

QUANTUM LANDSCAPES

A 'Ventriloquism of Spirit'

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Caribbean

**Claude
Lévi-Strauss**

ecocriticism

**Pauline
Melville**

postcolonial

Wilson Harris

*The rise of natural history as a discipline and as an area of inquiry was the result of European colonial activity in the New World tropics. While postcolonial studies has been concerned with the spatial contours of empire, it has only recently begun to explore the epistemological and ecological consequences of this construction of 'natural' history. Edouard Glissant has argued that the relationship between humans and nature in the Caribbean was fractured by the brutalities of the plantation system. Contemporary anglophone writers have begun to reconstruct that relationship through the use of non-realist narrative. Pauline Melville's novel *The Ventriloquist's Tale* brings together Amerindian mythology and Western physics in order to complicate the materialist and anthropomorphic bias of Caribbean historiography and to press against the realist boundaries of ecocritical studies.*

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Imagination is more important than knowledge. (Albert Einstein)

Postcolonial theory has arrived belatedly to the scene of ecocritical studies, even as the latter field has generally neglected the historical process of colonization and the body of scholarship that has emerged in its wake. A focus on the temporal and spatial contingencies of power would seem to facilitate an environmental framework for postcolonial studies, but the nexus of space-time has generally been defined in social rather than ecological terms. Understandably, postcolonial scholarship has been more concerned with an anthropocentric recovery of a subaltern subject that is metonymically linked to land than with examining a wider biotic community through what Wilson Harris calls the ‘quantum imagination’.¹ With a few exceptions, the process that Alfred Crosby (1986) terms ‘ecological imperialism’ has not been brought into a productive relation with the ways in which Caribbean writers have inscribed an environment that exceeds the bounds of human knowledge.²

1 Harris has written extensively about quantum physics for the past two decades, but the term ‘quantum imagination’ doesn’t explicitly appear until his more recent work (see, for example, Harris 1999: 246).

Here I negotiate these gaps by turning to Pauline Melville’s Guyanese novel, *The Ventriloquist’s Tale* (1997), engaging postcolonial ecocriticism through an interdisciplinary prism that includes colonial natural sciences and structuralist anthropology, as well as relativity and quantum theory. Turning to recent developments in physics not only serves to mend the post-Renaissance split between art and science, as Melville and Harris have argued, but also expands our phenomenologies of the natural world, pressing against the realist boundaries of ecocritical studies. Melville’s ventriloquism of the ‘spirit’ of the Guyanese interior eschews the Euclidean geometries of colonialism by embracing Einstein’s unity of space-time and the transformative powers of cosmological radiation. While the novel inscribes epistemological uncertainties through the lens of quantum theory, it also tests the boundaries of both classical and quantum physics through the trickster element of nature, symbolized in the shape-shifting ventriloquism of Melville’s deity-narrator, Macunaíma.

2 We’ve attempted to initiate this dialogue in DeLoughrey, Gosson and Handley (2005). See also the forthcoming special issue of *Isle: Interdisciplinary Studies in Literature and Environment* on postcolonial ecocriticism.

How might we define postcolonial ecocriticism, and how does it contribute to our understanding of empire and its consequences? Postcolonial ecocriticism is necessarily interdisciplinary, an emergent field committed to exploring the biotic contours of empire and its discursive inscriptions, drawing from fields as diverse as history and anthropology, the natural sciences and theoretical physics. It recognizes the importance of what Crosby (1986) has called the ‘portmanteau biota’ of European expansion, considering how the exchange of diseases, pathogens, crops and seeds helped to constitute the diverse experiences of colonial contact. Yet, unlike Crosby’s work, it does not position (male) Europeans and their biotic companions as the determining agents of history. Postcolonial ecocriticism helps destabilize

the *universalist* conceit of the Anglo-European human subject by examining the ways in which this anthropocentricity is constituted by a limited conception of the natural universe. One of the field's most important contributions is to foreground the human bias of historical narrative itself. Its most profound challenge is to provide an alternative rendering of 'natural history' through an environmental ventriloquism that circumvents the material and anthropocentric bias of colonialism.

The Caribbean provides a fitting frame for an ecocritical analysis because it is one of the most radically altered landscapes in the world and, as Richard Grove (1995) has shown, the space from which our current understandings of environmental conservation emerged. The forced transplantation of peoples, plants and animals to the primarily island spaces of the region created a complex layering, a hybridization of diverse cultural and environmental forms. The introduction of plantation crops such as sugar cane, coffee, rice and nutmeg, in addition to the domestic fauna such as cattle, goats, horses and dogs, created an unprecedented impact on the environment and the complex constitution of Caribbean cultures. Recognition of the violence of this historical process helps us to pinpoint some of the underlying conceits of ecocritical studies, particularly as it has been formulated in North America and Europe. By focusing on normative masculine white settlers, this particular construction of ecocritical studies has often upheld the division between nature and culture through a mystification of gender and race. For instance, ecocritical idealizations of pastoralism, presumably symbolizing a more natural human relationship to the landscape, are difficult to uphold in the wake of plantation slavery. The metonymic conflation of woman with nature is harder to sustain in a context where enslaved and indentured women labored alongside their male colleagues, and where people of color were conflated with animals. Finally, the engagement with Caribbean colonial history also poses a challenge to uncritical gestures to an *a priori*, naturalized and uncontaminated space of origins. Thus, an imaginative return to pre-contact ecologies has led to difficulties for the region's authors. For example, in *My Garden (Book)*, Jamaica Kincaid asks, 'what did the botanical life of Antigua consist of at the time . . . (Christopher Columbus) first saw it? To see a garden in Antigua now will not supply a clue' (1999: 135). An engagement with the complexity and violence of Caribbean regional history challenges facile assumptions of natural/national origins, and confers mutual permeability between the generally polarized realms of nature and culture. Lawrence Buell's definition of an 'environmentally oriented work', which demonstrates that 'the nonhuman environment is present not merely as a framing device but as a presence that begins to suggest that human history is implicated in natural history', might be expanded in a context where colonization, plantation

slavery and green imperialism have already rendered an obvious connection between human and ‘natural history’ (Buell 1995: 7–8). As I will explain, this continuum between nature and its cultural mediation is inextricably tied to the discourse of incestuous purity and its opposite, ecological and racial hybridity.

While nature and culture are historically permeable, the brutalities of the Caribbean plantation complex have resulted in an attempt to excavate natural and cultural purity in those ecological spaces beyond its reaches. Accordingly, scholars have turned their attention to those vestiges of folk or ‘natural’ autonomy, such as places of maroonage (the mangrove, swamp or mountain), as well as indigenous survival. In settler cultures, the invocation of indigenous presence has been one of the most powerful ways to validate national/natural origins, constructing a prehistoric native upon which settlers may graft their cultural and territorial authenticity. Due to the general lack of a visible indigenous presence in the island region, anglophone writers have transplanted diasporic origins from Europe, Africa and India into the Caribbean soil. Since these origins are deeply entrenched in historical violence, Edouard Glissant explains that this led to a representational split between nature and culture, where the process of cultural sedimentation was precluded by the forced ‘*irruption into modernity*’ (Glissant 1989: 136). Writers of the former British colonies have few historical or ancestral claims to Amerindian presence and, with certain exceptions, have often positioned native subjects as historical only in the sense of this population’s prior experience of colonization.³ As such, indigenous representation in the anglophone Caribbean has not been rendered in the full complexity of space and time, often constituting ‘the native’ in exclusively natural rather than cultural (historical) terms.

Consequently, many anglophone writers have turned to Guyana’s more visible indigenous population as a way to interrogate the efficacy of deep regional and natural history. For instance, Kamau Brathwaite writes:

In the Caribbean, whether it be African or Amerindian, the recognition of an ancestral relationship with the folk or aboriginal culture involves the artist and participant in a journey into the past and hinterland which is at the same time a movement of possession into present and future. Through this movement of possession we become ourselves, truly our own creators. (Brathwaite 1970: 44)

Brathwaite’s *oeuvre* engages with the semantic remnants of indigenous culture, visible in his poetic recuperation of Arawakan terms such as ‘hurricane’ (the god Huracan) and ‘cannibal’ (Columbus’s mistranslation of Carib), but his statement raises questions as to how ‘aboriginal culture’ might be freed of its ontological incarceration within the precolonial and spatially remote ‘hinterland’, a term synonymous with the Amerindian

3 In *Routes and Roots* (2007), I explore the revitalization of indigeneity in anglophone Caribbean novels.

Guyanese interior. This spatiality mirrors the evolutionary time adopted by nineteenth-century anthropologists which, as Johannes Fabian has shown, secularizes time into progressive units whereby ‘dispersal in space’ becomes hinged to ‘sequence in Time’ (1983: 12). An obvious example is the presumed temporal division between the space of civilized, modern Europe and the ‘backwardness’ of its colonies; but this space-time division also functions in the Caribbean between its diasporic subjects and the Amerindian hinterland, even though indigenous peoples were deeply imbricated in the colonial process as slaves and, in the case of some Caribs, slave traders.

The anthropological legacy of quantifying discrete units of space and time is an integral backdrop to Melville’s novel, which interrogates the spatial dispersal between modern and traditional practices under the larger umbrella of the division between nature and culture, especially as theorized by Claude Lévi-Strauss. The epigraph to *The Ventriloquist’s Tale* begins with a quote from *The Raw and the Cooked*, tracing a myth ‘which establishes a direct equivalence between eclipses and incest’ across the Americas. Here Lévi-Strauss’s broad geography upholds spatial continuity, yet, like French structuralism in general, brackets off the referents of history. *Elementary Structures of Kinship* argues that ‘the prohibition of incest’ signifies the way in which ‘the transition from nature to culture is accomplished’ (Lévi-Strauss 1960 [1949]: 24). Jacques Derrida brought attention to the ways in which Lévi-Strauss employed this divide to demarcate the universal (nature) from the particular (culture), but the latter reached this tool’s limits in the ‘scandal’ that the prohibition of incest is both universal (natural) and local (cultural). This demarcation raises questions about historicity and presence that are relevant to Caribbean interpellations of nature and culture. Derrida observes a ‘neutralization of time and history’ in French structuralism’s erasure of the diachronic, a failure to account for how a structure replaces another through ‘a rupture with its past, its origin, and its cause’ (Derrida 1978 [1967]: 291). In the Caribbean context, we might read this rupture as a sign of the process of colonization, shared between indigenous and diasporic subjects; Glissant’s ‘irruption into modernity’. Lévi-Strauss derives new structures from a ‘model of catastrophe’, which suggests an ‘ethic of presence, ethic of nostalgia for origins’ that we might liken to the semiotics of Caribbean indigeneity, rendered as a hinterland that represents both colonial loss (catastrophe) as well as a nostalgic signifier of precolonial origins (presence) (ibid.: 292). The Guyanese hinterland, an ecologically diverse interior region of rainforest, wetlands and savannah that is primarily occupied by Amerindian peoples (seven per cent of Guyana’s population), has functioned as an ideological space-time of precolonial origins, bracketed off from modernity and its epistemological offshoot, hybridity.

4 See Paula Burnett (1999), the first to pinpoint Melville's use of endogamy/exogamy and the novel's connection to narratives of Caribbean historiography, and April Shemak (2005) whose exploration of these tropes as well as her argument for Melville's 'postmodern indigeneity' are vital interventions.

5 In an effort to prove that 'logic in mythical thought is as rigorous as that of modern science', Lévi-Strauss drew from both mathematics and quantum physics (1963 [1958]: 227). His attempts to rectify synchronic and diachronic histories arose from adopting a 'molecular structure' of myth, just as he likened bodies of kinship to the laws of thermodynamics (ibid.: 226–7, 276). Lévi-Strauss turned to the quantum mathematician and author of the 'quantum bible', John von Neumann, for his theories of kinship, play and social rules (Herbert 1985: 25; Lévi-Strauss 1963 [1958]: 290–1). Von Neumann is known for his quantum postulation that 'consciousness

Creolization and hybridity are nearly synonymous with the Caribbean (the first term arose from the region) and might be linked, through Melville's novel, to Derrida and even Lévi-Strauss's occasional celebration of play – an alternative to the nostalgia for origins and an affirmation of becoming, decentralization and 'genetic indetermination' that are the hallmarks of Caribbean historiography (ibid.). The invocation of 'genetic indetermination' is particularly relevant to Melville, a writer of English and Guyanese heritage who celebrates that 'race, gender, class, species and divinity are all in the melting-pot, and [that she is] a champion of mixtures and hybrids' (Melville 1992: 742). Arguing that the 'imagination is effortlessly transnational, trans-racial, trans-gender, trans-species' (ibid.: 743), Melville's works have, like the title of her first collection (1990), emphasized the shape-shifter, the trickster, the indeterminacy of gender, race, sexuality and nationality. Thus, it might be surprising that *The Ventriloquist's Tale* chooses incest as its central narrative concern. Cognizant of the ways in which invocations of the Amerindian hinterland have rendered indigenous peoples as ahistorical subjects, Melville takes incest (endogamy) and hybridity (exogamy) to their extremes, developing a point that has been largely overlooked in Lévi-Strauss's theorization of the nature/culture divide.⁴ He has argued that the social prohibition of incest is often paired 'with its direct opposite, inter-racial sexual relations, an extreme form of exogamy' (Lévi-Strauss 1960 [1949]: 10). Thus, Melville's narrative doubling of an historical incident of brother–sister incest, framed by a more contemporary story of miscegenation, invokes Lévi-Strauss's proclamation that incest and racial hybridity constitute 'the two most powerful inducements to horror and collective vengeance' (ibid.). While the novel explains that 'all stories are told for revenge or tribute', it breaks from Lévi-Strauss by inscribing incest itself rather than its masculine prohibition (Melville 1997: 9).

Melville's novel is concerned with the cosmological mirroring of incest and hybridity but eschews the Oedipal interpretation of 'horror and collective vengeance' for the same reasons that it problematizes both structuralist and post-structuralist doctrine – their prioritization of culture (an anthropocentric system of signs) over a complex natural world that includes the gravitational influence of the stars and, as the narrator claims, 'the effects of electro-magnetic fields on human behaviour' (ibid.: 354). One might read Melville's novel as an engagement with the 'trace' of quantum theory that recent scholarship has excavated from the work of both Lévi-Strauss and Derrida in order to explore the dualities of nature/culture, particularly as they might open up the anthropocentric division between space and time.⁵ In fact, the work of Lévi-Strauss and Derrida has been

creates reality' and his destabilization of neo-realism by highlighting 'an active role for the observer's consciousness' (Herbert 1985: 24, 25). This is replicated in Melville's novel, which warns that our observational 'presence alters things' (Melville 1997: 79). See Louis James (1999) for an analysis of quantum theory in Melville's novel.

6 The mathematician André Weil contributed an appendix to *The Elementary Structures of Kinship* and made a significant impact on Lévi-Strauss (Plotnitsky 2002: 193). Plotnitsky reads Werner Heisenberg's 1929 critiques of classical physics (and his concern with the representational efficacy of language)

influenced by an epistemological destabilization that can be traced to the emergence of quantum physics in the early twentieth century.⁶

By invoking physicists such as Einstein, Nick Herbert, Arthur Eddington, Stephen Hawking and others, Melville's novel incorporates quantum and relativity theories as a means of exploring the relationship between humans and nature. Wilson Harris, also an advocate of the quantum imagination, describes her writing as an effort to establish 'bridges between the extra-human dimension (. . . animal messenger or companion, *ventriloquisms of spirit* through fossils and *densities in nature*) and a human-centered logic or discourse' (Harris 1996: n.p.; emphasis added). According to quantum physicist Werner Heisenberg, this sub-phenomenal focus emphasizes the mutability of matter, the inability to distinguish between the animate and inanimate, and the illegibility, discontinuity and seeming absurdity of natural behavior (1958: 149, 154, 42). Like post-structuralism, quantum theory destabilizes the relationship between observer and observed by paradoxically claiming the constant truth of deficient human knowledge (ibid.: 45,137). The discovery that light (energy) is both a particle and a wave (and the inability to measure this simultaneously) led French quantum theorists to refer to the essence of nature as '*densité de presence*' (Herbert 1985: 96). Harris has likened this to the artistic imagination, an engagement with 'the role of densities as transitive media planted in nature' (1999: 186). With its encoding of the natural world as a shape-shifting, trickster-like 'collection of events' rather than immutable things and beings, quantum theory offers a material and more 'natural' depth to post-structuralism (Levin 2002: 206).⁷ By embedding her narrative of incest in the histories of South American mythology as well as incorporating theories of relativity and quantum physics, Melville highlights indigenous science and removes the Amerindian hinterland from the temporal division of space that arises from a diasporic nostalgia for origins.

Architectures of space: the nature of narratives of the interior

as an important precursor to Derrida (ibid.: 227).

7 It is also an alternative to structuralism, likened by Harris to 'fascist' violence

The Ventriloquist's Tale is structured as a triptych of the space-time of contemporary, colonial and precolonial Guyanese history. The temporal and spatial overlaps among the three sections of the novel might be likened to Mikhail Bakhtin's 'chronotope', a term he adopted from Einstein's theory of relativity to describe the corporeality of time and the chronology of space (Bakhtin 1981 [1975]: 84). The novel is framed by the first-person voice of Macunaíma, the son of the sun, a deity derived from Amerindian belief and Lévi-Strauss's mythologies, as well as Mário de Andrade's Brazilian

(1981: 132). For a sustained analysis of Harris's critique of both structuralism and post-structural theory, see McDougal (2002).

modernist novel of the same name (1984 [1928]). Although claiming a 'sublime talent as a ventriloquist', he appears to concede the story to the modern 'trend' in realism, since 'fiction has to disguise itself as fact' (Melville 1997: 7, 9). The subsequent section of the novel explores the contemporaneous trials of Chofoye McKinnon, a character of Wapisiana (Arawak), Macusi (Carib) and European heritage, who leaves the Rupununi interior for the coastal capital of Georgetown to acquire finances to restock the ranch. In his disorientating urban experience, he begins an extra-marital affair with Rosa Mendelson, a British academic researching Evelyn Waugh's travels through the colony in the 1930s. Because the McKinnon family had hosted Waugh in the interior, Rosa hopes to interview Chofoye's Aunt Wilfreda, highlighting the excavation and transformation of colonial architectures of the hinterland.

Wilfreda becomes agitated about the history of incest that might be uncovered, a historical event that Waugh recorded briefly in his 1934 travelogue, *Ninety-Two Days*. The novel then shifts to the early twentieth-century Rupununi to explore Wilfreda's witnessing of the incestuous relationship between her siblings Danny and Beatrice, a union that produces the shape-shifter Sonny, the future manifestation of our narrator, Macunaíma. After a Jesuit priest brings an end to the relationship, catalyzing Beatrice's exile to Canada, the narrative returns to the present time and to the opposite of incest, the interracial affair between Rosa and Chofoye. While Beatrice and Danny's union produces our deity-narrator, Rosa and Chofoye's relationship results in the death of his son, Bla-Bla. Oblivious to the power of naming, Rosa mistranslates Chofoye's name, explosion of waters, to Michael Wormoal, a Czech anthropologist and 'wormhole' to the universe of Lévi-Strauss. Wormoal's belief in the 'purity of the nation' invokes Lévi-Strauss's nostalgia for origins, famously critiqued by Derrida (Melville 1997: 79). In turn, Wormoal mistranslates Chofoye's name for the American employees of Hawk Oil, a company that signifies the disastrous environmental pollution of the Guyanese interior (see Colchester 1996: 61–95). When they are dynamite prospecting in the Rupununi, the Americans attempt to warn Bla-Bla by calling out his father's name, a mistranslation but also a fundamental misrecognition of Rupununi modernity and diversity which leads Bla-Bla to run towards the explosion and meet his death. In the words of one character, 'the stupid American didn't even realize he spoke English – let alone that we all have different languages' (Melville 1997: 343–4). Rosa returns to England on the same plane as Wormoal, who is oblivious to the death and still claims 'to know more about the Amerindian peoples than they know about their selves', a conceit derived from *The Raw and the Cooked* (ibid.: 77–8). Melville draws our attention to the novel's complicity in colonial intertextuality by having Rosa begin to write her 'Post-

colonial Perspective’ of Waugh (ibid.: 351). Wilfreda, Chofoye, and his wife Marietta return to the Rupununi to bury their son; the conclusion suggests that they might regenerate their marriage and maintain their existence at the cultural and geographic margins of the Guyanese nation.

The novel raises compelling questions about the ways in which ideas about nature – natural sexuality, the natural indigene and the natural landscapes of the interior – are continually subject to deadly mistranslations. Rosa’s research project and her experiment with racial hybridity anticipate the postcolonial critic in the text, as she inscribes Waugh’s journeys and remains oblivious to how her mistranslation contributes to the death of their future (Welsh 2002: 107). Wormoal, who describes ‘Indian culture’ as ‘disintegrating’ and ‘contaminated mainly by contact with other races’, argues against Rosa’s belief ‘in the mixture of the races’, even as he recognizes that his extraction of indigenous mythology for the benefit of Western universities likens knowledge to ‘a new form of colonial power’ where ‘information is the new gold’ (Melville 1997: 78, 80). The Hawk Oil employees, relying upon Wormoal’s fetish of primordial alterity, contribute to the death of Bla-Bla and, as Paula Burnett points out, of the orality of the community (1999: 25). Even Macunaíma concludes the novel with the lament that he too is almost ‘fatally infected by the epidemic of separatism’ in Europe, which includes nationalism, racism and ‘religious orthodoxy’ (Melville 1997: 355). Retreating to the Guyanese interior to enjoy ‘untrammelled nature’, Macunaíma is troubled by ‘the ear-blasting sound of a helicopter’ announcing the arrival of the Body Shop owner, Anita Roddick, whose establishment of a Brazil-nut plantation caused labor disputes and the ‘collapse’ of a village (ibid.: 356). Beyond Melville’s tale, the interior is infected with mining pollution, biopiracy, and green capitalism.⁸

As April Shemak points out, even Macunaíma succumbs to the myth of endogamous purity in his retreat to the hinterland (2005). Although Melville attempts to destabilize our faith in her deity-narrator and the epistemological dangers represented by Beatrice and Danny’s incestuous affair, critics have often upheld a space-time division that positions the Amerindian interior outside of modernity, even though nearly all of Melville’s characters are of mixed heritage, speak multiple Amerindian and European languages, and travel regularly between the coastal cities, Brazil and the Rupununi.⁹ *The Ventriloquist’s Tale* almost encourages such readings in its encoding of the natural and human alterity of the hinterland, a seduction also experienced by Macunaíma, but this conflation between subject and landscape can function only if it suspends the far-reaching ‘catastrophe’ of colonialism as well as its textual legacies that inscribed a palimpsest of hinterland space. Like the interpellation of nature as a static object outside of human history, this

8 See Colchester’s excellent work on environmental exploitation in Guyana (1996), and Kaplan (1995) on Roddick’s green capitalism. Melville based the novel’s allusions to the latter on real events with the Kayapo of the Amazon.

9 For instance, one critic describes Melville’s Rupununi as ‘unspoiled by material commodities’ and ‘uncontaminated’ by the capitalist division between labor and leisure even though ranching is clearly a European adaptation (François 1999: 38). In describing the hinterland’s importance to Wilson Harris, Andrew Bundy conflates ‘the indigenous peoples and their *habitat*’ (1999: 18; emphasis added), and, strangely, David Dabydeen argues that Melville’s work must be segregated from European theories, particularly post-structuralism (1997: 138).

romanticization of the interior suppresses the textual '*densité de presence*' of colonial travel narratives of the Guianas.

Melville inscribes an alternative historiography of the Guyanese interior of Amerindian narratives, describing how colonial explorers, gold and oil prospectors, and naturalist writers construct spatial difference. The novel's intertextuality incorporates the colonial Guianas, the north-eastern section of the South American continent which included the French and Dutch colonies, as well as portions of Venezuela (the Orinoco) and Brazil. Columbus's interpellation of the interior source of the Orinoco as a 'terrestrial paradise' catalyzed a mythopoetic discourse of imperialism for this region, adopted by subsequent explorers who inscribed the utopian otherness of the nature of the New World alongside the all-too-historical manifestations of empire, such as genocide, slavery and environmental destruction. To the sixteenth-century British explorer Walter Raleigh, El Dorado, the fabled city of gold, was located in the glorified interior of Guyana, which he failed to secure for the empire. Spanish efforts to obtain El Dorado led to a seven-year war against the Caribs and the forced relocation of multiple Amerindian tribes to centralized mission villages (Colchester 1996: 15–16). Indigenous peoples who fled to the Rupununi became imbricated in Portuguese colonial trade networks (ibid.: 16). Far from being insulated from the space-time of European colonialism, 'Amerindian allies remained crucial to its survival' (ibid.: 19).

Contrary to Rosa's and Wormoal's assumptions, knowledge is not 'a *new* form of colonial power' and nor is it 'the *new* gold', even if El Dorado has taken on different forms. The eighteenth-century taxonomy of the natural world, systematized by Carolus Linnaeus, was derived from an alliance between colonial administrations and a field of knowledge that categorized hierarchies of race, flora and fauna. A deep relationship between ethnography, natural observation, and narrative production was forged and was entangled with notions of spatial difference and colonial violence. The flora, fauna and humans that were captured and transported to European metropolises for analysis and display attest to the epistemic violence of the production of 'natural' knowledge. The new historians of nature, including Charles Darwin, drew their language from the discourse of nationalist empire, inscribing biotic 'colonists' and natural 'kingdoms' (Browne 1983: 33). Colonial science contributed to the erasure of indigenous knowledges, a legacy manifested in the Body Shop's biopiracy.

By the eighteenth century, colonial texts linked the tropical regions and their creolized residents to hypersexuality, disease and moral decay. The Prussian naturalist Alexander von Humboldt, a precursor to Hawk Oil who collected mineralogical and geographic information for the Spanish Crown, dispelled the myth of El Dorado while arguing that the soil fertility of the

10 Humboldt had helped secure funding from the British Crown to commission Richard and Robert Schomburgk to survey the interior. Their mid-nineteenth-century travelogue (Schomburgk 1922) was an essential source of indigenous mythology for Lévi-Strauss. The Schomburgks influenced Walter Roth who, with the help of his son Vincent (also a government surveyor), translated their works into English during their travels in the colony. Roth and Waugh both stayed with the Melvilles, and the latter fictionalized Roth in his novel, *A Handful of Dust* (McDougal 1998: 567). In turn, Roth's encyclopedic studies were vital to Lévi-Strauss, Wilson Harris (whose survey of the interior is well known) and ultimately Pauline Melville's theorizations of the relationship between incest and endogamy, nature and culture. Roth was a formative influence on the work of Wilson Harris, who had also been commissioned as an interior surveyor in the

tropics 'retards the progress of nations towards civilization' and degenerates 'intellectual faculties' (cited in Stepan 2001: 42). In contrast to these naturalized narratives of progress, Melville's *Macunaíma* argues positively that 'sooner or later everything falls to the glorious spirit of rot with its fanfares of colour and nose-twitching stench' (Melville 1997: 3). This use of decay reflects an earthly rendering of the passage of time. By invoking the Amerindian legend of the 'Spirit of the Rot', Melville offers a vision of 'natural history' that is marked by the cycles of generation and decay rather than the textual footprints of European visitors (see Roth 1915: 231). Humboldt inspired Darwin's travels to the region, a figure castigated by *Macunaíma* for using the New World tropics as a primordial landscape to which Europeans could contrast their evolutionary progress (Melville 1997: 3). Melville proposes Darwinian evolution as a mistranslation of space-time; in the hinterland one 'progress(es) through life towards the perfect state of being an animal' (Melville 1997: 355; see also François 1999: 44).

Macunaíma criticizes European naturalists because one 'cannot hoard in the tropics', yet Guyanese natural resources, labor, and indigenous knowledges were accumulated by European colonists and contributed to their industrialization and academic disciplinarity (Melville 1997: 3). This constellation of naturalists foregrounds the hybrid genealogies and textual inheritances of the Guyanese hinterland.¹⁰ To position the Amerindian hinterland as a space removed from colonial modernity is to ignore the astonishing number of travelers and texts that incorporated this space – and the Melville family – into metropolitan discourses. There's hardly a narrative of the Guyanese interior that does not mention the Melville family and which is not incorporated into her novel, including V. S. Naipaul's *The Middle Passage*. Even the English translation of Andrade's celebration of New World hybridity, *Macunaíma*, dedicates the text to Edwina, Pauline Melville's relative and an early writer of the colonial period. Andrade's anthropological source, Teodor Koch-Grundberg, appears briefly in *The Ventriloquist's Tale* as an unnamed German traveler in the Rupununi (Melville 1997: 133). Paradoxically, these textual legacies perpetuated the myth of Amerindian isolation and purity by erasing the footprints of their own intertextuality. The commission of so many naturalists to the interior represents the empire's conflation of the natural landscape and indigenous subjects, claimed for nationalist interests and thus mapped, translated and placed into reservations for their own purported protection. For example, the naturalist surveyor and anthropologist, Walter Roth, drafted the 1910 Amerindian Reservation Ordinance. As 'Chief Protector of the Amerindians', Roth and his generation signify an ideological shift whereby 'indigenes whose impact on nature was once dismissed as derisory are now stewards blessed with inherent environmental wisdom' (Balkaran 2002:

1940s. This enabled Wilson Harris's recognition of the 'fantastic density of place' that allowed 'eclipsed perspectives of place and community' (Harris 1981: 58). As McDougal points out, Harris's 'deconstructive understanding of myth derives from Roth' rather than from Lévi-Strauss (McDougal 2002: 115).

11 Although the trope of textual cannibalism might be likened to that of Andrade's composite *Macunaíma*, Melville breaks with Andrade's masculinist hero in her focus on women's polymorphic sexuality and she refuses the incorporation of Amerindian subjects into any nation-

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building process. See Shemak (2005) for a comparative analysis of *Macunaíma*, Brazilian modernism and Melville's novel, and Jackson (1994) for his insights into the Brazilian anthropophagists.

12 Harris has written extensively about what he calls the 'architecture of space', but for its

146; Lowenthal 1997: 234). The rise of twentieth-century environmentalism has obscured indigenous impacts on the landscape, rendering a spatial problematic of the 'natural' native in contradistinction to the temporality of Euro-American technology and history.

The Ventriloquist's Tale is more than the cannibalization of cultural texts for an emergent nation that Andrade promoted; the novel is not an intertextual, postmodern pastiche, nor is it simply engaging in post-structural play. The novel's intertextual references extend to Jean Rhys's *Wide Sargasso Sea*, particularly with its focus on nature's representational excess and its relationship to the degenerating discourses of racial hybridity. It also draws from Dante's *Divine Comedy*, with its revision of Beatrice's guiding of Danny/Dante through the mythological worlds of incestuous cosmology.¹¹ By foregrounding this intertextual 'architecture of space' (to borrow from Wilson Harris), Melville suspends our belief in the immutable forms of her characters and landscape, suggesting that we've confused the colonial 'illusion' of historiography for 'the reality of dream and myth' (Melville 1997: 99).¹² Her negotiation between the natural historiography of the region and her own family's indoctrination into this history suggests a genealogy of textual and ancestral incest.¹³ As an act of narrative re-vision which seeks to expand the linear trajectories of colonial historicism and which, like so many other Latin American novels, links anthropology and myth, *The Ventriloquist's Tale* engages in a process of Harrisian 're-vision', excavating 'live fossils in the soil of tradition', particularly those 'eclipsed' cultures that contribute to a profound 'literacy of the imagination' (Harris 1988: 30, 27).¹⁴

Melville complicates the ways in which racial, gendered and biotic hierarchies were instituted by natural science in the colonies by turning to cosmological events. She uses the 1919 solar eclipse, the moment when British scientists in Brazil validate Einstein's theory of relativity and Danny and Beatrice enact their last sexual union, as a suspended moment of space-time that allows an examination of eclipses and incest, nature and science. The relationship between incest and the solar eclipse is introduced by Wormoal, whose essay 'The Structural Elements of Myth' parodies Lévi-Strauss by integrating mathematics and physics into a theory of eclipse mythology, which symbolizes 'the split of man from nature' (Melville 1997: 83). In the Wapisiana version he recounts, a brother seduces his sister under the cover of darkness, and, in order to identify him, she paints his face with a

relevance to this essay and concepts of the Amerindian interior see his essays ‘The Amerindian legacy’ and ‘Quetzalcoat and the smoking mirror’, collected in Harris (1999).

13 This resonates with Gabriel García Marquez’s *One Hundred Years of Solitude* (see Echevarría 1998: 27).

14 See previous note. Due to the language balkanization of the Caribbean and Americas, Guyana is generally incorporated into Caribbean regional studies but Melville’s engagement with writers such as García Marquez and Andrade suggests multiple legacies that cannot be contained by one model of historiography.

15 This section is followed by ample Lévi-Straussian references linking the ‘honey’ of Chofoye and Rosa’s sexuality, mediated by the tobacco (ashes) promised to his aunt (Melville 1997: 84).

16 Shemak (2005) points out that the first act of incest is also foregrounded by

magical dye; upon his discovery, the brother ascends to become the moon, which explains its dark spots.¹⁵

As a child, Beatrice’s face is first described as ‘blotched with red dirt’; later it is ‘spotted’ with measles that resemble ‘the imprints of a jaguar’s hide’ (pp. 91, 101). This appellation links her to the moon of the incest myth and highlights her complex relationship to non-linear time. This inscribes her as a trans-temporal and trans-species figure; she reflects the history of the jaguar manifestation of Macunaíma as well as the future of her son’s patterned body (p. 74). The introduction of the measles virus by her father, Alexander McKinnon, a Jamaican-Scotsman whose own fever led to his migration to the Rupununi, suggests that another shape-shifter, the virus, ‘is king on this planet. . . People only exist to be host to this master of the quantum jump which adapts so miraculously’ (p. 44). Notably, Melville re-visions the colonial interpellation of the tropics as a space of devolution, natural degeneracy and disease. Although Wormoal’s structuralism would seem to predetermine the events that unfold between Beatrice and Danny, characters are also ‘at the mercy of the random’, particularly the pathogens of colonial exchange (ibid.). Mutual contamination extends to Macunaíma’s ‘infection’ with ethnic nationalism, where ‘desire to be with your own kind exerts a powerful attraction’ (p. 355).

These scenes of European and indigenous biotic exchange reflect the larger adaptations and tensions of racial hybridity. For example, McKinnon’s polygamy positions him negatively to the white coastlanders as ‘more Indian than European’, while his Wapisiana wives ridicule his schemes on the ranch, ‘laugh[ing] at the idea of progress’ (pp. 100, 99). In the same chapter, Danny’s patrilineage is ridiculed at school, so he commiserates with this Macusi grandmother, similarly outcast from the Wapisiana community (p. 104). She relates to him a story of the sun’s quest to find a wife, in which he discards a black and a white woman, choosing the ‘reddish, rock-coloured woman’ who produces the trickster Macunaíma (p. 105). Danny concludes the chapter by wishing his father away, a denial of a genealogy of hybridity that frames his sexual visitation of his sister.¹⁶ The first incestuous act fulfills Wormoal’s description of the myth and upholds both men’s adherence to national and familial purity. This echoes Wilson Harris’s theorization of the incest metaphor as a reification of indigenous identity derived from the ‘dread’ of patrilinear violence (colonialism) and thus ‘eclipses’ historical density in the name of racial purity, which justifies future ethnic violence under totalitarian nation-states (Harris 1990: 11–12). In other words, Danny’s denial of his European paternity mirrors his rejection of the hybridity of colonialism, which is then displaced as endogamous sexual desire onto the body of his sister. While Beatrice later forgives his deception and continues the affair, Danny maintains his masculine privilege, magnified

Beatrice's attraction to a black coastlander, and links Danny in this case to Macunaíma.

in incest because the relationship is concealed from the community and he has 'no in-laws to trouble' him (Melville 1997: 172). They retreat from their village into the forests to commit 'slow, vegetable acts of love', upholding Lévi-Strauss's formulation of incest as a descent from patriarchal culture into nature by eschewing western dress and 'cultivated food' (pp. 197, 196). Danny is plagued by references to their father and too eagerly concedes to the patriarchal authority of Father Napier, the pedophilic Jesuit sent by McKinnon to take them home. Turning to George Handley's use of the incest/miscegenation analogy to literatures of the Americas, we might interpret Danny's endogamy as a denial of diachronic genealogy (the vertical patrilineage of colonialism) which leaves only a synchronic genealogy (horizontal links to other hybrid cultures) (Handley 2004: 164). In his adherence to racial purity, Danny is described as 'Joseph Stalin', and he ultimately marries a Brazilian woman of exclusively European descent (Melville 1997: 287).

Beatrice's interpretation of endogamy and hybridity, the Guyanese landscape and the eclipse differ radically from her brother's. Although she also causes racial 'confusion' because 'she was not black and she was not white', she draws upon Macunaíma's skills at camouflage and mimicry, determining to 'merge' with her 'surroundings' (pp. 139, 138). Unlike Danny's response to racial interpellation, Beatrice's experience in the convent, when she's instructed to apologize to a girl who has labeled her a 'dirty buck', catalyzes her first hallucinatory migraines which tie her to the Rupununi landscape (p. 141). Beatrice loses the 'left half of her field of vision' and experiences a 'star-shaped line' in her eye, which she associates with Rupununi lightning as she loses consciousness (p. 142). In a scene derived from Rhys's depiction of the convent in the *Wide Sargasso Sea*, Beatrice/Antoinette undergo negative racialization through the dichotomous epistemology of Catholicism and experience 'eclipsed' visions of the contrasts of black and white (ibid.). Beatrice's retreat from the space-time of colonial racism is followed by an evening 'flooded' with the 'carnal, dirty face' of the moon, and later a blissful dream of the Rupununi River that suspends time and renders a mirror of space where illusion and reality are perfectly blended (p. 144). To interpret this event in psychological terms would, as Macunaíma warns us, mistakenly attribute the causality of the past to the future; thus, both her hallucination and dream, manifestations of the alternative space-time of myth, are fulfilled in the 1919 eclipse.

The Ventriloquist's Tale re-visions nineteenth-century sciences which, in Heisenberg's words, positioned their 'progress . . . as a crusade of conquest into the material world', an epistemological conceit that was put into 'dissolution' by the indeterminate realms of space-time relativity and quantum physics (1958: 197, 198). While Beatrice and Danny disappear

into the savannah, our narrator weaves a dialogue between Amerindian cosmology, particularly the Tamukang constellation that encompasses the European Pleiades, Hyades, and Orion, and the 1919 scientific expedition to Brazil to photograph the bending of light during the solar eclipse (Melville 1997: 175). By incorporating reports from the Royal Society of Astronomy, Melville interweaves indigenous cosmology and Western science. The eclipse is vital to astronomers because it will feature the gravitational bending of light from the Hyades, the constellation that in the Rupununi signifies the tapir/incest and the advent of the rainy season (ibid.). While Eddington, Einstein's most enthusiastic proponent, organized the expedition, it was Frank Dyson's photographs of the eclipse in Sobral (the Amazon) that documented the deflection of light. With a support network of Amerindian and Brazilian assistants, Dyson validated Einstein's theory, proving that since light bends around massive objects, gravity is not the force Isaac Newton surmised but rather the curvature of space-time.

By re-visioning the events of the 1919 eclipse, the novel suggests that postcolonial ecocriticism must address the material and epistemological connections among empire, the terrestrial natural sciences and the racialization of colonial subjects by tracing how these discourses are entangled with the cosmological landscapes of physics and indigenous mythology. Macunaíma's introduction to the novel, in which he ventriloquizes the BBC's reproduction of the 'faint echo of the Big Bang' during a broadcast on Einstein and Hawking, reminds us that Amerindians have 'always been crazy about astronomy' and that macrocosmic narratives mirror the microcosmic diversity of human sexuality (p. 8). His grandmother interprets the Big Bang as 'a very slow orgasm', a trope that is mirrored in Beatrice's realization that 'her first sexual experiences had not come about through human agency' (pp. 8, 126). As an adolescent, she discovers that the sun brings on an orgasmic 'burst of pleasure' and 'the intense colours of certain flowers had the same effect' (pp. 127, 128). She experiments to determine if the effects of the 'vibrating wavelength of colour' would also extend to the family's tapir, the novel's symbol of incest and a signal of her trans-species and macrocosmic sexuality. Eschewing a colonial and terrestrial concern with endogamous origins and anthropocentric universals, Melville invokes the laws of physics which remind us that there is nothing 'more universal than light', 'the basis of our existence' (Weisskopf 1962: 65). As 'our only messenger from the stars', light signifies beyond the racial 'color-coding' of empire (ibid.). Here it does not emit from the colonial center but rather from the sun, a vital deity of this region of the Americas. Light, *densité de presence*, is a powerful symbol of the origins of a universe, an alternative genealogy that supersedes the homogenization of colonial universalisms and their terrestrial effect as

we remain 'submersed in this bath of background radiation left over from the big bang' (Levin 2002: 100).

Unlike Western ecocritical discourses that submerge racial and gendered difference in an attempt to claim a homogenously 'universal' dependency on the environment, Melville renders the historicity of racial colonialism and a cultural narrative of incest alongside those material and corporeal interpretations of light, color and *densité de presence*. Thus we might read the novel as a re-vision of those colonial attempts to build Euclidean geometries over the 'transparency . . . and light' of the Guyanese landscape in a way that positions Amerindian cosmologies of the solar eclipse, incest, and the division between nature and humans as originary narratives of the interior (Melville 1997: 35).

Melville's answer to colonial discourses of progress incorporates Einstein's first theory of (special) relativity, which proves that space and time are relative to the finite speed of light. The discovery that 'light and matter are lazy and take the path of least resistance' resonates with Macunaíma's catchphrase 'Aw, what a fucking life', adopted by Melville from the English translation of Andrade's novel (Levin 2002: 51; Melville 1997: 4). Importantly, K. David Jackson points out that the English mistranslates the Brazilian 'Ai! Que preguiça!', a reference to the sloth which signifies the Brazilian modernist movement's resistance to colonial discourses of degeneracy and these authors' adherence to 'cosmic laziness as a view of life' (Jackson 1994: 108). Melville's positive references to lethargy and laziness, coupled with the sloth's description as a 'creature of great timing', undermine colonial narratives of progress such as Kant's proclamation that people of the 'hot countries' could not 'reach the perfection of those in the temperate zones' and that 'all inhabitants of the hottest zones are lazy' (Melville 1997: 25, 62, 77, 327; Kant cited in Livingstone 2000: 93). Sloth fossils had been interpreted by Darwin as a signal that the 'creative force in America had lost its power', but Melville ties this to a larger cosmological cycle of generation, entropy and decay (cited in Browne 1983: 542). The sloth, like the tapir, a creature 'too lazy to mate outside the family', condenses a series of associations that link the Hyades, incest and the generative and shape-shifting powers of the sun, the father of Macunaíma and husband to Beatrice (Melville 1997: 176).

The sun is thus a generative force of Beatrice's sexuality and a degenerative facilitator of the 'spirit of rot', a process of nature that renders history visible and that Beatrice employs against the realism of classical physics and colonial missionaries. This is evident in her act of revenge against the evangelical Father Napier, who separates the incestuous couple. Melville morphs this historical figure with the Protestant mathematician John Napier, the seventeenth-century Scottish inventor of logarithms which

17 The character is based on Father Cary-Elwes. See Balkaran's biography of this figure (2002: 60).

were vital to Newton's and Einstein's theories of gravitation.¹⁷ Beatrice derives a poison from the local healer to punish Napier for his arrogance in thinking 'he can stand between the sun and the moon' (p. 240). Once Napier ingests the local landscape, the sun transforms into a Macunaíma-like 'jaguar on the attack' and torments Napier across the savannah. In his apotheosis, Napier is transformed when he burns down the churches he has established and comes to recognize Danny 'as an Indian' (p. 258). He is captured by Mr Herbert, a likely reference to the quantum physicist, and is placed in a Georgetown asylum (p. 257). As with the practice of incest, Beatrice feels 'no guilt' about her actions, recognizing that 'some sort of natural justice had been executed and she had been the instrument of it' (p. 269). Reinforcing Lévi-Strauss's observation that Amerindian incest myths exceed Oedipal structures by channeling communal disapproval onto the avenging party rather than the incestuous couple, Beatrice is exiled to Canada.

Beyond the hammock of space-time

Linear historiography, a legacy of colonialism, has been unable to represent the complexity of postcolonial experience, particularly the engagement with natural space and time. Thus Einstein's second theory of relativity, substantiated by the 1919 eclipse, allows Melville to inscribe the curvature of space-time as an arc that links the polarized realms of the diasporic coastland with the cosmologies of the Amerindian interior. Since there is 'no absolute time and no absolute space', in material terms one cannot segregate the space-time of the hinterland from world modernity (Levin 2002: 32). The division of past, present and future is arbitrary, and the continuity of space provides a 'bridge' to 'communicate' the movement of energy and matter (ibid.: 53). Interestingly, Arthur Eddington's work 'Weighing light', an explication of Einstein's theory which figures importantly in the novel, describes the curvature of space-time as a 'hummock', a depression or a 'ridge' that helps us conceive of matter's continuity in time (Eddington 1987 [1920]: 151). The online *OED* attributes the emergence of this term to the mid-sixteenth century, appearing in nautical texts such as Raleigh's voyages to the Americas. Although it is likely that the Carib word *hamaca* (hammock), described by Raleigh as 'Brazil beds', is the source for 'hummock,' the *OED* renders its etymology as 'obscure' (Raleigh 1893: 57). This suggests an erasure of Amerindian contributions to English that Peter Hulme has traced to Arawakan words such as 'hurricane' and 'cannibal', which were given spurious Latin origins in an effort to suppress the presumed degeneration of metropolitan language (Hulme 1986: 101). If

we read Melville's and Eddington's use of the terms 'hammock'/'hummock' contrapuntally, we might interpret the ubiquitous presence in the novel of this object of material culture as a rendering of the curvature of space-time that links the multiple temporalities and spaces of the Amerindian hinterland with the 'matter' of coastal metropolitanism. The hammock is not only an important item of trade between Melville's indigenous communities and travels with the characters between the Rupununi and Georgetown; it also appears in the novel as a complex symbol where events such as birth, marriage, incest, and mimicry and ventriloquism occur (Melville 1997: 94, 97, 162, 185). The hammock is also the primary place where visualizations of the transcendence of material space are made; it is a place from which Amerindian communities compare mythologies and language; and it signifies the space-time from which Macunaíma relates the novel (pp. 119, 190, 2).

Our deity-narrator likens the hammock to the curvature of space-time but warns against isolating its singularity: 'Do you think a man's life is slung between two dates like a hammock? Slung in the middle of history with no visible means of support? It takes more than one life to make a person' (p. 2). Macunaíma explains that writing, with its realist bias, emphasizes linearity and individualism, codified by the scientific term 'singularity'. With Macunaíma's repeated question, 'which came first, the equation or the story?', and the firm answer, 'the story, of course', Melville subsumes the multiple disciplinary methodologies she has invoked to the generative possibilities of the creative imagination (p. 182). Like Harris, Melville dissolves the bounds of disciplinarity, a by-product of nineteenth-century natural sciences, by employing a 'quantum imagination' (Huggan 2002: 256). While his theories facilitated a radical break from Euclidean geometry, Einstein still adhered to classical empiricism, despite his own contributions to the indeterminacy of quantum physics. As Herbert explains, quantum theory's emphasis on interconnectedness, 'non-human reasoning', the 'alteration of identities', parallel universes, the repetition of cycles, and 'patterns of events', like mythology, suggests a challenge to empiricism since 'uncertainty may be fundamental' to all matter (Herbert 1985: 20, 66, 19, 72, 107; Levin 2002: 65). This dynamic approach to macro- and microcosmic matter offers more flexible and mutable possibilities which echo the trickster in nature rather than the hierarchies of colonial natural sciences and classical physics. Although it breaks with a realist phenomenology of the natural world and highlights indeterminacy, the quest in quantum theory for a unified 'theory of everything' ultimately subscribes to a homogenizing teleology (Levin 2002: 197). Consequently, 'all theories are ultimately masks for hidden diversities' (Harris 1999: 65). Harris suggests that these scientists might have fallen for a 'deception' which he likens to the

trickster, a figure that resonates with both Macunaíma and his descendant, Sonny (ibid.: 64, 240).

The concluding chapter to Melville's narrative of incest, 'Singularity', focuses on Sonny and describes him as 'a compelling purity', a child who 'refuses to grow': 'As befitted someone conceived around the time of an eclipse, Sonny was a walking event-horizon. A singularity. No one knew what went on inside' (Melville 1997: 282, 283). To physicists, a singularity is represented by two events—the Big Bang and a black hole. As a product of endogamy, Sonny symbolizes the beginning of the universe—the Big Bang—and the creation of both space and time. An 'event horizon' is defined as the edge of a black hole: a collapsed star whose gravity infinitely warps the curvature of space and from which light cannot escape. In a singularity, a symbol of entropy and decay, general relativity and quantum theory meet their epistemological limits. Because 'they hide all the information about their interiors', black holes represent the failure of human knowledge about the micro- and macro-cosmos (Levin 2002: 85).

The infinite curvature of space renders the beginning and end of time as simultaneous, a point in the generation of the cosmos that science cannot explain. Thus Melville conjoins Macunaíma (the exogamous creator sun) with Sonny (the endogamous black hole) in an effort to resist the neocolonial and scientific nexus of knowledge/power:

In an era of discovery, revelation and the examination of every aspect of life, an era when every part of the world was being photographed, filmed, rediscovered, analysed, discussed and presented to a voracious reading public; when communications and networking were speeding up, when all previously inaccessible tribes were being brought out into the open, investigated and put on display, all Sonny wanted was concealment, secrecy, and silence. (Melville 1997: 285)

Physicists were unable to reconcile relativity and quantum theory until Hawking postulated that both the Big Bang and black holes signify an 'end to spacetime where matter and energy just terminate' (Levin 2002: 110). Melville inscribes Danny and Beatrice's lovemaking in sexually cosmological terms; Danny believes he 'ejaculate(s) into the black pit', resonating with the previous description of the Big Bang as an orgasm (Melville 1997: 169). The Big Bang also suggests that 'the center is everywhere' and that it continues to become more diffuse (Levin 2002: 173). Thus the Big Bang and black holes, the beginnings and endings of space-time, suggest post-quantum uncertainty by the repetition of cycles of hybridity (Macunaíma) and its endogamous, epistemological offspring (Sonny).

Through the trope of multiple 'hammocks' of space-time and their unknowable ends, Melville inscribes a Harrisian 'ventriloquism of spirit'.

By 'signifying priorities that are beyond exact representation', she weaves the smallest units of matter alongside the cosmologies of the universe (Harris 1999: 207). Turning to the beginnings and endings of the universe, light and matter, 'natural' events before and after space-time, Melville recuperates the realist bias of colonial and cosmological sciences and opens a new vision for postcolonial ecocriticism. Her novel renders the dichotomies between nature and culture, incest and hybridity, as miniscule human illusions amidst the 'fabric of the universe' that ultimately constitutes an unknowable, 'seamless and inseparable whole' (Herbert 1985: 18).

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