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Paper:

Pak, C. (2017). “Then Came Pantropy”: Grotesque Bodies, Multispecies Flourishing, and Human-Animal Relationships in Joan Slonczewski's A Door Into Ocean. *Science Fiction Studies, 44*(1), 122
http://dx.doi.org/10.5621/sciefictstud.44.1.0122

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Chris Pak

"Then Came Pantropy": Grotesque Bodies, Multispecies Flourishing, and Human-Animal Relationships in Joan Slonczewski's *A Door Into Ocean*

The colonization and habitation of planets calls for the physical modification of space (terraforming) or of bodies (pantropy). While terraforming is often the preferred method for adapting to the conditions of new worlds, pantropy supplements this planetary modification. Discussions of terraforming are linked to issues of climate change, while those of pantropy raise issues related to genetic modification. The oceanic world that Joan Slonczewski depicts in *A Door Into Ocean* (1986) constrains the way adaptation to and modification of the environment can be conceived. Adapted animal and human bodies evoke the monstrous, grotesque, and sublime; grotesque bodies interrogate the meaning of the animal, the human, and nature. Considering this intersection allows us to explore the interventions into nature that terraforming and pantropy entail, and how pantropy critiques colonialist approaches to terraforming.

After a brief discussion of terraforming and pantropy, I will explore how Slonczewski uses pantropy to critique the values and assumptions that underlie the former. Through connections between individual bodies and the ecological body of the world, *A Door Into Ocean* uses pantropy to refigure terraforming into symbiogenetic communities who adapt and maintain their global environment. The grotesque is fundamental to the text's challenge to colonialist domination embodied in industrial approaches to terraforming. The pantropic subjects and the ecology of the planet Shora are essential to offering an alternative conception of habitation centered on responsiveness to other lives.

Jack Williamson coined "terraforming" in his 1942 short story "Collision Orbit."[1] In the same year, James Blish coined "pantrope" to refer to the microscopic humans adapted to inhabit a puddle of water in "Sunken Universe" (1942), later expanded into "Surface Tension" (1952) and incorporated into the fixup novel *The Seedling Stars* (1957). The emergence of the terms "terraforming" and "pantropy" in the same year suggests an increasing sophistication to the way dialogues about space colonization were constructed in the 1940s. While not exclusive of one another, terraforming and pantropy involves two different modes of habitation, with underlying philosophies that are often opposed insofar as they imply distinct responses to the otherness of nature and other civilizations. "Pantropy," loosely translated, means "changing everything" (Blish, *Seedling* 8). In *The Seedling Stars*, the narrator points to pantropy's mythic resonances, arguing that "it went back, in essence, as far as Proteus– and as deep into the human mind as the werewolf, the vampire, the fairy changeling, the transmigrated soul" (44). This article's title, "Then Came Pantropy," is drawn from "Seeding Program" in *The Seedling Stars*, first published as "A Time To Survive" (1956). Colonialism underlies humanity's approach to space colonization in many terraforming narratives. The opposition between terraforming and pantropy turns on a philosophical choice between adapting the other or adapting the self. Terraforming and pantropy are co-dependent technologies that help to accelerate the habitation of other planets. Since *The Seedling Stars*, pantropy has been expanded to include body modifications other than genetic adaptations, including cyborgization.

In *A Door into Ocean*, the colonizing Valans attempt to establish sovereignty over the indigenous Sharers, in part justifying this endeavor by appealing to the benefits of free trade, and later by pointing to the profits that mineral extraction, Valan fisheries, and seasilk production generate. The adaptation of the environment for the purpose of resource extraction threatens the ecological networks on the planet. The danger that terraforming poses to indigenous communities lies in its disrespect and destruction of modes of habitation based upon a co-adaptation of "amborg" communities and their environments. Joan Gordon coined "amborg" to "represent the human/animal interface" understood as "organisms in their most liminal states, not just humans when we acknowledge our family tree, but any animals that interact with, exchange glances with, and acknowledge the presence and sentience of another species" (Gordon 191). The critique of terraforming via pantropy illuminates the choice between the destruction or persistence of existing ecological and cultural networks.

Multispecies Flourishing. *A Door Into Ocean* narrates the struggle between the inhabitants of the ocean planet Shora and occupiers from Valedon, part of the interplanetary Torran empire. Drawing from her Quaker background, Slonczewski presents the indigenous, all-female Sharers as pacifists who practice a consensus-based form of government that stands in stark contrast to the colonizers, who privilege violence and an adherence to hierarchy as strength. In an attempt to preserve their communities, the Sharers Merwin and Usha bring the Valan adolescent Spinel—a "malefreak"—to live with them and the Valan noble, Lady Berenice. Berenice is engaged to Realgar, an officer who later becomes head of the Valan colonizing force. By dwelling with the Sharers, Spinel helps them to better understand their occupiers: the relationships he forms provide new contexts for the Sharers to think about what it means to be human, and this in turn assists Merwen in swaying other Sharers from violent reprisals against the Valans. As the narrative unfolds, the Sharers' non-violent protest and stewardship of their multispecies communities leads them successfully to oppose colonization and terraforming by the Valans.

Exploitation of all the planet's inhabitants push the indigenous people to resist occupation. In "Animal Studies in the Era of Biopower," Sherryl Vint explores how *A Door Into Ocean* offers an alternative to a form of

colonial governance based on submission to Valan sovereignty. The concept of sovereignty is important for terraforming narratives because the notion of the liberal human subject upon which the Hobbesian social contract is based informs and justifies colonization and terraforming. The Sharers challenge these discourses of human nature and governance by grounding their society on a concept of the human that is based on a distributed responsibility to ensure multispecies flourishing, itself enabled by a practice of consensus building. In contrast to the colonizing Valans' hierarchical and power-based system of sovereignty, which privileges the human as the only subject capable of responding and not merely reacting to others, the Sharers "have no concept of sovereignty that coincides with the [Hobbesian] social contract model, and the Valan occupation force seeks in vain to find a leader who can speak for all the people" (Vint 448). The Sharer language is emblematic of their lack of a concept for sovereignty: its reciprocal verb-forms and lack of subject/object distinction directs readers' attention to the power of naming in shoring up the boundary between the human and animal, which the Valans take as axiomatic (see Vint).

Vint claims that *A Door into Ocean* articulates "a new ethics of passivity and diffuse subjectivity that could be one of the new fables of transformed sovereignty" that Derrida calls for in his work (449). This attempt to rethink sovereignty is often presented as a consequence of pantropic adaptations in sf. The Sharers' physical adaptations and unisex population mark them as morphologically distinct from the colonizing Valans, thus underscoring how embodiment is aligned with political differences. Pantropy challenges the values that underpin colonial approaches to terraforming, which is aligned in this novel to masculinity, hierarchy, individualism, and violence—key elements of the understanding of human nature upon which the Hobbesian articulation of sovereignty is based.

Slonczewski's world can be read as a model for thinking about contemporary biopolitics and human-animal interactions. Shora is an inversion of the desert world of Arrakis in *Dune* (1965), while the rafts the Sharers inhabit invert the forests of Le Guin's Athshe in *The Word for World is Forest* (1976). In contrast to Herbert and Le Guin, Slonczewski explores the possibilities for non-violent resistance to a colonizing force. The Sharers colonized their world in the distant past; Spinel's ability to eat food on Shora, to process the DNA of alien organisms, "can only be explained if the Sharers have systematically replaced most, if not all, of the pre-existing ecosystem of Shora with Earth-evolved organisms—in other words, in their own way they must have terraformed Shora—just as Valedon was terraformed" (Study Guide). Terraforming is thus a part of Shora's past as much as a threat to its future, an issue that Slonczewski explores in more detail in the sequels *Daughter of Elysium* (1993) and *The Children Star* (1998).

John Dupré argued for a promiscuous realism that recognizes the artifice involved in constructing taxonomies to account for non-human bodies. This does not make such classifications illegitimate, but it does call for flexibility when choosing an appropriate mode of classification (54-55). As Agamben argues in *The Open*, the notions of human and animal were constructed through the historical disavowal of the animal other: "the division of life into vegetal and relational, organic and animal, animal and human, therefore passes first of all as a mobile border within living man, and without this intimate caesura the very decision of what is human and what is not would probably not be possible" (15). The Sharers struggle with the question of Valan humanity, and this enquiry into the nature of humanity undermines the Hobbesian social contract and its notion of sovereignty. Spinel's time on Shora is a struggle to overcome the ways he has traditionally classified humans and other animals, substituting instead elements of the Sharers' mode of thinking. The body of the self and other is the first site for the formation of classification; the body in context, its lived experience in contact with other bodies, allows Spinel to revise these classifications and to reconsider the basis of his culture's orientation to nature.

Shora's ecology is complex and well-delineated. The indigenous human inhabitants call themselves and other species Sharers. They live in multispecies communities on rafts, which grow from seeds into large organisms that provide living space for many animals. The relationships that Sharers maintain with the creatures who live around and share their rafts are basic to their survival. Close physical contact with these companions make them amborg subjects who must respond appropriately to the needs of their fellow species. Clickflies, for example, provide the Sharers with the capacity to record and share information relevant to their practice of life-shaping, for which the cells of their rafts function as an information storage system.

Without prioritizing masculinist narratives, Slonczewski depicts the Sharers as both foragers and hunters, offering what Le Guin has described as a "carrier bag narrative" of survival within the ecological limits imposed by the environment. While they depend on the lives of other animals for their existence, this relationship is not one of dominance but of symbiosis. Sharers hunt the deadly shockwraith for their tentacles, accepting the danger their mode of living entails while resisting the extermination of threatening animals, cognizant as they are of how the healthy flourishing of all species depends on ecosystems. This multispecies community is a permaculture that has developed over ten thousand years, constituted of amborg subjects co-evolving and responding dynamically to each other. One example involves the Sharers' use of biomedical technologies. The Sharers rescue Valans who are caught in an explosion and encase them in a living cocoon "that bristled with vines and trailers" (*Door* 356). While not strictly animals, these organisms connect the multispecies animal communities to their world, functioning as a life-support system that helps the Sharers to flourish in their dangerous environments.

Scientific taxonomy is only one of the ways animals are represented and ordered in *A Door into Ocean*, and while it provides a powerful theme connecting life on Shora to that on Earth, it also frames other modes of classification. This includes the Valans' colonial-racist classification of Sharers as "catfish" (a reference to their baldness, streamlined ears, and broad, flat lips), and the Sharer's philosophical system that identifies all as Sharers. There is evidence of other taxonomies, such as when Merwen identifies predators as "blood drinkers" (235) and when Yinevra rejects Merwen's classification of the Valans as human, a claim Merwen bases on their genetic compatibility (32): for Yinevra, a shared evolutionary ancestor is insufficient to qualify as human. The novel's critique of colonialism is rooted in dismantling ossified modes of classification, such as the Valans' sense that their idea of their humanity puts them above the Sharers, people and animals. In order to adequately unpack the nature of the critique of terraforming that pantropy represents, it is important to consider how the grotesque operates in this novel. In the context of multispecies flourishing and amborg subjectivity, bodies are the matrix for emergent entities poised in ever-shifting relationships. Classification is subject to constant flux, necessitating a promiscuous realism that is responsive to embodied context. In *A Door into Ocean*, the Sharers' expertise with life-shaping and the monstrous physicality of the Shoran ecology—as Spinel experiences it—enables thinking about the sf grotesque and what it can tell us about terraforming, pantropy, and the human relationship to nature.

Haraway adapts Bowker and Star's notion of "torque" to "describe the lives of those who are subject to twisted skeins of conflicting categories and systems of measure or standardization. Where biographies and categories twine in conflicting trajectories, there is torque" (*Species* 134). *A Door Into Ocean* dramatizes this notion of torque through the conflict between two histories, between Shoran multispecies flourishing and Valedon's imperial subjugation of nature, and between the stories of the adopted Valans Spinel and Berenice, whose experiences of life on Shora offer amborg entanglements that lead new communities. It is significant that when Spinel first meets Merwen, she responds to his question about a possible Shoran invasion of Valedon by noting that Shora has long been occupied and that "truth is a tangled skein, and time ravels it" (15). *A Door Into Ocean* explores the problematic of truth through a narrative that creates spaces for the emergence of amborg subjects.

Through the figure of the sower seeding new worlds, Haraway connects multispecies communities to terraforming as the creation of new contexts for shared lived experiences and new myths for explaining what it means to be human. For Haraway, "sowing worlds is about opening up the story of companion species to more of its relentless diversity and urgent trouble" ("Sowing," 138). This conceptualization of terraforming opens up the notion of flourishing to include the relationships and interactions formed between the biotic and a-biotic. Bacteria and plants are points of connection between species and between species and their environments: "symbiogenesis is not a synonym for the good, but for becoming with each other in response-ability" ("Sowing," 145), a form of becoming that brings with it an ethical imperative to be responsive to other species. One way in which pantropy is used to critique Valan colonization is by drawing a distinction between different modes of terraforming, with pantropy positioned as a contrast to destructive modes of planetary adaptation that erase, rather than incorporate, prior ecological systems. Pantropy functions as an emblem for the ongoing story of symbiogenesis. The portrayal of diverse animal others is crucial to this vision because the attenuation of the network of multispecies relationships is presented as a profound impoverishment of both ecological and cultural vitality. Conflict arises from the Valans' failure to respect the pre-existing relationships on Shora. The novel articulates this critique of terraforming as the colonial imposition of systems of classification onto nature through four animals that appear in *A Door Into Ocean*: clickflies, breathmicrobes, humans, and seaswallowers.

Clickflies: Companion Species and the Carnivalesque Uncrowning. There are two uses of the word "grotesque" in *A Door into Ocean*: one when Spinel begins to succumb to what the Valans call the "purple plague" and one when he first sees a clickfly. These insects, compared at one point to "bees at a honeycomb" (50), are fundamental to Sharer society, providing a communications network that links raft-communities who would otherwise be isolated by a matter of days or weeks, depending on the length of a physical journey. Clickflies can transmit messages and navigate toward other raft-communities, and are thus valued companion species. They weave webs that can be decoded by the Sharers, who use this system of "writing" to teach life-shaping, the most essential of their arts. These webs encode at the genetic level, offering a vast capacity for storage and an ideal basis for the Sharers' advanced biological science—what the Valans fear as a "Forbidden Science" imbued with all the grotesquerie and chimerical monstrosity that (loss of) control over the body has signified since at least Wells' *The Island of Dr Moreau*.[2] Clickflies are celebrated as they make possible the Sharers' practice of learnsharing.

The Valan reaction to the clickflies is clearly a reacton, not a response. Spinel's sense of grotesquerie at the sight of the clickfly is apt, for they demonstrate an element of the carnivalesque uncrowning that leads Spinel—and readers—to a new insight into the Sharers' way of life. Carnivalesque uncrownings are reversals that turn the world on its head. The transformation of Spinel's orientation toward the clickflies from a feeling of unease to one in which he accepts becoming Shoran is anticipated in the very first episode with the insect. When it appears, perching on Merwen's shoulder on Valedon, it clicks and squeals, scraping "lopsided" mandibles together, and

the pattern Merwen weaves into her seasilk takes on swathes of color "more fantastic than the robes of Iridian nobles" (20). These greens, golds, and blues hint at a sublime mystery, that of the ecology of companion species on Shora. They are engaged in a hybridizing relationship that makes them amborg subjects.

The clickflies enact a carnivalesque uncrowning that deflates the harm implied by the horrified reaction of Spinel and the other Valans toward them. The sense of threat the Valans feel is out of proportion to their appearance and behavior. Growing familiarity with these creatures undermines such fearful responses and illustrates a co-shaping of bodies and histories that is cognizant of animal others as subjects. Part of Spinel's acclimatization and sense of feeling at home is communicated by his growing ability, not just to react, but to respond to the clickflies. Spinel's view of the organic and the bodily is uncrowned. As he learns to decode the clickfly webs he becomes part of Sharer life in myriad of ways. His orientation to other lives undergoes a transformation.

Toward the end of the narrative, the Valans attempt to eradicate the clickflies once they discover that they form the backbone of the Sharer communication system. Such a move illustrates the lack of respect the Valans have for animal life. They conceptualize the clickfies as pests and components of a communication infrastructure, not as fellow amborg subjects. The reader, however, is attuned both to the physical harmlessness of the clickflies and their importance to Sharer culture, which in turn highlights the extremity and cruelty of the solution the Valans adopt. This uncrowning works in tandem with a range of others, from the "animal" nakedness of the Sharers to their language. For example, when on Shora the commoner Spinel and the noblewoman Berenice adopt Sharer nudity, an uncrowning when their different statuses as imperial subjects and the Valan view of Sharers as primitives is taken into account. Their shared nakedness contributes to the levelling of their status, a transition from commoner and lady to "sister" Sharers.

The clickfly-Sharer relationship exemplifies what Vint, following Derrida, identifies as the basis for the Sharer language: the capacity "to respond, not merely react" (448). This reciprocity is built into the Sharer language: Slonczewski explains that the language is not structured with a subject-object relationship governing agency. Verbs such as "word-sharing" are thus the equivalent of both "speak" and "listen" in the Sharer tongue. "What use is the one without the other?" Merwen asks a frustrated Spinel (36). The Sharer language underscores a fluidity of experience that Slonczewski links to "the doctrine of 'satyagraha,' love-force, developed by Gandhi and other historical practitioners of nonviolent resistance" (Study Guide).

The Purple Plague: Symbiogenesis and the Grotesque Interval. The second context for the appearance of the word "grotesque" is when Spinel finds himself succumbing to the purple plague. His co-habitation with the Sharers and their bodies—adapted for existence on the ocean planet—sparks a reaction that had been suppressed until he begins to develop the Sharer's characteristic purple hue. The shock of this misrecognition of his own body transforms the Sharers in his eyes, and he suddenly sees them in a negative way as "reached out to him with livid limbs and flippers, grotesque signs of what he would become" (97). He escapes into the tunnels of the raft, obliterating in these dim spaces the sight of a skin that horrifies him: "as if by sheer force of will he could keep himself from becoming a monster" (97). This space, between what was and what is becoming, evokes Harpham's notion of the grotesque interval, which Csicsery-Ronay tells us is that "between the transmutative fluidity of the object and the classificatory uncertainty of the perceiver" (187-88). The cause of the purple plague is the breathmicrobe, a harmless organism modified by the Sharers to increase their oxygen efficiency. This symbiotic micro-organism is an instance of a pantropic strategy that enables the habitation of Shora.

Breathmicrobes are apt agents for the grotesque, since the aesthetic is concerned with the smallest of scales, with "cells, genes, molecules, atoms, bytes" (Csicsery-Ronay 212). Breathmicrobes signify the grotesque porousness of animal bodies; infection by this innocuous micro-organism represents a threshold beyond which individuals become enmeshed and begin to flourish within the interspecies communities that make up the planet's ecology. The Valans fear this transformation and take drugs to prevent becoming hosts to the breathmicrobes, refusing on this fundamental level the amborg relationship. The Valans' lack of knowledge about the transformation, and their projected fear that the Sharers will tailor a deadly strain of the breathmicrobes for use as a bioweapon, speaks to the grotesque interval, a contact zone that invites the possibility of a hybridizing response with the other. The Valans misunderstand and simply react to the Sharers because they attempt to fit Sharers into their system of classification. The Sharers' challenge to respond disrupts the classificatory systems that the Valans use to support and justify their colonial endeavor.

Spinel's call to respond comes at this moment of crisis, and he retreats into a "shelter, a cocoon to hide away from [the Sharers]" (97). Csicsery-Ronay tells us that

> The grotesque … turns the arrested attention intensely toward things, in which it detects a constant metamorphic flux, an intimate roiling of living processes that perpetually change before understanding can stabilize them. This process is one of steady descent into interiors, into grottoes of being, in the hope of finding a core, but always finding more transformation. (190)

His skin, however, is as inescapable as the breathmicrobes that inhabit his body and environment. He is forced to confront the full significance of what it means to be implicated in the shifting processes of a multispecies community. Spinel's descent into the womblike interior of the raft is a descent into what Bakhtin would call the material lower bodily stratum, a term he uses to refer to a series of grotesque bodily images—gustatory, excremental and reproductive—that characterize the carnivalesque uncrowning. These images create reversals by undermining what was previously valorized: for Spinel, the transformation of his skin undermines his identification as Valan and destabilizes the boundary separating Valans and Sharers.

Csicsery-Ronay acknowledges that the grotesque "may appear reductive and essentializing" because it aligns the transformative space with the womb and thus with the feminine, but he also points out that this characterization hints at "a mythological charge that Harpham detects in the grotesque" (194). The mythological and literary coupling of the feminine with such spaces does not necessarily assume an essentialism that sees this association as gender determined, but rather points toward a literary-historical link between the grotesque body and the transformative space of the mythic womb. The use of the grotesque in this ecofeminist novel draws on the association of bodily permeability and womblike spaces with the feminine, although such images are complicated by the life-shaping that allows all children to be born female.

The image of the grotesque space of the tunnels is complemented by the raft's outward appearance, inverted trees whose branches plunge the ocean. Bakhtin tells us that "[the grotesque] is looking for that which protrudes from the body, all that seeks to go beyond the body's confines. Special attention is given to the shoots and branches, to all that prolongs the body and links it to other bodies or to the world outside" (316-17). The raft's "roots" connect the Sharer habitations to the surrounding seas, and they provide shared living space for other animals that live as companions with the Sharers. The Sharers' biomedical technology, part of the raft system itself, involves the use of vines that enter or, as Spinel characterizes it, "wor[m]" into the body to make various adjustments to its functioning (92). The medical and the grotesque are coupled, as are symbiogenetic transformations through the purple plague and the transformative spaces of the raft. These transformations are examples of the pantropic themes central to *A Door Into Ocean*.

Spinel's descent into the raft's life-generating depths is a confrontation with the grotesque body of the self that is experienced as other, a transformation that turns the gaze inward. His struggle involves a re-categorization of the boundaries between self and other, a transformative crisis that results in his accepting and responding to the multispecies community of the Sharer raft. Spinel, as a Valan and newcomer to Shora, begins to adapt physically and experientially to habitation on this new world: he undergoes pantropy, both via colonization by the breathmicrobes and by intermeshing with wider multispecies communities in a symbiogenetic ecology.

Spinel's reaction to his transformation, to the emergence of signs of the animal within his own body, is contrasted to that by the Valans, who are later colonized by the breathmicrobes. In one dramatic scene in which five Sharers protesting outside a Valan base enter whitetrance (reducing their bodily functions to the bare minimum for survival), the Valan commander Realgar sees "five pallid Sharers facing soldiers awash in dreadful violet, as if the color had seeped directly from one side to the other. No one spoke, except the inescapable voice of the sea" (299). The Valan sense of superiority, marked by a difference in skin color and clothing, is subject to an uncrowning. Many Valans react poorly to this instance of unintentional pantropy, and notably they plan to terraform the planet rather than accept adaptations to their bodies or to their mode of living on Shora.

Humans and the Anthropological Machine. The Valans' orientation to the Sharers involves identifying them as animal even when knowledge of their shared evolutionary origin becomes widespread. This resistance to scientific taxonomy speaks of another system of classification that depends on the hierarchical ordering of groups according to their behavior, rather than their genetic similarity or concordance:

> "Well, now. You have to understand, sir, when I first came out here twenty years ago, the catfish weren't considered human at all, just another part of the natural fauna. You can't even mate with them properly, and to my mind"—Kyril shifted his weight and sat forward. "Look, if you're going to call them people, you better understand just what kind of people they are. They never had to back down to anyone, not since before the rise of Torr, and they just plain don't know how. You'll have to blow up half the planet to teach them." (243)

The Valans' colonial folk taxonomy centers on dominance as the basic structure for categorization. Attitudes and practices that cannot be accounted for by this system pose problems for how the Valans should order their relationships with both the people and other animals of Shora. By doing so, they also exclude the attitudes and behavior that characterize the Sharers' pacifism and investment in multispecies relationships. As Kyril struggles with the evidence of their shared origins, his compromise entertains the possibility of classifying them as people only insofar as it makes scientific sense to do so. It is clear that for Kyril, despite the incontrovertible evidence of their humanity according to evolutionary biology, Sharers still remain "catfish" because they do not share Valan

values. A difference in political and ethical systems forms the basis for a division between the human and the non-human. Like their colonial counterparts, scientific evidence fails to convince the Sharers to reframe their view of the Valans, since the Valans do not act according to values the Sharers recognize as human.

Merwen's insistence on the mind as a center for the definition of the human is a typical move that reflects some aspects of human exceptionalism. When Merwen asks Spinel whether a monkey that she sees on Valedon is human, Spinel replies, "are you kidding? … It's a monkey. People eat them, even." Her retort, "How was I to know? You're human," speaks to the grotesque indeterminacy that lies embedded within the border between humans and monkeys and which troubles these neat classifications (39). Merwen's failure to recognize the monkey as other illustrates one point of departure from Valan taxonomies. Merwen's recognition of herself in the body of the monkey, and Spinel's failure to do so, highlight two different approaches to the question of what it means to be human.

Unlike some of the other Sharers, Merwen is convinced of the humanity of the Valans, and her adoption of Spinel is in part an attempt to prove this fact to her community. Speaking of the ability to recognize oneself in the other, and the other in the self, Merwen tells Realgar that "there is a difference between seaswallower and human. A human sees herself in the mirror. I am human, and so, inescapably, are you" (367). Realgar's attempt to subvert Merwen's pacifism by having her accept his logic of extermination in the face of Sharer-Valan conflict is designed to overcome any notion of similarity between Merwen and himself by, paradoxically, having her admit that her approach is fundamentally untenable and that the Valan approach—violence—is the only reasonable response. Such a concession would give Realgar the justification for ordering the genocide of the Sharers because it would be reasonable to assume that if the Sharers accepted his logic of violence, it would be permissible for them to use their advanced lifeshaping skills for the purpose of devising biological weapons.

Merwen's response is to emphasize the human ability for self-recognition, but undergirding this basic notion is another category fundamental to Sharer philosophy: "A lesser creature sees its rival on the water and jumps in to fight it. A human sees herself and knows that the sea names her. But a selfnamer sees every human that ever was or will be, and every form of life there is. By naming herself, she becomes a 'protector' of Shora" (61). This three-tiered taxonomy introduces another category to the already troubled human-animal binary. While Merwen's description of the "lesser creature" draws from studies of the animal's failure to recognize its reflection, it also chimes with the Valan approach to the Sharers; they fail to see themselves reflected when they gaze at their counterparts. They are constructed—not as animal—but as subordinate to the other two categories. This distinction accounts for the Sharers' inability to accept Valan humanity, given the Valan record of violence on the planet. Humans, on the other hand, are able to recognize themselves in the image that the ocean reflects back at them. To be a "selfnamer," however, requires something more. It necessitates an understanding and acceptance of the self as embedded in multispecies relationships. It requires a "long view," one that can accommodate the temporal and spatial relationships between humans and other animals, along with their interconnectedness across time and space. This view aligns the selfnamer with sustainability as a mode of consciousness and to the recognition that the amborg subject is constituted by individuals in relationships of difference and similarity. By accepting such a mode of consciousness, the selfnamer is better able to protect Shora, companions, and future generations.

Seaswallowers and the Grotesque Body of the World. Seaswallowers are cephaloglobinoids, creatures presumably descended from squids, with life cycles that include tempestuous breeding periods where they agitate the seas with whirlpools recalling Charybdis. Csicsery-Ronay points to this Homeric beast as a source for the grotesque trait of containing two bodies in one: "a new body may be in the process of metamorphosing out of an old one; a being may combine, conflate, or be trapped in two corporeal forms; a body's appearance may conceal a completely different one underneath" (197). Companion species presumes this ongoing transformation involving bodily reversals, blending, and emergence. Bakhtin tells us that "the grotesque body … is a body in the act of becoming. It is never finished, never completed; it is continually built, created, and builds and creates another body. Moreover, the body swallows the world and is itself swallowed by the world" (317).

The seaswallowers exist as part of the grotesque transformations of Shora. Despite the Sharers' extensive knowledge of biology, down to the cellular and atomic level, knowledge of the seaswallowers is scant. They are re-formulations of the sandworms of *Dune*; "beasts of the deep, they swallow all in their path" (16). Like the sandworms, they are symbols of nature that combine death and life into one body. The destruction that they bring is essential, not only for their own existence, but also for the flourishing of others: "seaswallowers passed as they always did, leaving the waters clean and clear" (396). Without their bi-annual clearing of the waters, the Sharers' way of life and the lives of their companion species is jeopardized. Bakhtin suggests "the combination of killing and birth is characteristic of the grotesque concept of the body and bodily life" (248). As the Valans destroy the seaswallowers to minimize the risk of damage to their property, the Shoran ecology is diminished. "Without seaswallowers … the entire life web would collapse, and Sharers would starve" (367). They are keystone species, ambivalent companion animals who make Sharer life possible.

The seaswallowers' consumption, in this ecological context, is also a regeneration of the cosmic body. It is an essentially generative image, one that capitalizes on a series of images related to the material lower bodily stratum. These images are an essential key for understanding the grotesque in *A Door into Ocean* as an ecological aesthetic that links the image of Earth to that of the individual. Bakhtin contends that "death, the dead body, blood as a seed buried in the earth, rising for another life—this is one of the oldest and most widespread themes. A variant is death inseminating mother earth and making her bear fruit once more" (327). This image is connected to terraforming, which requires the death of microbes and plant-life to bring another kind of life to planets.[3] These are generative images that turn inward on themselves, embodying the essential ecological reversal of a transformation from death to life at a macrocosmic scale.

This connection between the individual and the wider environment is coded into the reciprocity of the Sharer language. When attempting to explain to Spinel the variety of verbal "share-forms," Merwen confirms the validity of what Spinel believes are examples of the impossibility of jettisoning the object-subject distinction. One exchange in particular is especially telling:

> "Or if I swim in the sea, does the sea swim in me?"
> "Does it not?" (37)

This flow between interior and exterior, the individual and cosmic body, connects companion species and the grotesque to issues of landscaping embodied by the terraforming motif. It becomes possible to read terraforming as a way to intervene and transform aspects of the individual body and the communities in which they are embedded. The image of the ocean planet emphasizes this flow between organism and world and, with the breathmicrobes factored into this reciprocity, it connects the grotesque directly to the permeability of multiple bodies in multispecies community. In a very literal way, the sea does permeate the submerged body; micro-organisms traffic between world and organism and confuse the supposed distinction between autonomous bodies.

This traffic between boundaries is encapsulated in another image that takes the grotesque aesthetic and merges it with the sublime. As the seaswallowers pass, the second cycle of regeneration begins, with bioluminescent protozoans able to multiply unchecked in the wake of the devastation the seaswallowers cause: "in a few days waterfire bloomed again, a lovely bioluminescence that etched the waves for seven nights and kept everyone awake dancing in its brilliance. Another strand of the living web was rejoined" (396). The grotesque and the sublime are entwined in this image. Csicsery-Ronay notes that "it is not always easy to distinguish the two modes, as they are dynamically, dialectically related. A phenomenon that to one mind appears to be grotesque may appear sublime to another, if the principles behind it are seen not as violations of reason, but its primal processes' (146-47). To the Valans, the seaswallowers and the Sharers' adaptation to their life cycle are grotesque because they violate fundamental relationships that humans should build with other animals within their philosophy. Yet understanding the place of the seaswallowers as one of many companion species highlights their fundamental role in renewing the cosmic body of the world. As such, the destruction and renewal that follows can be seen as a sublime recognition of necessary ecological relationships, encoded by the appearance of firewater. As another example of the traffic of micro-organisms between bodies, the Sharers ingest the diatoms that make up firewater: "it was a spectacular time for night dipping, to bathe oneself all over in the water-fire, to swallow the 'flames' and spit them out again. One's teeth glowed for hours afterward" (161). The Sharers revel in what the Valans interpret as grotesque disturbances between bodies.

I have considered the significance of the grotesque in the multispecies communities depicted in *A Door into Ocean* with the aim of illustrating how this aesthetic can be incorporated into a biopolitical framework for animal studies in sf. In doing so I extended Vint's analysis of biopolitics and the human-animal relationship to provide a foundation for continuing research into the intersection between terraforming, pantropy, the animal, and the grotesque. I aim to rehabilitate the category of the grotesque as a powerful aesthetic for exploring the human orientation to nature as a whole, and to animals in particular. The grotesque offers a foundation for considering taxonomic classification and the multiple ways in which different communities order their relationships with other bodies and groups of bodies, including the cosmic body of the world. The grotesque "seeks to grasp in its imagery the very act of becoming and growth, the eternal incomplete unfinished nature of being. Its images present simultaneously the two poles of becoming: that which is receding and dying, and that which is being born; they show two bodies in one, the budding and the division of the living cell" (Bakhtin 52).

These continuous transformations require flexibility when dealing with relationships between the human and non-human and call for a promiscuous realism that can adequately take cognizance of the different and sometimes conflicting ways in which humankind relates to animals. The Valans' colonial endeavor, predicated on attempts to reduce species multiplicity by erecting barriers between themselves and others they regard as animals, requires the subjection of others to their desire and control. *A Door Into Ocean* explores what it means to be an amborg subject made up of individuals whose relationships are predicated on both response and respect. In contrast to the extermination of life that the Valan terraformation of Shora would bring, *A Door Into Ocean* offers a vision of pantropic relationships that are based on the evolution of symbiogenetic relationships that work

to create environments, and ultimately worlds, within which multispecies communities can flourish. This relationship is itself an alternative form of terraforming based upon the elementary interrelatedness of life and death and the embeddedness of grotesque bodies within the cosmic body of the world.

NOTES

1. Blish, James. *The Seedling Stars*. London: Gollancz, 2001. p. 44.

2. For an exploration of vivisection and genetic engineering in *The Island of Dr. Moreau*, see my "The Dialogic Science Fiction Megatext: Vivisection in H.G. Wells."

3. My "'All Energy Is Borrowed'—Terraforming: A Master Motif for Physical and Cultural Re(Up)Cycling in Kim Stanley Robinson's *Mars* Trilogy" explores the emergence of life from death in the context of terraforming.

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ABSTRACT: Joan Slonczewski's *A Door Into Ocean* depicts animals enmeshed in multispecies relationships who oppose colonial desires to occupy and reform their planet through terraforming. The Bakhtinian grotesque body, Istvan Csicsery-Ronay's sf grotesque, and Donna Haraway's companion species can help account for the relationship between terraforming and pantropy: the modification of the body to facilitate the habitation of alien planets. Building on the human-animal scholarship of Joan Gordon and Sherryl Vint, this article offers a contribution to biopolitical thought that seeks to rehabilitate the aesthetic category of the grotesque as a mode that invites multispecies flourishing.