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Man in the Cosmos: Italo Calvino's  
Cosmic Ecology in *The Cosmicomics*  
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**Abstract** – Italo Calvino's *The Cosmicomics*, despite its pluralistic openness to multiple critical interpretations by various theoretical and conceptual frameworks including post-humanism, science-fiction studies, postmodernism and many more, deals with the fundamental issue of the human's physical and conceptual inseparability from Nature or the cosmos. The human's inseparability from the non-humans (including animals, vegetation and inanimate matters) has profound ecological implications. What Calvino establishes in the mentioned text is the human's inevitable and unconditional inclusion in Nature rather than his self-proclaimed, physical/conceptual exclusion from the same. This is vindicated by the fictional illustrations in the text in which the 'human' is posited as a mere member of the ecosystem, and not as its master. In this context, this article endeavours to explore and analyze the said ecological implications of the mentioned work in the light of some the established ecological theories and postulations.

**Keywords** – Ecology; Human; Nature; Cosmos; Anti-anthropocentrism; Time; Space.

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# Man in the Cosmos: Italo Calvino's Cosmic Ecology in *The Cosmicomics*

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## 1. Introduction: *The Cosmicomics* as a Science Fiction and a Post-human Comedy

Italo Calvino has been read, examined and analyzed from multiple critical perspectives including neorealism, science fiction studies, fantasy tales, cosmological tales and many more. Mark McGurl, while analyzing the amusing, post-human qualities of the tales narrated by Calvino, denotes the text as an archetypal «posthuman comedy» (533) that explores the human's alternative existential possibilities beyond its own humanness. Eminent Calvino critic Letizia Modena, while evaluating the text's overarching scientific tempo, appreciates it for its consistent invocation of the universal «structuring power of atomism» (12).

In a similar vein, critic Eugenio Bolongaro evaluates *The Cosmicomics* as a «collection of science fiction short stories» in which Calvino abandons the 'realist mode' of narration and creates an eclectic narrative pattern that is in concurrence with the «transnational current of postmodern writing» (191). Similarly, critic Beno Weiss examines the text as a science fiction treatise that encompasses «theories in astronomy, physics, chemistry, biology, and computer science» (96) and thus, exudes abundant scope for its own multiple and multidisciplinary critical exegeses. Dani Cavallaro implicates the presence of intensely deep philosophical undertones inherently imbued in the phantasmal narrative of the text which effectuates a unique evocation of the «variable admixtures of being and non-being» (12).

## 2. The Ecological Dimensions in *The Cosmicomics*

Serenella Iovino's article "Ecocriticism, Cultural Evolutionism, and Ecologies of Mind: Notes on Calvino's *Cosmicomics*" is one of the few works on Calvino's *The Cosmicomics* that implicates towards the overarching ecological dimensions of the work, and it is believed by the author of this article that a more nuanced and detailed analysis of the text is required to explore the multiple dimensions of the embedded ecological implications of the work. Particularly, Calvino's presentation of the human's deep immersion in different cosmic dimensions—the terrestrial, the subterranean, the aquatic and the celestial etc.—needs special attention and analysis such that the human's diffusion in the cosmic ecosphere (contrary to its self-assumed separation from the same) is comprehensively vindicated. Also, special critical emphasis needs to be given on the diffusion of the 'human' into not only the sphere of other non-human living 'beings', but also to that of other non-human, lifeless matters. Calvino's presentation of the diffusion of the 'human' into the non-human world is all-inclusive, i.e., he makes his human characters diffuse into every part of the cosmos and the universe regardless of whether it is the living or the non-living component of the universe. Moreover, the timeless presence of the ecosphere, regardless of whatever evolutionary form and dimension the human takes, is the key feature of Calvino's ecology and a vindication of the timeless, all-pervasiveness of the cosmic ecosphere shall be the key focus of this article.

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To assert its critical focus, this article shall heavily rely on certain fundamental strands of eco-theory, particularly those of deep ecology. It must be mentioned at this juncture that 'deep ecology'<sup>1</sup> is a term coined by Norwegian eco-philosopher Arne Naess and at a fundamental level, it is radically averse to the quintessentially Nature-alienating and Nature-dominating principles of anthropocentrism. Deep ecology nurtures and harbours a holistic and unifying view of the universe where the separate parts of the ecosystem (including the human and other non-human species and matters) contribute towards its formation and operation in a way that no species can afford to assume unqualified ascendancy over the 'other.' The very coinage of the term 'deep ecology' urges the human for an in-depth contemplation over his intrinsic connection with the non-human world and thus, for a radical redefinition of his relation with the same in a way that his self-assumed position of ascendancy over the latter is thoroughly demystified. Thus, in the deep ecological schema, there is a marked shift of emphasis from the 'human' to the 'non-human' such that the non-human species or matters become equally significant players, as is the human, in the miscellaneous cosmic ecological composition. The inculcation of this kind of a deep ecological view or perspective radically contests and demystifies the current phenomenon of the human's progressive estrangement from his environment or the cosmos, both at physical and conceptual levels, and negates Nature's anthropocentric objectification through its construal as an 'other' object readily available for unhindered human intervention and consumption. Of course, it goes without saying that the longstanding philosophical, discursive, theological and epistemological<sup>2</sup> practices of the West have been overtly anthropocentric and thus, instrumental in Nature's marginality in the human's cultural terrain.

But a close reading of *The Cosmicomics* easily divulges the text's elicitation of an oppositional and subversive counter-discourse and its emphatic reaffirmation of man's ineluctable physical/conceptual immersion in Nature and the Cosmos's immense spatio-temporal enormity and all-pervasiveness. This has profound ecological implications, particularly in the wake of the massive environmental crises that have raked the world and the human existence, and in the context of the critical world's consistent emphasis on the copious proliferation of several ecological approaches to literature. And this seems Calvino's prime endeavor in *The Cosmicomics* where the non-human species and matters surface to prominence and interact with the 'human' in multiple ways (as will be discussed with reference to the text's individual stories) that collectively undermine the very notion of their conceptual differences established and perpetuated by humanity. In this pretext, this article endeavors to unearth

<sup>1</sup> Deep ecology is an offshoot of the umbrella term ecocriticism and is more nuanced and radical in its rejection of anthropocentrism. Deep ecology attributes moral and intrinsic value to all non-human beings.

<sup>2</sup> In the opening chapter "Genesis" of *The Holy Bible*, we find that God created man in his own image and empowered him to be the master of the world: «And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth». (3) The anti-Nature principles in the Western discursive formations were taken to the maximum height during *The Enlightenment*. For instance, Francis Bacon, in a notorious protestation of anthropocentric despotism over Nature, sanctions the human's military march into the former's territory by advising man to «unite forces against the Nature of the Things, to storm and occupy her castles and strongholds, and extend the bounds of the human empire» (qtd. in Mathews 32). However, Calvino's *The Cosmicomics* seems to be doing exactly the opposite in the sense that we find man, instead of being the master of all things in the universe, to be one amongst the many compositional elements of the cosmos. Moreover, what is found to be extending its empire is not man, but the cosmic ecosphere.

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Calvino's creation of an intricate, all-inclusive, cosmic and egalitarian<sup>3</sup> 'web of life' in the said text where the 'human' is not the former's self-aggrandized master, but its mere constituent element, amongst many non-human species and matters.

### 3. The Human and the Non-human in "The Distance of the Moon"

In the story "The Distance of the Moon," we comically encounter an amusing love triangle involving Qfwfq, Mrs Vhd Vhd, Qfwfq's deaf cousin and the Moon. Mrs Vhd Vhd, initially in love with Qfwfq's deaf cousin, suddenly discovers the latter's mesmeric fascination only with the Moon (he is «lost in his lunar bliss», 11) and not with her which results, later on, in her willful assimilation with this non-human, celestial object: «Because she had finally realized that my cousin loved only the Moon, and the only thing she wanted now was to become the Moon, to be assimilated into the object of that *extrahuman* love» (Calvino, *The Cosmicomics* 16; emphasis added). What is interestingly observable here is that the pivotal figure of this phantasmagoric love-triangle is not any human being, but rather the Moon; this nonhuman object becomes the epicenter of the love saga and the *in medias res* site for the effectuation of the human's passions, attractions and fascinations towards other humans. Finally, Qfwfq informs us that for the fruitful consummation of her love with Qfwfq's deaf cousin, Mrs Vhd Vhd transports herself to the Moon permanently, and in a way, assimilates herself with it—an assimilation that she had fervidly desired earlier. Her physical/metaphoric integration with the Moon intensifies to the extent that she becomes its colour. Qfwfq describes: «She was the colour of the Moon [...] I could distinguish the shape of her bosom, her arms, her thighs, just as I remember them now, just as now, when the Moon has become that flat, remote circle, I still look for her as soon as the first silver appears in the sky, and the more it waxes, the more clearly I imagine I can see her, her or something of her, but only her, in a hundred, a thousand different vistas» (Calvino, *Cosmicomics* 18-9).

Mrs Vhd Vhd's self-willed, irretrievable departure onto the Moon is another conspicuous indication of the human's relinquishment of its cloistered, terrestrial, anthropocentric niche and its concomitant, self-willed assimilation with this non-human object. Thus, the far-reaching ecological ramifications provided by Calvino through his comical instauration of such an extra-terrestrial, cosmological love-story chiefly rest on the human's inevitable entanglement in Nature and its non-human objects, without which the inter-human connections fail to exist. There is no denying of the fact that this paranormal proximity between man and Nature creates a condensed cosmological firmament while positing and embedding the former in the latter's vast ambit of cosmic ecology.

### 4. The Terrestrial, Aquatic and Solar Ecologies in "At Daybreak"

The chapter "At Daybreak" provides us with another instance of the rupture and disruption of the human's anthropocentric niche in various ways—through its transformation into animals and through its concomitant physical/metaphorical diffusion into the non-human world. With the spread of the solar refulgence permeating across the nebula, Qfwfq's family, friends and acquaintances (who are presumably human or at least possess human consciousness) assume different non-human forms. We learn that Mr Hnw «later became a horse» (20)

<sup>3</sup> Many eco-philosophers including Arne Naess have used such expressions to advocate for an environment that is bereft of hierarchy and difference between the 'human' and the 'non-human.' Ecological or biospherical egalitarianism is the expression usually used by these ecologists.

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whereas Qfwfq's brother Rwzfs, who was subsequently called 'Nickel Rwzfs' due to his relentless fascination with the metal nickel, «married an alga» (23) and nobody heard of him again; he diffused into Nature's non-human chlorophyll-world by marrying the alga. It is also seen that Qfwfq's family members, his friends and acquaintances spread and diffuse into different parts of the cosmos—some into the terrestrial world (like his sister), some into the sky's floating space (like his uncles and aunt) and some into the aquatic world (like Rwzfs). We learn from Qfwfq's narration that his sister G'd(w)<sup>n</sup> «sunk into the condensing matter of the Earth» and “had remained in there” until Qfwfq «met her, much later, at Canberra in 1912, married to a certain Sullivan, a retired railwayman» (30). Calvino's human characters sinking into Earth's crust resemble, in some sense, Richard Matheson's *Shrinking Man*<sup>4</sup> «who passes through the kingdoms of nature, slip between molecules, to become an unfindable particle in infinite mediation on the infinite» (Deleuze and Guattari 308).

The complete immersion of Qfwfq's family members in the solar ecology is presented in a way that they become one and inseparable with the solar refulgence which subsumes them like the interfused parts and particles of its radiation. The ethereal ecological dominance of the solar refulgence is ascertained through its complete, real/symbolic enfolding of the humans in its flames. Qfwfq narrates: «And so was my father, and my mother, too, and I – we were all burning in the fire. Or rather: we weren't burning, we were immersed in it as in a dazzling forest; the flames shot high over the whole surface of the planet, a fiery air in which we could run and float and fly, and we were gripped by a kind of new joy» (30). This human/Nature merger is a trans-spatial and trans-temporal cosmic phenomenon; time spans across prehistoric to modern eras whereas space spreads across the expanse of terrestrial/subterranean/celestial firmaments; in them, the 'human' remains submerged, sometimes with the retention of its form and identity and sometimes, with their gross forfeiture. So, the fundamental ontological divide between the human and the non-human is obliterated; it goes without saying that this emphatic obliteration of the human/non-human dualism is deep ecology's ultimate, anti-anthropocentric leitmotif. Serenella Iovino very rightly points out: «Celebration of complexity and reversal of ontological hierarchies are leitmotiven in Calvino's work» (116). Jane Bennet in her book *Vibrant Matter*, provides an interesting way of converting all the human and non-human components of the cosmic ecosphere into ecological materials; their conversion into ecological materiality is a potent tool for the human/non-human binary's thoroughgoing decimation. Bennet elucidates:

[...] *materiality* is a term that applies more evenly to humans and nonhumans. I am a material configuration, the pigeons in the park are material compositions, the viruses, parasites, and heavy metals in my flesh and in pigeon flesh are materialities, as are neurochemicals, hurricane winds, *E. coli*, and the dust on the floor. Materiality is a rubric that tends to horizontalize the relations between humans, biota, and abiota. It draws human attention sideways, away from an ontologically ranked Great Chain of Being and toward a greater appreciation of the complex entanglements of humans and nonhumans. (111-2)

In Calvino's *The Cosmicomics*, all the humans and the nonhumans alike, are converted into ecological materials irrespective of their respective 'humanness' or 'non-humanness'; they become undifferentiated and equalized parts of the all-embracing ecosystem. Calvino, here,

<sup>4</sup> Deleuze and Guattari give example of the American writer Richard Matheson's science fiction novel *The Shrinking Man* where the protagonist Scott Carey shrinks to the size of unrecognizability and merges into Nature.

seems like promoting what can be called in today's critical parlance, 'new materialism'<sup>5</sup> which is an umbrella term used to denote all literary/philosophical/critical movements that are exclusively directed against the self-stultifying dictums of anthropocentrism.

## 5. The Dissolution of the Human in the Cosmic Ecosphere in "All at One Point"

The story "All at One Point" provides a similar dimension where Calvino attempts the human/Nature merger through the former's somatic/spatial miniaturization to the point of physical insignificance and unrecognizability. The tale's characters eschew their exclusive human individuations, and merge into the ever-expansive, trans-human cosmic phenomena so much so that they hardly occupy any distinctive and quantifiable physical space; they are dispossessed of their secluded identities, differentiable from the world's other matters. With the expansion of ecology across the boundless stretches of cosmic space and time, human characters like Qfwfq and Mrs Ph (i) Nkō are «hurled to the four corners of the universe» (47) in a scenario where the latter dissolves into «a kind of energy-light-heat» (48) emitted by the cosmic, ecumenical ecosphere. What is emphasized here is the ultimate «involution» (Deleuze and Guattari 263) of the human body/space to extreme diminutiveness in the extraterrestrial ecosphere whose spatio-temporal immensity extends unfathomably beyond the tiny alcoves of the human existence.

The extreme miniaturization of the human body/space is akin to Deleuze and Guattari's advocated processes of molecular becomings. It is through these molecular becomings, the molar subjects (like the humans) disintegrate and diffuse into the world; the human body becomes molecules, particles, haecceities and becomes imperceptible while mingling into cosmic Nature. The humans in *The Cosmicomics* are in the constant process of multiple becomings — «becoming-animal, -vegetable, or-mineral; becoming-molecular of all kinds, becoming particles» (Deleuze and Guattari 301). The obliteration of individual human identity in the all-enveloping cosmic ecology, in another critical context, is well-observed by Gregory Bateson in his work *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology* where he says: «personal identity merges into all the processes of relationship in some vast ecology or aesthetics of cosmic interaction» (222).

By making the humans and other non-human species or matters merge into Nature's space, Calvino creates the space of Nature as a «plane of consistency or immanence» (Deleuze and Guattari 297) where all elements of Nature including the humans merge losing their individuated identities; they become molecular; they become particles, haecceities, lines of flight spreading all along Nature's empyrean space and thus, becoming one with Nature. In *The Cosmicomics*, Calvino's discourse is all against interspecies and ecological stratification; in a sense, the whole of Nature and its components become de-stratified. As Deleuze and Guattari explain: «The Plane of consistency or immanence [...] implies a destratification of all of Nature» (297).

<sup>5</sup> One of the major proponents of the notion of 'new materialism' is William E. Connolly who elucidates this concept in the following lines: «The "new materialism" is the most common name given to a series of movements in several fields that criticise anthropocentrism, rethink subjectivity by playing up the role of inhuman forces within the human, emphasize the self-organizing powers of several nonhuman processes» (399). Calvino, in *The Cosmicomics*, does exactly the same, and promotes the nonhuman entities, forces and processes over the human ones.

## 6. Mingling with the Earth: Relinquishment of Humanness in “Without Colours”

The chapter “Without Colours,” unlike the previous ones, demonstrates the human/Nature unification in Earth’s terrestrial visual field in a way that the former evades distinctive visibility due to its mergence with the latter. Here, the terrestrial wanderer Qfwfq traverses across «continent after continent» (49) and runs through «a kind of amphitheater of porous, spongy rocks» while pursuing his beloved Ayl who keeps eluding him like «a kind of colourless flash running swiftly, disappearing, then reappearing further on» (51). Their almost indistinguishable amalgamation with the Earth’s terrestrial expanse is so intense that none of them assumes a distinctly identifiable human form and their physical appearance always occurs not through their singular visual manifestations, but rather in conjunction with Nature’s vast corporeality. So, we the readers encounter them not as standoffish and detached individuals, but rather as ‘Earth-mingled’ individuals who appear through the ‘human-in-Nature’ spectral images (and not just through ‘human’ images) projected by the author before us. For instance, we encounter Ayl not in her aloofness, but through the spectacle of her ‘sand-dune-mingled’ appearance: «I went into the sandy wasteland: [...] the crests of the dunes seemed the outlines of reclining bodies. There you could almost make out the form of an arm folded over a tender breast, with the palm open under a resting cheek; further on, a young foot with a slender big toe seemed to emerge. . . . I realized that, before my eyes, I didn’t have a sandy ridge but the object of my pursuit» (Calvino, *Cosmicomics* 51).

The passage provides us with a testimony of Ayl’s eschewal of an exclusive human ‘visibility’ through her integration with the sand dune. In the sprawling, colourless, grey world, her first appearance is through this sand-dune, with hazy and unobtrusive markings of female shape (Ayl’s) carved on its body, precisely for which Qfwfq finds it difficult to sight her with absolute perceptual clarity and visual precision. Ayl also confronts the same difficulty and is not able to recognize Qfwfq with enough visual clarity due to the latter’s infrequent merger with the sandy world: «At first I believe she couldn’t distinguish me . . . from the rest of that sandy world» (51). Being bodily enwrapped in the terrestrial ecology, the two meet and interact, flickeringly, in half-revealed manners as their full, bodily manifestations are camouflaged by the ‘human-obfuscating’ terrestrial ecology. Ayl, in particular, keeps prevaricating between appearance and disappearance while finding «a way to hide herself, to slip off among the crevices in the mosaic» (54).

Her self-willed relinquishment of a stable and discreet human identity, and her somatic integration with the sand dune are symbolic assertions of the ‘human’ being Nature’s integral part, its inconspicuous constituent and not its egomaniac antithesis. Ayl’s deep-ecological merger with Nature is further intensified through her fluent convergence with the rising volcanic flames with her asunder body parts (like her hair) admixed indistinguishably with the latter: «We ran along the crest of the volcanoes. In the noon greyness Ayl’s flying hair and the tongues of flame that rose from the craters were mingled in a wan, identical fluttering of wings» (Calvino, *Cosmicomics* 52). Her persistent Nature-mingling activities reinforce deep ecology’s radical advocacies for «a monistic, primal identification of humans and the eco-sphere» (Garrard 21). In another context, the human’s intrinsic oneness with Nature is theoretically well-articulated by the postmodern thinkers-duo Gilles Deleuze and Felix Guattari in their collaborative project *Anti-Oedipus*: «man and nature are not like two opposite terms confronting each other . . . rather, they are one and the same essential reality» (4-5).

It is also observable that Ayl never appears before Qfwfq in her full bodily adumbration; in fact, she appears before him only as a flickering shadow constantly eluding the human

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form that is subject to easy perceptual identification: «Ayl might be the colourless shadow swinging from a branch of the colourless forest [...] A hundred times I thought I glimpsed her and hundred times I thought I lost her again» (Calvino, *Cosmicomics* 54). Finally, she slips into the colourless, subterranean inner world leaving Qfwfq alone and abandoned forever: «As I had been projected outwards, into the open, Ayl had remained beyond the rock wall, closed in the bowels of the Earth» (Calvino, *Cosmicomics* 59). Her volitional disclaimer of a sovereign 'human' form and her willful synthesis with the 'non-human' world not only attribute her an 'ecological self'<sup>6</sup> instead of an anthropocentric one, but also create an ideal and symbolic deep ecological condition where all anthropocentric normativities are duly substituted by the norms of radical ecocentrism<sup>7</sup>. It must also be pointed out at this juncture that in the mentioned tale, Calvino offers to us overarching ecotopian<sup>8</sup> visions which inspire us to recognize, vindicate and celebrate our deep ecological bonding with Earth, the benefits of which are well-articulated by Bill Devall and George Sessions through their comment that «ecotopian visions present affirmations of our bonds with Earth» (162).

### 7. Pre-Anthropocene Ecology in "The Dinosaurs"

In the tale "The Dinosaurs," Calvino establishes a protracted connectivity between the 'human' and the animal (the dinosaur) across the latitudes of cosmic, ecological space and time. They become indispensable parts of a ubiquitous, 'prehistoric-to-modern' ecological continuum where we trace the symbolic/phantasmagoric return of the extinct species like the dinosaurs into the midst of the exclusively 'human' territory and population, or into the anthropocene<sup>9</sup>. The story's enigmatic protagonist possesses the consciousness of both the dinosaur

<sup>6</sup> Ecological self, a concept propounded by Arne Naess, is the exact opposite of an anthropocentric self. When the human individual possesses an ecological self, he considers himself as a mere, plain member (and not the master) in the cosmos that includes many other members from different species. By inculcating in himself an 'ecological self,' the human individual relinquishes his anthropocentric ego and accepts the immense inter-species diversity of the cosmic ecosystem.

<sup>7</sup> Ecocentrism is a term used by deep ecologists to denote that our worldview should be ecology-centered instead of being human-centered. An ecocentric worldview believes that there is no ontological divide between the humans and the non-humans and thus, the humans, in no way, possess greater intrinsic value than the non-humans. The ecocentrists believe that the ecosystem is above the 'human' which is no more than its mere component, like its other non-human components. According to Stan Rowe: «The ecocentric argument is grounded in the belief that, compared to the undoubted importance of the human part, the whole biosphere is even more significant and consequential: more inclusive, more complex, more integrated, more creative, more beautiful, more mysterious, and older than time. The "environment" that anthropocentrism misperceives as materials designed to be used exclusively by humans, to serve the needs of humanity, is in the profoundest sense humanity's source and support: its ingenious, inventive life-giving matrix. Ecocentrism goes beyond biocentrism with its fixation on organisms, for in the ecocentric view people are inseparable from the inorganic/organic nature that encapsulates them. They are particles and waves, body and spirit, in the context of Earth's ambient energy» (106-7). In this context, it can be argued that Calvino's narrative in his works presents an ecocentric view where the ecosystem holds supreme value, and Calvino presents the 'human' as an infinitesimally small element in this cosmic ecology.

<sup>8</sup> Bill Devall and George Sessions use the term 'ecotopia' (imitating the use of the terms like utopia and dystopia in the critical and literary worlds) in their book *Deep Ecology* to denote a world dominated by an ecological vision and not by an anthropocentric one.

<sup>9</sup> The 'Anthropocene Epoch' fundamentally represents a fragment of geologic time that involves the entry of the humans into the cosmic ecosystem. The notion of the 'Anthropocene' is extremely im-

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and the human and operates in close contact with pristine flora and fauna and also at the same time, with the world of modern urbanity bustling with the humans and their activities. In Calvino's cosmic ecological schema, the presence of every species (whether living or extinct) is registered inerasably across an infinite canvass—a cosmic spatio-temporal milieu—whose dimensions are too big for the anthropocene and its narrow and minuscule world of the Homo-sapiens. Regarding the return of the dinosaurs, the narrator delineates: «From the semi-darkness of fears and doubts of now ignorant generations, the Dinosaurs continued to extend their necks, to raise their taloned hoofs, and when the last shadow of their image had been erased, their name went on, superimposed on all meanings, perpetuating their presence in relations among living beings» (110).

Jhan Hochman in his article “Green Cultural Studies,” while referring to Deleuze and Guattari’s notion of «becoming-in-the-world» rather than a «more fixed, being-in-the-world», explains how the thinkers-duo have provided a metamorphic, dynamic interchangeability between humans and animals such that it leads to a mutual interspecies transformation in a way that one becomes the other and vice-versa through the process of «shape-shifting» (191). In the tale “The Dinosaurs,” the humans and the dinosaurs are not statically confined in their restrictive spatio-temporal milieus and niches; rather they transgress them and intermingle through shape-shifting such that «no impervious boundaries exist between [...] animal and human» (192). The dinosaur and the man enter into a trans-spatial and trans-temporal contagion and form an interspecies multiplicity, thereby generating an exemplary scenario of interspecies multiplicity and assemblage (these are typical Deleuze and Guattari terms) which ultimately create a perfect, non-hierarchical cosmic ecosystem. Deleuze and Guattari beautifully explain:

These multiplicities in heterogeneous terms, confounding by contagion, enter certain *assemblages*; it is there that human beings effect their becomings-animal [...]. These are tales, or narratives and statements of becoming [...]. The pack is simultaneously an animal reality, and the reality of the becoming animal of the human being; contagion is simultaneously an animal peopling, and the propagation of the animal peopling of the human being. (Plateaus 267).

Thus, the formation of the human/animal packs, multiplicities and assemblages, as enacted by Calvino, fittingly corroborates to my argument of his generation of a non-hierarchical, ecologically egalitarian cosmos in the story “The Dinosaurs.”

## 8. The Crystal Ecology in “The Crystals”

In the context of our discussion, the tale “Crystals,” presents before us an extreme case of the elevation of the non-human matter to the utmost level of ecological importance; Calvino creates in this story a heterocline crystal ecology in which the characters like Qfwfq and Vug are duly submerged and into which they frequently interpenetrate. Qfwfq narrates:

I dreamed of a world of crystal, in those days: I did not dream it, I saw it, an indestructible frozen springtime of quartz. Polyhedrons grew up, tall as mountains, diaphanous: the shadow of the person beyond pierced through their thickness. ‘Vug, it’s you? To reach her I flung myself against walls smooth as mirrors; I slipped back; I clutched the edges, wounding myself; I ran

portant in the context of ecological studies because it exposes the undeniable truth that relentless human interventions in the ecosphere have disturbed its overall ecological harmony and balance.

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along treacherous perimeters, and at every turn there was a different light—diffused, milky, opaque—that the mountain contained.

‘Where are you?’

‘In the woods!’

The silver crystals were filiform trees, with branches at every right angle. Skeletal fronds of tin and of lead thickened the forest in a geometric vegetation. (183-184)

It is discernible from the above passage that through their recurrent interpenetration into the crystal vegetation, Qfwfq and Vug become parts of an eco-systemic network that is constituted by biotic and abiotic components, Qfwfq and Vug being the biotic ones. According to S. E. Jorgensen: «The biotic and abiotic components of an ecosystem are connected in a network. The network gives the ecosystem mutualism and synergy» (3). By weaving the story of the crystal ecology, Calvino indulges in an ecological thinking that transgresses all conceptual boundaries between the ecosystem’s compositional components so much so that, a crystal vegetation may substitute an arborescent vegetation. Here, we readily encounter another facet of Calvino’s overall agenda of deconstruction of boundaries, and what is dismantled here is not just the human/non-human boundary, but that between the non-human life (the arborescent vegetation) and non-human matter (the crystal vegetation). P. Shepard writes: «Ecological thinking [...] requires a kind of vision across boundaries» (2) and what Calvino indulges in this particular story is indeed the creation of an ecological vision whose fundamental axiom centers around the demolition of interspecies boundaries.

It is interesting to note at this juncture that when Calvino was writing *The Cosmicomics*, there arose in the 1960s and 1970s the famous or infamous “New Age Movement”<sup>10</sup> spearheaded by the Jesuit priest Pierre Teilhard de Chardin and Buckminster Fuller. This movement propounded anti-Nature and anthropocentric principles that appealed enormously to the Silicon Valley technophiles; it believed that the humans should transcend the world of Nature and substitute it with an artificial, human-controlled, technological environment or the ‘noosphere’<sup>11</sup>. However, Calvino’s narrative in *The Cosmicomics* offers a counterpoint to the anti-Nature and anthropocentric spirit and discourses of his age that authenticated the human’s physical/metaphysical transcendence of Nature. Calvino’s anti-anthropocentric narrative in the said text demystifies the humanist propaganda of ‘Nature-transgression’; it is part of an overall program of the ‘non-human turn’ (Colombino and Childs 355) where the fundamental principle is to «take seriously the vitality of (nonhuman) bodies» (Bennet VIII).

<sup>10</sup> This movement believes that the human race, empowered with reason and with scientific and spiritual knowledges, shall be the leader of the entire ecosphere within which we all exist. Peruvian-born anthropologist Carlos Castaneda is widely believed to be the leader of this movement. This movement attributes prime importance to anthropocentric norms and principles to be the guiding forces of the universe—a notion that is thoroughly demystified by Calvino’s anti-anthropocentric narratives in *The Cosmicomics*.

<sup>11</sup> Noosphere is a philosophical concept inaugurated and popularized by Russian-Ukrainian Soviet biochemist Vladimir Vernadsky and French philosopher and Jesuit priest Pierre Teilhard de Chardin. According to them, ‘noosphere’ is an ecosphere dominated by human reason and scientific thought and in their parlance, it will dominate all non-human components including animals, plants and other matters devoid of the human qualities of reason and intellect. This is an exclusively anthropocentric vision of the ecosystem and this vision is thoroughly demystified by the introduction of non-anthropocentric, ecological egalitarianism perpetuated by Calvino in *The Cosmicomics*.

## 9. The Electromagnetic Ecology in “The Solar Storm”

The tale “Solar Storm” presents another intriguing aspect of the cosmic ecosystem that Calvino weaves in *The Cosmicomics*. Here, we trace an electromagnetic, solar ecosphere spreading across the world, absorbing and assimilating the human characters like Rah in its ubiquitous electromagnetic field. Here, the sun is not seen as a distant object, but rather as an ethereal whirlpool of currents spreading and enveloping the Earth, as Qfwfq narrates: «And we are inside it: it's not true that we are here and the Sun is there; it's all a constant whirlpool of concentric currents with no intervals between them, a single tissue of matter, denser in some places, less dense in others, stemming from the same original cloud that has contracted and caught fire» (349-350). Not only this much, the expansive solar ecosphere is described as a controlling ecological force that subsumes the ‘human’ into its ubiquitous ambit:

I notice things that it is pointless to tell you people about: cataclysms that are even at this moment shattering its fiery depths, continents that are collapsing in flames, incandescent oceans swelling and overflowing out of the crucible, turning into currents of invisible radiation heading towards the Earth, almost as fast as light. [...] We have always been in the Sun's control, even though we almost always managed to forget it and to think that we were sheltered from its whims. (351)

The sun's ubiquitousness as a regulatory ecological force is indeed a subversive nullifier of any anthropocentric dictum that attributes the ‘human’ preponderance over the ecosphere in which he/she lives. It is further ascertained through Rah’s corporeal/metaphorical integration into the anthropomorphized, aerial electromagnetic field generated by the solar storm:

It was then that I saw her. I looked up to the foremast: she was up there. She was holding onto the foreyard, hanging in the air like a flag unfurling for miles and miles around, her hair flying in the wind, and her whole body flowing like her hair because it was made of the same pulviscular substance, her arms with their thin wrists and their ample shoulders, her loins sickle-shaped like a crescent moon, her breasts like a cloud covering the ship's quarterdeck, and the spirals of her drapery mingling with the smoke from the funnel and with the sky above. All this I could see in the invisible electricization of the air; or at times it was just her face, like an aerial figurehead, the head of a monumental Medusa, with crackling eyes and locks: Rah had managed to catch up with me. (Calvino, *Cosmicomics* 351-2)

Qfwfq highlights Rah’s physical constitution from the same pulviscular matter as that of the sun; it is reification of the human’s combinatorial oneness with Nature, and not of its separation from the same. Regarding the compositional sameness of the human and Nature, Merleau-Ponty writes in his book *The Visible and the Invisible*: «my body is made of the same flesh as the world (it is perceived), and moreover [...] this flesh of my body is shared by the world» (248). Rah’s transmogrified aerial view (visible only to Qfwfq) enunciates the former’s thoroughgoing assimilation into the ecosphere including the sky, the cloud, the wind and the smoke etc. Moreover, while justifying her self-willed effacement in the aerial world, she explains: «I wanted to see if there was another way of being» (Calvino, *Cosmicomics* 352). Her experimental entry into another ‘way of being’ is implicative of her desire for possession of a ‘cosmological self’ which, according to her, is «outside all dimensions and forms» (Calvino 353), particularly those determined by the self-stultifying dictums of anthropocentrism.

## 10. The Aquatic Ecology in “The Spiral”

Such human/Nature connectivity is further established by Calvino in the story “The Spiral” in an eclectic but convincing way. Here Qfwfq (a mollusk), despite being submerged in the aquatic world, has his attention perpetually directed towards the human world leading to the formation of its eternal connectivity with the latter.

I see all this and I feel no amazement because making the shell implied also making the honey in the wax comb and the coal and the telescope and the reign of Cleopatra and the films about Cleopatra and the Pyramids and the design of the zodiac of the Chaldean and the Pyramids and the design of the zodiac of the Chaldean astrologers and the wars and empires of Herodotus speaks of and the words written by Herodotus and the works written in all languages, including those of Spinoza in Dutch, and the fourteen-line summary of Spinoza’s life and works in the installment of the encyclopedia in the truck passed by the ice-cream van, and so I feel as if, in making the shell, I had also made the rest. (145-6)

The narration not only connects the aquatic world with the outside, terrestrial/celestial ecosphere, but also unites the minuscule spatial domain of the ‘mollusk-in-its-shell’ with the world of the humans and their activities spread-out across millennial space and time. And interestingly, while describing this aquatic/terrestrial/celestial connectivity, Qfwfq is infused with a typical ‘human’ consciousness, and he articulates his experiences with a human voice and volubility: «Every now and then I was seized by fantasies, that is true; for example, the notion of scratching my armpit, or crossing my legs, or once even of growing a moustache» (138). Regarding the non-human’s humanlike vibrancy and volubility, ecological critic Mircea Eliade writes: «not only is the nonhuman world alive, but it is filled with articulate subjects, able to communicate with the humans» (98). Calvino makes the non-human mollusc an «animistic<sup>12</sup> subject» which possesses and exudes «a shifting, autonomous, articulate identity that cuts across the human/nonhuman distinction» (Manes 18). According to the mollusk-narrator Qfwfq, the vast, sprawling network of historic/modern space and time in which all the mundane/grandiose human activities are enacted, are also at the same time, performed in its tiny shell-world such that the demarcating barrier between its aquatic world and the outer, human-inhabited world readily disappears. This is a magnificent attempt, on the writer’s part, to attach the human habitation with that of the other non-human beings (however tiny they may be) so as to form one, undifferentiated, cosmic ecological whole where both interact in a language that is encoded with the messages of trans-species interactivity. William Howarth writes: «Ecology leads us to recognize that life speaks, communing through encoded streams of information that have direction and purpose, if we learn to translate the message with fidelity» (77).

<sup>12</sup> Animism, as an ecological concept, harbours the notion that all universal, natural phenomena including the humans, animals, plants, and non-human matters like rocks, mountains, rivers etc. possess soul or spirit that fills them with vital energy. In a sense, animism finds no difference between the humans and the non-humans as all of them possess soul and spirit. According to Christopher Manes: In contrast, for animistic cultures, those that see the natural world as inspired, not just people, but also animals, plants, and even “inert” entities such as stones and rivers are perceived as being articulate and at times intelligible subjects, able to communicate and interact with humans for good or ill. In addition to human language, there is also the language of birds, the wind, earthworms, wolves, and waterfalls—a world of autonomous speakers whose intents (especially for hunter-gatherer peoples) one ignores at one’s peril. (15) In *The Cosmicomics*, Calvino looks like upholding the spirit of animism by attributing non-human biotic and abiotic components of the ecosphere with the qualities of soul, spirit and articulation thereby establishing the axiom of ecological egalitarianism.

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Moreover, we find that the mollusk-Qfwfq is in love, at one and the same time, with the female mollusk, with the female sea gull «volplaning on the surface of the sea, with the daughter of the keeper of the observatory», with «the queen bee flying at the head of the swarm», with the female anchovy swimming in the midst of a «a school of anchovies», with a «slave-girl named by Herodotus» (146), with queen Cleopatra and finally, with the Dutch girl amongst the party of the Dutch tourists. On the other hand, the mollusk-Qfwfq could well be substituted by «the beachboy with the gold chain», with «the director of the observatory», with a male seagull, with a male anchovy, with the «reader of Herodotus, or Herodotus himself», with «the vendor of ice cream» (147), with Spinoza, or with a male anchovy. Mollusk-Qfwfq's cosmic and inter-species love-saga involving the possibilities of multiple inter-substitutions between different species, indeed, brings them together and binds them all by one single unifying thread of love and by one, single consciousness of interspecies transformability.

The inter-species connectivity is further established, in a novel and innovative way, through the formation of an all-pervasive, kaleidoscopic visual field constituted by images formed by eyes, corneas, irises and pupils of different living species including the 'humans.' In this sprawling and immanent visual network, the mollusk-Qfwfq is seen by the eyes of the polyp, the cuttlefish, the bream, the mullet, the crayfish, the lobster, the fly, the ant, the snail, the seagull, the fisherman, the sea-captain, a woman bathing in the sea, a zoologist and an anchovy. All surveying eyes are connected to each other through the inter-connective web of visual images and finally, Qfwfq declares: «All these eyes were mine. I had made them possible; I had the active part; I furnished them the raw material, the image» (151). Transformed into an image of itself formed by his eyes, Qfwfq traverses across all other eyes — of the humans and the non-humans — in a way that his own image gets imprinted in the eyes of the others and conversely, others' images are also imprinted in his own eyes. Qfwfq describes: «And at the bottom of each of those eyes I lived, or rather another me lived, one of the images of me, and it encountered the image of her, the most faithful image of her, in that beyond which opens up, past the semi-liquid sphere of the irises, in the darkness of the pupils, the mirrored hall of the retinas, in our true element which extends without shores, without boundaries» (151).

Such immanent visual connectivity across species has telling ecological implications in the sense that it maintains an intra-ecological association amongst its components through multiple interspecies gazes directed at one another without any particular species claiming iniquitous dominion over another. So, what is achieved in the end by the creation of this immanent and imagist visual field is a decentered, multispecies labyrinth that is ecologically egalitarian and non-hierarchical. In addition, the establishment of the immense, existential significance of the mollusk in the aquatic world, its treatment on par with the human habitation in a cosmic existential firmament etc. conjointly ascertain the enormity, depth and greatness of the non-human world which lies out there and whose ecological precedence has mostly, gone unnoticed and unacknowledged by the humans. Edward Abbey explains: «out there is a different world, older and greater and deeper by far than ours» (37). So, what Calvino achieves by weaving this mollusc/human story is what deep ecologists Devall and Sessions would term «biocentric equality»: «The intuition of biocentric equality is that all things in the biosphere have an equal right to live and blossom and to reach their own individual forms of unfolding and self-realization within the larger Self-realization. This basic intuition is that all organisms and entities in the ecosphere, as parts of the interrelated whole, are equal in intrinsic worth» (67).

Thus, the immense recurrence of the human/non-human interfusion as seen in many of the tales in *The Cosmicomics* generates a fascinating, cosmological, dialogic (to use a typical Mikhail Bakhtin terminology) nexus of interspecies articulation. In these stories, the tremen-

dously articulate non-human species (like the birds and the molluscs, for instance) contest, mock and subvert the human's longstanding anthropocentric vainglory and the cosmic ecology Calvino weaves through his stories transcends not only the anthropocene, but also the holocene<sup>13</sup>. The writer's purposeful attribution of articulation and volubility to Nature's non-human entities demystifies anthropocentrism as the dominant and uncontested reigning principle of the world. What we witness in *The Cosmicomics* is an interspecies carnivalesque, a multi-species polyphony, a cosmological chronotope embedding multiple species and organisms, an interspecies dialogism and a cosmic, ecological egalitarianism. Most of Calvino's characters, presumably human, are in the process of ecological metamorphosis, and of 'becoming' — «becoming-animal, becoming-earth» (Braidotti 66).

## 11. Conclusion

In the final analysis, *The Cosmicomics*, through its amusing and hallucinatory narrations of 'man-in-the-cosmos' stories, evokes profound and far-reaching ecological implications, which this article has specifically endeavoured to unearth. Calvino's narrative strategy in the said work is craftily designed towards the formation of a trans-spatial and trans-temporal cosmic ecology where an altered exegesis of the human/Nature symbiosis evolves.

In this work, Calvino attains a complete 'decentering' of the human subjects which, now, exude 'ecological selves' instead of 'anthropocentric selves.' This, in turn, results in the establishment of a world which is 'boundary-less,' 'non-hierarchical' and characteristically bereft of the anthropocentric human exclusivity.

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<sup>13</sup> The era encompassing a time from the origin of the Earth till today.

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