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The Rhetoric of Emergence in Narrative

This essay addresses rhetorical narratology's approach to widely disparate scales of time and space in narratives of emergence, in which micro-events without centralized agents or clear causal relationships produce macro-scale effects. It uses rhetorical narratology's *a posteriori* approach to address the difficulty of narrating causality between these scales and resists systematizing relationships of scale. Rhetorical narratology worries less about conditions of scalar interaction that undermine narratability, focusing instead on contingencies that mediate these scalar engagements. In particular, it explores hybrid relationships between rhetorical modes of narrative and lyric that emphasize interrelationships between event causality and conditions of being that are key in narratives of emergent behavior. If truth value is determined by ways that narratives establish coherent relationships between narrator and narratee in terms of purpose, then a rhetorical approach to scale and emergence considers how individuals use available resources to describe and explore relationships between different scales to achieve certain purposes.

1. Introduction

Walt Disney's film *Fantasia* (1940) famously pairs animated vignettes with classical music. Faeries frolic to Tchaikovsky's *Nutcracker Suite*. Crocodiles dance with hippos, ostriches, and elephants to Ponchielli's *Dance of the Hours*. Ghosts, demons, and devils writhe to Mussorgsky's *Night on Bare Mountain*. Beethoven's *Pastoral Symphony* plays as Greek mythological creatures prepare a festival. Bridging the eight segments are live-action scenes of the Philadelphia Orchestra, hosted by the film's emcee, Deems Taylor. Before the sequence with Stravinsky's *The Rite of Spring*, directed by John Hubley, Taylor describes the narrative's vast scales: Earth's formation, emergence of life in oceans, its move to land, and the rise and fall of dinosaurs. From our contemporary perspective, his scientific 'facts' are wildly inaccurate, but more important than the truth-*value* of these facts is Taylor's truth-*claim* to scientific objectivity:

> That story, as you're going to see it, isn't the product of anybody's imagination. It's a coldly accurate reproduction of what science thinks went on during the first few billion years of this planet's existence. Science, not art, wrote the scenario of this picture. (Armstrong et al. 1940, 0:40:25-0:40:37)

Early in his speech, collapsing chimes in the percussion section jarringly interrupt Taylor, previewing Stravinsky's dissonant work and reinforcing that the film is now in real, unpredictable space. Taylor's opening frames our engagement with the vignette and contrasts it with the fantasy of the previous one, with Mickey Mouse as magician's apprentice, as well as all other pieces in the film.

Taylor's introduction precedes a montage of early planetary history, with each scene representing a moment in this narrative. Paired with *The Rite of Spring*, volcanoes belch rhythmically, Pteranodons swoop over the ocean along to clarinets,

a Triceratops raises its head at an approaching Tyrannosaurus and accompanying crescendo, and mountains rise instantaneously with braying French horns. The scientific intent of this piece depends upon its artificial and aestheticized representation. Musical montage collapses a timescale of millions of years to a far more manageable, accessible, and narratable scale. Each scene encapsulates a moment of Earth history, with gaps establishing narrative causality. Creatures floating in primordial soup 'become' fish of early oceans. The creature making its way onto land 'becomes' the sauropod wading through the swamp. Planetary formation and life's emergence involve so many events and take place on such vast timescales that they undermine narrative comprehension. *Fantasia* narrates that double incomprehensibility of scale (of time and events involved) by compressing, simplifying, and aestheticizing.

Despite Taylor's claim, science *and* art wrote the scenario. The sequence artificially connects conditions of life represented in each scene to a narrative of planetary transformation. This structure attempts to represent a process of emergence in which "entities (properties or substances) 'arise' out of more fundamental entities and yet are 'novel' or 'irreducible' with respect to them" (O'Connor / Wong 2020). In biological systems, emergence occurs in species evolution, as well as ant colony behavior and movements of bird flocks. Emergence also occurs in earth history and climate processes central to Anthropocene conditions, in which collective, micro-scale, human behaviors produce macro-scale, long-term, planetary effects. In September 2016, the Anthropocene Working Group, part of the International Commission on Stratigraphy, proposed formal acknowledgement of a new geological epoch and set its measurable beginning in the mid-twentieth century, when human activity began to "leave a permanent record in the Earth's strata," ending the Holocene's 12,000 years of climatic stability (n.p.). This proposal identifies humans as a geological force while acknowledging our incapacity to control effects of that transformation, which are "geologically long-lasting" and "effectively irreversible" (ibid.). For Timothy Clark (2015, 48), the Anthropocene marks "a necessarily vague but insidious border at which what used to be clear human goods begin to flip over into sources of degradation and environmental harm." Clark's sense of the Anthropocene as a border where human influence on environmental systems shifts to a planetary scale offers one especially relevant example of these narratives of emergence. I am interested in situating this narrative of Anthropocene emergence among other narratives of emergent behavior, understanding and clarifying the means by which we tell, access, and understand these unwieldy narratives.

Narrating causal relationships between radically different scales of time and space often distorts or simplifies complexities inherent to situations of emergence. Narrative theory tends to take one of two paths to understand and negotiate these complexities. In one, emergence is, in H. Porter Abbott's (2008) sense, unnarratable without distorting fundamental elements of its condition. In the other, seen in David Herman's (2018) work on multiscale narratives, key terms in narratives of emergence are reconsidered in order to create serviceable

engagements between humans and larger planetary systems. These two approaches appear irreconcilable, with one rejecting narratability outright and the other redefining concepts to make emergence seeable and sayable. I address this irreconcilability through the lens of rhetorical narratology, whose *a posteriori* approach[1] echoes recent work exploring relationships between human and planetary scales. Rather than resolve these scalar interactions, I consider ways that rhetorical narrative theory clarifies and navigates conditions of these interactions. In particular, I explore hybrid relationships between rhetorical modes of narrative and lyric that emphasize interrelationships between conditions of being and event causality that are key to narratives of emergence. I turn to Christine Brooke-Rose's novel *Subscript* (1999) and Stanley Kubrick's film *2001* (1968) as examples of these narratives. Both employ hybridized rhetorical structures of lyric and narrative in order to reposition human history within vaster scales of planetary time. While focused on different kinds of narratives of emergent behavior, each repositioning offers its own model for negotiating multiscale thinking, a process also necessary within the emergent conditions of the Anthropocene.

2. The Unnarratable and Heuristics of Emergence

For H. Porter Abbott (2008, 234), emergence is fundamentally unnarratable in that it "defies the formal structure of narrative for its representation." Emergent behavior is unnarratable in that it involves "thousands, millions, or even billions of tiny stories that play out at the micro level," by their sheer number massively distributing any causality necessary for narrativity (ibid., 235). This unnarratable situation prompts forms of simplified causality through narratives of centralized control. For instance, in the case of evolution, centralized control is inserted via the concept of intelligent design; in planetary ecology, it appears in the Gaia hypothesis. Such narrations distort by inserting a central controlling agent into a system in which no such agent exists. For Timothy Clark (2015), rather than being an issue of agency, this narrativizing process involves distortions of scale. Unnarratable conditions of emergence require narratives to represent "complex issues in ways that make them more amenable to thought or overview, while at the same time running grave risks of being a simplification and even evasion" (ibid., 74). Narratives of climate change become "discursive practices that construct the scale at which a problem is experienced as a mode of predetermining the way in which it is conceived" (ibid.). In other words, scale framing – a shift in scale that make ecological systems understandable – simplifies issues of climate change "in terms largely dictated by the aesthetic, dramatic, and narrative constraints of presenting things in some easily apprehensible empirical scenario, sensuous images or plot of human actions, characters and motive" (ibid., 79). Scale framing reshapes unnarratable situations to produce accessible, though problematic, narratives.

For both Abbott and Clark, narrating emergence requires distortion, either by inserting agency where there is none or by reframing scalar engagements to make them aesthetically representable. In both cases, this distortion hinders accurate representations of emergent conditions for the sake of narrative simplicity and accessibility. For David Herman (2018, 21), that narratives are "optimally calibrated for human-scale phenomena" does not prevent them from furnishing "routes of access to emergent structures and processes extending beyond the size-limits of the lifeworld." He analyses textual strategies for representing emergence, noting ways that the tools of narrative are flexible enough to allow for storytelling at and between a variety of scales. For instance, Herman notes recent reconsiderations of the term *species*. In its traditional usage, what he calls "species monism," a singular, scientifically precise definition of species "will eventually be reached through further empirical research" (ibid., 261). Species pluralism, on the other hand, reframes the concept as a series of "supraindividual structures and processes that may nonetheless be mapped out through modeling strategies afforded by narrative" (ibid.). This newer conception is open to multiple, overlapping definitions of species, employing the concept heuristically rather than as "a real category in nature" (ibid.). Instead of linear narratives of species development, he uses this definition to propose a mesh of "partially overlapping species concepts" (ibid.) that offer more flexible and contingent engagements between different scales than are possible under a monistic species concept. Herman identifies a series of narrative affordances that build upon this pluralism, from temporal structuring to allegorical projection to counterfactual scene building – all of which employ the meso-level 'species' concept heuristically to narrate at macro-levels. This multiscale storytelling thus fosters "keener recognition of our inextricable interconnectedness with the larger biotic communities, the transhuman traditions, on whose survival our own survival depends" (ibid., 294).

3. Cosmic and Nonscalable Emergence

Abbott and Herman are at cross purposes. For Abbott, emergence resists narration; for Herman, redefining core concepts like 'species' reveals the ways that the tools of narrative can be amenable to the conditions of emergence. Zach Horton's (2017) approach to complexities of scalar interaction offers a way to reconcile these theoretical discordances and links these concerns of scale to rhetorical narratology's *a posteriori* method, what James Phelan (2007, 85) calls a grounding in "a respect for the concrete details of its object." In his work on multiscale thinking, Horton identifies three epistemological systems that reconcile the human with vaster cosmic scales. The first, which he calls "the microcosm," is exemplified by the sixteenth-century Swiss alchemist Paracelsus, who posits a structural homology between different scales. In this microcosmic vision, each scale influences all others so that, for Paracelsus, "Man can affect

heaven no less than heaven affects man" (Horton 2017, 43). Horton's second cosmic model is the "serialized cosmos." Modeled on Walt Whitman's poem "Song of Myself," this system sees each self as "scale ground zero," using this singular perspective to establish homologies with other larger and smaller scales (ibid., 46). A serialized cosmos envisions a "radically dehierarchized ontology", in which "any point, any singularity, can serve as the center to everything" (ibid., 48). Radical contingency of self combines paradoxically with universal articulation.

Both microcosmic and serialized approaches simplify scalar relationships: microcosm constructs a totalizing vision of transcalar unity; the serialized cosmos produces the radical openness of individualized subjectivism. Horton's third model, which he calls the "mediated cosmos," also simplifies scalar relationships, but does so using self-reflexive engagements with mediation and resolution. This approach is modeled on Kees Boeke's *Cosmic View. The Universe in 40 Jumps* (1957). The book, 15 centimeters by 15 centimeters in size, includes a series of images at different scales, beginning with a girl sitting in a chair in 1.5 meters square. The scale between page and represented image is one to ten. Each proceeding image increases that scale by a factor of ten, so that the next image of a courtyard is one to one hundred, onward to vaster scales of the universe. Unlike its more famous film adaptations, such as Charles and Ray Eames *Powers of Ten* (1968), which smooth transitions between frames, Boeke's printed text foregrounds mediated difference between scales. Each jump in scale contains the content of all previous scales, but issues of resolution make some of those details unobservable. Its largest scale, an image of seemingly empty space at a scale of one to 10^{26}, is not actually empty, but contains everything from all preceding images: most of the observable universe. Mediation and contingencies of resolution shape engagement and navigation of these scalar relationships. The result is a "self-reflexive process of scalar mediation [that] links [the audience] to endlessly branching connective ligaments between all scales, a rhizome consisting of mediated detail and proliferating observation points rather than progressively purified observation distance" (Horton 2017, 57). The resolution shaping these scalar relationships depends upon *a posteriori* conditions of mediation within each representation. These representations, ultimately, involve authors, audiences, and purposes in relationships with textual phenomena.

Despite their significantly different subject matters, the openness and resistance to systematicity central to Horton's mediated cosmos resembles Anna Tsing's (2015) work on nonscalability in the context of economic exchange. For Tsing, a "hallmark of modern knowledge" is "the ability to make one's research framework apply to great scales, without changing the research questions" (ibid., 38). This scalability smooths transitions between scales "without any change in project frames," which results in "obliviousness to the indeterminacies of encounter" (ibid.). Tsing's primary example of a scalable system is the European colonial plantation, in which self-contained and interchangeable structures of labor and land exploitation make agricultural industries like sugar cane and cotton easily expandable and exportable. Unlike the plantation's

interchangeability, the matsutake trade "cannot be reduced to self-replicating interchangeable objects. […] Instead, [it requires] attention to the histories of encounter that maintain the chain" (ibid., 144). In contrast to the smoothness and uniformity of scalable economies, which can "change scales smoothly with any change in project frame" (ibid., 38), Tsing sees more complicated and contingent modes of production in the matsutake mushroom trade, a fungus dependent on interspecies relationships, harvested by independent foragers displaced from traditional structures of labor, engaged in a salvage economy, and working in forests that are remnants of a scalable logging industry.

Tsing observes these contingent and nonscalable characteristics in arenas other than economics as well, noting especially their role in relationships between evolutionary change and interspecies encounters. She describes these encounters as "events [that] can lead to relatively stable situations, but [that] cannot be counted on in the way self-replicating units can; they are always framed by contingency and time" (ibid., 142). Our ability to understand the relationship between the scale of interspecies encounter and evolutionary change breaks down: "The only way to create scalability is to repress change and encounter. If they can't be repressed, the whole relation across scales must be rethought" (ibid., 142). While focused more on the actualities of encounter and less on representation, Tsing's attention to self-reflexive contingency and precarity in nonscalable systems, what she calls "the arts of noticing" (ibid., 37), resembles Horton's cosmic concerns with contingent encounters between author, audience, text, and purpose and offers another *a posteriori* approach to relationships between different scales.

4. Rhetorical Emergence: Narrative Lyric and Lyric Narrative

Both Horton's mediated cosmos and Tsing's nonscalability emphasize contingencies of engagement, which links their theoretical goals to similar ones in rhetorical narratology and hints at ways that rhetorical narratology might approach issues of scale. Where mediated cosmos "enrolls its readers in a drama of resolution" that offers a "contingent and mediated negotiation of difference" (Horton 2017, 54), rhetorical narratology sees "narrative as an interaction between an author and an audience through the medium of text for some purpose" (Phelan 2005b, 500). Where nonscalability emphasizes contingencies in each scalar encounter, rhetorical narratology emphasizes particularities of each narrative situation, recognizing purpose as central to these engagements. Rhetorical narratology approaches questions of scale in much the same way as Horton's mediated cosmos or Tsing nonscalability, negotiating Abbott's unnarratability and Herman's reconsideration of emergent processes by attending to the particularities of the narrative instance. For Abbott, emergence undermines the narrative transformation of action into causally ordered events, thus making the phenomenon of emergence essentially unnarratable. Our "craving" for "causal complexity,"

triggers the construction of a "default narrative of centralized control," a characteristic fundamentally absent from emergent behavior (Abbott 2008, 236). Our tendency to make sense of world in narratives undermines our capacity to "grasp modes of causality that cannot be accommodated to narrative form" (ibid., 230). I don't dispute Abbott's point here. Emergence may very well be unnarratable as such. Instead, building on Horton's and Tsing's interests in contingency, I attend to the rhetorical act itself, considering ways that specific narratives of emergent behavior work in service of specific purposes. A rhetorical approach develops *a posteriori* from the specific conditions of each narrative instance. Whether or not emergence is actually narratable, narratives of emergence exist – some more fraught and problematic than others, but narratives nonetheless – which use a variety of rhetorical strategies for a variety of purposes. Dismissing them outright as unnarratable or only focusing on ways that they misrepresent emergent conditions ignores complicated and contingent ways that rhetorical strategies link speakers and audiences in terms of purpose. Rhetorical narratology offers ways to think more carefully about relationships between these different elements.

More precisely, complicated relationships between events and states of being central to emergence are analogous to the relationship between narrative and lyric rhetorical modes. James Phelan's (2007, 3) rhetorical definition of narrative famously involves "somebody telling somebody else on some occasion and for some purpose(s) that something happened." He slightly modifies this rhetorical definition for his definition of lyric: "somebody telling somebody else […] on some occasion and for some purpose that something is" (ibid., 22). Where narrative attends primarily to events and their causal relationships, lyric emphasizes conditions of being. Central to Phelan's rhetorical distinction of narrative and lyric is the premise that both are rhetorical modes appearing in various forms and media: just as we have narrative prose, narrative poetry, narrative dance, narrative film, etc., we also have lyric prose, lyric poetry, lyric dance, lyric film, etc.[2] The distinct affordances of different media produce different effects that develop the purposes in different forms.

In certain instances, these narrative and lyric concerns interact and build on one another. A co-presence of the lyric and the narrative allows for two possible interactive relationships between representations of events and conditions of being. Phelan does not distinguish these two relationships. The first form of interaction, which I am following Phelan to call *lyric narrative*, emphasizes events but explores ways that conditions of being shape those events. It fuses Phelan's definitions of narrative and lyric so that it involves somebody telling somebody else on some occasion and for some purpose that something happened because something is. The second possibility, which I call *narrative lyric*, emphasizes conditions of being but explores ways that events and change produce those conditions. A rhetorical definition for narrative lyric would involve somebody telling somebody else on some occasion and for some purpose that something is because something happened. Both hybrid forms establish complementary relationships between lyric and narrative modes and reinforce Heather Dubrow's

(2006, 256) claim that "lyric and narrative may further common agendas." Differences between the lyric narrative and narrative lyric are subtle and perhaps less important than acknowledging different possibilities for interactive relationships between narrative and lyric modes. This acknowledgment reinforces an *a posteriori* heuristic that critics must "[reason] back from the multilayered effects of those individual works to their causes in those combinations of elements" (Phelan 2007, 153).[3]

Emergence extends these relationships between events and states of being to their unnarratable limit, producing two basic structures:

- *Emergent Lyric Narrative*: Somebody telling somebody else on some occasion and for some purpose(s) that something happened because something is and something else is and something else is and something else is and something else is, etc.
- *Emergent Narrative Lyric:* Somebody telling somebody else on some occasion and for some purpose(s) that something is because something happened and something else happened and something else happened and something else happened and something else happened, etc.

Both radical forms of hybridity highlight impossibilities in describing emergence: one resisting narrativity and lyricality through an overabundance of events and a lack of causality between them producing a state of being; the other resisting narrativity and lyricality through an overabundance of details about conditions in which an event occurs. In both, emergence overwhelms cognitive capacities to link events and states of being. Of course, these two rhetorical forms of emergence also imply infinite variation. Each condition of being carries relationships with events and other conditions of being, and each event carries relationships with conditions of being and other events. Each moment of interaction between conditions and events implies its own complicated and extended emergent form, the hybridity of emergence overwhelming any capacity to manage and articulate these relationships.

Mediation establishes a resolution that makes that emergent behavior seeable and sayable. A rhetorical approach to emergence attends to ways that each attempt to represent a phenomenon of emergence in narrative form produces resolution and emphasis. Rather than focusing on inevitable failure in narratives of emergence or redefining fundamental concepts *a priori*, a rhetorical approach defines terms of emergence via the text itself, considering its hybrid structures of narrativity and lyricality in the service of certain purposes. With that *a posteriori* approach in mind, I turn now to two examples of narratives of emergence. In each, I track different ways that mediation collapses and wrangles overwhelming structures of emergence into narratable forms. And then I link that mediated engagement with emergence to similar structures necessary for engaging with and navigating Anthropocene conditions. Each text offers strategies that, while epistemologically imperfect, grapple with Anthropocene conditions and human involvement in planetary change.

5. *Subscript*: Emergent Form

Christine Brooke-Rose's novel *Subscript* (1999) covers a vast stretch of earth history, beginning with the formation of prokaryotic life forms and ending with the rise of human agriculture. It attempts to narrate the evolutionary processes between those two moments. Taking place over 4,227,909,000 years, each of the novel's nineteen chapters is focalized through different beings representing different moments within this evolutionary narrative. The first chapter, "Euka," narrates development from prokaryotic, single-celled organisms to eukaryotic and multi-cellular beings. After this first chapter, all other chapters are titled by the gap in time between it and the previous chapter – for instance, chapter two, which describes the development of sexual reproduction, occurs "Four thousand million years later," a time span which happens to be the major part of planetary history and time covered in the narrative (ibid., 10). With occasional exceptions, gaps of time between chapters progressively decrease. Chapter three, which describes the development of fish and the journey to land, occurs "Twenty-five million years later" (ibid., 20). Chapter nineteen, when humans settle in villages, is only "Nine thousand years later" (ibid., 200), still a large amount of time on any human scale, but significantly less than earlier chapters. These decreasing time gaps between chapters coincides with a refinement of change from one evolutionary moment to the next. The more time between chapters, the more significant the changes are between beings represented and worlds in which they exist.

Gaps between chapters, no matter their length, separate and isolate individual character-narrators, highlighting one impossibility in narrating emergent processes of evolution. As Abbott (2018, 234) notes, species evolution involves unintentional, unguided, and unpredictable actions of multiple individual beings over extended periods of time. These micro-level actions produce, at a macro-level, an evolution narrative in which x-species evolves into y-species, which evolves into z-species, and so on. The gap between individual actions and evolutionary narrative is where emergent processes reside, and, as discussed earlier, for Abbott, the processes that connect micro- and macro-level are unnarratable. Any attempt artificially distorts the actual conditions of emergence. *Subscript* navigates this impossibility not to circumvent it, but, instead, to self-consciously explore aesthetic capacities for representing emergence. Its primary technique is to create interactive relationships between narrative and lyric modes. On one level, each chapter serves as a self-enclosed narrative lyric hybrid existing at the micro-level of the individual. We access the conditions of being at that moment in earth history for that species. While character-narrators describe events that happen within each chapter, at the novel's macro-level of species change, each chapter maintains a relative evolutionary stability. In other words, species change happens between chapters, in gaps of time demarcated by chapter titles. In Phelan's (2005a, 158) sense, each character-narrator undergoes no "substantial change

within the temporal frame of the main action," a key characteristic for lyric-narrative hybridity. Instead of emphasizing change, each chapter focuses on "dimensions of the character-narrator's current situation."

The novel establishes narrative continuity at an evolutionary macro-level in the ordering of these chapters. The species of one chapter 'become' the species of the next chapter, which 'become' the species of the next chapter. Much like the animated sequence in *Fantasia*, lyric visions of being in each chapter combine to produce a cohesive narrative of species change. Moreover, grammar employed by isolated character-narrators reinforces these evolutionary processes. Each chapter's grammar depends upon specific conditions of being for each character-narrator. For instance, in the opening chapter, "Euka," narrated by the earliest forms of life, there are no pronouns whatsoever, including the impersonal "it." Chapter five, narrated by a mammal-like reptile, begins to employ "it" and "they" for things in the external world and employs the collective noun *pack*. Chapter eight, with its simian narrator, introduces the collective noun *tribe*, as well as first-person plural pronouns.[4] The result of this restrictive, synthetic grammatical structure is what Karen R. Lawrence (2010, 159) calls a "primitive reenactment rather than anachronistic comparison" between the novel's largely nonhuman subject matter and its anthropocentric linguistic form. This combination of narrative-lyric hybridity and grammatical change produces the novel's self-reflexively artificial representation of emergence.

This narrative of evolutionary becoming is reinforced through reference to a "code" present throughout the novel and linking the different creatures together. The code "may be a present memorial to ancient memory but never explains anything at the time" (Brooke-Rose 1999, 30). This memory doesn't exist as some conscious or cognitive process, but instead "remains in the body" (ibid.), embedded in the processes of being at the micro-level of individual existence. The code causally links events between chapters. For instance, the reptilian narrator of chapter four notes how the code "says" that the sea "brought the group here so long ago" and distinguishes its species from "those big fish the code once told us about, that remained in the sea" (ibid., 34). These explanations become "code-stories" (ibid., 35). As the novel shifts to human subjects, spiritual leaders become "Interpreters of the Code" (ibid., 208). The code provides a causal link that 'remembers' (and, in some instances, 'forgets') connections that unify disparate chapters into a single narrative. While clearly referencing DNA, 'code' also refers to language and aesthetic form. As the capacities for those develop in humans in later chapters, explicit reference to "the code" all but disappears. Instead, it becomes embedded in processes of telling, creating, and world-building central to human activity. *Subscript*, then, might be seen as a self-reflexive aesthetic object positioned along a timeline of its own creation, embedded within and reflecting the code-story, engaged in the same narrative processes as early humans working to understand the world and their position within it.

The novel ends as the agrarian revolution begins. The final chapter is narrated by the human girl Aka, who, along with her father, encounters a traveler from the Fertile Crescent. This traveler describes changes taking place with his people

– collecting seeds from foraged plants, organizing labor around growing seasons, distributing specialized responsibilities, shifting from nomadic to sedentary lives. The traveler rejects this new world. For him, these changes upend a life of mobility and freedom and portend more ominous changes:

> Growing food means clearing more space, burning down trees, or bringing them down with hafted axes and ropes. And forests are where most animals live. So, if we destroy them we slowly send the animals all away, or they just die off. Staying in the same place means eating the land dry, killing off everything. Like locusts. (Ibid., 203)

For the traveler, mass extinction and overconsumption are built into the basic logistical structure of agriculture. Timothy Morton (2016, 42) calls this structure agrilogistics, which involves "a technical, planned, and perfectly logical approach to built space." For Morton, agrilogistics becomes the dominant global logic, so pervasive that the very analytical tools used to understand it are "compromised products of agrilogistics" (ibid., 43). The Anthropocene, in this sense, is not just a marker of geological time, but is also an epistemological tool for moving outside of the current, global logic. It allows us to "think the human species not as an ontically given thing I can point to, but as a hyperobject that is real yet inaccessible" (ibid., 25). Hyperobjects are defined by Morton as "things that are massively distributed in time and space" (2013, 1). For Morton, the Anthropocene reveals planetwide human-ecological relationships that have become invisible. He locates the beginning of these relationships to the time of *Subscript*'s final chapter. In that sense, Brooke-Rose's novel offers one aesthetic structure for understanding the conceptual reframing of the human as an invisible hyperobject. By positioning the human characters at the end of a long, evolutionary process, it represents humanity as an unwieldy entity, artificially represented through interactive relationships between narrative and lyric modes. The narrative's gaps and inherent failures point to the impossibility of its goals and, paradoxically, the need to maintain those goals to imagine human experience as more richly embedded within our planet's ecological history.

The final chapter represents a moment before humankind changes the course of this history, when agrilogistics is one possible ordering of human relationships with the world. For the skeptical traveler, the shift from nomadic to agrarian life leads to the conquering of the earth. And once this conquest is accomplished, he predicts that "men will turn their amazing drive against each other" (Brooke-Rose 1999, 207), the future tense pointing to the violent human history that follows this imagined moment. The novel's last paragraphs juxtapose two ways to understand human-planetary relationships. Aka, the chapter's focalizing narrator, falls into a hidden cave, mortally injuring herself. In the penultimate paragraph, she has a vision that situates the traveler's new world within a much grander vision. She reflects on the way that the sedentary people "have enslaved themselves to rigorous routine" (ibid., 215). Aka then experiences an epiphany, feeling as if "a river floods through the head" (ibid.). She recognizes that the impetus for this agricultural turn "is inside something at the bottom of the sea, that wants to stop feeding from what it can find and make its own food. But it's not independent" (ibid.). Aka's transcendent moment pulls her from her limited

perspective in order to recognize connections between shifts from nomadic to agrarian culture and earlier changes in evolutionary history's deep time. The vision reconnects human history to this different scale of time, flooding her with an epiphanic and lyric vision of planetary connection.

In the novel's final paragraph, Aka's vision shifts to the cave paintings surrounding her. In her final moments, these images become strange human-animal combinations: half-woman, half-bison with "two heads, a woman's head and a bison's head"; "men with horse bodies and horse legs below them" (ibid.). Humans overwhelm and control nature, so that the creatures of the plains are absorbed into their being. These creatures scatter seeds "like rain with wide rainbow gestures into the loosened earth as they pass" (ibid.), bringing with them agrarian culture. Hordes "of wheat-rearers and animal-tamers" conquer the landscape, have "endless offspring[,] and live happily ever after" (ibid.). Whereas the novel's previous paragraph connected humanity to vaster planetary scales, embedding their desires and changes within larger perspectives of change, the final paragraph imagines human dominance transforming the planet for humanity's own purpose. Each vision captures human relationships with the larger world. These two concluding paragraphs juxtapose two radically different, lyrical visions of coexistence and dominance, offering a glimpse of the emergence of the Anthropocene and an awareness of the planetary scale implicit in both possibilities.

6. *2001*: Monolithic Emergence

If *Subscript* ends with an epiphanic vision of the emergence of the Anthropocene, the final act of Stanley Kubrick's science fiction film *2001: A Space Odyssey*, titled "Jupiter and Beyond the Infinite," employs its own idiosyncratic interactions between narrative and lyric modes to offer its aesthetic vision of emergence. David Bowman, the film's central character, arrives at Jupiter, having recently disconnected the artificial intelligence system HAL, which has killed all other crew members. Approaching the orbiting monolith, the film suddenly shifts from representations of slow movement of objects in space to a kaleidoscopic and disorienting vision. The film's formal change mirrors Bowman's shift to a new sense of space and represents his transformation into a new kind of being, the posthuman "star child" of the film's final scene. The audience accesses Bowman's new condition through the images that follow his engagement with the monolith. These changes combine narrative and lyric registers, emphasizing the representation of Bowman's new condition of being, i.e. his transformation into the "star child."

In addition, this transformation and its being connected to the monolith reflects the shift of consciousness in early-human primates at the film's beginning. Without warning, the monolith appears within the middle of a group of early hominids living on the savannah. Later, while rummaging through scattered

bones, one primate suddenly realizes their potential as tools – and more specifically as weapons, which he uses against other animals and a rival hominid group – representing an epiphanic evolution of consciousness. Both the primate and Bowman serve as figures of evolutionary change: one from hominid to human, the other from human to star child. Their engagements with the monolith compress and make visible this transformative emergence, taking processes of species emergence and collapsing them to the scale of the individual. The film's most famous match cut unifies these two historical bookends. When the tool-wielding primate tosses his bone tool, it appears suspended in air. This image of the bone immediately cuts to a similarly shaped spaceship floating in space. All of human history – from early primate to space-faring humans – passes within this cut. The match cut links bone and spaceship as human tools and collapses the human narrative into a single, transitional moment. In other words, the match cut compresses the unwieldy emergence of the human condition into a hybridized narrative lyric in which something is (i.e. the human) because something happened (i.e. interaction with the monolith).

The monolith – whether with Bowman or early humans – serves as a mediating figure of emergence, bookending human history and affording resolution for audience engagement. Like the "code" of Brooke-Rose's novel, the monolith is the rhetorical agent that reveals human history, marking both its beginning and its end. The film's collapse of emergent complexities through the monolithic agent resembles similar rhetorical strategies in narratives of intelligent design. Just as a higher power shapes life's development in this pseudoscientific theory, so too does the monolith (or its mysterious creators) serve as the film's catalyst for evolutionary change. This scalar frame does not imply, however, that the film renders a theological vision. Instead, the filmic cuts and kaleidoscopic images that represent these transformations reinforce their artifice. The monolith is a science-fictional and rhetorical device for narrating the unnarratable conditions of emergence and the impermanence of the human condition. Emphasis in the film is not on how change happens. Those details are never revealed, and the monolith's semantic emptiness and ambiguity reinforce that obscurity. Instead, the film emphasizes that change has happened and could happen again.

Moreover, the ending's psychedelic vision explores difficulties of witnessing or understanding emergent transformations. Throughout the sequence, images of Bowman's face or single eye flash on the screen, reflecting the light and dizzying array that he is witnessing. Bowman watches the incomprehensible vision even as he is a part of it, reminding us of our own mediated and incomplete engagement. Afterwards, Bowman appears within an enclosed and strangely lit living space and encounters a series of older versions of himself. As he encounters each version, he then 'becomes' that individual – the camera cuts and the younger version disappears from the scene. With each encounter, we watch Bowman watching himself, and then watch as one Bowman replaces the other. Any understanding of change (for the audience or for Bowman) comes through mediated resolution, with the film self-reflexively highlighting its scalar and rhetorical engagement. Immediately before transforming into star child, the elder

Bowman is now bedridden, seemingly near death, and looking from his bed to the monolith now in the room. The film cuts to a wide shot of Bowman reaching out to the monolith, then to the monolith from Bowman's bedridden perspective, and then to the bed from the monolith's position with Bowman transformed into star child. Much like the primate at the film's beginning, Bowman's transformation collapses humanity into a single figure and makes the change instantaneous. This scene positions the monolith at the center of that change without explaining its agency. The monolith's black, empty space becomes a rhetorical tool that collapses conditions of and renders the impossibility of representing emergence.

The film's self-reflexive mediation replicates conditions similar to Anthropocene emergence, in that we only recognize that transformation through self-reflection and mediation, i.e. narrativization of human history at a geologic time scale that situates human behavior within a larger planetary history. At the same time, that narrativizing project transforms our sense of the human condition, a change now marked by the end of the Holocene epoch and the beginning of the Anthropocene. We observe that change from a double position: as agents that have created this new condition and as witnesses that are incapable of halting changes now in place. Much like the monolith in *2001*, the Anthropocene becomes an unwieldy hybrid of lyric and narrative registers that allows us to think about relationships between human condition and planetary history, or between human history and planetary conditions, collapsing unmanageable processes of planetary emergence into a scale that is seeable and sayable.

7. Conclusion

Narrative impossibility does not absolve us from the consequences of emergence. These processes shape our lives and the world in which we live, so we must grapple with that impossibility even while recognizing our likely (if not inevitable) failure. Samuel Beckett's play *Endgame* (2006 [1958]) models that impossible position. In it, the servant Clov relishes an end to his innumerable toils, and imagines how that end might appear. He declares, "Grain upon grain, one by one, and one day, suddenly, there's a heap, a little heap, the impossible heap" (ibid., 92). A reversal of the Sorites paradox, in which progressively removing single grains of sand never transforms a heap into a non-heap, Clov deputizes the heap as metaphor for life as emergence – events as meaningless grains of sand that suddenly become the heap of life. Both grain heap and life involve sudden, radical, even miraculous shifts of scale: uncountable grains to heap; events to life. In both, impossible shifts from one scale to another reinforce the unnarratability of emergence. And yet, narrating emergence is exactly what Beckett's play attempts, trying and failing again and again to mark the emergence of the impossible heap: the end of the game, the vision of life. The play goes on, despite emergent failure – in fact, drawing our attention to that failure.

Rhetorical narratology recognizes the need to go on despite conditions of emergence that deny narratability, focusing on contingencies that mediate scalar engagement. If truth value is determined by ways that narratives establish coherent relationships between narrator and narratee in terms of purpose, then a rhetorical approach to narratives of emergence considers how writers use available resources to explore issues of scale to achieve certain purposes. Interaction between scalar impossibility and rhetorical contingency arises most pressingly in emergent conditions of climate change and the stories we tell to understand them. Human action suddenly emerges as chaotic planetary transformation. Stating that we can't narrate emergence exiles these concerns to a narratological no-man's-land. Instead, rhetorical narratology provides vocabulary for more richly understanding the means by which we situate our own position in these planetary transformations.

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[1] In James Phelan's (2017, 6) sense, rhetorical narratology reasons "back from the effects created by narratives to the causes of those effects in the authorial shaping of the narrative elements" in order to make generalizations about narrative as a rhetorical form.

[2] Here, my rhetorical approach breaks with much scholarship on lyric, which tends to link it exclusively to poetic form. For instance, Jonathan Culler sees lyric as an inherently transhistorical poetic form, dependent upon engagement with the poetic tradition of recitation for its rhetorical and aesthetic effect. For Culler, lyric "involves a tension between ritualistic and fictional elements" via poetic form (ibid., 7).

[3] For other work on hybrid relationships between lyric and narrative, cf. Culler (2018), Dubrow (2006), Hühn (2005), Fludernik (2005), Morgan (2009), Wolf (2020).

[4] Cf. Lawrence (2010, 172f.) for a chart that describes the grammatical limitations set forth for each chapter.