political infrastructure of Western nations such as the USA. In a similar vein, my argument is sustained by the fact that reviewing human and nonhuman performativities as open-ended enactments also opens up a space where nonhuman actants are seen as participants within the material discourse of the world they make.

These two assumptions are pivotal for re-modeling the way nonhuman agency is depicted, enacted and subsequently read in literary texts. Contemporary literary theory can thus devise models to re-define nonhuman agency and its role in framing human subjectivities within the contemporary ecosphere.

6.6 Eco-performative Theory and Modifications in Human Subjectivity

Subjectivity is inherently a problematic essentialist construct since it is postulated in terms of human exclusivity, a "universal rationality" that is evinced in a strong ethical behavior which exiles the Other to the realm of inferiority (Braidotti 15). This concept of subjectivity does not only create race and gender-based discriminations among the humans but also denies nonhuman actants any form of subjective traits. However, a human's humanness, which provides the foundations of human subjectivity, is to be seen in terms of an "ontological polyvocality" (*Chaosmosis* 29) that entails a direct apprehension of the nonhuman alterity within the human. The 'I', as mentioned earlier, is a compendium of numerous others. It is both plural and singular, (with the singular implying uniqueness here) in its constitution. A prosthetically enhanced human becomes an even more diverse assemblage. Man has always-already been technical, an automata and a machine (Bradley 27; *Natural-Born Cyborgs* 137; Deleuze and Guattari 409) capable of influencing the ways through its control over the nonhuman via its reasoning faculty. Human subjectivity is also processual as it crosses multiple thresholds in its apprehension of the self, both

at the material and intellectual levels. Human subjectivity is thus a mobile material-discursive assemblage whose narratives are as much a part of the world as those of the nonhumans.

However, the argument that I have given here faces a pitfall. It could be assumed that when a human becomes aware of the immanence of the Others of which its subjectivity is composed, there is the danger that the Other might be subsumed and therefore erased within an overarching humanness. In becoming a compendium of the nonhuman, there is always the possibility that the human may co-opt the nonhuman, thus reinstating anthropocentrism. However, *The Windup Girl* and *The Heirs of Columbus* provide a groove into addressing this conundrum. Emiko in Bacigalupi's *The Windup Girl* is a replica of the human, a techno-biological hybrid that serves as a "commercially interesting sexual unit" (A. Clark 23), genetically enhanced and programmed to behave in a certain 'human' way. It is in her being programmed that she raises questions regarding human subjectivity, just as Abe and Cyn do in *Grammatron*. The first problem inherent in human subjectivity becomes obvious in the depiction of these characters. Yearning and desiring, colonized and embodied through different code-based intra-actions, these nonhuman characters do not simply display subjectivity in its own right, rather their sense of self emanates out of their engagement with their environment. Emiko longs to be repatriated with her own kind in a village which she is desperately trying to find. While this longing counters the loathing and contempt she receives as a nonhuman sex-slave, it bespeaks of a sense of a consolidated individuality that evolves out of her interaction with her social environment. This contests the argument that nonhumans do not have subjectivity because, in Heideggerian terms, they cannot apprehend the world. However, my counterargument is that if the 'human' has never been a constant but a variable that has evolved with time, then with the advancements in biotechnological enhancements of the human body, humanness will soon become a far more elaborate complex than it is now. Just as human beings a thousand years ago could not have envisaged the bio-technological extensions in the human today, similarly, the human today cannot completely speculate and fathom how biotechnologically advanced future human beings might become. The 'human' as a concept has always been variable in conjunction with its environment. Nonhuman tools become inveterate components of the human body so much so that human beings themselves become oblivious to their presence. Pacemakers, microchip implants and multipurpose apps in our cellphones that can monitor our heart rates, all attest to the fact that humans are firmly embedded within "transparent, personalized, robust, and readily accessed" gizmos with which we have a cognitive intra-actions

through “many nonconscious neural goings-on” (*Natural-Born Cyborgs* 135). Humans have always-already exceeded their skins; hence, they are inherently excessive objects with malleable subjectivities. Since Emiko is also an excessive object, a trait that she shares with humans, her having a subjectivity of her own cannot be an impossibility. In becoming an excessive object, the human is in a state of becoming-nonhuman as much a nonhuman, like Emiko, is in a state of becoming-human. If human subjectivity is a social construct, it is plausible that beings endowed with a sentience of their own could also enact a subjectivity of their own. While science fiction and futuristic theories such as speculative posthumanism have developed such notions cogently, contemporary philosophy also provides a niche for this suggestion. Gary Genosko writes:

Subjectivity is a group phenomenon. It is completely deindividuated and depersonalized and *ecologized*, a consequence of foregrounding the social environment of the institution. There are different kinds of subjectivity, but they are always of the group. Subjectivity involves, then, non-predetermined interrelations, non-linear and non-logical 'evolution', and the production of differences. (114-115; emphasis added)

The concept that subjectivity is a product of an ecological enmeshment given in the quote above is of extreme significance in configuring the concept of race and gender in the light of an Eco-performative theory. However, while Genosko’s observation clarifies that subjectivity is foregrounded in the social stratum, I deem it necessary to assert via Guattari’s *Three Ecologies* that social ecology is connected with mental and environmental ecologies which are further supplemented by media and digital ecologies. All these ecological tiers are engaged in multiple forms of enunciative intra-actions, hence establishing the fact that the ecosphere is also a textual space whose material-discursive enmeshments are illustrated in Figure D below:

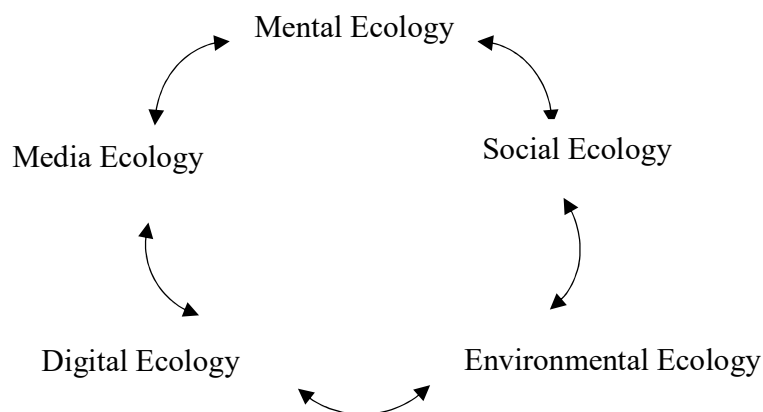


Figure D: The interconnections among different ecological tiers

Figure D given here extends Guattari's concept of the three ecologies by including digital and media ecologies as separate domains which are enmeshed with the social, environmental and mental ecologies which collectively establish the ecosphere. Apart from this, the diagram elucidates another argument regarding subjectivity. Since subjectivity is a performance emanating out of the web of social institutions, as Genosko has highlighted, and the social ecology or web is enmeshed within other tiers of mental and environmental modes of thought and action, human subjectivity does not remain a product of the social domain alone. It becomes a product of the other ecological strata as well. However, since human subjectivity results from intra-actions with nonhuman phenomena, subjectivity is more of an intersubjectivity or a compendium of subjectivities. This intersubjectivity is not only depicted in *The Heirs of Columbus*, but is also evinced in *The Windup Girl*, *Grammatron* and *V: Vniverse*. For instance, while Vizenor depicts Columbus as a mixed breed, originally a Mayan carrying the signature of survivance, David J. Carlson argues that Vizenor endeavors to present the fact that modernity's West-centricity can be deflected by the inclusion of nonwestern epistemologies such as those of Native American cultures. The all-inclusive nature of these epistemologies does not merely blend the global and local ways of seeing but also induces diffractions in the way the world is seen. Beatrice Lord's experience in the Bone Court is a case in point as she "is able to bring a range of narratives, localities, and perspectives together in a manner that enhances her respect for tribal sovereignty without leading her to totally abandon or repudiate her own traditions." (Carlson). As she beholds the therianthrope transformations from the human to a bear through a techno-shamanistic experience, the imaginative, the digital and the real blend to generate an "intersubjective identification" (Carlson). However, unlike Carson's argument, my argument posits that this intersubjectivity is not only a product of blending the local and the global traditions, it is also a product of human and nonhuman intra-active actants. Shamanism as a process blends the noumenal and the phenomenal allowing one to constantly re-invent their subjective selves in relation to various ecological strata. Columbus himself is shown as an intersubjective being due to his mixed heritage. He is shown to be suffering from a physical disability that causes him great discomfort which can only be relieved in his physical relation with Samana the handtalker. However, in opposition to Carson's stance, my reading is that Columbus' "twisted penis" (*The Heirs* 30) is not only suggestive of a White Western man's "subordination and then the erasure of

the indigenous world” (Carlson), it is also suggestive of the alterity within which the nonhuman constituents of Columbus’ humanness are confined. The genetic signature of survivance which his heirs inherit and which is also passed on by Ishi, suggests not only a racial interpenetration but also a recognition of human and nonhuman interpenetration. The One and the Other establish conglomerates, with each modifying the other. The subjectivities of the people who are given the genetic signature of survivance undergo a dynamic shift in their constitutional makeup. While the colour blue remains a symbol of healing in many Native American cosmologies, in the novel it also acts as an irruption point within the continuum of the black-brown-white skin tones that frame the entire spectrum of racial identities so that the genetic code of Columbus and Samana via Blue Ishi becomes a material intervention within the racial discourse. All skin tones and races stand neutralized and blended through the blue radiance that is irradiated by Blue Ishi. Thus, the novel re-writes racial boundaries in terms of a material mode of transcorporeal enunciation that is constantly mobile. The whites, the blacks, the Native Americans, etc., are all healed as Native American techniques of healing blend with Western biotechnological cures. The genes, technological devices and humans of all races, including the mystical mute child, all function as actants through their participation in shaping the world. Subjectivity is increasingly processual owing to biotechnological interventions, not only discursively but materially as well. At the same time, it also de-anthropologizes the Anthropos in the sense that the human comes to see itself in all its radical alterity.

Digital texts like *Grammatron* and *V:Vniverse* also present subjectivity as a processual concept while at the same time permitting human thought to engage with the text in a disanthropocentric manner. As technology extends the range and scope of human embodiment, nonhuman conglomerates in teletechnologies, biotechnologies, etc., all reflect another aspect of what may be termed as a special form of subjectivity. The word object in itself denotes passivity. However, when the same ‘objects’ are taken as phenomena and actants, they lose their passivity since they operate as active subjects. Phenomena such as bacteria display distinctive subjective behaviours, such as social IQ scores that enable them to respond to other living and nonliving phenomena around them. In addition, Contzen Pereira, citing Maturana, Lynn Margulis and Chris King, elaborates how living things display cognition, so that evolution is also a form of communication through genetics, therefore, humans are neither superior nor completely unique in their ability to display conscious

behaviours (16-17). Roden's research also shows that artificial intelligence or AI does have the ability to act autonomously and adapt through its cybernetic flexibility that goes beyond existing models of the human (*Posthuman Life* 38). Hayles also posits that the human body is the "original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born" (*How We Became Posthuman* 3). Since the posthuman view permits the articulation of the human in terms of its enmeshment with the nonhuman, technological prosthesis, "there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism" (*How We Became Posthuman* 3). If the human body, the site where subjectivity is crystallised, has always-already been a prosthetic in a process of constant upgradation, then the nonhuman components participating within the development of this embodied subjectivity cannot be totally denied the standing of a subject, albeit a standing that is uniquely different from the human sense of subjectivity. Here, I engage Figure D again; if human subjectivity is constituted by environmental, mental, digital media and social ecologies through their textual linkages, the nonhuman phenomena anchored within these interconnected strata do not remain excluded from human subjective formations. This is aptly evident in *Grammatron* and *V: Vniverse*. As all ecological tiers are interconnected within an overarching textual ecology, nonhuman phenomena also display certain subjective modes of intra-actions. Subjectivity does not pre-exist material scaffoldings and supplements (*Natural-Born Cyborgs* 37; *Originary Technicity* 97) nor does it reside within the human, rather it is created by nonhuman conglomerates establishing the human *umwelt*. Therefore, through an interface with an AI consciousness or a digital avatar, the fixity of any racialized or gendered ontology is displaced. In these hypertexts, selves are produced at the "intersection" of the various ecological strata, generating a "multi-vocal cyberethnographic" (Gajjala, Rybas & Altman 1110) subjectivity that is fluctuant. In its enactments, *V: Vniverse* enacts this fluctuant subjectivity. As the text, the reader, the author and the narrator all are enmeshed, *V: Vniverse* questions the very fixity of the so-called linear 'real'. In moving rhizomatically, its narrative presents the shapes of a fetus, a bull, a stick insect, or some other indescribable phenomena, allowing one to see how different assemblages overlap human and nonhuman selves that are never ending "exquisite, detailed, ever, over and over, a never ending never decaying, never" (Strickland and Jaramillo 217). The text enacts becomings as the human becomes nonhuman and vice versa. Electrons, fetuses, humans, AI, animals all attest to "a prehistoric rupture"

(Strickland and Jaramillo 142) that galvanizes all beginnings. In the text, no phenomena are fixed or mutually exclusive. The human blends into the cosmic; hence, Eco-performativity cannot remain a closure of performance. As subjectivity becomes intersubjective and polyvocal, it becomes pure difference which signifies the “pre-phenomenal conditions of possibility for the coming-into-appearance of all phenomena” (Bradley 100)

6.7 Eco-performativity and the Modeling of Literary Theory

Just as Judith Butler’s concept of gender performativity had galvanized the subsequent modelling of gender theories, specifically in the domain of literature, Eco-performativity as a concept has the ability to further develop not only Guattari’s three tiered ecosophy. It can also introduce alternative ways of reading and decoding literary texts not only in themselves but in their intra-actions within textual ecology. Theorists like Maran have already initiated formulating models of Biosemiotic criticism, premised on the grounds that “Although humans cannot have immediate access to the sign systems of other species, we are bound to them by common evolutionary history and shared biological material (as well as by the sign processes which occur in that material) of which we are composed, and this forms at least a partial foundation for understanding the semiotic activity of other species.” (“Biosemiotic Criticism” 300). However, like Maturana and Varela’s concept of autopoiesis, Maran’s biosemiotic modeling is primarily concerned with biological intra-actions. Eco-performativity, however, takes into account non-biological material-discursive phenomena as well.

While literary theory has focused on different forms of alterity within the human world, Eco-performativity brings to the fore the alterity of the nonhuman *umwelts*, both within and without the human. Maran’s modeling blends zoo-semiotic, artistic and linguistic models that traverse across the biological spectrum of the world and Eco-performative accounts permit a traversal across biological and non-biological domains allowing bio-semiosis and digi-semiosis to blend and offer new representative enactments of human and nonhuman intra-actions. This allows not only human thinking processes to connect with other forms of biological consciousness through their neural connections, but also with non-biological and digital modes of consciousness as well, in a manner whereby humans extract an understanding of the world without re-positioning themselves in the center of all creation. Eco-performativity offers the concept of textual ecology,

or ecology as a textual space, to dilate and deliberate upon how the world writes. Writing, thus, becomes a disruption and a galvanization of multiple narratives. Embodiment, understanding, human and nonhuman all become bound within this mode of writing that is code-based. The ecosphere functions as a hypertext in itself, as different phenomena lead to the enunciation of other phenomena as is thematically enacted by *The Heirs of Columbus* and *The Windup Girl*. The same enunciation is enacted by *V: Vniverse* and *Grammatron* as different consciousness and materialities overlap to lead to the production of new and different open-ended consciousnesses and materialities. Literary theory needs to take into account the fact that not only does the nonhuman ‘other’ speak endlessly, it can also be read and decoded. Nonhumans do perform outside the anthropocentric episteme. In addition, since the prevalent anthropocentric episteme is primarily a derivative of Western epistemological paradigms, Eco-performative accounts of nonhuman actants enable literary theory to develop a conceptual interface with nonwestern epistemologies that have never silenced the nonhuman other. Literary theory, being a mode of writing and embodiment, is also a processual enunciative assemblage in general. Like literary texts, literary theory is also anchored within a world of becomings. Ideas too are in a state of becoming as they recycle and modify discursive chains to address material alterations. Literary theory, as operant within a textual ecosphere, allows myths and histories, science and imagination to collectively cross thresholds so that the very nature of the world and of ourselves is seen in a different light. The real world writes materially and discursively. The code is therefore an expanded concept, constantly modifying itself as intra-actions change and the constituents of assemblages undergo mutations. Literary theory is one such assemblage. Being a form of code-based writing, literary theory does not merely organize genres on the stylistic and thematic planes by defining subjects, it also “liberates the particles of an anonymous matter, allowing them to communicate through the "envelope" of forms and subjects, retaining between them only relations of movement and rest, speed and slowness, floating affects” (Deleuze and Guattari 267). As words and ideas write, unwrite and stretch themselves in new enunciative forms, theory becomes a materiality in itself, an embodied reading practice.

Since literary theory is an embodied reading of life in all its open-ended diversity, it is a story of entanglements and the forms taking shape as a result. Despite these intra-actions, entities are able to retain their forms which enable one to identify them. Humanness is one such form. The constitutive elements of humanness are material and discursive, connected through “transference”,

thus providing a basis of an understanding of the world that can “decide against exclusion” (Sloterdijk 11-12). There are spheres of thought and embodied form existing separately and yet co-extensively. Literary texts are such an assemblage, and so is literary theory. These are textual enunciations, both within and without. They are a mode of “transference” which is “the formal source of the creative processes that inspire the exodus of humans into the open” (Sloterdijk 12). While for Sloterdijk, this transference is evinced in the eviction of the human from the womb, in the context of Eco-performativity, I have taken this transference in terms of the exodus of the human across the anthropocentric threshold which effects the co-penetration of the human and the nonhuman. Whether it is through the survivance narratives of Samana, or the AI consciousness of Abe Golam, or the genetic modification of windups like Emiko, their code-based modifications suggest a sharing across biological, technological, sociological and literary spheres. They are codes incarnate and the movement of the code animates these assemblages both within and without. Literary theory in its engagement with code-based Eco-performative practices interfaces literary poetics in its multivalent forms with material-semiotic poetics shaping the ecosphere, connecting multiple assemblages and becomings. An Eco-performative literary theory sees fixity in terms of an absolute state of mobility (Deleuze and Guattari 267). It thus functions as an onto-epistemological plane where humans are able to read their world as an ongoing process of which they are participants in a state of a non-hierarchical ongoing onto-epistemological becoming. The next and final chapter focuses on these ideas of becoming and their imbrication within a plethora of narratives that both human and nonhuman phenomena continue to generate.

CHAPTER 7

Becoming-Code: Literary Texts and the Role of the Humanities

One of the major objectives of the current study was to dilate upon how different kinds of textual practices frame the multi-dimensional ecological network; therefore, it traced the ideas that lead to the development of Eco-performativity and its connection with literary theory. The ecosphere is presented as a field of incomplete and entangled parchments which have been written over many times, therefore, remaining open-ended. That is why an Eco-performative literary account serves as a viable tool to re-define human and nonhuman agency in all its disruptive paradigms in a non-reductive manner. An Eco-performative account is a direct engagement with the stories of a processual becoming as it highlights the potency of a singular semiotic corporeality that exceeds the anthropocentric enclosure. This is where it opens up possibilities regarding the role of humanities in contemplating the future role of humanity in re-defining its connection with nonhuman phenomena. This idea is foregrounded in this chapter. What needs to be confessed here is that albeit an Eco-performative account of human and nonhuman agency and its material-semiotic engagements could lead to further debates within the field, particularly from an interdisciplinary perspective, what makes it significant is that it exceeds an anthropocentric bias particularly in its affiliation with the idea of textual ecology. In addition, the idea of all ecological tiers being code-based textual practices creating meanings in a material-discursive paradigm provides a significant intervention within Guattari's three-tiered concept of ecosophy. Not only does this code-based exchange allow ecosophy to become less anthropocentric, it also allows the human, as a construct, to lose its centrality. Throughout this work, my contention has been that taking all ecology as a code-based textual praxis permits the deconstructive nature of an Eco-performative account of human and nonhuman embodiment and agentive maneuverings to exceed any linguistic, and therefore anthropocentric, fortress. In taking all material-discursive phenomena

as varying code-based enunciations, the deconstructive practice is no longer restricted within a language-based framework. It was this language-based restriction that Braidotti dreaded primarily because she took language in the Derridean sense, i.e., in terms of verbal articulation or different forms of notation. However, when taken as a code-based enunciation, writing is an embodied practice, engaging both material and discursive, semiotic and a-semiotic means of expression. The real world writes. Melting glaciers, floods, earthquakes, trees shedding leaves, earthworks burying in the soil or a mutant alveolar cell wreaking havoc with the human body after carbon particles sediment in the lungs: all are creating meanings. Likewise, dreams alter our moods and ideas change our perspectives through neural plasticity that is both material and ideational. Thus, meanings are produced in material form in ways which exceed human understanding at a particular time. Reciprocally, humans are intimately enmeshed within the environment; therefore, they are mutual narratives impacting each other.

With this intimacy being an ongoing exchange among phenomena located at different points, this intimacy takes place at the cellular level and also at cosmic levels (Pereira & Reddy 954). This intimacy simply allows all phenomena to be seen as inter-subjective enmeshments with limitrophic boundaries. This does not mean that the human loses its internal solidarity and wholeness to become merely a nonhuman assemblage; as a matter of fact, a human becomes a site of shared subjectivity with different forms of matter and nonmatter participating in this sharing process. What an eco-performative account posits is that human performativity cannot be articulated in terms of a reiterability that denies the co-extensive nature of the human as well as of the nonhuman environment, both within the human and without it.

However, while an Eco-performative account de-anthropologizes the human, it also acknowledges the significance of residual anthropocentrism for two main reasons: the *Anthropos* is not an isolated assemblage but is engaged in a reciprocal relationship with the nonhuman phenomena surrounding it. Secondly, just as it influences the world around it, it too is influenced by the world around it. This residual anthropocentrism, inherent within an Eco-performative account, is thus a rallying of the human for the nonhuman rather than a rallying point created by the human for the human alone. The “all for one; one for all” (Dumas 74) slogan is re-iterated but this time it incorporates a camaraderie with the nonhuman, keeping in mind the intimacy between the two mutually co-constitutive planes of existence. At the same time, this idea might be critiqued on the

grounds that it does not displace the human since it remains tinged with a residual anthropocentrism. While conceding to this point, I argue that an Eco-performative account does in fact displace the human in the sense of redefining what it means to be human without in effect exonerating the human from the charges of doing irreversible damage to the environment. In the tradition of Andy Clark, my concepts of textual ecology and Eco-performativity “hijack” and “reshape” (*Natural-Born Cyborgs* 5) the images of the human and nonhuman so that residual anthropocentrism becomes a concept fraught with the sense of responsibility rather than a prestigious sense of exclusivity. In this way, an Eco-performative account, in alliance with the idea of textual ecology, is able to overcome the anthropocentric refrain. An Eco-performative account is a mode of reassembling thought and of creating new “existential virtualities” (*Chaosmosis* 120) as the new human and nonhuman collective is shaped. This collective generates new “complex schemas” (*Chaosmosis* 121) to present ongoing entanglements between the human and the nonhuman.

7.1 Textual Ecology: Reading Eco-performative Literary Theory as an Embodied Practice

Since ‘textual ecology’ is a term that I have frequently used in this work, it is a notion that I must revisit at the end of this exploration in terms of its scope in an Eco-performative literary theory. All literary theories, in their diverse discursive paradigms, have provided a viable means for allowing a socio-political engagement with literary texts. They have allowed the texts and their interpreters to be anchored firmly within a specific ideological terrain. However, as the world functions as one vast, processual onto-epistemological narrative, an Eco-performative literary theory is more than a discursive engagement; it functions as an embodied practice. It is a material-discursive engagement within a material-discursive world engaged in different forms of narrative practices. Through the concept of textual ecology I have mapped a cartography of the enmeshed ecosphere within which all phenomena are differentially active, creating their own meanings. Through ongoing de- and re-territorializations across multiple planes, the ecosphere functions as a hyperlinked space wherein all phenomena are linked. The knowledge of one phenomenon leads to the knowledge of another as does the materiality of one phenomenon lead to the materiality of another in an enmeshed form. In the ecosphere, all things are linked as non-semiotic codes intersect

with semiotic ones to generate embodied assemblages. Matter, despite its surface consistency, is altering at the molecular levels. Matter is all about transversal movements across limitrophic thresholds that allow what Braidotti has termed as a hierarchical “Species-ism” (77) to be replaced by a “*zoe*-egalitarianism” (Braidotti 103) that permits a more democratic mode of interaction with nonhuman biological phenomena. However, it is not only nonhuman biological phenomena that create meanings. Non-biological phenomena are just as participatory. It is this mode of thinking that frames the anxiety inherent in post-ecological and post-human theories. Literary narratives, in all their textual modes of enunciation, depict these anxieties. Thus, a theoretical engagement with them allows one to re-scrutinize the moral, ethical and social anxieties that stem from a recognition of our partnership with the nonhuman world. This form of re-scrutinization is necessary particularly from the aspect of “reparative humanization” (Braidotti 76) that lies at the core of residual humanism.

What needs to be kept in mind is that Humanism in all its variant forms has placed an ideal form of the human at the core of all anthropocentric discourses. Since the depiction of the Vitruvian man to the depiction of superheroes ranging from prophets to fictional characters in popular culture, a standard idealized, patriarchal, and primarily White, version of a ‘man’, or a male human, has been projected as the core of all Humanistic values which have been upheld by numerous literary and philosophical discourses. However, once a human being is seen as a part of the processual world within which he is embedded, it is not only the supremacy of the human which stands disbanded, but also the supremacy of ideal manhood suffers a deliquescence. A human being in itself is a code, mediating across the digital and the biological spheres. When contemporary literary theories of embodiment, and by extension, of race and gender, address the material-discursivity of all phenomena framing the world, an entire spectrum opens up for revisiting not only the humanness of the human but also the various racial and gender-based enclosures within which humanity is placed. An Eco-performative literary theory comes face to face with a multitude of becomings. These becomings include becoming-animal, becoming-molecular, becoming-human, all operational in an intra-active manner.

In this case, an Eco-performative literary theory, in its engagement with human and non-human intra-active phenomena, becomes a theory of ‘becomings’ which take place in the micro and macro worlds as evinced through the participation of literary texts. For instance, the broken children in

The Heirs of Columbus are healed as they engage in a new form of becoming when the genes of survivance are injected into them. Their new becoming is thus framed at the genetic level. Race becomes immaterial. White, brown and black children all receive a collective genetic heritage that breaks down racial differences. Their bodies are no longer hierarchically commodified by a Western capitalist system. The same is the case with Emiko and the morphing Cheshire cats in *The Windup Girl*. The bodies of Emiko, the Cheshire cats and even the poorly harvested algae are a representation of the colonization and exploitation of the genetic topography of the organic world. It represents the “commodification of Life by bio-genetic advanced capitalism” (Braidotti 59) through its genetic data mining which is a cause of concern for many. However, what this concern ignores is autopoiesis, i.e., self-formation, that is not only inherent in biological phenomena, but as Guattari has theorized in *Chaosmosis*, a characteristic feature of machines as well. Nonhumans are just as capable of autonomously evolving as humans. This evolution may take place at the less obvious molecular and quantum levels. While entities retain their apparent forms, human and nonhuman self-engendering entails alteration at the level of their molecular and componential codification as well. So the question is, how can an Eco-performative literary theory address the question of nonhuman becomings through their enunciation in literary texts and its implications in the world at large?

In order to address this question, an Eco-performative literary theory permits an embracing of other domains such as computer technology, biological, physical and chemical sciences. Therefore, in giving a material-discursive account, I have blended a deconstructive approach with the idea of quantum theory. While this is in the tradition of Barad, my argument takes it within the realm of a disanthropocentric textuality operant within the code-based ecosphere. In this way, I have skirted around Braidotti’s concern that deconstruction remains confined within a linguistic spectrum which is anthropocentric. In its alliance with the quantum theory, my deconstructive approach exceeds the linguistic spectrum, by taking all phenomena as speaking subjects. Hence, my Eco-performative account presents an onto-epistemological account of how humans and nonhumans, in all their classified material modalities, perform within a rhizomatic ecosphere. With deconstruction positing an open-ended enunciation of meanings, and the quantum theory positing a material world with “a large number of degrees of freedom” (Nagaosa v) to which no fixed values can be assigned, entities exist in uncertain and dynamic relations. Phenomena are always entangled and not always localizable. Particles are both matter and wave. When this notion gained currency

via quantum physics, both materiality and its understanding underwent an apocalyptic shift. Material phenomena no longer *performed* in a fixed, pre-established manner, as the domination of science as the authoritative narrative account came to be seen in a questionable light. This is where the scope for reactivating the supposedly redundant Humanities opened up. Since performative accounts were lodged within social functionalist accounts, defining how gender was to perform, bodies were to be used and nonhumans were to be exploited, etc., the nexus between deconstruction and quantum theory opened up the scientific enclosure. More importantly, it also allowed a revival of the Humanities, and particularly of literary discourses, to address the issues of human and nonhuman agency. In the words of Braidotti, theory:

. . . works towards an expanded vision of vitalist, transversal relational subjects. *Theory today is about coming to terms with unprecedented changes and transformations of the basic unit of reference for what counts as human.* This affirmative, unprogrammed mutation can help actualize *new concepts, affects and planetary subject formations.* Just as we do not know what posthuman bodies can do, we cannot even begin to guess what *postanthropocentric embodied brains will actually be able to think up.* (104; emphasis added)

In giving her ideas regarding the modifications in human subjectivity at the level of its basic units due to the mass proliferation of technology, Braidotti, in line with Roden and Haraway, is aware of the massive alterations within the definition of the human and the collapse of the epistemological binary structure that stems from it. Theory, and in this context literary theory, interfaces through various material-discursive modes of representation to establish an interface among phenomena to create new ideas that encourage one to think from a “postanthropocentric” perspective (Braidotti 100). It might be argued that representation has been responsible for the ossification of anthropocentrism as an epistemological enclosure. However, I argue that if representation were taken as an embodied practice and not only as a discursive practice, literary representation has the ability to exceed this enclosure as has been evinced in science fiction texts over the last five decades. Literary texts have shown the agency of the nonhuman world, albeit from a perspective that targets humans. Science fiction and its sub-categories such as climate fiction and digital multimodal texts have taken this literary interface across the human and nonhuman spectrum onto a whole new level. Literary texts in their material-discursive

enunciations display a vital materialism that does not merely disrupt ontologies but also epistemologies. *The Heirs of Columbus*, *The Windup Girl*, *V: Vniverse* and *Grammatron* all display different modes of semioses through a vital materialism that percolates into the noumenal world. As embodied practices, not only do they extract nonhuman subalterns out of muteness, but in addressing the creative singularity of both humans and nonhuman, both literary texts and Eco-performative literary theory function as a viable means to artistically map new onto-epistemological cartographies. These new onto-epistemological cartographies are by no means closed, but remain open-ended in the tradition of Braidotti who argues that open-endedness implies a destabilization of the supremacy of the Anthropos, and the introduction of the *bios* and specifically of the *zoe* or the animal (60). My argument has taken this a step further. The Eco-performative literary theory does not merely displace the Anthropos in order to induct the wider category of the *bios*; an Eco-performative theory also takes into account the role of the *contra-bios*⁸ or non-biological phenomena, including digital and mechanical technologies. Therefore, this literary theory is not about universals but about transversals, and about different codified assemblages crossing thresholds. In so doing, literature and literary texts plot new coordinates of history and time, as does the history of Samana and Columbus that remains operant in the contemporary times. Myths function matterphorically across the historical continuum in a manner similar to hyperobjects i.e., across vast geological and special grids. Stories thus become hyperobjects linked across temporal and spatial barriers, connecting with the biological and non-biological narratives in an intersubjective manner. Textual ecology is thus a ‘smart’ ecology, with interlined narratives that traverse across the temporal and spatial canvas, connecting the nous, bios and the Anthropos in intersubjective ways. The term ‘smart’ implies the intense network based infra-structure, moving spaghetti-like across material-discursive membranes, distributing knowledge in endless ways (Braidotti 182). Textual ecology is an ecology of narratives that traverse the human and the nonhuman. If ecology is read in this way, it induces a “rupture with signification and denotation” that is anthropocentric, by inducing a “mutant production of enunciation” of both the human and nonhuman (*Chaosmosis* 131).

⁸ The reason why I have used the term *contra-bios* is that the grammatical opposite of *bios* in Greek is *Thanatos* which implies death. This connotation further leads to the implication that things that have lived die, whereas numerous nonhuman phenomena have never been imbued with life. *Thanatos* therefore becomes a highly limited concept within the current study. Therefore, in order to address the wide breadth of the agentive maneuvers of non-human phenomena, I have engaged the term *contra-bios*.

Since these modes of signification and denotation are social constructs, in breaking free from these structures, contemporary literary texts and theory function as sites where new, open-ended modes of signification may be generated and the encoding of alternative social, historical and political accounts may be affected. Performativity, in itself, has remained a fixed socially sanctioned narrative of embodiment. As Judith Butler's account suggests, there is no singular concept of the human particularly as multiple seams across different categories become limitrophic. Phenomena, including bodies, have to be read parallaxically generating numerous truths radiating in different directions. Her account of performativity demands a shared human condition in terms of its being singular and unique. Theory operates on these thresholds, "where cultural horizons meet, where the demand for translation is acute and its promise of success, uncertain." (*Gender Trouble* ix). This uncertainty is evident in posthuman and postanthropocentric discourses. If the concept of textual ecology postulates a new mode of ecosophy that is no longer based on the self-reflection of the human, it demands a new moral stance regarding nonhuman agency and the collapse of alterity within the human. Butler also postulates in *Precairous Life* that the human condition is not universally shared (20). Albeit, she engages this argument in the scenario of the global political discriminations against different politically disempowered groups, I have used this premise in terms of human co-extensiveness with the nonhuman. My argument diverges from Judith Butler's who postulates that embodiment is a social, hence a discursive and anthropocentric construct. My stance is that embodiment is both a material and discursive construct. By engaging this notion, social narratives regarding human placement and enactment within the ecosphere can be reconfigured. Textual ecology sees semiosis as a material enunciation which is intersubjective and where narratives do not merely expound a culturally constructed sense of the self, but an ecologically constructed sense of the self which is polysemous and processual. The human reader becomes not just an embodied consciousness, but also a transversally embodied consciousness, as we behold *The Heirs*, as well as in *Grammatron* and *V: Vniverse* as the human and the digital consciousnesses become one. Textual ecology enables one to think in terms of plurivocality that is diffracted and not in terms of any pre-conceived One-ness. In presenting the code as a mutating, material-discursive unit of enunciation, textual ecology reinstates the subject - and here the term subject encapsulates all human and nonhuman actants within the ecosphere - in terms of "its own multiple and heterogeneous material of expression." (*Chaosmosis* 133). As human subjectivity is reciprocally constituted by nonhuman subjects, images, signs, artificial intelligence, narratives, all

establish the mutating assemblage of human subjectivity.

7.2 Intersubjective Humanness: The Polyvalent Human

Since my discussion in the previous section has posited that textual ecology leads to the framing of human subjectivity as a sum of nonhuman phenomena, in this section I have extended the argument regarding the connection between subjectivity and Eco-performativity. Performativity and subjectivity are related concepts within the field of social functionalism. With social performative accounts permitting human subjectivities to be contoured according to social prescriptions, once the idea of subjectivity shifts with the displacement in the notion of the human, performative accounts also experience a reciprocal alteration. Socially sanctioned performative accounts, while being anthropocentric, address the human as a construct that is defined in terms of One-ness, depicting an embodiment of psycho-social unity.

However, since the human is an assemblage in a state of constant becoming, through a shared intimacy with other phenomena surrounding it, the human is no longer a unity, but a multiplicity, i.e., an intersubjective construction. At this point, I further develop Braidotti's argument that a theory of subjectivity ought not to take accepted notions of functionalism and "naturalistic foundationalism" for granted without taking into account the immanence of man within an ecological skein (82). Braidotti asserts that posthuman subjectivity, which is a conglomerate of various nonhuman components that go into the making of the human, needs a new ethical engagement that is operant within a processual, polysemous world (145). My reading of this pivotal argument is that performative accounts have been based upon a specific ethical engagement with the world that has been confined with an anthropocentric enclosure. If this enclosure is made permeable, the nature of our ethical engagement with the world at large will change. This would result in an altered performative account not only of the human, but of all actants functional within the ecosphere. This intersubjective notion of humanness lies at the core of reparative humanity since it provides the grove for the formation of the new collective that Latour had envisaged. The idea of reparative humanity is egalitarian in nature, it traverses across the *bios* and the *contra-bios* as an acknowledgement of the agency inherent in nonhuman phenomena and their ability to intervene within human narratives. Human subjectivity is not merely a product of discourses, it is also a product of the vibrant materiality of the world we are connected with "trans-individually,

trans-generationally and eco-philosophically” (Braidotti 135). Not only that, as humans we occupy a plethora of spaces, ranging from the ego, to the world of dreams as well as the physical being wherein numerous others are settled. The human, as I infer it here, is located at various points between the material and the discursive, the noumenal and the phenomenal. The same holds true for the world we inhabit. It is multivalent and so are its enunciations multivalent. Each assemblage is an intersubjective space. The human is one such assemblage, composed of multiple subjectivities, both within itself and without itself. This intersubjective humanness, therefore, demands more pliable and “polyvalent games of reason” in order to address the “shimmering diversity of perspectives” (Sloterdijk 75) and to do away with an authoritative account of what it means to be human. This is one of the alternative ways of defining the human subject, i.e., in all its polyvalent multiplicity. Abe Golam, Samana, Emiko and Blue Ishi are polyvalent forms of the human, or rather of human becoming. Humanness becomes embodied “*potentia*” (Braidotti 136; emphasis in original) i.e., a force that is moving along lines of multiple intensities. As a hypertextual space, the ecosphere is an intersubjective sphere where the human and nonhuman face each other and make each other. Abe Golam and the narrator of *V: Vniverse* co-constitute the reader who are in various non-localised embodied states at the same time, i.e., both within cyberspace and without it. A human being is a part of the ecospheric syntax, composed of multiply codified thoughts and materialities. Differentiated along the lines of gender and race, when human beings are seen as an embodied force in polyvalent forms of material enunciations, race and gender also become equally fluctuant. What is primarily displaced is the image of an ideal White man as the standard representative of Western Humanism that has defined anthropocentrism. Once the intersubjective construction of the human is taken into account, it is this reified image of the White man, that has been taken a stand-in for perfect humanness and humanity, which is displaced.

Yet, that is not the only outcome of viewing a human as an intersubjective assemblage. As a code-based becoming, all human beings, regardless of gender and race, are in a state of “transference” which is at the core of the “creative processes that inspire the exodus of the humans into the open” (Sloterdijk 12). This exodus of the human from any anthropocentric enclosure also opens up the racial and gender-based enclaves within which humanity is divided. This is evident in *Grammatron* as Abe Golam and Cynthia enact a sexual experience that is characterized by markedly human sensations, a result of their being “preprogrammed avatar (s)” (“The Real Thing3”). Human desire is codified in algorithms and alphabets to articulate a fluid embodiment that is human and not-

human, open and closed (Wolfe xxiv) all at the same time. The hyperlinked textual apparatus of *Grammatron* presents a sexual encounter as a union of different codified bodies, a form of digi-sexuality within which the human reader is absorbed. The human reader and author are present within the digital characters as non-localised intersubjective beings. The AI, through this encounter, becomes human and vice versa. Through its digi-semiotic intra-action, *Grammatron* displays the complex processes of becomings that embodiment undergoes as it crosses the digital threshold. The human and the avatar share subjectivities, crossing gender-based and racial thresholds at the same time. Defined in terms of skin, meat and bones, Abe is controlled by a woman. Cynthia is not just a character but also a woman who uses Abe as her avatar. Thus, cyberspace becomes a place of matter-flow where genders are fluid. Images of sexual union continue to characterize their relationship. Abe is the woman and the woman is Abe through a symbolic and material form of digital osmosis. In my case, as a female reader, as I click the links, I flow materially and discursively into Abe and vice versa, so that our identities and notions of subjective selves become molten. This reminds us of Sloterdijk's argument that a human is a vessel, filled in by other subjectivities. The experience with a digital text like *Grammatron* takes this onto a whole new level. Interaction with an avatar opens up the space for a new kind of sexual experience that is digitally encoded. Sexual performance in itself becomes a diffracted experience as gender loses its fixity to engage in a code-based becoming. Surrounded by "sexual algorithms" ("sexual algorithms"), Abe Golam is told, "I understand your urges Golam. I have them myself. They're programmed. Written in. What you have to worry about is what's written out. Your surge is worth something. And the last thing you need is to get infected by some sexdroid virus ready to corrupt your hard-earned data." ("urges2"). What is significant here is that the android is also no longer a self-enclosed, auto-referential entity, but a flowing digital materiality, composed of "various fractals of pixillated ooze" ("gmorph3") in the mercurial "transsexuality" ("brutal media") of cyberspace. However, it is not the processes of digital gendering which are the focus here. What is of importance here is that in immersing oneself within the digital sphere, the human body also becomes pliable, enacting sexualities according to an entire range of spectrums. Through avatars, one leads multiple existences, all in different states of becoming, fluctuating diffractively between the one and other, as Figure B in the previous chapter had reflected.

The same is evinced through various forms of biosemiosis that *The Windup Girl* and *The Heirs of Columbus* reflect. The human is always multiple and already operational in a network of

institutions, discourses, environments, technologies. In addition to that, Judith Butler, in her 2015 lecture entitled “The Difference of Philosophy: Notes on Impressions & Responsiveness”, states that the human ‘I’ is also a product of the “life processes handled by an organic and inorganic object field that exceeds the human. In this sense, ‘I’ am nowhere and nothing without the nonhuman”. This precisely is the message of *The Windup Girl* and *The Heirs of Columbus*. Both novels suggest a level of transitivity as stories and genetic code are handed over across generations, intertwining the noumenal and the phenomenal, the scientific and the mythical. The human is nothing without the nonhuman. In the same lecture, as in her other works, Butler argues that the human I or subjectivity is always a “belated” (“The Difference of Philosophy”) formation, a product of a social narrative that leads to the formation of the ‘I’, even before this ‘I’ is able to formulate its own narratives. This implies that the pre-existing social and historical narratives are responsible for the creation of the ‘I’ in the first place which subsequently leads humans to create their own performative accounts. Thus, human performativity is a narrative that is always pre-conditioned and pre-programmed by the interweaving of *a priori* social ideologies. Performativity is an internal repetition of behavior as humans work within their semiotic, ritualistic shells externally imposed on them. Performativity is about remaining bound within such a shell. Textuality, in terms of scriptural articulation, has further consolidated this confinement. However, once textuality is re-defined in terms of autonomous, multi-modal code-based enunciations, the anthropocentric shell is broken so the code becomes a medium of sharing, working both within and without the human. Since bio-semiosis and digi-semiosis enact such material-discursive modes of code-based exchanges across human and nonhuman phenomena in both paper-based and multimodal texts, they do not only break down anthropocentric performative accounts, but also the supposed supremacy of the *bios* over the *contra-bios*. All become differently codified intra-active phenomena. This notion of ‘becoming-code’ that I have postulated in this research bridges the gap among the arguments of Hayles, Braidotti and Wolfe. For Wolfe, transhumanism is an “intensification” (xv) of humanism, and not a negation of it. Transhumanism does not disband anthropocentrism, but only allows it to take on a new modality (*Posthuman Life* 14, Wolfe xv). Conversely, Hayles argues about leaving the body altogether thereby disbanding embodiment. However, I argue that in becoming-code, human embodiment does not utterly disband embodiment, nor does it re-instate anthropocentrism, thus ensuring that the human remains a “shared activity” with other phenomena (Sloterdijk 85). Humans are leaky vessels with limitrophic

boundaries. This allows them to evolve along with their biological and technological constituents, which are scattered across ever distending ecosphere, creating their own material narratives.

This idea begs the question that when all humans, regardless of race and gender, are leaky vessels in a state of becoming, what is the impact of this perception on the discourses pertaining to racialized and gendered bodies and discourses? As the preceding argument has shown, the human is all about becoming code, particularly in the age of the posthuman; therefore, narratives pertaining to new formations of gender and sexuality are of the order. With all actants going into the formation of the human and the environment, race and gender gain an added malleability. If new materialisms are vocalizing the need for a new political and ethico-aesthetic engagement with nonhuman phenomena on the grounds that human superiority has been disbanded, then the need for a new political and ethico-aesthetic engagement with race and gender is a plausible outcome. My critics can easily argue that in the contemporary political scenario, where the preservation of human rights remains a messy conundrum, how can one argue for the rights of nonhuman phenomena? The second observation could be that even if the human is taken as an assemblage, the contemporary global political praxis could use this as a premise to designate certain human assemblages as inferior in terms of the specifications of their embodiment. Yet, it is precisely within this critique that my research finds its solid space.

First and foremost, my argument has not ‘dismantled’ humanness; it has dismantled the concept of a standardized, superior human as inherited from Western Humanism, i.e., of a white male, as reflected in the image of Christ or the Vitruvian man. By reframing the onto-epistemological specifications of the human, my Eco-performative account has de-centered anthropocentrism. Consequently, as the human and nonhuman come on an equal plane, it is not just one category of the human that is subjected to radical egalitarianism, rather humans of all categories participate in this egalitarianism and as actants with a similar standing, at least on the theoretical level. Samana and Emiko are cases in point. Despite their racialized and gendered otherness, Samana and Emiko are just as acting and intervening agents as Stone, or Judge Lord in *The Heirs* or Anderson and Gibbons in *The Windup Girl*. What these texts enact is not only the inter-racial and inter-gender constitution of all humans, but also the fact that the hierarchy among the races and genders is constantly undermined by the Other that is inveterately situated within any embodied assemblage. This assemblage could be discursive, social, economic or political. The Other is just as

interventionary as the so-called One, hence the One and the Other are equal intersubjective agents. This demands that new non-hierarchical performative accounts regarding race and gender are the first step to engage in a subsequent political practice where humanness, rather than humanism, is taken as a controlling factor.

Since the idea of humanness presents the human as a permeable assemblage of nonhuman phenomena, it provides the basis for a residual and reparative humanity that is able to exceed the epistemic enclosures that generate racial and gender discrimination and also of human rights. Rights, as Braidotti has argued, should not merely revolve around the human, particularly in an era where the nonhuman is operant as an equal citizen. This leads to the assumption that discriminating against assemblages with different pigmentation or biological structure would become redundant, since the human body, regardless of these characteristics, is simply defined in terms of intra-active flow or force. I do, at this point concede that in the age of the posthuman this discrimination could be upheld on the grounds that some human bodies might experience more enhancements due to their privileged access to technological advancements, and the divide between the technological-haves and have-nots might still remain (Braidotti 28). Resultantly, the people of non-white races might remain deprived. However, the formation of new theoretical models that re-configure racial and gender divides along lines of material existence could be the first step towards mitigating such discrimination and the construction of new narratives that articulate conceptions of race and gender that vary from the ones imbibed through the anthropocentric extensions of Humanist values. This approach finds support in Braidotti's recommendation that

In terms of feminist politics, . . . we need to rethink sexuality without genders, starting from a vitalist return to the polymorphous and, according to Freud, 'perverse' (in the sense of playful and non-reproductive) structure of human sexuality. (98)

This vitalist return to the polymorphous takes us back to the idea of enmeshments wherein all humans and nonhumans are intertwined. Derrida, Deleuze and Guattari, Sloterdijk, Barad, Bennett, Latour etc., have all, in their own ways, talked about enmeshments and entwinements of several assemblages. Humans have created their own shells within shells. However, since the nonhuman within the human, such as genetic codes, digitally programmed prosthetics, etc., are extensively becoming internalized within the human, the human is in a state of constant displacement. I argue

is that this displacement is not only internal but also external, both within and outside the human, the noumenal and phenomenal, ideas and materials become each other. Both the interior and exterior spaces of the human are created by careful arrangement of the Others. *Grammatron* presents this arrangement through ideas such as info-shamanism that allows one to enter the cracks within the “functional code” that standardizes (“written out”) ontologies and epistemologies. Scientists, witch-doctors, shamans, etc., all with their varying experiences of reality through different modes of de and re-territorializations, are able to access the “the in-betweenness of standardized code” (“written out”); thus all have different modes of accessing, representing and modifying the material-discursive becomings of the world we live in. Human subjectivity is always divided and assigned. It is the thinking of ecological thematics in this way that serves as the precursor to further changes in the way human beings relate with the world that they inhabit. The fact is that a change in thought at the theoretical level is what is needed to initiate a change in the socio-political realms. This is the premise for re-configuring the existing discourses and narratives on gender and race.

7.3 Re-weaving Narratives and Reviving the Humanities

One of the major arguments that I have presented in this work is that human beings need to revise the narratives which they have used as a lens to frame their view of the world. The world was an always-already movement and a crossing of thresholds at quantum levels which is not always visible to the naked eye. Matter is always mobile, so is meaning; both are based on a differential mode of enunciation. If both meaning and matter are in motion, the narratives surrounding them, be they scientific, religious, mythological or literary, all experience a mutation or shift. Not only that, as the human comes to be seen in terms of a dynamic immanence, new narratives requiring new ways of presenting these enmeshments are generated and different ways of decoding them also burgeon. In such a scenario, literary texts across a broad spectrum of techno-futuristic, dystopian, and other genres offer overlapping insights, due to their ability to interweave ideas from all disciplines, connecting history, imagination and material events across racial and gender-divides and play a pivotal role in generating different angles of viewing the world. *The Heirs of Columbus*, *The Windup Girl*, *V: Vniverse* and *Grammatron* are just some instances that elucidate diffractive readings of the world. Novels falling in such genres are also able to go beyond Western epistemic paradigms to integrate non-Western cosmologies and epistemic modes of reading the

world. Vizenor's *The Heirs of Columbus* is a case in point as it articulates new epistemologies from a Native American angle. Literary texts, in this inter-connective ability are able to go beyond the superego of science. This is further elucidated through the digi-semiosis evinced in the stylistic practices of multi-modal literary texts. Functioning as mobile assemblages, literary texts enunciate the cybernetic connectivity among semiotic and a-semiotic assemblages across the nature-culture divide. When matter changes, performative accounts change and stories are re-woven. Thus, both reading and theory, in their engagement with processual matter and meaning, are embodied material-discursive practices. Theory in general, and literary theory in particular, is a means of apprehending and representing reality (Braidotti 5). Ergo, literary theory functions as a conduit within textual ecology, just as literary texts do. This makes the Eco-performative theory a narrative theory that is moving towards concern for the environment. According to Erin James, this concern takes into account "the world beyond the text" wherein the readers and the texts are ecologically interconnected via the human mind's "experiential simulation" of the situations that a literary texts describes in numerous ways (14-19). My argument takes this a step further by positing through textual ecology how the noumenal world of the human is both materially and discursively embedded within an ecological network that creates meaning through codes. The code, in all its diversity, becomes a unit of the material-discursive narratives that the world presents. Literary narratives take "experiential simulation (James 19) to new immersive level across the material and digital thresholds.

Since all phenomena are about becoming-code, all phenomena are concerned with narratives. This theoretical notion offers a new way of re-conceptualizing the human as Braidotti has urged. One needs to generate other visions of the self: "Sexualized, racialized and naturalized differences, far from being the categorical boundary-keepers of the subject of Humanism, have evolved into fully fledged alternative models of the human subject." (38). Stories address this reconfigured notion of the human subject, and the ensuing racial and gender-based narratives. The human is in a state of matter-flow (Braidotti 137; Sloterdijk 224; *Natural-Born Cyborgs* 125; Alaimo 155) through enmeshments. Stories are also processual enmeshments, archived within stones and bones, and living phenomena (Cohen 62-63). Stories are absorbed within the very atoms of stones, as they become indicators of the past in the present. They unsettle the linearity of human history as it is told by nonhuman phenomena, sedimenting multiple voices, both human nonhuman. They become "temporal palimpsests" (Cohen 108) as material and discursive codes mutate. Humans write stories

via nonhumans and nonhumans create their own a-semiotic narratives via the human. Contemporary ecological alterations attest to this fact. If seeing is an agentive enterprise, so is narrating. The bones of Columbus, the genetic code of Blue Ishi and Emiko in *The Heirs and The Windup Girl*, the vessel-like human juxtaposed with the shape of the albatross and the bull in *V: Vniverse*, and the transsexual union between Abe Golam and his human handle, all suggest an interpenetration of narrative enunciations. Stories and theories are interiorized like chocolates. Just as chocolates and sweets melt in the mouth altering the salt balance within the human body, stories also melt in the mind through different ways of their material discursive enmeshments with the world. In so doing, they alter human mental models. By extending this analogy of Sloterdijk regarding one's consumption of sweets, I argue that stories share a lasting intimacy with the human as they penetrate the human body like sweets, to overwhelm it with a presence of taste that influences the senses and the way one reacts and reaches out the world. The human mind and body open up to the world and respond to it as the material-discursive narratives around them change and vice versa. As stories and theories articulate new performative accounts in connection with the altering material narratives of the ecosphere, humans are able to initiate a reconfiguring of their intra-action with the world in terms of their reparative residual humanity. This intra-action is political, aesthetic and ethical as the concept of rights no longer revolves around the human alone. In narrating different and more egalitarian performative accounts of human and nonhuman agency, literary texts and theories talk in terms of human and nonhuman open-endedness. This open-endedness is further consolidated through literary texts, both paper-based and multimodal. As my current study has repeatedly argued with the help of examples, literary texts function as open-ended semiotic systems with multiple entry and exit points. These entry and exit points open up the enclosures of literary theory and interpretation through multiple disciplinary lens. In so doing, literary texts are materially connected with multiple other narratives and milieus. In enacting this interconnectivity, through their literarity and literacity, literary texts are able to re-weave new stories regarding human and nonhuman co-constitutive participation in the meaning-making processes of the world. This interconnectivity provides the space for the renewal of humanities which have been pushed aside by the sciences on the grounds that the humanities, and particularly literary texts, do not always adhere to empirical facts. However, what is forgotten in this anti-Humanities argument is that humans exist in multiple landscapes, i.e. psychological, physical, digital, etc., which are all plaited together.

7.4 Digi-Semiosis, Bio-Semiosis and Zoo-Semiosis in Digital and Literary Texts:

The Reconstructions of Ecology

One of the major questions of exploration in this research is to set up literary texts as a transit lounge among various material discursive assemblages, displaying an on-going de- and re-territorialization of meanings as mattering changes. This demands not only new ideas to be generated but also new modes of enunciation to emerge. With the development of technology, the enactments of literary texts have undergone a massive shift as they are becoming increasingly multimodal. More importantly, ecology in itself is a multi-layered text of interconnected material-discursive phenomena with varying degrees of limitrophic boundaries. Genetic modifications and technological enhancements have further complicated the imbrication of human and nonhuman phenomena which have all become rhizomatically linked in a cybernetic network. Genetic editing is already being used for an invasive mode of species elimination, as for instance, altering the genetic codes of insects so that they do not remain malaria-inducing (Caughill). Bionic spinal cords and eyes are already being successfully tested to help people overcome paralysis or ocular impairments through “neural interface” by biotechnologists such as Thomas Oxley (OUTREACH@DARPA.MIL). Scientists in the Massachusetts Institute of Technology have developed a “liquid body armor” that can work as a bullet proof skin in combat zones. The “Skinterface Suit” (Lee) and the Dexmo Exoskeleton (Perez and Marquart) can be worn by a person to enable one to feel, touch and move in the virtual world. Not only that, DARPA⁹ scientists are working on interfacing the human brain with the digital world through an “implantable neural interface” (Javelosa). With these kinds of researches, technology is becoming invisibly ubiquitous in the world that is not just a simulation but, in effect, has become what Derrida terms as an “*actuvirtuality*” (Derrida and Stiegler 3; emphasis in original). This portmanteau word implies a virtuality that is actual and an actuality that is virtual. Hence, human performative practices would markedly shift as not only the world but the entire experience of the world and humanness would be monumentally altered.

⁹ DARPA stands for the Defense Advanced Research Projects Agency, an agency working under the umbrella of the United States’ Department of Defense. It oversees developments in emerging technologies according to the requirements of the US military.

At this point, it may be granted that this development might not be readily accessible to all people across the world at the same instant in time; however, it does consolidate the position that the idea of the human is variable. The recent birth of a child who received a mitochondrial donation from a donor to overcome any genetic flaws in its parents' genetic makeup affirms this fact. While many would object to this experiment on ethical, religious or cultural grounds, but the point is that this baby did not inherit the terrible disabilities that his siblings had fatally inherited. In a way, science has enacted what *The Heirs of Columbus* has presented through the genetic inheritance shared by Blue Ishi. Hence, the ideas encoded within numerous literary texts falling within Sci-Fi or Cli-Fi, etc., might be scientifically incorrect but, nevertheless, full of future possibilities that might materialize sooner than we expect. With so many material mutations shaping the human body, the very idea of the human also functions as the Derridean "trace" (*Of Grammatology* 64) since it opens up to exteriority. In opening up the concept of the human, nonhuman phenomena are no longer pushed into exile. In the Derridean sense, it is conceptual enclosures that are exclusionary. Once the enclosure collapses, excluded phenomena are rehabilitated. These changes need to be embraced, albeit with a critically constructive approach.

One way of embracing these alterations is by recognizing different forms of semioses framing the material and discursive phenomena around us. Stories have made matter perform from an anthropocentric angle throughout the ages. This is the contention that I have repeatedly taken up in the course of my current theorization to advocate the notion that stories are to be re-engaged to displace anthropocentrism. In displacing anthropocentrism, they offer different accounts of becomings that integrate the human and the nonhuman by mutating human thoughts. This mutation entails a recognition that meanings lie outside human understanding and that the existing narratives need to be revisited. This concept is pivotal in disbanding what Braidotti has termed as "Speciesism" in addition to racism and sexism (Braidotti 77). This going beyond categories is supplemented by semiotic and "a-semiotic links of discursivity dedicated to the ontological weaving of an auto-consistent world" (*Chaosmosis* 82). The semiotic and a-semiotic interweaving of material-discursive enunciations is characterized by the flow and mutation of the intrinsic codification of all discourses and material assemblages, so that all phenomena are marked by an "ever-centered rupture that happens at the heart of being" which generates an incessant chain of "ontological mutations" (*Chaosmosis* 82). While Guattari's argument posits ontological alteration, my Eco-performative account suggests that these mutations are not only ontological, but onto-

epistemological, since ontology is heterogenic, and so is epistemology. Amidst this flux of enunciations between the semiotic and the a-semiotic, the techniques of digi-semiosis as well as bio-semiosis in alliance with its sub-category zoo-semiosis, articulate new notions of ecology and becoming-code. Digi-semiosis and bio-semiosis interbraid semiotic codes with the a-semiotic codes, suggesting a meaning-making mechanism that exceeds an anthropocentric enclosure. As “posthuman subjectivity” (Braidotti 80) sees human subjectivity as an intersubjective conglomerate, literary texts access this intersubjective humanness by using these three techniques of semioses that constantly cross material-discursive thresholds. *The Heirs of Columbus*, *The Windup Girl*, *Grammatron* and *V: Vniverse* use these modes of semiosis to suggest not only alternative accounts of humanness and nonhuman agency but also different accounts of human history, by going beyond boundaries and enacting the complex interconnections that define contemporary ecology.

In enacting bio-semiotic transformations, such as those of Emiko and the algal baths in *The Windup Girl* as well as the shamanistic therianthropy of Caliban and Transom in *The Heirs of Columbus*, the texts enunciate a new modality of embodiment. Samana’s undulating hand movements and her liaison with Columbus induce a notion of the woman’s body as a space wherein alternative histories are inscribed. At the same time, Emiko’s seductive but infertile body is to be used to generate a new breed of humans. The algae that refuse to breed and hence, cannot address the energy needs of a world that has exhausted all petroleum resources, undergo a mutation so that when they do breed, they unleash pestilence. The “blooms of algae” (Bacigalupi 154) that everyone had ardently desired, have been biologically altered so that they no longer remain beneficial to the human race. As their material constitution changes, their embodied functions also experience a shift.

Multimodal texts like *V: Vniverse* and *Grammatron* take this enunciation of embodiment a step further. The mobile and fluctuant erotic signification in these works does not only depict a gender fluid environment, it also invites a revisionary scrutiny of gender-based hierarchical relations in the society. Not only is the human body, and specifically a woman’s body, taken as a fluid space, it is also shown to be in a fluid relationship with its material and historical contexts. The title *V: Vniverse* is not only an interesting play on the word ‘universe’, the word V also stands for Virginity and goes into a poetic exploration of the cult of virginity that has come to define ideal womanhood.

However, a reading of the text implies another meaning of the alphabet V, that of violence that is exercised on virgin women. Tracing the story of Philomel, the Greek princess who was raped by her brother-in-law and then proceeds to undo the stigma of rape by turning into a nightingale, *V: Vniverse* links it up with the witch hunts that had targeted single women living independently. The idea of moral panic surrounding virgin women is challenged thematically and stylistically by the text as its animated graphics present the body as a fluid space that can alter the narratives of embodiment.

Procné is among the slaves that embroidered texts of a woman raped and her tongue cut out

by her brother-in-law. She is trying to address her sister. And does. And they serve him his child for dinner. And turn into birds.

Blank birds, they blend into one name, Philomel. Medieval story of the nightingale pressing her breast onto thorns, who can't remember

why she mourns. A real witch doesn't cry a real witch can't float. Weight her down, if she drowns, you were correct in your suspicions. (Strickland and Jaramillo 156-159)

Philomel's violated body falls onto thorns and bleeds as it metamorphoses into the body of a woman accused of being a witch and ultimately in the body of Briar Rose, the child sleeping behind a thorny hedge, who is pricked by a thorn and falls into a coma. As sections careen from one idea to the next, the images also morph from that of a fetus in Philomel's story to a prickly spindle in the tale of Briar Rose. Yet, the fears of a premature loss of virginity and a prolongation of virginity are offset by the fact that the human body remains fluctuant. The moral panic that the text stylistically critiques is based on a fixed notion of the body. Not only that, but what the text's morphing graphics suggest is the interconnectivity of the human body with other bodies in the supposedly external world of nature. The text reflects biosemiosis as one body morphs into another and also digi semiosis as multiple scriptural, graphic and algorithmic codes engage in a digital tango, to suggest the pliability of the human and nonhuman assemblages. All bodies become codes, biological as well as digital within *V: Vniverse*; thus, through these forms of semioses, multimodal texts suggest alternative notions of embodiment. Like *Grammatron*, *V: Vniverse* also goes beyond boundaries as it blends developments in contemporary science, philosophy and literature with

myths and history in a manner that is enacted on a canvas that simulates the rhizomatic connection among constellations in the night sky, it becomes a text about constant becomings. In emulating an ecological mode of connectivity among codes, the text enacts an onto-epistemological account of fluid becomings that cross temporal, spatial and ontological thresholds. We behold transversalist movements of ontology and epistemology as *V: Vniverse* defies any universalist narrative of embodiment which is based upon “encounters of a special, precarious sort” (Strickland and Jaramillo 180). Through its depiction of cosmic intra-actions and enmeshments, the text displays that the world is composed of “limitless interfaces” (*Chaosmosis* 92) which lead to the collapse of any fixed interiority or exteriority. Phenomena constitute themselves “at the root of every system of discursivity. They are becomings – understood as nuclei of differentiation – anchored at the heart of each domain, but also between the different domains in order to accentuate their heterogeneity” (*Chaosmosis* 92). It functions as a hyperlinked space wherein all entities are co-constitutive and enmeshed and thus require “multiple registers” (*Chaosmosis* 93) for their enunciation.

It is these multiple registers of enunciation that enable literary texts to go beyond anthropocentric confines and “solitary individuations to ecosystems, environments, shared agencies, and companionate possibilities” (Cohen 11-12), thereby accounting for their literacity. Different forms of digi- and bio-semioses allow nonhuman actants to demand their own narrative modalities of expression that extract it out of any discursively imposed stillness. Contexts, whether material or discursive or both, are never still. Therefore, ecosophical thought repeatedly interrogates the binaristic divides framing the human and nonhuman spheres of existence. Textual ecology and its multiple modalities of semiotic enmeshments make our “ethical connectedness to the nonhuman world more tangible” (Cohen 12). Once the human stops seeing the world as ‘my world’ but as ‘our world’, an overarching egalitarian approach starts taking shape. Code-based enunciations vary and intermingle as they move from one assemblage to another and within the multiple constitutive strata of each assemblage. They “multiply and divide ad infinitum” (Deleuze and Guattari 44). Through the idea of the code, humans can surmount or at least see beyond the linguistic gap between numerous textual enunciations so that the world is a uniformly kinetic story. Human rationality has always been based on “correlationism” (Cohen 39), creating shifts in epistemological alignments as matter continues to veer at multiple levels, ranging from the quantal to the macrocosmic levels. Digi-semiosis and bio-semiosis become matterphoric enactments as

multiple code-based textual strata cavort with each other through what Cohen has termed as tremors and seismic flows (158). Semiosis, like metaphors, becomes material as the material world imbricates “history, bodies, climate, substance, animals, fluids, metaphors, narrative, plants, differences, queer matter, and diverse peoples” (Cohen 159). Matterphoric narrative agency allows narratives to move materially and discursively, engaging both kinds of figures of speech to engage in an ecological dance that traverses across time. It is this energetic materiality of matter that allows it to say things other than itself, particularly when it is not an ontological fixity in itself. In reconstituting the notion of ecology as material-discursive semiotic practices, ecology becomes a space where human and nonhuman assemblages both form and break closures. The ecosphere is the “sum of circumstances” that allows vital “semiotic transformations” (Deleuze and Guattari 82) which need to be repeatedly revisited. Since performativity is a result of circumstances, a semiotic transformation entails a change in performativity as well.

7.5 Possibilities for Future Debates

At the conclusion, this research raises some questions regarding the place of humans once the idea of humanness is theoretically revised. The ideas of Eco-performativity and textual ecology invite a re-analysis of a number of hierarchical power structures in place in the world, particularly in terms of an egalitarian outlook towards nonhuman actants. As anthropocentrism is substituted by the idea of ‘humanness’ that acknowledges the idea that human beings have permeable boundaries and are not ontologically or epistemologically isolated, the place of human beings within numerous enunciated narratives of the world giving rise to certain pertinent questions for future exploration. First, what are the extended political and social ramifications of the idea of a processual humanness and does it lead to the objectification of the human race as the human and nonhuman share an ecospheric citizenship? Although not new, this critique inherently stems from an ingrained sense of the hierarchical supremacy accorded to the human and its inherent power discourse. One way of addressing this critique is by viewing this egalitarian approach as a two-way movement of both humans and nonhumans towards each other, so that both become inclusive at an equal level. Emiko’s genetic modification as well as Columbus’ genetic signature of survivance allow both humans and their molecular and genetic codes to work in togetherness to re-constitute the material-discursive entanglements of the world. Not only that, it is the very concept of superiority that invites a revision. The idea of anthropocentric superiority has led humans to believe that they can

utterly discard any concern regarding the potential impact of the changes they are inducing within their environment. This sense of superiority has led them to brazenly ignore and belie their radical immanence within their environment. However, the idea of being the stewards of the earth must be reconfigured in terms of being in the service of the earth instead of using it in viceregal connotations. Humans are bound within “zones of indiscernibility” or “transitional and limitrophic zones” (Deleuze and Guattari 101). Hence, in a world where boundaries are fluctuant, the idea of human superiority experiences a discursive deflection if it is to account for a residual but reparative anthropocentrism. Since life is about constant becomings, with numerous material-discursive couplings and ruptures taking place at the subcutaneous levels of all assemblages, humanness is all about negotiating with limitrophic becomings both within it and outside it. In becoming code, humanness remains actively imbricated in the surplus material-discursive enunciations that account for the ongoing evolution of the world.

The idea of a permeable humanness and its extension in destabilizing racialized and gendered bodies, invites a further exploration as to how gendered and racialized identities are to be re-defined. If a human body is an *umwelt* composed of intra-active and malleable assemblages, human sexuality does not remain confined to reproduction alone. In this sense, a woman comes onto the same plane as man. Once the category of the human¹⁰ is reconfigured, it yields a domino effect wherein the supremacy of man, as opposed to a woman, also becomes tenuous. Both are equal in their malleable humanness which becomes their defining feature instead of their gender. However, this equality that a woman attains is not a denial of her sexuality or even of her femaleness, but it does provide some space for a woman not to be seen only as a sexual object. Emiko’s body is a case in point. Despite her infertile constitution, she is able to generate life by contributing her genetic code. Sexuality thus becomes liberated from the conventional social functionalist doctrines. As mentioned earlier, the recent birth of a child with the genetic code of three individuals attests to the fact that reproduction is no longer only dependent upon a physical union among parents (Dockrill). A woman thus no longer remains an object whose sexuality remains strictly regulated by the society. Since the narrative of a woman’s body emanates out of the cultural constructions imposed by a patriarchal system, therefore, once the narrative of embodiment undergoes a shift, all the inequities of gender are also displaced. In becoming a multiple

¹⁰ At no point in my argument, does the word ‘human’ share synonymity with man. i.e., the male human.

assemblage, just like a man's, the very idea of social control on the basis of the biological makeup of an individual must necessarily be revised. As the human becomes prosthetically enhanced, the idea of womanhood as bound within subservience to "the organic demands of reproduction" (*Simians, Cyborgs and Women* 10) shifts. As nature is freed and is redefined in terms of becomings, the concept of becoming-woman and its Eco-performative account provides another step into further theorizing womanhood in a post-ecological and post-human context. What needs to be reiterated here is that the reconfiguration of womanhood does not mean that woman ought not to reproduce. This would be as flawed as stating that men ought not to reproduce either. What the reconfiguration of womanhood implies here is that the layers of domination imposed upon them need to be peeled off. If humans cannot be thought of in terms of reductive universals, by extension neither can women. If the human body is to be rethought in terms of potential or force, so a woman's body also needs to be rethought outside a sexual or reproductive enclosure. As the modalities of signification that govern the world spill over, so does the logic of domination that has shaped all strata of human existence across the globe. In addition, as the ecosphere becomes textual, women's narratives of agency and embodiment also shift. While religion and science have upheld a patriarchal narrative of women's functions and embodiment, in a textual ecosphere, where nonhuman phenomena are writing their own narratives, so can a woman rewrite her narratives of embodiment. I argue that just as nonhuman narratives are not necessarily directed towards human cognition, women can exceed the patriarchal boundaries by writing narratives that do not necessarily address a masculine perception. The disanthropocentric approach becomes an initial step in disbanding the patriarchal narratives that centralize the phallic order, particularly in the form of a White masculine center.

This argument is further supplemented by my idea of becoming-code that alters the very conception of humanness by allowing meaning-making to exceed linguistic barrier essential to anthropocentrism. As the human becomes a multiple assemblage, he no longer speaks a *logos* but *logoi*. While Lacan's idea of the symbolic order remains logocentric, as the child learns to speak a linear language codified by the patriarchal social system, the idea of the human body as an assemblage speaking *logoi* induces a rupture within the idea of a universalized, patriarchal logocentrism, specifically in its association with the idea of lack. This rupture is further justified through Braidotti's following argument:

It is important to stress, however, that this dis-unity points to over-abundance, not lack. As a result: '*anthropos* is that being who suffers from too many *logoi*' (2003: 6). This is especially true in the context of contemporary scientific and technological advances, which have contributed to even more heterogeneous discourses. Their heterogeneity is such that they are incapable of providing an over-arching theory of technological self-representation. They consequently push even further the disaggregation of the discursive unity of *anthropos*, which has proved very creative in adapting to this scientific exuberance. Perhaps the Humanities have a different relationship to complexity than the Natural and Life sciences. (156; emphasis in original)

With the patriarchal order defining women in terms of penile lack and also in the sense that women have been alienated from the domain of *logos* (Cixous 875), when the human body is seen to be speaking in multiple registers or *logoi*, the domination of a uniform patriarchal language is weakened. The patriarchal *logos* in itself becomes a sub-category of a code-based enunciation of a specific masculine assemblage. The patriarchal *logos* thus loses its self-constructed superiority in a world of code-based textual exchange. This argument could lead to the question that if language in itself is a code and so is embodiment, can it inherently be patriarchal or gender-based or is it merely constructed as such? Once the universality of language as a uniquely human prerogative is disbanded, the proprietary rights that patriarchy imposes on language also become debatable.

Since the idea of the super-linear code exceeds any uniform *logos*, it is a compendium of *logoi* as its processuality is an enunciation of multiple material-discursive enactments. This has remained one of the recurrent themes of my entire argument. However, this idea does not merely provide a niche into inducing deflections within the concept of alterity and subalternity within postcolonial discourses and the encounters among the entire racial spectrum as well as between the first and third worlds. While the pigmentation of the skin has served as the major index in defining intra-racial connections, with the white race dominating and discriminating against people of a different racial spectrum, the becoming-code of all humans provides a way out of racial enclosures. Once all human bodies are viewed as fluctuant *umwelts* in their constitution, people across the racial divide are viewed as sharing a common material denominator. All bodies, regardless of skin color, are codified in specific ways and whose constitution can be altered through numerous bio-

technological interventions. It is in this modifiability that humans share a commonality. However, this statement appears to be too facile on the surface level since it may be rightly argued that becoming-code of the human body may further be used to extend the gap between the technological haves and have-nots of the world. In addition, the people of the economically stable regions and classes may have a readier access to means that make them more human than the rest of humanity, while at the same time, continuing with the exploitation of the human bodies living in the less privileged areas. Contemporary postcolonial discourses have focused on the ecological exploitation suffered by the people of the colonies or of less privileged regions. A classic example is the hydrogen bomb testing conducted in the Marshall Islands, which according to Dan Zak in *The Washington Post* is “a little-known nation that was entrusted to the United States as a primitive society 68 years ago” (Zak). Since the tests, “Its elders have endured burns that reached to the bone, forced relocation, nightmarish birth defects, cancers in the short and long term. Its young people have inherited a world unmade, remade and then virtually forgotten by Washington, D.C.” (Zak). The current protests against the Dakota Access oil pipeline by the Native American tribes including the Sioux and other environmentalists in North Dakota reveal the ecological exploitation of the lands from which common farmers derive their sustenance. Eco-racism replicates neo-colonial exploitation not only of the environments of the colored people across the world but also of their bodies. Medical apartheid, as evinced in the Tuskegee Syphilis Studies, as well as unethical and covert drug testing in countries like Uganda and India of medicines with fatal side-effects, like Nevirapine and Streptokinase further illustrate the idea that biotechnological advancements would provide new means for different forms of exploitation of the underprivileged across the world. Anderson in *The Windup Girl* and Transom the thief in *The Heirs* collude in what may be termed as the genetic colonization of the coloured people across the globe.

Despite conceding to these rather weighty counter-arguments, I also contend that the idea of becoming-code which humanness enlists may also function as a counterfoil to this mode of racial discrimination. I understand that the way one manipulates material phenomena and forces them to operate serves the interests of a dominant human ethno-racial group. Therefore, the diachronic movement of mattering across the historic continuum necessitates one to think and advocate a nonhierarchical reparative humanness. While *The Heirs of Columbus* focuses on the present, *The Windup Girl* leaps into the future, showing the ramifications of an altered materiality that could defy racial boundaries either through a material de- ad re-territorialization, as in *The Heirs*, or

through death, as in *The Windup Girl*. This compels one to rethink racial politics which has always been based upon an exclusionary, hierarchical binary of the dominant One versus the weak Other. This binary sees the Other as everything that the One is not, hence, the Other is exiled into a supposedly external realm. The One is discursively constituted in terms of being an unassimilable Other. This Othering is further complicated in a world where the distinction between simulacra and reality has collapsed. Missiles are fired by a pilot thousands of kilometers away from the target while real, living and breathing people are Othered as they are seen as artefactual entities through a computer screen. The gulf between the One and the Other is further enhanced. This gulf is a result of the fact that humans continue to see each other as Others, a perspective which is further consolidated through economic and biotechnological exploitation. The ethical conundrum stemming from this is further complicated by the thought as to who decides who is human and who is to be dehumanized or treated as the monstrous Other.

At the same time, the materialist and deconstructive turn in philosophical thought has led to the idea that the One is constituted by the Other and in terms of the Other, by each other. This leads to the collapse of any exclusion of the Other. As all bodies are seen as engaged in becoming-code, this leads to the collapse of racial boundaries so that the White masculine One is made to see itself as coextensive with its non-White Others. Regardless of skin color, all bodies are codes, therefore, networked in a similar manner. It is in this thought that people across the racial spectrum can begin to see each other in terms of mutual inclusivity, instead of using the speculum of race to bind each other in a radical alterity. In addition, once all human bodies are seen as codified assemblages of multiple actants, it would be necessary to revisit the idea of the subaltern who cannot be heard. Since human bodies and their environments speak multiple *logoi*, the privilege accorded to one universal language of power implodes, be it any anthropocentric *logos* or a Eurocentric capitalist *logos*. The notion of subalternity thus finds a way to extricate itself from an externally imposed sense of muteness, since all human and nonhuman assemblages engage in enunciation; hence they articulate themselves materially and discursively. This argument further breaks down the binary of silence and speech through the idea of enunciation, as is evinced in Samana's hand-talking, Blue Ishi's silence in *The Heirs* and the virulent modification of the algae baths in *The Windup Girl*. Since all bodies speak, all bodies are agents. The deflections induced in the key concepts of alterity, gender and race through the idea of becoming-code could provide a groove in the future theoretical reconfiguration of the power-dynamics governing these discourses at present, particularly in an

age when Thanatos-technology, i.e., death technology, e.g., drones, has become a means for some to further dehumanize other races and people. If humanness is to be defined in terms of becoming-code it could lead to a re-thinking of the human in terms of pan-humanism and pan-ecologism, as Professor Levy Bryant has termed it in his blog of the same title. For Bryant, Pan-Ecologism is based on the idea that “being is ecological through and through” and it is a mode of thinking that investigates being in terms of their intra-activity in systems and assemblages. While Bryant’s notion of pan-ecologism thinks of the world in terms of connected ontologies, it is also onto-epistemological in its outlook since it posits that

To think ecologically is to think in terms of systems and interactions rather than in terms of isolated and separated beings. It is to think in terms of horizons such that every being is surrounded by a horizon of relations and interactions like the penumbra about the sun, making that entity what it is. (Bryant)

Thinking of ontological connectivity in itself is an onto-epistemological practice since it binds thought with materiality and epistemologies with the ontologies of the world. Thinking in terms of pan-ecologism does not merely allow one to think of reparative humanity in its connection with nonhuman phenomena, it also compels one to re-think of reparative humanity in terms of pan-humanism. Since the new concept of humanness is not rigidly confined within an anthropocentric enclosure, it can be used as the first step to further think about a culture of mutual respect that an Eco-performative account necessitates. This mutual respect is based on an egalitarian approach towards the human and nonhuman and also within the human. To argue that this kind of egalitarianism devalues the human is inherently problematic since it is precisely this notion that led to the brazen exploitation of the environment by humans. One needs to see the earth as a political agent. The earth is a “Body without organs” composed of multiple flows, which are both semiotic and a-semiotic, in a process of constant coding and decoding (Deleuze and Guattari 40). Even as I am writing this section, one of the major stories developing at the moment is that the International Court of Justice has declared crimes against the environment as crimes against humanity (Vidal and Bowcott). While some might criticize that this move humanizes the environment and remains mired in the human-environment binary, I see this development as a practical step towards recognizing humanity’s immanence and embeddedness within the skein of ecological networks. Despite its anthropocentric focus, it does exemplify a form of reparative

humanity's agentic action in the direction of mitigating the wanton destruction of the world's ecosystem. The earth does become a political agent whose nonhuman citizens have legally protected rights. In addition, what becomes obvious is that the issue of rights is no longer bound within an anthropocentric enclosure. By acknowledging the political status of the earth that the idea of rights is extended to "all species, virtual entities and cellular compositions", (Braidotti 190) i.e., to all phenomena treated as the nonhuman Other.

It is within this mode of thinking ecologically where literary theory becomes an embodied participant. In *Reassembling the Social*, Latour states that theory functions as a mode of observation through which the observers do not only map the boundaries of the various actors and their groups but also map the relations within a social context. Observers like scientists formulate the boundaries of groups first and then map the relations among those groups assuming that these "social aggregates" (*Reassembling the Social* 3) are fixed in themselves and hence, extract theories out of the interactions among these aggregates. Due to this reason, Latour argues that it is "so important not to define in advance what sort of social aggregates could provide the context for all these maps" (*Reassembling the Social* 32) since it is not only the observers who form these aggregates, the actants themselves engage in processual aggregate formations. Group boundaries are permeable and flexible, implying that social theory needs to remain flexible. As different actors remain operant in the different strata of different human and nonhuman assemblages, they enact different material and discursive enunciations; hence, no theory can function as an overarching metatheory. Numerous social and scientific theories limit agencies. However, once theory, particularly as evinced in an Eco-performative theory, sees all phenomena and assemblages as composed of limitrophic boundaries, it in itself becomes an embodied participant within the material-discursive enunciations of the world. Theory connects the noumenal landscape of the human mind and its epistemological contours with the semiotized material configurations of the world. Literary theory is no exception. While engaging with the open-ended material-discursive practices of enunciation displayed by both paper-based and multi-modal digital texts, literary theory plays a significant role in permitting a constructive diffraction within the way the writings of the human and nonhuman phenomena are read and decoded. Once literary theory is seen as imbricated within an agentic world, it can change the ways in which we perceive and interact with the nonhuman world since agency implies leaving an impact or imprint through a transformative action, both literary texts and literary theory can function as transformative actants.

This transformation would possibly include extending alternative accounts of a world that agentively enunciates itself in a manner that exceeds the domains of numerous scientific and social functionalist theories. Literary theory can operate as a “theory of action” (*Reassembling the Social* 58) that remains open-ended in its wider range. An Eco-performative account suggests precisely this ongoing processuality of the world that defies boundaries and is in a constant state of modification both at the material and discursive levels.

What is important here is that it is not only the world that is in a state of ongoing non-linear modification, rather human subjectivity and identity are also mutating. One of the theoretical positions that Braidotti takes is that the world’s time-line is to be defined in terms of “the continuous tense of becoming” or “*Aion*” (129, emphasis in original). The “ipseity” (*Monolingualism of the Other* 1), i.e., the I-ness of a human is no exception. While Derrida has argued that the ipseity of things is constituted for him by the language that he speaks and inhabits, his argument views anthropocentric language as the only means of apprehending and sensing the world. Albeit his argument is embedded in his own linguistic deracination because of his colonial experience, once this argument is braided within the current theoretical framework, the idea that human language contours both human and nonhuman ipseity becomes problematic. Human subjectivity is always constituted by a human being’s intersubjective intra-action with the world at large, composed of both human and nonhuman phenomena. As the material-discursive intra-actions of the world change, human subjectivity is also altered, whether one is conscious of it or not, since the constituents of one’s inter-subjective experiences mutate. This reality has been forcefully imposed upon me because of my having dealt with congenital kidney stones. As intersubjective constituents, these recurring stones impact a wide range of my life choices, ranging from dietary preferences, to surgery and even constantly keeping pre-emptive medicines on my person, in case they get activated. All my life, I have remained acutely aware of the agency of these stones within my body as I negotiate with their agentic potential. Thus, my kidney stones and I remain in a state of ongoing becomings as we impact each other. Due to such interobjective nonhuman interventions, human identity also morphs constantly. This idea of unfixed identities might be unsettling for some; however, it may be used more constructively to re-question and re-configure the earlier accounts of human identity and performative practices not only on the social scale, but also on a wider ecological scale. One’s ipseity, in terms of reparative humanity or humanness, may thus be re-constituted on the basis of one’s imbrication within a world composed

of multiple citizens which fold within and exceed the *Anthropos*.

Since extracting theoretical inferences pertaining to Eco-performative practices was one of the main objectives of my work, my main contention has been that ecology functions as a domain where matter is semiotized through its various material-discursive enunciations. In their processual becomings, all human and nonhuman phenomena function as narrative entities, creating meanings and generating different accounts of agency within an ecosphere that is radically undergoing a modification, primarily due to human interventions. This has led to a major shift within the ecological equilibrium as well as in the way human and nonhuman intra-actions are to be decoded. When human embodiment itself is seen as an assemblage composed of multiple semiotic and a-semiotic constituents, human identity becomes a processual becoming. My contention has been that since human embodiment and subjectivity are all immanent within the vast ecospheric network of material and semiotic flows that frame the vast ecological narratives, the way humans perform within such an ecosphere needs to be readdressed. Numerous discourses have talked about human performativity in terms of their socio-political milieu, engaging how matter and ideas perform in alliance with humans needed further attention. Human embodiment and its functionality cannot be seen in isolation from the agentic enunciations of its nonhuman constituents and environment, particularly in an age where prosthetic enhancements and the induction of hyperobjects constantly call humanity into question. Once the idea of the human is taken as a processual becoming, particularly through multivalent code-based intra-actions, not only does human identity become debatable, rather discourses pertaining to anthropocentric superiority, race and gender-based hierarchies also demand a re-scrutiny. In order to address the complex modifications within the material environment and our material-discursive engagements with it, human beings need to re-think and re-articulate their own position within the ecological skein by altering their own mental models regarding nonhuman phenomena which are co-extensive with them. With nonhuman phenomena constantly enunciating themselves in different material and discursive forms, the human race needs to acknowledge these enunciations and the alterations within them by constructing narratives that re-articulate their own immanence in nature. Eco-performativity is an articulation of a reparative humanity that sees itself as an extension of the nonhuman phenomena around it. In order to reconstruct its role in reparative terms, humanity needs to re-weave new narratives, those that acknowledge both themselves and the nonhuman phenomena around them for what they are in all their vibrant multiplicity. It is in being able to respect the meaningful

activities of nonhuman phenomena that exceed any anthropocentric episteme, humanity would pave the way to challenging the exploitative narratives of capitalism, racism and gender-discrimination. In this entire effort, I had hoped to insert conceptual creativity in re-visiting the role of human beings by going beyond the lacunae of binaristic thought through the ethico-aesthetic engagement of literary narratives with the environment and its active materiality. As I experimented with the existing theories of posthuman subjectivities and nonhuman agencies in my current research, I have endeavored to highlight the efficacy of literary texts in re-thinking the categories of the human and nonhuman as well as the narratives that they generate through a critical theory that also raises possibilities for future thoughts regarding humanness. What cannot be denied is that we stand to learn more if our narratives acknowledge the role of nonhuman others as they map the rhizomatic connections that frame us and our world in togetherness. We need to rethink ourselves in terms of the multiple challenges we face with the firm belief that in re-defining itself, the human race can alter its current course that is leading towards an environmental apocalypse whose main casualty could very well be the human race.

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