Beyond Anthropomorphism: Attending to and Thinking with Other Species in Multispecies Research

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Abstract

Despite the growing richness of multispecies scholarship, questions about anthropomorphism – how to responsibly speak about other species as beings with their own lifeworlds and intentions without anthropomorphizing – continue to haunt multispecies research in Western academic settings. Here I argue that working to attend ethically to more-than-human others as beings with their own lifeworlds and decolonize Western epistemologies as a joint project can help multispecies researchers address the conditions that render charges of anthropomorphism sensible to begin with. I first introduce my study context at the Vancouver Aquarium and positionality as a settler scholar, reflecting on how these come together to generate tensions that shape the meaning of (and possibilities for) ethical multispecies research. I then explain how I have looked to Indigenous intellectuals for guidance before exploring submerged grammars of animacy that linger within the Vancouver Aquarium and Western epistemologies enfolded with this space. I engage Indigenous, feminist, and queer scholarship with more-than-human geographies and octopus science to explain how imagining ethical attention to more-than-human others as beings with their own lifeworlds from this space also entails imagining radically different relations between bodies and spaces than those permitted at the Aquarium.

Keywords

Multispecies research, ethics, anthropomorphism, politics of citation, octopuses, Vancouver Aquarium

Introduction

Beginning in spring 2018, I spent nine months conducting volunteer work and expert interviews at the Vancouver Aquarium[1] to better understand the role of octopus care and display in conservation. During this time, I came to understand octopuses and other nonhumans in this space as individuals with their own proclivities and only partially knowable inner worlds. However, staff classified any form of anthropomorphism as "aquarium swears" volunteers should avoid at all costs when talking about animals with the public. They emphasized that this prohibited all references to what animals in the exhibits thought or felt and justified this directive using the institution's commitment to promoting scientifically sound beliefs about the environment. Despite this, I remained committed to developing ways to attend responsibly to other species' intentions and lifeways while working within and writing about an institution that worked to curtail these ways of knowing in its educational messaging.

In Western scholarship, a commitment to understanding nonhuman others as beings with their own lifeworlds, intentions, and ways of speaking has been shared by geographers and others working across a wide range of contexts (see Gibbs 2020; Hovorka 2017 for recent reviews). However, as I was while doing fieldwork at the Vancouver Aquarium, this scholarship is also haunted by a question of anthropomorphism it has long moved beyond: how to attend responsibly to more-than-human others without inappropriately ascribing "human" traits to nonhuman beings and objects. For example, in the conclusion to her volume on multispecies care, Puig de la Bellacasa (2017, 218) describes concern over how to fully address "the expected charge of anthropomorphism" – a charge questioning both the ethics and rigor of her multispecies engagements. Similarly, Gibbs (2020, 171) emphasizes that despite growing attention to "'hearing the "cry" [of the nonhuman]'" in animal geographies, determining how to do this remains a daunting challenge for scholars operating in an academy that privileges Western epistemologies and language rooted in the *impossibility* of speaking, acting nonhuman others. Daston and Mitman stress that the moral is "central to debates over anthropomorphism" (2005, 5), outlining the term's origin as a blasphemous "attribution of human form to gods" (2005, 2) before it developed its connotations of sloppy academic thinking.

The richness of existing multispecies scholarship demonstrates the feasibility of conducting research that attends to nonhuman others as beings with their own lifeworlds but belies the difficulty of justifying this work – articulating the possibility for rigor or ethics in multispecies research – within the Western academy on terms that do not downplay the existence of more-than-human lifeworlds. This difficulty emerges from histories of colonial violence that have defined the so-called human and what it means to think, feel, or speak within narrowly racialized and gendered terms (Ferreira da Silva 2016; Maldonado-Torres 2007; Wynter 2003). The "expected charge of anthropomorphism" against multispecies research only makes sense and only emerges as "expected" under these conditions. In her review of animal geography over the last few decades, Hovorka (2017, 388) joins others (i.e., Sundberg 2014; TallBear 2011; Todd 2016a) in calling for decolonizing "white, Anglophone, Western" multispecies scholarship. However, as many of these scholars note, moves to decolonize multispecies scholarship also run the risk of reiterating colonial violence by plundering Indigenous thinking in the service of projects that are not accountable to and do not serve the people who animate this intellectual work. Hovorka helpfully advocates for commitments to ontological plurality in multispecies research but leaves open the question of how to determine what "curious, respectful, and critically engaged" scholarship looks like across rich "cross-cultural and interspecies differences" (2017, 389). Here, I take up this challenge by exploring the joint problem of how to ethically attend to more-than-human others

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[1] The Vancouver Aquarium is located on the traditional, ancestral, and unceded territories of the Musqueam, Squamish, and Tsleil-Waututh people in what readers may also know as British Columbia, Canada.

as beings with their own lifeworlds and unsettle Western epistemologies from my positionality as a white settler studying multispecies relations at the Vancouver Aquarium. I argue that responsibly engaging with more-than-human intentions and lifeworlds is inseparable from the work of decolonizing more-than-human geographies and that developing what Potowatomi botanist and poet Robin Wall Kimmerer calls *grammars of animacy* can help multispecies researchers navigate the fraught ethics of this joint project.

Kimmerer (2013) uses the term *grammars of animacy* to describe ways of thinking and speaking that begin with the recognition of others as beings with intentions and lifeworlds. Critically examining our embodied experiences in the field and attending to how more-than-human others come to know one another can help multispecies researchers develop these grammars of animacy. Here, I extend multispecies scholarship centering affect, attunement, and response-ability to consider other species' intentions, lifeworlds, and modes of speaking (i.e., Bear et al. 2017; Haraway 2008; Hayward 2010; Lorimer et al. 2019). Kimmerer's (2013, 57) eloquent insight that in English "the only way to be animate, to be worthy of respect and moral concern, is to be human" highlights the centrality of the concept of the *human* in dilemmas about how to attend rigorously to more-than-human animacy in English. Similarly, Cree scholar Billy-Ray Belcourt (2014, 4) argues for understanding anthropocentrism as "*the* anchor of speciesism, capitalism, and settler colonialism" that makes it possible for settlers to naturalize their understandings of animal bodies as resources and property — rather than as animate beings people negotiate political and familial relations with. I thus contribute to the development of less anthropocentric methods in more-than-human geography (i.e., Bear et al. 2017; Hodgetts and Lorimer 2015; Isaacs and Otruba 2019) by arguing that learning to speak an English grammar of animacy as Kimmerer proposes requires grappling with the political and historical processes shaping different understandings of who counts as human and placing particular forms of humanity at the center of both language and politics.[2]

Fortunately, numerous (and incredibly diverse) scholars writing from positions outside or at the margins of different definitions of the human have long worked and written on exactly this topic. Furthermore, scholars and artists from these communities have creatively worked to develop ways of expressing agency that locate power outside the violent exclusions of liberal humanism (for example, see Belcourt 2016; King 2019). This of course includes Indigenous scholars, artists, and activists but also a range of people writing from intersecting disabled (Taylor 2017), queer (Barad 2007; 2011; Chen 2012), Black (Wynter 2003; Ferreira da Silva 2016; King 2019), Latinx (Maldonado-Torres 2007), feminist (Plumwood 2003; 2008), and other positionalities.[3] Reading Indigenous writing on more-than-human agency has therefore played a crucial role in teaching me how developing language for engaging ethically across species difference requires a much broader set of engagements and political commitments. Here, I want to stress that just as animals are not pretexts for decolonization, decolonization is not a pretext for thinking with animals.[4]

In what follows, I first introduce my study context and positionality as a settler scholar, reflecting on how these come together to generate tensions that shape the meaning of (and possibilities for) ethical multispecies research at the Vancouver Aquarium. I then explain how I have looked to Indigenous

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[2] For this reason, I do not engage multispecies scholarship that assumes the existence of normative human intelligence, consciousness, and/or feeling and deploys this as a benchmark for comparatively exploring more-than-human cognition (i.e., Godfrey-Smith 2016; King 2013).

[3] Citations here are intended as examples and starting points rather than exhaustive lists.

[4] In this engagement with cephalopods, I thus diverge from work such as Villem Flusser's (2011, 27-28) meditations on vampire squid where animals serve as "pretext" for stories "mostly about men" and also heed warnings about facile, direct comparisons between human and animal oppressions that would instrumentalize human lives and politics (Kim 2015; Weheliye 2014).

intellectuals for guidance before exploring submerged grammars of animacy that linger within the Vancouver Aquarium and Western epistemologies enfolded with this space. I engage Indigenous, feminist, and queer scholarship with more-than-human geographies and octopus science to explain how imagining ethical attention to more-than-human others as beings with their own lifeworlds from this space also entails imagining radically different relations between bodies than those permitted at the Aquarium. Throughout, I stress the importance of interruptions to anthropocentrism by scholars writing from diverse positionalities for developing more vibrant grammars of animacy in multispecies research.

Study Context and Ethics: The Joint Problem of Unsettling Settler Epistemologies and Spaces

Gallery design and messaging around the Vancouver Aquarium's octopus exhibit discursively support settler mastery and a clean, scientifically managed divide between the so-called animal and human. At the Vancouver Aquarium, the octopuses I came to know inhabited a glass box approximately the volume of a walk-in closet in the Treasures of BC gallery. The entrance to this gallery is marked by a panel evoking a treasure map, reading: "Welcome to the treasures of BC Gallery. Meet some of the marine life - the treasures of British Columbia - that lives under the waves off our own coast." The panel map has labeled none of the animals — only places — and inserted their pictures into bubbles neatly pinned to points on the map. Inside one labeled "Port Hardy" at the northern end of Vancouver Island sits a picture of an octopus. In her ethnography of Sea World, Susan Davis (1997, 149) describes how "there are no breaks in the authority of scientific research and no disputes about the directions of research" in the galleries, which also holds at the Vancouver Aquarium's Port Hardy exhibit. Nowhere does the exhibit mention Indigenous knowledge about this common coastal species or discuss any of the many mysteries about octopus physiology and life history. Furthermore, the exhibit fails to reference octopus cognition at all. In the Aquarium's tanks, representations of places and ecosystems shimmer like living gems, and filters and regular cleaning keep the water an impossibly clear and brilliant turquoise. The tanks suggest an untouched ideal which could exist — simultaneously free of contaminating human influence and cultivated to perfection under human care. This imagery and messaging belies a reality where intensive human care requiring regular interaction and embodying more-than-scientific ways of knowing maintains these exhibits behind the scenes. It also upholds a settler colonial politics of space. The gallery map charts animals like resources and exemplifies how "settler colonialism … operates through a militant and racist politics of territoriality whereby Indigenous lands are physically and symbolically evacuated to be re-made into settler spaces" (Belcourt 2014, 5). Nowhere do Indigenous communities or place names appear on this otherwise empty map. The entry panel celebrates imperial dominion over creatures and coastlines and implies that both these creatures and the places they represent lay waiting for guests to visually consume.

Tucked between towering cedars and manicured lawns with picnic tables, the Vancouver Aquarium sits in the eastern end of Vancouver's iconic Stanley Park. Where I work informs how I engage ethically with different ways of thinking about interspecies relations. The land now occupied by the city of Vancouver has been inhabited by Musqueam, Squamish, and Tsleil-Waututh people since time immemorial. These nations have never ceded their traditional and ancestral territories to foreign powers. The village of X'way X'way, one of the largest local settlements before colonial authorities forcibly evicted its inhabitants, stood less than 200 meters from the present-day location of the Aquarium in Stanley Park (Mawani 2003). After colonial authorities forced Coast Salish communities onto reserves in the late nineteenth century, several families continued living in the eastern end of Stanley Park (est. 1888) through the 1930s when the city ordered their eviction. The last resident from this community remained there through the 1950s (Mawani, 2003). These homes stood at what is now known as "Brockton Point" (Mawani 2003), less than a kilometer from the Aquarium's current site. This history matters because it demonstrates how colonial authorities created the space where the Vancouver Aquarium now sits: they forcibly removed Indigenous people, their relationships to places and space,

and their modes of sociality in order to create a settler park space for citizens to appreciate responsible environmental stewardship as narrated by colonial authorities.

Given this, what does it mean to engage ethically with different ways of knowing other species in this space? To what extent can different intellectual traditions and frameworks challenge the colonial, anthropocentric biases of spaces like the Vancouver Aquarium? As a white settler scholar living and working on unceded land, I came to these questions through a desire to avoid framing settler epistemologies as the only or best way of knowing more-than-human others because doing so would perpetuate the erasure of Indigenous peoples in this space. However, my own positionality and the Aquarium context also raise questions about what counts as ethical engagement with Indigenous scholarship and what forms of engagement would appropriate or abuse the work of Indigenous scholars writing against colonial violence. Furthermore, as a settler scholar, ethically attending to other species' intentions and lifeworlds requires honest engagement with the limits of traditions like biology and Western philosophy. Doing this responsibly requires avoiding claims that these Western scholars writing against anthropocentrism *invent* or *discover* nonhuman agency when diverse intellectuals – including but not limited to Cree, Anishinaabe, and other Indigenous intellectuals – have long written and spoken about nonhumans as beings with their own intentions and lifeworlds (e.g., Deloria Jr 2001; Watts 2013). How might intellectual traditions with deeply anthropocentric histories disrupt their own biases, and how can scholars engage tools from traditions like Western philosophy to understand other species without inadvertently reinforcing anthropocentric hierarchies? To what extent is this even possible? Here I engage these questions as inseparable from the spaces and relations within which multispecies researchers work. I suggest that the difficulty of unsettling epistemologies from the perspective of a settler scholar emerges from the same spaces and relations that render it difficult to speak about more-than-human others as beings with their own lifeworlds.

Indigenous Scholarship: Imaginations of Language and Space in Ethical More-Than-Human Relations

Diverse Indigenous scholars have written about ethical engagement with nonhumans as beings who have their own lifeworlds and agency. Here I highlight Indigenous intellectuals whose work has been crucial for helping me understand how language produces and reinforces different understandings of animacy as well as how different constructions of space render less hierarchical relations with nonhumans more (or less) possible to imagine and enact. However, as a settler scholar, I cannot use Indigenous languages and knowledge as resources for describing more-than-human relations in my own life or settler spaces like the Aquarium without reinscribing extractive colonial power relations. Indigenous languages are not resources for settlers to mine. As Zoe Todd (2016a, 17) emphasizes, "Indigenous thinking must be seen as not just a well of ideas to draw from but a body of thinking that is living and practiced by peoples with whom we all share reciprocal duties as citizens of shared territories (be they physical or the ephemeral)." In other words, engaging ethically with this scholarship entails not just intellectual but also political commitments[5]. Checking Indigenous knowledge against ideas from Anglo-Euro intellectual traditions would also run the risk of using Indigenous scholars' writing as a resource to help legitimize settler colonial knowledge and authority (Simpson 2017). However, my aim

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[5] On this note, I want to acknowledge that between the time this manuscript was accepted for publication and the time it was published, Todd publicly pivoted in her engagement with Kimmerer's work (Todd, 2021), noting how Braiding Sweetgrass centers settler audiences and fails to engage the messy, often violent nature of decolonization. In reading Todd and Kimmerer together, I want to therefore invite other settlers to avoid taking comfort in Kimmerer's calls for reciprocity. I hope this piece helps make clear the insufficiency of reciprocal relations without the literal unsecuring of settler spaces and subjectivities involved in real decolonization.

here is to engage with this scholarship to help understand how particular language and spaces systematically render it difficult to imagine or describe nonhumans as animate beings. This intellectual engagement supports a political commitment to figuring out how to best undermine the physical and intellectual structures that reify colonialism from my position as a settler scholar in the academy.

Kimmerer (2013) helpfully explains the importance of language for structuring how people understand animacy. She laments how "the language of animacy" now "teeters on extinction" thanks to colonial genocide and ways that Western societies discipline people to speak (and especially, avoid speaking) about other species. In the Americas, Indigenous language extermination has played a central role in conquest — not only through the murder of Traditional Knowledge holders but also through systems like Canadian residential schools, boarding schools in the United States, and foster care which interrupt intergenerational language transmission. Kimmerer explains how learning Potawatomi and Anishinabemowin (closely related to Potawatomi) as an adult helps her develop what she calls a "grammar of animacy" that English lacks. For example, Kimmerer describes how Anishinabemowin interacts with many concepts as verbs that English treats as nouns, and in many Indigenous languages people use "*the same words*" (55 — italics added) to address both human family and the more-than-human world. This language both reflects and reproduces understandings of others as active, animate beings who people understand as family in a very literal sense.

Helpfully, Kimmerer emphasizes that learning to speak about nonhumans as beings with intentions and lifeworlds does not require settlers and immigrants to learn and appropriate Indigenous languages. Instead, she invites people to celebrate the wealth of ways they can nurture and develop *grammars of animacy* in all the languages they speak. Even toddlers raised within Western societies "speak of plants and animals as if they were people, extending to them self and intention and compassion — until we teach them not to" (Kimmerer 2013, 57). Michi Saagiig Nishnaabeg scholar Leanne Simpson (2017, 164) similarly comments that "my ancestors have always understood this, and in fact, I think my kids understand most of it" after spending several pages describing the reciprocal, consensual nature of more-than-human relations within Nishnaabewin. These points underscore how using language that assumes others lack animacy until proven otherwise does not simply reflect "natural" ways of being but instead results from systematic attempts to exterminate ways of speaking that extend animacy beyond the human. They also suggest that many of us already have resources for developing animate language if we learn how to attend properly to the languages we have grown up speaking.

Dakota scholar Kim TallBear (2011) emphasizes that Western scholarship cannot benefit from Indigenous insights about nonhuman animacy while it insists on using the language of metaphor to describe Indigenous relations with nonhumans (for example, by describing these relations as mythical, imagined, or metaphorical approximations to "truer" Western scientific narratives). She argues that Western academics studying multispecies relations need help from Indigenous intellectuals — and the language they use to describe more-than-human relations — to overcome hierarchical thinking embedded in the life/nonlife binary. TallBear explains how even social scientists committed to understanding other species as beings with livelihoods frequently remain unable to fully attend to nonhuman agency because they insist that inorganic matter and geological forces have impoverished forms of agency relative to living things. In contrast, Dakota intellectual traditions understand all parts of creation as having spirit, regardless of whether those spirits exhibit consciousness. Western anthropologists' and other social scientists' use of metaphorical language when describing Indigenous knowledge plays a crucial role in discrediting and downplaying these insights about nonhuman agency (TallBear 2011). TallBear is far from the only Indigenous scholar to make this point while writing for academic audiences. Metis anthropologist Zoe Todd (2015, 222) has implored fellow anthropologists to "treat Indigenous people's human-animal engagements and ontological assumptions as literal rather than only symbolic matters." When recounting Haudenosaunee and Anishnaabe Creation histories, Mohawk and Anishnaabe scholar

Vanessa Watts (2013, 21) similarly emphasizes that "these two events took place. They were not imagined or fantasized. This is not lore, myth or legend." Although TallBear primarily frames her argument within what Western academics can gain by using language that takes Indigenous histories and relations seriously, TallBear, Todd and Watts all emphasize the political stakes of this project as well: language that treats Indigenous people's insights about the more-than-human world literally implies ethical relations with more-than-human others that look radically different than they do under colonial capitalism.

Key features of these ethical more-than-human relations include reciprocity, consent, and mutual recognition. For example, the Anishnaabe and Haudenosaunee assumption "that land is alive and thinking and that humans and non-humans derive agency through the extensions of these thoughts" (Watts 2013, 21) positions humans as one of many kinds of beings who have societies with "ethical structures, [and] inter-species treaties and agreements" (Watts 2013, 23). Histories and language that assume an already-animate world not only make possible but demand the recognition of nonhumans as teachers and political actors within a world that has *never* revolved around the so-called human. Leanne Simpson (2017) stresses the centrality of mutual recognition in Nishnaabeg practices of building society with others. More than mere acknowledgment, reciprocal recognition in Nishnaabeg practices is "about profound listening, and about recognizing and affirming the light in each other as a mechanism for nurturing and strengthening internal relationships to our Nishnaabeg worlds" (Simpson 2017, 182). She describes how

> We greet and speak to medicinal plants before we pick medicines. We recognize animals' spirits before we engage in hunting them. Reciprocal recognition within our lives as Nishnaabeg people is ubiquitous, embedded, and inherent. Consent is also embedded in this recognition. When I make an offering and reach out to the spirit of Waawaashkesh before I begin hunting, I am asking for that being's consent or permission to harvest it. If a physical deer appears, I have their consent. If no animal presents itself to me, I do not. (Simpson 2017, 182)

Here she also emphasizes the importance of *consent* within Nishnaabeg relations. Simpson takes care to clarify that consent here means *informed* and *honest* consent for all beings. Zoe Todd (2015, 225) similarly describes how her Inuvialuit colleagues take care not to engage in disrespectful bragging about their own fishing prowess because fish "choose when to be caught" and can respond to disrespect by refusing to feed their human relations. Elsewhere she emphasizes how fish and other nonhumans provide humans with not only physical but emotional, spiritual, and intellectual nourishment (Todd 2016b). By attending to fish relations in her own community and Inuvialuit Paulatuuq, Todd (2016b) learns to understand fish as important political actors in resistance to colonial dispossession. Questions about anthropomorphism — inappropriately imposing human perceptions onto nonhuman beings — make little sense within worldviews that continually engage with nonhumans as social and political actors where "it is unthinkable to impose an agenda onto another living thing" (Simpson 2017, 155). In this way language, thought, and reciprocal, consensual more-than-human relations mutually shape one another.

Reading this work helped me develop clarity about many of the ways the construction of space at the Vancouver Aquarium render reciprocal political relations with other species difficult or impossible to imagine. Through glass, visitors can witness other species express themselves or defy their captors' intentions but cannot share knowledge or nourishment. Several hours wandering the galleries can perhaps introduce guests to other species they may not encounter otherwise, but it can never generate the kind of ethical relations Todd, Simpson, or Kimmerer describe which develop through repeated, sustained, and consensual encounters. Exhibit messaging and structure encourage guests to think of other species and their homes as ideally unmarred by human relations. Having specific language to describe what makes these relations anthropocentric matters because it denaturalizes the "self-evident" lack of animal agency

in many Euro-Western spaces and equips people to understand how constructing space differently can nurture more vibrant grammars of animacy.

Submerged Grammars of Animacy in Western Epistemologies and Spaces

Despite these very real constraints and earlier-described proscriptions against anthropomorphism by Aquarium staff, material for subversive grammars of animacy lurks just below the surface that presents colonial, Western scientific ways of knowing as self-evident and uninterrupted. Here I explore submerged grammars of animacy that linger within the Vancouver Aquarium and Western epistemologies enfolded with this space. Leveraging examples from my fieldwork, I reflect further on the power, potentials for, and limits on ethically nurturing grammars of animacy from the Aquarium's octopus exhibit and ways of knowing entangled with it. I suggest animate language lingers in the mutual, interspecies recognition this space permits. However, as more-than-human geographers have demonstrated, mutual recognition and responsiveness alone cannot generate emancipatory multispecies relations (Collard 2012; Giraud and Hollin 2016; Yusoff 2013). I build on their insights by arguing that the Vancouver Aquarium obstructs the development of more vibrant grammars of animacy through how it precludes full reciprocity or consent between humans and other species. Interruptions to anthropocentrism from diverse scholarship, especially Indigenous, feminist, and queer thinkers, help reveal vulnerability as a key precondition for reciprocal, consensual multispecies relations and grammars. I suggest that positing conditions for multispecies vulnerability which would foster more vibrant grammars of animacy from the position of a settler scholar entails imagining the unraveling of conditions that secure settler subjectivity – that secure a particular iteration of the human as *the* human – at the Aquarium. Thus, ethically attending to more-than-human others as beings with their own lifeworlds is inseparable from the project of unsettling Western epistemologies and spaces.

The Grammars of Mutual Recognition

Aquarium biologists frequently speak and write about octopuses as individuals with agency, preferences, and unique ways of understanding the world. As multispecies researchers have argued (Bear 2011; Haraway 2008), recognizing animals as individuals can generate key insights for starting to speak and write about more-than-human others as beings with their own lifeworlds. The biologists at the Aquarium who had currently or recently worked with octopuses one-on-one lit up when describing their interactions with individuals. These aquarium biologists always took care to avoid misleading anthropomorphisms by noting, for example, that they cannot know how octopuses are processing information about them even when it becomes apparent that the octopuses are watching, processing information, and reacting in diverse ways to what they taste and see. This practice resonates with what geographer Chris Bear (2011) calls "responsible anthropomorphism" in his study of the octopus Angelica in Kingston-upon-Hull, UK. People who interact with captive octopuses often suggest that these animals can tell humans apart by taste and sense chemicals people secrete in their skin when scared or angry since octopuses taste everything they touch with their hundreds of highly sensitive suckers (Montgomery 2015; Ocean Wise, n.d.). Abundant anecdotal and Western scientific evidence also demonstrates octopuses' ability to tell individual humans apart by sight (Anderson et al. 2010). One keeper I spoke with described how the octopus Mystique would readily grab her hand but display more trepidation with others, explaining, "…she's more used to my touch… more used to my taste. It would be like 'Hey, this fleshy thing touches me and then food happens! So I want to touch this one.'" Here a form of mutual recognition manifests in the interactions between octopus and keeper, albeit under conditions where steep power inequality (the physical constraints of a tank and octopuses' dependence on biologists for food and other care) precludes full reciprocity or consent. The tentative language of "processing information" and "fleshy thing[s]" that aquarists use – a nascent grammar of animacy – reflects these possibilities and constraints.

Despite the limitations of their language, biologists' careful descriptions of octopus behavior do helpfully illustrate some ways of speaking ethically about other-than-humans as individuals who we know have lifeworlds without presuming — or needing — to know exactly what those lifeworlds are. Their training makes them acutely cognizant of the radical differences between our species which diverged over half a billion years ago,[6] long before either of us resembled the creatures we are today, and wary of language their peers or supervisors might dismiss as unprofessional 'anthropomorphizing.' However, interacting with an octopus with this in mind forces a recognition of personhood across difference rooted in an ethics that cannot imagine (and therefore never tries) reducing that other into our own likeness. In this way, recognition of octopus agency even manifests in the interstices of (otherwise dry) scientific writing and guidelines for animal care. For example, Dews (1959) explains his decision to exclude an octopus named Charles from his behavioral experiment because "Charles had a tendency to direct jets of water out of the tank, specifically they were in the direction of the experimenter" and to break laboratory equipment rather than cooperating like the other animals. Tellingly, Dews describe Charles as "capricious," and the octopus's exclusion from a behavioral experiment on the basis of this behavior illustrates another way biologists recognize, describe, and reckon with nonhumans as beings with intentions and lifeworlds that are often inscrutable to the scientific method. The Association of Zoos and Aquariums' (AZA) official care manual for giant Pacific octopuses is replete with anecdotes about octopuses whose individual proclivities cause mayhem, provoke horror, and frequently confound or delight the people who interact with them. The manual explains that these anecdotes illustrate the existence of octopus intelligence despite the fact that "there are no proper IQ tests for them [octopuses] yet. Their world is so different from a human's — it just may not be possible" (AITAG 2014, 84). In doing so, the manual echoes views expressed by biologists I interviewed that octopuses have their own lifeworlds despite humans' inability to measure or know the nature of these worlds directly.

Attending to the limits of scientific knowledge about others' lifeworlds marks a key starting point for reimagining the language researchers use to attend to more-than-human others – developing new grammars of animacy. Scientists' statements about what they *cannot* know using the observations and empirical frameworks their field allows sometimes translate into statements that what Western science cannot observe or know does not exist. However, many of the cephalopod scientists described above express much more careful sentiments about limits to scientific epistemologies. Caring for octopuses in close quarters forces them to grapple with the animals' intentions and lifeworlds regardless of whether they can observe these things directly. This work prompts scientists to admit limits to scientific knowledge and ways of knowing alongside the conviction that what science does not — or perhaps cannot — know not only exists but also matters: for example, when aquarists describe the sensation that octopuses are watching and processing information about them. Dews' exasperated description of Charles the octopus as "capricious" illustrates how even begrudging recognition of limits to scientific ways of knowing can prompt the recognition of nonhumans as beings with their own unknowable intentions and lifeworlds. In this way, attending to the interstices of scientific narratives makes it possible to center the nonscientific ways of knowing nonhumans that scientists are already deploying alongside their experimental work. Although phrases like "processing information" may sound like impoverished ways of describing others' inner worlds, they productively seek to avoid misleading language about what it means to behave and think like an octopus within the contours of this space. The aquarists I spoke with modeled care in their language, which helped me understand how my own training in the language of biology could productively inform qualitative multispecies research (rather than impeding it). In this way, being forced to recognize the limits of their field's dominant language and ways of knowing

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[6] Cephalopods and vertebrates both emerged as distinct taxonomic groups during the Cambrian period (Holland and Chen 2001; Kroger et al. 2011).

paradoxically spurs the generation of new language and methods for engaging ethically across species difference. This helps elaborate how language, thought, and multispecies relations mutually shape one another and how grammars of animacy can develop without appropriation under impoverished conditions: sharing mutual recognition with octopuses and given a scientific language unable to describe this recognition, biologists rearrange their grammars to accommodate and articulate epistemologies that can.

Attending to the limits of *scientific* intelligibility therefore also entails rethinking what counts as "intelligible" and what counts as language within multispecies scholarship. Reflecting on the work of ecofeminist philosopher Val Plumwood, Deborah Bird Rose (2013, 98) explains how Plumwood's philosophical animism inverts the question of nonhuman intelligibility:

> One of the things that is so remarkable about Val's approach to ethics is that it avoids all those abstract questions of who or what is morally considerable, and what may be meant by that. Rather than querying others, it asks the human to query herself, and it seeks to open the human to the experience of others in the contexts of their own communicative and expressive lives. Here, as elsewhere, she was concerned with paths (toward others) rather than answers (about others).

In other words, Plumwood begins by asking how people might approach and understand others differently. Plumwood does not *need* answers about others' inner worlds in order to know them as fellow beings. Instead, her approach emphasizes attunement to others on their own terms and highlights how assuming nonhuman unintelligibility demands that others communicate in ways already familiar to the researcher — and ironically renders nonhuman communication unintelligible. Rose's insight about cultivating openness to nonhuman communication rather than beginning with handwringing about the problem of others' unintelligibility offers a useful starting point for rethinking what counts as language that can populate the grammars of multispecies research. Drawing on Charles Peirce's work on semiotics, anthropologist Eduardo Kohn (2012) elaborates on how understanding thought and language as sign processes reveals examples as varied as dogs barking, trees crashing, and human speech as thought and language because they interactively transmit signs. Within this framework, anything that "stands to somebody for something in some respect or capacity" (Kohn 2014, 4) can function as a sign — revealing not only humans but multitudes of living and nonliving others as both senders and interpreters of signs. Lessons from this literature and scientists at the Vancouver Aquarium have taught me how to attend to how octopuses respond to people, how people respond to octopuses, and how octopuses interact with their different environments. This has helped me speak with precision about what octopuses and others at the Aquarium do and the effects of different interpretations of those actions — remaining cognizant of the many beings (human, octopus, and otherwise) who have their own intentions in this deeply unequal space despite the fact that I usually cannot know for sure what those intentions are.

Beyond Recognition: Vulnerability and Decolonization in Multispecies Research

Considering more radical disruptions to the language Western scholars use to describe their more-than-human relations suggests how critical reflection on embodied vulnerability can enrich grammars of animacy emerging from spaces like the Aquarium which allow mutual recognition but place severe limits on mutual vulnerability. Just as work by Indigenous scholars helps make clear how the Aquarium space renders reciprocal, consensual relations with more-than-human others less thinkable, reading this work helps reveal how the Aquarium space makes animacy hierarchies feel self-evident through how it enables the mobility and security of particular human bodies relative to others. Queer theorist Mel Chen (2012, 190) describes animacy hierarchies as "ontologies of affect" because of how they naturalize ideas about different beings' relative capacities to affectively interact with others. Writing on the experience of living with mercury poisoning, Chen (2012, 202) explains how

anyone or anything that I manage to feel any kind of connection with, whether it's my cat or a chair or a friend or a plant or a stranger or my partner, I think they are, and remember they are, all the same ontological thing.

Chen means this very literally: while sick, they struggle to distinguish intimacy from a human partner with intimacy from, say, a couch. Even though conflating these different intimacies becomes less thinkable after the toxic spell passes and they recover "human-directed sociality," Chen pushes readers to consider how toxins disrupt animacy hierarchies in multiple ways as these chemicals transform porous human bodies and the more-than-human others people share their lives with. Accounts like this reveal animacy hierarchies as also ableist hierarchies that denigrate the supposed "irrationality" of treating humans and others alike. In a slightly different vein, Plumwood's (1995) account of surviving a crocodile attack in the Australian bush disrupts her own subject-centered "narrative of self" as

> In that flash, when my consciousness had to know the bitter certainty of its end, I glimpsed the world for the first time 'from the outside', as no longer my world, as raw necessity, an unrecognisably bleak landscape which would go on without me, indifferent to my will and struggle, to my life as to my death.

This experience transforms her understanding of food and death — disrupting deep-seated anthropocentrism in her embodied understanding of these concepts — because for the first time she comes to understand her own life as an extension of other lives that will one day nourish others and individual human narratives as part of a richer fabric of narratives that begin with and continue into the landscape after people die. Inspired by Indigenous animisms, this framework relies on understanding living and nonliving others as animate beings who have their own stories. For Plumwood (2008, 324), the insight "that we are food and that through our death we nourish others" fundamentally disrupts anthropocentric understandings of animacy because considering the story of one's life "from the outside" reveals it as part of a broader storied landscape. Together, this writing extends critiques of the so-called human by inviting researchers to query what kinds of being they enact in their research practices. At the Vancouver Aquarium, this meant continually asking what versions of humanity I was performing through different kinds of attention to octopuses and others in this space. It also required attention to how the space itself spoke about my humanity as distinct from and dominant over everyone I encountered in the tanks. To develop less anthropocentric grammars for multispecies research, researchers therefore need to not only critique "humanity" but query their own.

These accounts illustrate how attention to embodied experiences of vulnerability can teach researchers to articulate less anthropocentric ways of being human and speaking about more-than-human others. They reveal vulnerability as a key condition for the kinds of reciprocal political relations Simpson, Todd, and TallBear describe. Through aquarium glass, visitors not only cannot share knowledge or nourishment with other species but remain constantly assured of their own mobility, security, and *humanity* relative to everyone they encounter in the tanks. Aquarists may experience moments of vulnerability as they negotiate animals' idiosyncratic needs and rhythms during caretaking activities but ultimately, limits to vulnerability inscribed through the deeply unequal power relations in this space also translate into limits to reciprocity, mutual recognition, and consent – and thus the animacy of language scientists use to describe these relations. More-than-human geographers studying captive care in other contexts have similarly stressed the deeply unequal nature of violence even when care operates with the explicit aim of reducing harm against more-than-human others (i.e., Collard 2014; 2018; Nelson 2017; Parreñas 2018; van Dooren 2014). Juno Salazar Parreñas highlights embracing interspecies vulnerability as a key strategy for decolonizing conservation work and moving away from conditions that figure captive care as lifesaving. Here, I extend these insights by linking the capacity to imagine and enact more-than-human relations of embodied vulnerability differently with the capacity to nurture more vibrant grammars of animacy. From the position of a settler scholar, imagining conditions of

vulnerability congruent with reciprocal, consensual more-than-human relations and the proper grammars of animacy to describe them entails imagining the unraveling of conditions that secure a narrowly racialized, gendered, and able-bodied settler iteration of humanity as *the* human.

Conclusions: Interrogating the Human in Multispecies Research

Reading across these diverse branches of thought from a multispecies field site reveals the importance of interrogating the so-called human for practicing ethical multispecies research. Confronted with how octopuses confound anthropocentric descriptors for what it means to think, feel, sense, and even *move*, the language Western scholarship uses to describe these activities in relation to an assumed human reference point also begins to unravel. Developing richer grammars of animacy from the contexts where Western scholars live and work however entails more than simply changing researchers' language. It also entails new embodiments, relations, and attention to how diverse intellectuals already recognize more-than-human intentions and lifeworlds. Helpfully, the scholarship highlighted here illustrates how the language and epistemologies researchers use to navigate more-than-human relations systematically render nonhuman animacy more or less thinkable. Multispecies researchers seeking methods for ethically attending to more-than-human lifeworlds under conditions haunted by questions of anthropomorphism can begin by asking what conditions might render supposedly "anthropomorphic" language sensible and what language might emerge as sensible for describing more-than-human relations under other assumptions about how to relate with others. Researchers must stay vigilant about how spaces render reciprocal, consensual relations with nonhumans difficult to imagine and enact. Reading at the margins of narratives by scientists who work within heavily anthropocentric epistemologies and spaces yet also know nonhumans as beings with their own lifeworlds can help qualitative researchers attend to the ways of knowing nonhumans they may also be unconsciously deploying and systematically ignoring.

The scholarship I showcase here highlights vibrant grammars of more-than-human animacy that already exist in academic settings for those who know where to look — especially within the work of scholars writing from marginalized positions within the academy. Tellingly, some of the most potent disruptions of anthropocentric thinking within the academy have emerged through autoethnographic accounts by scholars writing from these various margins. Charges of anthropomorphism haunting multispecies research emerge from anthropocentric thinking made possible by ongoing, violent political exclusions that produce the *human* as an intelligible category. This history underscores the importance of engaging with diverse scholarship in multispecies work. From this perspective, conducting ethical and intellectually rigorous qualitative multispecies research requires engaging with intellectual traditions that have long understood the political construction and centering of the so-called *human* as a problem. To ethically attend to other species' intentions and lifeways, Western academics therefore need to also unsettle the colonial epistemologies and spaces that make charges of anthropomorphism possible in the first place.

Acknowledgments

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