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Widening Gyre: A Poetics of Ocean Plastics

Abstract

By focusing on contemporary experimental poetry that engages with ocean plastics,

this essay explores the capacity of ecopoetics to make distinctive interventions in the

environmental humanities, and in particular the blue humanities. It examines work

by Stephen Collis, Adam Dickinson and Evelyn Reilly to show how poetry's forms of

juxtaposition, linkage, linguistic porosity, indeterminacy and non-narrative

temporalities suggest fertile modes of cultural engagement with the more-than-

human oceans. This poetry cultivates amplified modes of attention to more-than-

human scales of space, time, agency and modes of relation, and it performs highly

material ways of understanding historical, economic and aesthetic forces affecting

the oceans.

Keywords

Ecopoetics; Capitalocene; ocean plastics; trans-corporeality

At first it is difficult to know what you are looking at (Figure 1). A large, white form fills the frame, its rough, alabaster-like surface pitted and scarred, as if by the ravages of time. Looming above the viewer's perspective, it occupies an empty, featureless landscape like an enigmatic monument from a long-forgotten culture. Then, the moment of recognition hits; the object is, of course, just an upturned polystyrene cup, stranded on a beach by the retreating tide. That aquamarine strip just visible in the far distance will soon return to reclaim this detritus and carry it away, elsewhere. This photograph is one of a series of images of beach debris in artist Andy Hughes's project Dominant Wave Theory. Hughes has spent decades photographing anthropogenic waste in littoral zones; his images transform discarded trash into visually arresting, larger-than life art objects that provoke intensified forms of attention to that which normally passes beneath notice. The artist presents each found object with such compelling vibrancy that even once it is identified as trash, the initial impression of its simultaneous significance and inscrutability lingers. In the case of the polystyrene cup, the object's seeming monumentality suggests how, despite its ephemeral, throw-away (and thrown-away) status, it also inhabits the temporality of the unthinkably longue durée. Polystyrene's notorious longevity and non-biodegradability has made this substance one of the iconic figures for Timothy Morton's concept of "hyperobjects," "materials from humble Styrofoam to terrifying plutonium [which] will far outlast current social and biological forms." Hyperobjects, Morton points out, "will be our lasting legacy" and yet because they are so "massively distributed in time and space relative to humans," they outstrip our capacities to fully comprehend their implications, either scientifically or philosophically.³ Hughes's arresting photograph holds together a series of

contradictions: the fleeting use life of disposable plastics and the monumental time of non-biodegradability; the abjection of trash and the sublimity of an entity "massively distributed in time and space;" the humble scale of the hand-held object and the global reach of its ocean-borne travels; the disregarded status of waste and the intensified mode of attention commanded by the work of art.

If Hughes's polystyrene cup appears monument-like, it is because it is indeed a kind of monument to our times, now increasingly referred to as the Anthropocene. Furthermore, what it memorializes is a momentous shift in the multispecies lives of a realm that has long been consigned to the background of cultural and environmental histories of modernity: the marine world. As John Mack has observed, "[t]he sea is not somewhere with 'history', at least not recorded history... [i]t is not monumentalized."⁴ Along with artworks like Hughes's, an emergent oceanic turn in the humanities is in the process of shifting that imaginary. As historian Kären Wigan notes, "the sea is being given a history, even as the history of the world is being retold from the perspective of the sea." For literary scholar Hester Blum, this endeavour also entails rethinking methodological and epistemological paradigms; "oceanic studies unmoors our critical perspective from the boundaries of the nation" and invests in "recalibrating... the gauges of time and space." Moreover, for an increasing number of scholars, anthropogenic changes in the seas demand that this process of refocusing widen its compass beyond the boundaries of the human. As Philip Steinberg asserts, oceans "need to be understood as 'more-than-human' assemblages." Perhaps precisely because "the sea is not our home," the development of the marine or "blue" humanities calls for enmeshment between

cultural history (traditionally the domain of the humanities) and natural history (aligned with the sciences). The work of "recalibrating... the gauges of time and space" in this context, then, also means engaging ocean worlds as natural-cultural assemblages and negotiating varying human and more-than-human scales.

I want to explore these possibilities by sticking with the space-times of ocean plastics invoked by Hughes's image, but by shifting my focus to poetic works. By examining experimental poetry that engages in different ways with marine waste, I want to demonstrate the capacity of ecopoetics to make distinctive interventions at the intersection of marine and science studies. In particular, poetry's forms of juxtaposition, linkage, linguistic porosity and indeterminacy, as well as its nonnarrative temporalities, suggest fertile modes of cultural engagement with the morethan-human oceans. The poems I examine, by Stephen Collis, Adam Dickinson and Evelyn Reilly, all engage with ocean waste in ways that necessarily encompass histories and agencies of the more-than-human world. Like Hughes's image, these works cultivate amplified forms of attention to more-than-human scales of space, time, agency and modes of relation. Furthermore, in common with the broad methodologies of science studies, these poems take particular kinds of scientific knowledge as the basis for philosophical (and, in their case, aesthetic and political) enquiry. Each of my selected poems engages with language and imagery drawn from the discourses of chemistry, biochemistry and marine biology. These materials form starting points and touchstones for the poems' exploration of ocean plastics and attendant social, economic and aesthetic questions. Donna Haraway asserts that "It matters what matters we use to think other matters with; it matters what stories we

tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties." I see the work of Collis, Dickinson and Reilly as performing modes of thinking with scientific and cultural materials that parallel some of the theoretical developments that have emerged from the new materialisms and science studies. My analyses of the poetry will thus draw on insights from these fields relating to economics, corporeal being, agency, subjectivity, collectivity and temporality.

A widening gyre

In "The History of Plastic," from his 2010 collection On the Material, Canadian poet and activist Stephen Collis investigates the entangled economic and ecological dimensions of a historical moment for which the "Great Pacific Garbage Patch" stands as emblematic marker. The poem imagines its contemporary moment by both drawing on and rewriting prior canonical images of historical process:

... polystyrene defining modernity in pure clear flexibility a torrent of products into the widening gyre¹¹

Collis's pointed reframing of Yeats's famous phrase performs a shift in historical understanding. The "widening gyre" of Yeats's early twentieth-century poem also depicted historical change in terms of profound physical transformations visited upon the earth, epitomised in its imagery of a "blood-dimmed tide" and the "rough beast" that takes concrete form at the end of the poem. But in Yeats, the causes of these terrifying alterations are vague and abstract. An era in which actual ocean

vortices of human waste are a "defining" feature, Collis suggests, demands a more literally material understanding of historical process. In this context, the purloined phrase also works as a directive for a widening of historical perspectives, to encompass the more-than-human physical world.

By adopting a historicist stance attentive to ecological materiality, Collis's treatment of plastic production, consumption and waste chimes with Jason W. Moore's theorization of capitalism "as a way of organizing nature." 13 Resonating with new materialist perspectives, Moore's reworking of historical materialism sees capitalism "not [as] a structurally invariant, monolithic Society, acting upon a structurally invariant, external Nature. Rather, the history of capitalism is one of successive historical natures, which are both producers and products of capitalist development."¹⁴ The more-than-human world is not a passive resource in this process, but an integral part of the web of relations, or "oikeios" through which the possibilities and limitations of capitalist development unfold. Nature, in this understanding "can be neither destroyed nor saved, only configured in ways that are more or less emancipatory, more or less oppressive. But... our terms 'emancipatory' and 'oppressive' are offered not from the standpoint of humans narrowly, but through the oikeios, the pulsing and renewing dialectic of humans and the rest of nature." ¹⁶ Collis's poem approaches ocean plastics as one such historical nature, specific to a moment in which capital accumulation relies upon, among other things, the production of cheap, ephemeral commodities and cheap "sinks," such as the seas, for their disposal. In this thinking, marine waste is not an unfortunate byproduct of this phase of capitalism; it is integral to a process of accumulation

dependent upon escalating production, consumption and disposal of a "torrent of products." This ecological phenomenon also emerges from an "organization of nature" whose geographic imaginary and material practices externalise ocean habitats as vast, timeless, out-of-sight spaces into which waste is "offshored" or dispersed "away." ¹⁷

Whereas Moore's theorizing necessarily makes large-scale generalizations in its mapping of totalities, Collis's poem engages intimately with concrete specificities by splicing and combining images drawn from chemistry, marine biology and popular imaginaries of ocean waste. In so doing, it moves between varying scales of space and time involved in plastics' material existence, as well as seemingly diverse frames of reference:

Simple molecular configurations of carbon and hydrogen atoms linked together to form chains (all we have to lose are our chains) mixing tarry carbolic acid phenol with formaldehyde in Yonkers Leo Baekeland et voilà – a green sea turtle in Hawaii dead with a pocket comb a foot of nylon rope and a toy truck wheel lodged in its gut¹⁸

This first section of the poem forges a parallel between the structure of polymer molecules and (via the parenthesised allusion to Marx) the structures of capitalism.

Both a key trope of this section and a metapoetic gesture, the image of the "chain" simultaneously implies connections, shackles and temporal sequence, all of which

the poem mobilises. From its initial parallelism between polymeric and capitalist structures, then, the poem proceeds to make spatial and temporal links between Leo Baekeland's invention of the first synthetic plastic (Bakelite) in 1907 and subsequent, widespread, ecological impacts of plastic pollution on marine life. Tragic images of plastic ingestion such as that suffered by Collis's turtle are common in popular and scientific discourses of anthropogenic marine litter. But these discourses' causal logic tends only to trace the sources of pollution back to immediate and demonstrable causes, such as waste management practices which result in direct or inadvertent disposal at sea, landfills or urban sources. ¹⁹ Collis's connective and correlative method probes the networks of the turtle's tragedy more deeply and more widely, in both its spatial and temporal dimensions. Via the metaphor and the method of the chain, the poem yokes together radically different spatial scales - from molecular structures to the anthropomorphic scales of plastic objects and turtle bodies to the global scales of world ocean currents. In Collis's poem, capitalism "as a way of organising nature" reaches all the way down to the molecular level, and all the way across and through the planetary oceans. The phrase "et voilà" connects the green turtle's death by plastic ingestion to a web of relations involving scientific experimentation (including Baekland's innovation and later developments of thermoplastics); synthetic manipulations of hydrocarbon molecules; practices of production, consumption and disposal, ocean currents and turtle feeding habits. Such material processes form a spatial and temporal mesh of causality that is not teleological but complex, contingent and unpredictable.

In a recent series of blogs, online articles and poems, Collis proposes that we understand our contemporary era as "the era of Geophysical capitalism" rather than the Anthropocene (which implicates all humans, as if equally, in anthropogenic damage). ²⁰ In so doing, he echoes others such as Haraway, Moore and Andreas Malm, who propose the term Capitalocene to indicate "the geology not of mankind, but of capital accumulation." For Collis, because "life itself—all planetary biological material—is now subject to, and the substance of, the extraction of wealth," a new kind of political "class" has emerged: ²²

a biotariat: that portion of existence that is <u>enclosed</u> as a "resource" by and for those who direct and benefit from the accumulation of wealth. So: workers and commoners; most animals and plants, including trees and forest and grassland ecosystems; water; land, as it provisions and enables biological life; minerals that lie beneath the surface of the land; common "wastes" and "sinks" too, into which the waste products of resource production and use are spilled—the atmosphere and the oceans. It's that large. **The enclosed and exploited life of this planet.**²³

For Collis, the biotariat is an exploited class of "bare life," but also, on the basis of that shared condition, a form of collectivity.

"The History of Plastic" traces a biotariat constituted through the bonds of plastic production, consumption and waste. This collective includes "crude petroleum;"²⁴ dead turtles; "bladder wrack and cockle shell" washed by a "polymer sea;"²⁵ aquatic organisms "unable to breathe and cancer/ coating our colons,"²⁶ as well as human bodies beset by toxicity and disease. Above all, this is a political "class" bound together though shared but differentiated physical exposure to petroleum products. In a talk in 2014, Collis highlights the importance of embodiment in thinking about historically specific biological, chemical and political relations. Remarking that

understandings of proprioception, an awareness of one's own situated body, remain "stuck in Anthros," he wonders, "is there such a thing as eco-ception, where what we're physically aware of is our location amongst other species, other things... that are not human, but [that we're] deeply, physically in interaction with?"²⁷ By tracing "historical natures" constituted through plastics' production and their post-disposal mobility across oceanic geographical and biological bodies, Collis's poem cultivates forms of "eco-ception" that traverse varying scales of space, time and bodily being. The work thus makes tangible capitalism's yoking together of human and more-than-human life. While these bonds enact networks of exploitation and appropriation, Collis hopes that they might also catalyse "a new and necessary solidarity."²⁸

Hello from inside the Albatross

Collis's "eco-ception" is a form of heightened political alertness to what Stacey
Alaimo has influentially called "trans-corporeality," which emphasises how human
bodily being is "always intermeshed with the more-than-human world."²⁹
Understanding corporeality in this way, Alaimo argues, "opens up a mobile space
that acknowledges the often unpredictable and unwanted actions of human bodies,
nonhuman creatures, ecological systems, chemical agents, and other actors."³⁰ My
next example, drawn from the work of another Canadian poet, further explores
trans-corporeal relations of the Capitalocene. Adam Dickinson's poem "Hail"
highlights how this socio-economic-ecological configuration produces physical forces
that escape human mastery, necessitating a rethinking of agency and subjectivity.
"Hail" is the opening poem of Dickinson's collection The Polymers (2013), which
treats plastic as "an emergent expression of the petrochemical age... an organising

principle (a poetics) for recurring forms of language, for obsessive conduct, and for the macromolecular arrangements of people and waste in geopolitical space."³¹

The collection adopts "organising principle[s]" of polymers in the very structures of its own composition, associating each of its sections with a common plastic resin, and mapping each poem's title on to a particular atom within that resin's molecular structure (Figure 2). Dickinson has long-running interests in creating intersections between science and poetry, remarking in an interview that

there is so much cultural authority invested in science as an arbiter of what is true and important that... I think there is a need for artists to really engage with science, inhabit its methodologies and signifying frameworks in order to expose the contingencies that lurk there and offer ways of re-conceptualizing and expanding the conversations around many of the issues that scientific discourse and research raise. ³²

By pursuing the cultural and philosophical implications of specific scientific knowledge through poetic modes of thinking, Dickinson contends, poetry can perform thought experiments, or swerves of cognition and articulation that he sees as "complementary to scientific forms of research."

It is significant that "Hail," the very first poem of <u>The Polymers</u>, centrally figures ocean plastics. Public awareness of marine pollution has made the sea an originary site for a growing sense of plastic as a problem, albeit one generally imagined as "out there," spatially offshore and distant. "Hail" draws on familiar imagery associated with marine plastics, not to merely reinforce this "message" but to conduct a thought experiment: where do plastics go, and what do they <u>do</u>, once they

are out of sight? How might a poem map "macromolecular arrangements of people and waste," emphasising the connectives in these configurations, rather than the logics of distance which so often inflect representations of marine waste? The results of Dickinson's experiment are much more complex than they might first appear. It is worth quoting the whole poem:

Hello from inside the albatross with a windproof lighter and Japanese police tape. Hello from staghorn coral beds waving at the beaked whale's mistake, all six square metres of fertilizer bags. Hello from can-opened delta gators, taxidermied with twenty-five grocery sacks and a Halloween Hulk mask. Hello from the zipped-up leatherback who shat bits of rope for a month. Hello from bacteria making their germinal way to the poles in the pockets of packing foam. Hello from low-density polyethylene dropstones glacially tilled by desiccated, bowel-obstructed camels. Hello from six-pack rings and chokeholds, from breast milk

and cord blood,

from microfibres
rinsed through yoga pants
and polyester fleece,
biomagnifying predators
strafing the treatment plants.
Hello from acrylics
in G.I. Joe.
Hello from washed up
fishnet thigh-highs
and frog suits
and egg cups
and sperm.
Hello.³⁴

Through a series of playful but macabre greetings, offshored waste speaks or writes back to us. Initially, the greetings come from the bodies of far-flung marine inhabitants such as albatrosses (whose plastic ingestion has been made famous by artist Chris Jordan), Caribbean coral reefs and beaked whales (echoing widespread media reporting of stranded whales with stomachs full of plastic). But as the poem progresses, the utterances issue from substances intimately associated with the human body – "breast milk," "cord blood" and "sperm," where recent biochemical research has found plastics additives such as phthalates, with worrisome implications for human health and fertility.³⁵ The poem thus performs a movement from "out there" to "in here" in relation to human bodies. As Lynn Keller points out in her discussion of this poem, "[t]hat all the damaged bodies offer the same greeting, 'Hello from...,' speaks to their environmental interconnection and our common vulnerability to the same human-produced materials." ³⁶ Furthermore, the mobility associated with the ocean, both in its materiality and in its cultural imaginaries, plays a key role in the poem's figuring of these trans-corporeal relations across varying spatial scales. As Alaimo remarks in recent work that takes her concept of trans-corporeality into the oceans, "marine trans-corporeality would submerge the human within global networks of consumption, waste, and pollution, capturing the strange agencies of the ordinary stuff of our lives." 37

The "strange agencies" of the sea itself thus invite contemplation of more-thanhuman modes of being, most especially because marine habitats are so inhospitable for humans. Media theorist John Durham Peters observes how marine environments radically transform gravity, light and sound, forming an ideal communicative medium for marine-adapted species (such as dolphins), but a radically inhospitable medium for the human sensorium.³⁸ Engaging with cetacean modes of communication and corporeal adaptation leads him to ask, "what would it mean to live in an environment immune to shaping and permanence? What would aqueous mind look and sound like? How would it feel if our bodies had adapted to live in water?"³⁹ Dickinson's poem extends this kind of questioning, asking: what kinds of "being" might be produced within the plastic-filled ocean, a medium to which no organism is adapted? While the poem's "hellos" constitute very direct forms of address, its speaking "subjects" are radically indeterminate. Dickinson's syntax stymies attempts to identify what is speaking from "inside/ the albatross;" is it an unidentified plastic object, a single molecule, an atom of hydrogen, or a composite speaker made up of all these things, plus the albatross corpse, plus the "windproof lighter" and so on? Similar questions arise with each iteration of the "hello," and as the poem progresses, greetings emanate not from a single, defined "place," but from sites that shift and proliferate via a syntax of listing: "from breast milk/ and

cord blood,/ from microfibers..." As if taking on the grammar of chain-like polymeric structures, the poem models ontologies that are radically distributed, permeable, shape shifting and not restricted to defined organisms or sites.

By invoking the notion of "hailing" in its title, the poem draws a parallel between a plastic-pervaded environment and Louis Althusser's understanding of ideology as an all-encompassing medium within which subjectivity is inscribed. This parallel implies that rather than thinking of petrochemical polymers as "man-made," determined by human needs, desires and technologies, these substances also <u>make us</u> (humans and more-than-humans), in an evolving and unpredictable process of co-emergence.

Says Dickinson, "[t]he toxicity of plastics is such that it can interfere with the human endocrine system, mimicking hormones and rewriting the body's biochemical messages. In biosemiotic terms, therefore, plastic can be seen as a form of writing."⁴⁰ His poem thus raises questions about how plastics quite literally and materially "hail" humans and other organisms, "rewriting" us in profound, diverse and unpredictable ways.

A poetics of poly.flotsam.faux.foam

While Collis's poem maps the material interconnections of marine plastics as a "historical nature," and Dickinson explores the implications of this configuration for questions of agency and subjectivity, my final example, drawn from the work of New York-based poet Evelyn Reilly, more self-consciously foregrounds questions of literary history and aesthetic form. Lynn Keller has written searchingly on Reilly's poetry, and her recent book <u>Recomposing Ecopoetics</u> contains a chapter on plastics

and toxicity, which discusses Reilly's and Dickinson's work together. Offering astute readings of both poets' work (including both poems I discuss here), Keller is interested, as I am, in how these writers' "poetics of interconnection" trace transcorporeal relations. She also explores how Reilly engages with the aesthetic legacies of Romanticism, whose "trans-historical adaptability" risks perpetuating "intellectual frameworks and ideologies that helped produce and still contribute to current environmental problems." ⁴¹ Such insights are highly instructive for my own analysis of how this poet's work engages with ocean worlds as natural-cultural assemblages, constituted through "capitalism in the web of life." My focus is the first poem of Styrofoam, "Hence Mystical Cosmetic Over Sunset Landfill," which entwines scientific and commercial imageries of plastic with allusions to famous literary engagements with the sea by Melville, Coleridge and Wallace Stevens. In so doing, it refigures tenacious Romantic literary imaginaries of the sea through the lens of the polluted present, and investigates how poetic forms might respond to new oceanic realities of a plastic age.

Like Collis and Dickinson, Reilly takes as a starting point the molecular structure of plastic, prefacing her poem with a diagram of Polystyrene, laid out visually as two horizontal chains and captioned with both the generic name and the trade name Styrofoam™. Reilly's use of the trademark symbol embeds this substance (and its language and imagery) in the logics of the market. Therefore, the trademarked name also implies that although the diagram claims to represent an object with an essence (a physical structure which defines what it is), even on the molecular, "essential" level, polystyrene is not a singular object. Instead, it is what Latour calls "a collective

of humans and non-humans."⁴² Polystyrene is not just matter; even at its point of production it is a hybrid bundle of "actants" comprising multinational companies, markets, chemists, and, on a fundamentally material level, other chemicals which make it mouldable into commodifiable forms. Reilly's poem traces how his assemblage expands, with unpredictable implications, as polystyrene moves into relations of consumption and disposal, circulating through human and animal bodies, marine habitats, the internet, the language of marketing, and also aesthetic forms.

Reilly's poem adopts a collage structure that echoes this principle of assemblage, resembling an ocean gyre, or seeping "heap-like & manifold.of" found materials drawn from multiple sources. Keller argues that the poet's "models of punctuation, poetic form, structure, and allusion or citation... encourage readers to think in terms of inescapable ecological interrelatedness." For Keller, this formal move enacts a "critique [of] received environmental paradigms," embedded in Western literary traditions, and most especially the transcendent impulses of romantic forebears. 44 Indeed, Reilly has said that she aspires toward "a poetry... firmly attached to earthly being and... thus dis-enchanted."45 One of her models for such a poetics is post-war poet Charles Olson, whose "open field" composition embodies a relational ontology "no longer [of] THINGS but what happens BETWEEN things." 46 For Reilly, Olson's poetic thinking "reflects the shift from a classification biology obsessed with naming, to an ecological biology with its emphasis on processes of interaction and change, and, on the molecular scale, with randomness and contingency."47 Echoing Olson's method, Reilly structures "Hence Mystical Cosmetic Over Sunset Landfill" as a field

of relations in which "what happens BETWEEN things" transforms the potentials of its component materials, just as when polystyrene enters a marine habitat, for example, it interacts with multiple other actants. These might include the water itself, into which plastics' additive chemicals leach; industrial pollutants already present in the water, which cling to marine plastics, creating new toxic "cocktails;" sunlight, which alters their molecular structure, triggering photo-degradation; waterborne micro-organisms, which become more mobile by colonising debris, and a whole array of larger organisms, from plankton to whales, whose ingestion of petrochemical substances circulates them through food chains in a variety of unpredictable ways.⁴⁸

"Hence Mystical Cosmetic Over Sunset Landfill" revisits literary histories of the sea through this relational understanding of both material reality and poetic form. By including in her collage poem fragments and allusions drawn from famous engagements with the sea by Melville, Coleridge and Wallace Stevens, Reilly reshapes these prominent literary imaginaries through the presence of plastic. This activity begins with the poem's jarring title, assembled from found words and phrases lifted from Melville's chapter on "The Whiteness of the Whale" in Moby Dick, plus the addition of the word "Landfill." Both historically and syntactically, this final term recasts the found materials through the lens of a polluted present.

Another such juxtaposition at the poem's conclusion (Figure 3), comprises a found image of sea birds atop a pile of waste, captioned by a further fragment from "The Whiteness of the Whale:" "Though in many of its aspects this visible world seems formed in love." The quotation continues, in Melville but not in Reilly, "the invisible

spheres were formed in fright."⁵⁰ Although this was clearly not Melville's inference, one of the "invisible spheres" for him was, of course, the future of the ocean ecosystems about which he wrote. Reframing Ishmael's mediations on his fear of whiteness with the whiteness of Styrofoam, Reilly's poem performs a retrospective "haunting" of Melville's text with new kinds of "fright" that now inhabit the oceans. For Melville, whiteness signified both "spiritual wonderment and pale dread" but above all an "indefiniteness" which "shadows forth the heartless voids and immensities of the universe."⁵¹ Reilly's poem emphasizes how, in its own contemporary moment, such uncertainties and "immensities" inhere not in a transcendental or "mystical" realm, but in the complex and enigmatic afterlives of plastic polymers; ocean habitats cannot now be framed in metaphysical or symbolic terms but must be engaged in material ways.

However, Reilly's references to Melville's famous book also serve as a reminder of the more materialist dimensions of this work, which viscerally explores the processes and logics of an industrial capitalism that relied heavily on whale oil, as well as other whale-derived products such as baleen. Such substances have now been replaced with petroleum oil and petroleum products such as plastics, which certainly seem more ethical in terms of animal cruelty and suffering. However, by entangling Melville in the threads of plastics production, consumption and waste that run through her poem, Reilly complicates the relations between whale oil and plastics.

Both are products of an extractive capitalism that works through the appropriation of "Cheap Natures." Furthermore, the poem also highlights how plastic is, of

course, implicated in the suffering of non-human animals, particularly in marine contexts.

Indeed, Reilly's poem indicates how the impacts of plastic pollution on non-human animals necessitates a transformation in literary ocean imaginaries and their iconic figures. In a context in which seabirds are among the species most prominently affected by plastic ingestion, ⁵³ an albatross can no longer be imagined as an "antarctic fowl.cherubim," ⁵⁴ a messenger from a realm beyond the physical, as in the literary imaginations of Melville and Coleridge. Reilly's poem reshapes the image of the albatross within the "collective of humans and non-humans" of her poem:

beyond the dense congregation of species successful in environments where the diversity of plants and animals has been radically diminished

(for all averred, we had killed the bird [enter albatross stand-in of choice⁵⁵

The scientific idiom of the first lines here interacts with the poetic idiom of the tweaked line from Coleridge to register new imaginaries which position the albatross as a charismatic "stand-in" for ecological damage, rather than for a divine or supernatural force. The trans-corporeal network of harm and responsibility in which the albatross is entangled also necessitates a change in the personal pronoun from Coleridge's "I" to "we." Keller rightly remarks that this substitution performs a shift of focus from an individual's torment over the destruction of a single creature, to collective responsibility for widespread, if less immediately felt, devastation of species diversity. ⁵⁶ In so doing, it also necessarily deemphasises the capacities of the

bounded individual, and posits agency and responsibility as distributed, collective and materially enacted.

Reilly's reworking of the individual actor throughout her poem also has implications for aesthetic production. The poet's collaging of found materials is of course one way of displacing the individual artist as creative agent. But a rethinking of aesthetic production is also a thematic concern. The invocation of a muse figure, "& all the time singing in my throat," in the poem's opening lines obliquely alludes to Wallace Stevens's famous poem "The Idea of Order at Key West," whose muse "sang beyond the genius of the sea." The difference between the two poets' prepositions is significant. Stevens's singer collaborates with the "inhuman ocean" in creating her song, but the work itself transcends the materiality both of the ocean and of the singer (who barely has a physical presence at all in the poem). Reilly's muse is a corporeal presence felt in the throat. She is subsequently depicted as a porous body, a "little dead Greek lady" wearing synthetic fibers and infiltrated by plastics additives, "environmental sources of hormonal activity" which the poem correlates with her demise. The act of creation is, then, portrayed not only as collaborative, but also as rooted in trans-corporeal physicality.

Furthermore, in Stevens's poem, the creative act gives form and significance to the "meaningless plungings of water and the wind:"

... And when she sang, the sea, Whatever self it had, became the self That was her song...⁶⁰ But Reilly posits a quite different becoming-self of the sea, implicitly asking: what does it mean for aesthetic representations of the marine world when it has physically become a kind of "self" that can no longer be imagined as fully "inhuman" or as raw, primordial "nature?" Her poem declares itself "& barely able to see sea" and instead of an idealized elemental energy, the sea of her poem contributes other kinds of aesthetic material:

What the sea brought: poly.flotsam.faux.foam

&Floam®

a kind of slime with polystyrene beads in it that can be used to transform almost any object into a unique work of art ⁶²

Techniques of juxtaposition and unconventional punctuation here enact contaminations and composite forms that crush together seawater, polystyrene and art. Similarly, elsewhere, the poem gives a dictionary definition for "foam" which etymologically brings together plastic substances and the sea, since the term refers to both. Such moments highlight ubiquitous material mingling of these substances across the oceans, but they also work metapoetically. As repellent as Floam® might seem in this context, Reilly's poem partakes of its material condition. Stevens's poem recurrently measures and re-measures the distances between its singer and the sea. On the contrary, Reilly's "work of art" contemplates its seas, landfills and contaminated bodies not from some "outside" position, but instead embodies their forms: the poem is "poly.flotsam.faux.foam."

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Cultural theorist Gay Hawkins highlights the "distanced relation with wasted things"

that "[c]onsumer cultures and technocratic logics of efficiency and concealment

have produced... even as amounts of waste have escalated phenomenally."⁶⁴ In

common with Hughes's polystyrene cup image, which produces a relationship of

intimacy with thrown "away" things, Reilly's poetic forms resist the spatial logics of

"distance, disposability and denial," even as they negotiate the "invisible spheres,"

and patterns of disavowal by which ocean waste becomes "offshored" both

physically and imaginatively. Furthermore, like Hughes's image, the poem also

investigates and unsettles the temporalities of disposability. If the logic of throwing

waste "away" relies on a spatial relation of distancing, then it also posits a

temporality in which waste is cast into the consumer's past. Reilly's poem unsettles

this logic from its first lines:

Answer: Styrofoam deathlessness

Question: How long does it take?⁶⁶

Styrofoam's "deathlessness" projects it not into the past, but into futurity. Keller

notes that these lines' reversal of the question/answer format "suggests how

incomprehensible people find the timescale of Styrofoam's nonbiodegradable

permanence."⁶⁷ This idea can be extended, however, to posit that both the

disjunctive temporality and the sense of disbelief here arise from incompatibility

between the timescales of commodity relations (rather than human timescales in

general) and the afterlives of waste. Besides incomprehension, the question also

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conveys a sense of impatience consistent with temporalities of instant gratification

epitomized by fast food and disposable packaging. The reversal of the question-

answer format also parodies the logic of the late capitalist marketplace, which

overturns traditional laws of supply and demand: "very often, supply comes before

demand... firms... have gained the ability to make something no one was requesting,

and all of a sudden everyone wishes to have."⁶⁸ Reilly's lines echo this topsy-turvy

logic as a way of critiquing an environmental corollary to this mode of production:

the material aftereffects of all this supply come into being long before questions are

asked about its ecological impacts.

Although the material fact of "Styrofoam deathlessness" invokes a sense of futurity,

the unthinkable scale of its immortality also problematizes the temporality of future

orientation. Reilly puts pressure on notions of futurity by circling back to the

question "How long does it take?" a page into the poem:

Answer: It is a misconception that materials

biodegrade in a meaningful timeframe

Answer: Thought to be composters landfills

are actually vast mummifiers⁶⁹

Instead of providing more satisfactory replies, or representing a progression of

knowledge, these answers merely repeat or return to the problem of temporalities

that do not fit with human scales of time as they are currently constructed. Both

semantically and formally, the poem invokes a temporality that is both repetitive

and embedded within a longue durée that resists conceptualization within a

"meaningful timeframe." By engaging with the lives of plastics as they circulate through landfills, ocean gyres, human and non-human bodies, as well as scientific, literary and cultural imaginaries, Reilly's poem embodies a temporal mode akin to Donna Haraway's notion of "staying with the trouble." Says Haraway:

In urgent times, many of us are tempted to address trouble in terms of making an imagined future safe, or stopping something happening that looms in the future, of clearing away the present and the past in order to make futures... Staying with the trouble does not require such a relationship to times called the future. In fact, staying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic and salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings.⁷⁰

In Reilly's work, polystyrene is trouble acting materially and conceptually in ways that are unexpected, as yet not fully knowable and entwined with other kinds: the wider logics of the marketplace; the material presence of other forms of pollution; the lingering legacies of aesthetic values and environmental imaginaries formed in an age when oceans, in particular, were imagined as vast, timeless and invulnerable to human influence. This is trouble that sticks to and with inhabitants of this planet, from which there is no "away," spatially, temporally or aesthetically.

However, where Haraway's notion of "staying with the trouble" tends to privilege "stories"⁷¹ and narrative forms in general as models for "ongoingness," Reilly's non-narrative, even anti-narrative, approach proposes alternative aesthetic and conceptual models. As anthropologist Anna Tsing remarks in a related context, "it is necessary to begin again, and again, in the middle of things."⁷² Formally and thematically, Reilly's engagement with plastic pollution suggests that an ecopoetics

involving reversion, revision and even impasse may be well suited for engaging with temporalities that do not fit with the forward march of capitalist modernity, even though they may have been materially produced by it.

In its own way, each of the poems examined above enacts processes of "staying with the trouble." These works avoid sentimentalising lament over apocalyptic degradation of habitats too often popularly depicted as the planet's "last wilderness." They also resist the problem-solving logic of technical and policy "fixes" that so often shape popular, activist and many scientific discourses on marine plastics. These works refuse the distancing logics inherent in these modes of thinking, which tend to perpetuate an imaginary of ocean worlds as inhuman spaces "beyond the blue horizon." Instead, they portray marine habitats as intimately enmeshed with onshore human activities through mutual entanglement in the networks of capitalist and trans-corporeal relations. Unlike Melville's "great shroud of the sea" which "rolled on as it rolled five thousand years ago" at the conclusion of Moby Dick, contemporary ocean imaginaries clearly need to address ocean worlds as historically-specific and highly changeable (and changing) multispecies habitats. Engaging with the more-than-human oceans requires modes of philosophical and aesthetic reckoning that can render palpable, if not fully cognizable, human and more-than-human scales of space, time, forms of agency and collectivity. Poetry's formal flexibility offers opportunities for making tangible the strange connectivities, distributed ontologies and more-than-human modalities of space and time active in the widening gyre of ocean studies.

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